THE

DICTIONARY

OF

DAILY WANTS

BY THE

EDITOR OF "ENQUIRE WITHIN UPON EVERYTHING"
"THE DICTIONARY OF USEFUL KNOWLEDGE,"
ETC. ETC.

"NATURE HAS IMPOSED ON MAN CERTAIN DAILY WANTS; CIVILIZATION HAS GREATLY ADDED TO THESE. THE DEMANDS OF NATURE ARE LAWS; AFTER THESE, THE USAGES AND REQUIREMENTS OF SOCIETY CLAIM ATTENTION; AND IN CONFORMI[illegible]OUND TO EXERCISE GOOD TASTE, COMBINED WITH PRUDENCE, AND A GENERO[illegible]OR THE GOOD OF OTHERS."—[illegible]

HOULSTON AND SONS
65, PATERNOSTER ROW.

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LIST OF AUTHORITIES

CONSULTED IN WRITING THE

"DICTIONARY OF DAILY WANTS."

ell's Skilful Housewife's Book.
on's Bread Book.
on's Modern Cookery.
ice to the Embarrassed.
ell's Treatise on Friendly Societies.
of Catering and Carving.

well's Great Facts.
well's Mother's Practical Guide.
tein's Cage Birds.
eper's Manual.
ard's 100 Beverages.
Method of Doing Common Things.
's Instructions for the Aquarium.
's Wife's Own Book of Cookery.
's County Court Practice.
's Treatise on Brewing.
's Encyclopædia of Rural Sports.
Angling.
Practical Cookery Book.
's Handbook of Games.
Handbook to London.
Summer Drinks.
out all Kinds of Things.
Art of Wine Making.
ll's Poultry Yard.
an's Common Things of Every-day Life.
Own Book.
's Dictionary of Science, Literature,
Art.
n's Practical Cook.
.
ints to Mothers.

Lawyer.
's Household Hints.
ll's Farmer's and Cottager's Guide.
's Edinburgh Journal.
's Information for the People.
's Advice to a Mother.
'other's Book.
Work Table.
English Housekeeper.

Conquest's Letters to a Mother.
Cooley's Cyclopædia of Practical Receipts.
Corner Cupboard.
Cottage Library.
Cottage Gardener's Dictionary.
Crabb's Dictionary of General Knowledge.
Crawley's Theory and Practice of Billiards.
Cust's Invalid's Own Book.
Cyclopædia Britannica.
Cyclopædia Metropolitana.
Cyclopædia of Industry.

Dalgairns's Practice of Cookery.
De Laspée's Calisthenics.
Dickson's Management of Poultry.
Dinner Questions.
Dod's Cook and Housewife's Manual.
Dolby's Cook's Dictionary.
Domestic Economist.
Donovan's Domestic Economy.
Doyle's Cyclopædia of Practical Husbandry.
Doyle's Rural Economy.

Eaton's Cook and Housekeeper's Dictionary.
Economic Library.
Enquire Within upon Everything.

Family Economist.
Family Manual.
Finchley Manuals.
Fonblanque's Rights and Wrongs.
Forrest's Every Boy's Book.
Forrest's Handbook of Gymnastics.

Galton's Art of Travel.
Gardener's and Farmer's Reason Why.
Glenny's Flower Garden.
Glenny's Gardening for Cottagers.
Glenny's Handy Book on Gardening.
Glenny's Gardening for the Million.
Glenny's Gardener's Every-Day Book.
Gosse's Handbook to the Marine Aquarium
Governess.

Hale's Household Receipt Book.
Hammond's Domestic Economy.
Handbook for the Sea-side.
Handbook for Bathing.
Handsard's Book of Archery.
Hassall's Food and its Adulterations.
Hartwig's Sea-Bathing.
Hints for the Table.
Hints to Railway Travellers.
Hogg's Domestic, Medical, and Surgical Guide.
Home-book of Household Economy.
Houlston & Wright's Industrial Library.
Housewife's Reason Why.
How to Furnish a House.
Hudson's Executor's Guide.
Humphrey's Ocean Garden and River Garden.

Interview.

Jenning's Recipes in Cookery.
Johnson's Every Lady her own Gardener.
Johnson's Farmer's Encyclopædia.
Johnson's Garden Manual.
Johnson's Life, Health, and Disease.
Johnston's Chemistry of Common Life.

Kemp's How to Lay out a Small Garden.
Kitchiner's Cook's Oracle.
Kitchiner's Housekeeper's Oracle.
Knight's Popular Cyclopædia.

Leslie's Confectioner.
Lewis's Cook.
Library of Entertaining Knowledge.
Life Doubled by the Economy of Time.
London's Domestic Pets.
London's Cyclopædia of Architecture.
London's Cyclopædia of Agriculture.
London's Cyclopædia of Gardening.

Magazine of Domestic Economy.
Maunder's Treasury of Knowledge.
Maunder's Treasury of Natural History.
Mawe's Every Man his own Gardener.
McCulloch's Dictionary of Commerce.
McIntosh's Book of the Garden.
McIntosh's Ten Thousand Receipts.
Mechanic's Magazine.
Merle's Domestic Dictionary.
Morton's Cyclopædia of Agriculture.
Murray's Handbooks for Travellers and Tourists.

New London Cookery.
Notices to Correspondents.

One Thousand Practical Receipts.
Orr's Household Handbooks.

Paris's Dictionary of Diet
Penny Cyclopædia.
Phillips's Million of Facts.
Philp's History of Progress.
Piesse's Art of Perfumery.
Plain Family Receipts.
Plant's Gardener's Dictionary.
Popham's Nursery Guide.
Practical American Cook-book.
Practical Housewife.

Rarey's Art of Horse-Taming.
Reason Why: General Science.
Reason Why: Natural History.
Rham's Dictionary of the Farm.
Richardson's Rural Handbooks.
Robinson's British Wine-Maker.
Rolando's Course of Fencing.
Rowland on the Hair.
Rundell's English Cookery Book.

Shopkeeper's Guide.
Smee on Debility.
South's Household Surgery.
Soyer's Modern Housewife.
Stephens's Book of the Farm.

Tegetmeier's Information on Common Objects.
Tegetmeier's Manual of Domestic Economy.
That's It.
Thomson's Dictionary of Domestic Medicine.
Three Experiments of Living.
Toilet Book.
Tomlinson's Cyclopædia.
Tuthill's Nursery Book.

Ure's Dictionary of Arts and Sciences.
Useful Arts.
Useful Teacher.

Vegetarian Cookery.

Walker's Defensive Exercises.
Walker's Manly Exercises.
Walsh's Manual of Domestic Economy.
Ward's Wardian Cases and their Application.
Warren's Economical Cookery Book.
Webster and Parke's Cyclopædia of Domestic Economy.
White's Lessons on Housewifery.

Youatt on the Dog.
Youatt on the Horse.
Young Mother.
Young Wife

ADVERTISEMENT.

THE DICTIONARY OF DAILY WANTS may be said to have done for matters of Practical Utility in Domestic Affairs, what the great naturalist, Linnæus, did for the science of Botany—it has brought the thousands of useful items scattered in disorder through an unlimited number of channels, into one Arrangement and System, by which they may be easily found and applied.

We assure those to whom this Dictionary may become a Household Book, that it has been compiled with the greatest care—that every line has been attentively considered before being suffered to pass through the press—that the Medical Articles, and those relating to Law, have been written by professional gentlemen not only qualified to *write*, but experienced *practice* in their avocations; and that, in the composition the DICTIONARY, many talents have been employed, and many friendly hands engaged.

The DICTIONARY has already found a very large sale—no less than ONE HUNDRED THOUSAND copies of the complete Work having

been issued. The DICTIONARY OF USEFUL KNOWLEDGE (a companion Work), forming a Book of Reference upon all matters of History, Geography, Science, Natural History, Statistics, &c., is now completed, and is well worthy to stand by the side of the DICTIONARY OF DAILY WANTS: thus, the TWO DICTIONARIES form *a complete and invaluable Encyclopædia, embracing all subjects of interest and of practical utility.*

In compiling the DICTIONARY OF DAILY WANTS, the Editors have availed themselves of works by the most eminent authorities in various departments. A List of these authorities is appended, and the grateful acknowledgments of the Editors are hereby tendered to the Authors of the Books enumerated.

THE

DICTIONARY OF DAILY WANTS.

ABATEMENT in commerce is a deduction made in the price of goods either in consideration of the payment of prompt cash, or on account of the deterioration of value which the merchandise may from a variety of causes have undergone. In many branches of commerce, especially when the articles are of more than ordinary value, it is customary for the seller to take less than he asks, because he anticipates that *the buyer will but him less.* When extensive purchases are made this should be remembered and acted upon.

ABBREVIATIONS are made use of in writing for the purpose of saving of time and trouble. In composition, or epistolary correspondence, the abbreviation of words of ordinary import is both inelegant and unnecessary, such as the use of the words "can't," "shouldn't," mustn't," for *cannot, should not,* and *must not,* which, with many other words of a similar nature, should invariably be written in full. It is justly considered an impropriety to use such abbreviations as the following in correspondence: "Remember me to Mrs. B.," "Hoping that Mrs. B. and yourself are quite well," &c. In denoting the titles and distinctions of persons, however, abbreviations are sanctioned by custom, and therefore allowable. The following list includes some of the most important of these abbreviations, with their explanations:—

A.R.A., Associate of the Royal Academy.
B.A., Bachelor of Arts.
Bart., Baronet.
B.C.L., Bachelor of Civil Law.
B.D., Bachelor of Divinity.
Captn., Captain.
C.B., Companion of the Order of the Bath.
C.M.G., Companion of the Order of St. Michael and St. George.
Col., Colonel.
D.C.L., Doctor of Civil Law.
D.D., Doctor of Divinity.

Dr., Doctor.
Esqr., Esquire.
F.A.S., Fellow of the Antiquarian Society.
F.H.S., Fellow of the Horticultural Society.
F.L.S., Fellow of the Linnæan Society.
F.R.S., Fellow of the Royal Society.
F.S.A., Fellow of the Society of Arts.
G.C.B., Knight of the Grand Cross of the Bath.
G.C.H., Knight of the Grand Cross of the Royal Hanoverian Guelphic Order.
G.C.M.G., Knight of the Grand Cross of the Order of St. Michael and St. George.
H.E.I.C., Honourable East India Company.
H.M.S., Her Majesty's Ship; with the prefix "on," Her Majesty's Service.
K.C., Knight of the Crescent.
K.C.B., Knight Commander of the Order of the Bath.
K.C.H., Knight Commander of the Royal Hanoverian Guelphic Order.
K.C.M.G., Knight Commander of the Order of St. Michael and St. George.
K.G., Knight of the Order of the Garter.
K.H., Knight of Hanover.
K.P., Knight of the Order of St. Patrick
K.T., Knight of the Order of the Thistle.
Kt., Knight.
Lieut., Lieutenant.
LL.D., Doctor of Laws.
M.A., Master of Arts.
M.D., Doctor of Medicine.
M.P., Member of Parliament.
M.R.C.S., Member of the Royal College of Surgeons; the addition of E. implies of Edinburgh.
M.R.I.A., Member of the Royal Irish Academy.
Mus. D., Doctor of Music.
Ph. D., Doctor of Philosophy.
Prof., Professor.
R.A., Royal Academician.
R.N., Royal Navy.
Rt. Hon., Right Honourable.

The following miscellaneous abbreviations are also universally used —

& Co, and Company
A D, The year of our Lord.
A M, Before noon
B C, Before Christ
Cr, Creditor
Do, or ditto, or , As before.
Dr Debtor
i e that is to say
Inst The present month
£ s d Pounds shillings and pence
MS Manuscript, MSS Manuscripts
N B, Observe
Nem Con Without contradiction
P M Afternoon
Pro Tem Temporarily
P S, Postscript
Ult, The last month
U S, United States
Viz, Namely
Xmas Christmas
Cwt qr lb oz Hundredweight quarter, pound and ounce
4to, Quarto folded into four
8vo Octavo folded into eight
12mo Duodecimo folded into twelve &c

ABDOMEN the lower part of the body extending longitudinally from the cavity or hollow usually called the pit of the stomach to the lower part of trunk The intestines of the abdomen are liable to a variety of diseases, the most formidable of which is inflammation Many internal injuries of the abdomen are caused by continual external pressure to obviate which all articles of clothing which come in contact with this part of the body should be made to fit loosely, and with an equal weight upon the whole surface

ABERRATION OF MIND —A form of disordered intellect and incipient insanity which fluctuates according to circumstances This affliction is the result of a variety of causes but frequently arises from excessive application to sedentary occupations, and an undue exercise of the mental faculties in any one direction The remedy for this derangement is moral rather than physical A certain regimen should be scrupulously observed all mental employment abstained from while change of scene, cheerful conversation and harmless amusement may generally be adopted with success

ABLUTION The frequent affusion of the surface of the body is not only necessary to cleanliness and comfort, but is also essential to the preservation of health The explanation of this is, that the pores of the skin act as agents for removing from the body useless and superfluous matter, which is constantly being generated, and which, in the form of minute scales, is deposited upon the outer portion or cuticle of the skin. If this refuse is suffered to accumulate and remain, it forms in the process of time a thick hard crust, which obstructs the pores of the skin, and impedes their functions It is obvious, therefore, that the internal organs of the body, being deprived of the assistance and vital energy rendered by the pores, become by this means enfeebled in their operations, and habitually debilitated and deranged. To obviate these evil effects it is necessary that the whole surface of the body should be *daily* subjected to an ablution of cold water or where this may be impracticable, to friction with a damp cloth

ABRASION is the violent removal of the outer skin in any part of the body such as may be caused by a fall or a blow The *best* remedy is court plaster or goldbeater's skin, or linen bandages spread with spermaceti ointment *Common adhesive plaster should not be applied in these cases* because it irritates instead of calming

ABSCESS —A collection of pus or matter deposited in a cavity occasioned by inflammation The mode of treatment for the cure of abscess is to promote suppuration rather than retard it this is effected by warm fomentations, and poultices of bread and water or linseed meal If the suppuration proceeds slowly it may be hastened by opening with a lancet and after the discharge of matter the poultices may be continued until all tenderness has left the part The wound should then be dressed with spermaceti ointment twice a day and lightly bandaged In the early stages a liberal diet may be adopted until the period of discharge a light nutritious diet should then be substituted, and mild aperients administered until perfect health is restored

ABSORPTION is the action by which liquids and gases become incorporated with various bodies, as sponge sugar and chalk absorb water and the pores of the skin absorb the fluids and gases near the mouths of the vessels When fluids absorb each other it arises from one being more fluid or less viscid than the other The following are the relative powers of absorption of various bodies Garden mould 95 deg of moisture pipe clay 85 deg , alumina, 84 deg silica 40 deg , wool, 13 deg

ABSTINENCE, both in eating and drinking, is occasionally advantageous in the preservation of health the cure of disease and the prolongation of life In taking food or drink nature unerringly reminds us when we ought to *abstain*, and an indulgence beyond this point becomes excess which sooner or later acts injuriously upon the system and engenders a number of painful and tedious diseases In minor complaints such as headache, heartburn, cold &c abstinence will frequently effect a more certain and speedy cure than any medicine On the other hand, excessive abstemiousness should be guarded against as being liable to induce debility and nervousness but here nature again steps in and informs us when the supply of food is not sufficiently nutritive and invigorating

ACACIA — A variety of shrubs and plants are included under this name The *rose acacia* grows to a great height in genial situations and will sometimes bloom twice during the year The *mouth tree acacia* blossoms in August; it flourishes best in a light mould, requires careful tending and protecting from the wind The *sponge tree acacia* grows best on a rich soil and in a warm situation, also requiring great care and attention in its culture.

ACADEMIES.—See EDUCATION.

ACCEPTANCE of a bill of exchange is the name of a party *written by himself, or by some person duly authorized by him*, thus—"Accepted, Thomas Jones," upon an unconditional order for a certain sum of money, whereby he accepts the obligation to pay the amount specified. Any person so signing his own name, though for a company or another person, renders himself personally liable. Any person signing his name upon a blank bill stamp may be made to pay any bill afterwards drawn upon it to the amount of the stamp. Acceptance by joint stock companies must be by two directors, expressed to be accepted by them on behalf of the company, and countersigned by the *secretary*.

ACCEPTOR. The technical or mercantile designation of the person primarily liable to pay a bill of exchange. An acceptance is a conclusive admission of the ability of the drawer to make the bill upon the acceptor, for which reason he is liable, though the drawer's signature be forged. If a trader, he may be made a bankrupt upon it, though the time for payment may not have arrived. —See BANKRUPT.

ACCESSORY (BEFORE THE FACT), is, in law, a person who though not absolutely assisting in a felony at the time of its committal, yet counsels or abets another to commit the felony. An accessory *after the fact*, is one who harbours or assists the felon, with the knowledge of a felony having been committed. In two offences, the highest high treason, and the lowest misdemeanor, there are no accessories, all persons implicated being considered as *principals;* and in murder, administering poison, attempts to drown, suffocate, or strangle, shooting, stabbing, administering poison to a woman to procure abortion, abduction of women for lucre, child stealing, and bigamy, accessories *before the fact* are punishable in the same manner as principals.

ACCIDENTS.—As there is no age or condition which can insure us against accidents, it is of the utmost importance that we should always be prepared against such contingencies, and that we should have some line of conduct marked out by which we are resolved to act in an emergency. This faculty is termed *presence of mind*, and it is to the want of this that the lamentable loss of human life is in many cases attributable. When an accident occurs, firmness of resolution, and coolness of action, are indispensable. In the majority of instances, however, it unfortunately happens that the mind, being suddenly overwhelmed by fear, becomes as it were paralyzed, and is unequal to the conception of the simplest means by which both life and property might be saved. It is, therefore, incumbent upon us all that when we are most secure, and the mind is in the full and calm possession of its reasoning powers, we should devise and mature certain plans, to be put into execution in the hour of danger for the preservation of ourselves and the succour of others. There are accidents of daily and hourly occurrence, which the exercise of the commonest prudence might prevent, and which we may be said to rush into through carelessness and indiscretion.

Stand not near a tree, or any leaden spout, iron gate, or palisade in time of lightning. ——Never sleep near charcoal; if drowsy at any work where charcoal fires are used, take the fresh air.——Carefully rope trees before they are cut down, that when they fall they may do no injury.——Air cellars, vaults, and sewers, by letting them remain open some time before you enter, or scattering powdered lime in them.——Where a lighted candle will not burn animal life cannot exist. Before entering damp and confined places, therefore, it will be an excellent caution to try this simple experiment. ——Never leave horses whilst in use by themselves, nor go immediately behind a led horse, as he is apt to kick.——Leave nothing of a poisonous nature open or accessible, and never fail to write the word "POISON" upon it in large letters wherever it may be placed.——In walking the streets keep out of the line of the cellars, and avoid scaffolding and ladders; and never look one way and walk another.——Never meddle with gunpowder by candlelight.——Lay loaded guns in safe places, and never imitate firing a gun in jest.——In trimming a lamp with naphtha never fill it. Leave a space for the spirit to expand with warmth.——Do not enter a room where there is an escape of gas, with a lighted candle.——Never alight from an omnibus while it is in motion, nor stand on the steps to receive change, nor enter with the point of your stick or umbrella upwards.——When driving, keep on your right side of the road, and abate speed when approaching corners or cross roads.——Never throw orange rinds about in the streets.—— Open windows at the top: it is better both for ventilation and safety.——Sprinkle door steps with coal ashes or sand on frosty mornings. Never sprinkle them with salt. ——Take great precautions with fires where children are, as this is an element that they are very fond of amusing themselves with. ——Do not "rake out" fires at night time; let them go out of themselves; there will be no loss of fuel as they will support the temperature of the apartments, and be less likely to cause accidents.——Never quit a room leaving the poker in the fire.——Put a wire guard before each fire on going to bed.—— Turn off gas at the meter the last thing at night.——Look both ways before you cross a street; and when you know you have to cross, take the first opportunity of doing so, instead of waiting until you arrive at the spot where you must cross.——Never be attracted by a mob. Be assured that where there is a crowd there are already too many for any good purpose; therefore pass on.——Never be induced to venture upon platforms hurriedly erected by needy people, to let out places at small fees for viewing public spectacles.——When travelling by railway, do not put your head out of the window, nor lean against the door, without due caution.——Keep lucifer matches in their boxes, and never let them be strewed about.

As accidents from whatever causes are always sudden, and as life may be saved or much pain and suffering averted by the promptness with which remedial agents are applied, every household should have a few of the most necessary articles always at hand in case of emergency. Wherever there are children, such appliances as will at once assuage the anguish of a burn or stop the effusion of blood become absolutely imperative, as before a medical man can be obtained much time is lost, and in the anxiety and confusion consequent on an accident, and in the hope of giving the sufferer some relief, the most injudicious means are often erroneously employed.

Articles to be kept in the House for all cases of Accident.

A piece of adhesive plaster.
A few sheets of wadding.
A little fine wool.
A 4 ounce green bottle of liquor plumbi, or pure extract of lead, properly labelled *Poison*.
And a few bandages, two or three yards long and 2 inches wide.

These should be kept together in a box or drawer, so as to be ready at any moment.

The use and application of these articles will be explained under the different headings by which various accidents are distinguished.—See also Burns, Cuts, Drowning, Fires, Lead, Poisons, &c.

ACCIDENTS, Responsibility for.—When one person meets with an accident through the carelessness or negligence of another, the amount of the damage sustained thereby is recoverable by action at law. If, for instance, a person falls into a cellar which opens into a public thoroughfare, and it is proved that such cellar was not properly guarded at the time, all expenses and losses attendant upon such accident—namely medical attendance, loss of wages, salary, or any other form of income, both present and prospective, may be sued for against the owner or occupier of the cellar in question. The same responsibility also exists where the servants of an employer cause an accident, the employer being considered by the law as answerable for the acts of the employed.—See Master and Servant.

ACCOSTING.—When a lady is met or a person of either sex in a superior position, the hat should be lifted as a mark of respect. A gentleman should not presume to notice a lady, until the lady recognizes him; the lady should also be the first to advance her hand to be shaken. Upon the occasion of shaking hands the gloves should not be removed. When a person bears evident signs of being in a hurry, he should just be acknowledged and then suffered to pass on. When an acquaintance betrays a wish not to be recognized, he *should not be seen*. Modes of recognition which consist of slapping persons on the back, tapping them on the shoulder, pulling their coat tails or their hair, calling in their ear, or shouting out their name in the street, are vulgar and absurd antics, reprehensible in the extreme.

ACCOUCHEMENT.—See Childbirth.

ACCOUNTS.—See Book-keeping.

ACIDITY OF THE STOMACH is chiefly characterized by sour eructations, and is a sure symptom of a weak or deranged digestion. Small doses of carbonate of soda or sal volatile, with extract of gentian added, should be taken three or four times daily. At the same time the bowels should be kept regular, all gross and oily food should be avoided, and as much exercise as is compatible with strength should be taken daily in the open air.

ACIDS, in chemistry, are a comprehensive class of substances generally distinguished by a sour taste, and possessing the property of changing blue vegetable colours into red. Acids are chiefly vegetable and mineral. Many of the vegetable acids, such as the juice of limes, lemons, oranges, &c., are efficacious in a number of cases. Mineral acids have totally opposite properties to vegetable acids, possessing highly stimulating effects when administered in the mildest form, and the majority of them exhibiting in a greater or less degree destructive and poisonous properties.—See Oxalic Acid, Prussic Acid, Tartaric Acid, &c.

ACIDULATED DRINKS.—See Lemonade, Sherbet, Tamarind Water, &c.

ACIDULATED DROPS.—Boil a pint of clarified sugar, pour it on a slab, and mix with it a quarter of an ounce of tartaric acid; fold the edges of the sugar over the acid, and continue to mix the acid in this way, but do not pull it. Roll it out in long sticks, cut into small drops, and mix with sugar dust.—See Barley Sugar.

ACIDULATION.—The process adopted for preserving animal food by the application of vinegar. The meat intended to be preserved having been previously laid in a very strong brine for one, two or three days, according to the length of time it is to be preserved, the vinegar, which has been already boiled with herbs or spices agreeable to the taste, is poured into a pan with an equal quantity of water also previously boiled, and the meat laid in it to soak. After it has lain three or four days it may be taken out, hung up, and will thus keep sweet for a length of time.

ACKNOWLEDGMENT IN LAW made in writing after six years renews a debt barred by the Statute of Limitations. A general promise to pay is an acknowledgment of the sum demanded being due, and is frequently the evidence upon which a plaintiff recovers *an amount* from an incautious debtor that he might otherwise have successfully disputed. The trustee of a fund, or the holder of a sum of money to be applied to any specific purpose, acknowledges himself bound to apply it as the payer directs upon becoming the recipient of the money so paid. Acknowledgment of a deed before a judge, &c., by a married woman is necessary to the disposal of her property.

ACONITE.—See Wolf's Bane.

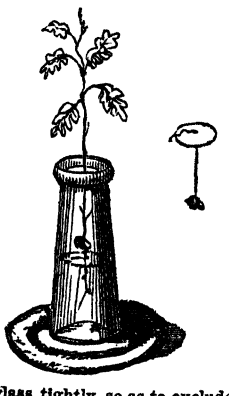
ACORN.—The well known fruit or nut

of the oak tree. They possess the property of fattening animals, especially hogs—bacon which has been thus fed acquiring a more than ordinary firmness, and an agreeable flavour. When hogs are fed upon acorns the quantity should be limited, and also mixed with a more laxative food to prevent constipation. While eating this food, the hogs should not be confined to their sty, but suffered to run at large; otherwise they will neither thrive nor grow fat. Acorns should be gathered about the middle of October, and in order to be preserved, should be thinly spread in an airy loft until thoroughly dried; after which they may be put in bags or barrels, and kept until the spring.

ACORN CAKES—Take ripe acorns, peel off their skins, and bruise them into a paste; let them lie in water for a night, and then press them dry—this will remove their astringent property; the mass should then be dried and reduced to a powder, and kept in a covered jar or keg. When wanted it may be kneaded into dough, and formed into thin cakes, which may be baked on the hob or in the embers. We do not recommend these cakes for habitual eating, but in times of great scarcity they might be occasionally partaken of as a substitute for wheaten bread.

ACORN COFFEE.—Peel the husks from sound ripe acorns, divide the kernels, dry them gradually, and roast them in a close vessel; while roasting they should be stirred continually, and small pieces of butter added from time to time. Care must be taken not to burn, or roast them too much. When roasted, they may be ground and used as ordinary coffee. We insert this receipt with the same reservation as the preceding.

ACORN TREES.—Very pretty ornaments for the parlour may be produced by setting acorns to germinate in hyacinth glasses, and placing them over the mantel-piece. Half fill with rain water a white glass, one of those usually employed for bulbous roots. Take a ripe acorn, which has been for a day or two steeped in rain water, or in damp moss or mould; with the aid of a piece of cork or cardboard suspend the acorn about a quarter of an inch above the water. Let the cork or cardboard fit the mouth of the glass tightly, so as to exclude the air. In a few weeks the acorns will begin to grow, and the interesting process of the germination of one of our noblest trees may be watched from time to time. When the leaves reach the cork another arrangement must be adopted: the acorn must be raised, the leaves be pushed through the cork or cardboard, and the young plant be suspended in the position shown in the engraving. Should the water become green or turbid, it must be changed; and if any fungi appear upon the acorn, they must be carefully brushed or wiped away. The oak plants thus produced will, with attention, flourish for two or three years—the most important points for their preservation being the changing of the water, and the cleansing of the root when fungous plants appear. When the acorns are first put to grow, nothing must be done to them except removing the cup; the shell of the acorn must be uninjured.



ACQUAINTANCE.—According to the rules of etiquette, a person is not so considered until the ceremony of introduction has been gone through. Every person, especially in London and other large cities and towns, where so many facilities offer for mixing with society, should be careful in forming acquaintances, as many unprincipled people, favoured by the opportunities which a large community offers, make the acquaintance of the inexperienced and unwary, for the purpose of forwarding some dishonest schemes of their own.

ACRE.—The statute acre contains 4840 square yards. It is divided into 4 roods, and each rood into 40 perches. An acre is composed of

4 roods, each rood 40 perches.
160 perches, 16½ft. each.
4840 square yards, 9ft. each.
43,560 square feet, 144 inches each,
174,240 squares of 6 inches each, 36 inches each.
6,272,640 inches, or squares of one inch each.

Land is measured by the *chain*, which is 22 yards long, so that ten *square* chains are one acre. Thus:—

22 chains
22
44
44
484
10
4840 produce.

121 Irish acres are equivalent to 196 English acres. 48 Scotch acres are equal to 61 English acres. The French acre is a square, whose side is 10 metres, and 1000 English acres are equivalent to 40.466 French acres.

ACTION, IN LAW.—The process by which a person seeks to recover, through the assistance of the law, that which he seems to be due to him. The injured person (termed the plaintiff) obtains a writ against his adversary (the defendant), who, upon being personally served with a copy thereof, undertakes to appear at the trial. The plaintiff then puts in a written statement or declaration, in which he sets forth the ground of his action, and claims to be restored to his right, or to be compensated for the injury sus-

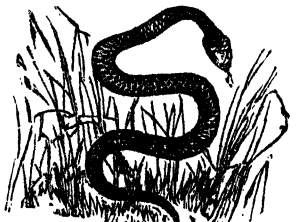
tained. The defendant then answers the declaration, by contradicting the allegations which it contains, asserting his own right, or justifying his pretentions. The material questions raised upon the pleadings are termed issues, upon which the verdict is given; and in accordance with this verdict the judgment is pronounced, which is carried into execution by the sheriff or other proper officer.

ACTION, IN SPEAKING.—See ELOCUTION.

AD CAPTANDUM ("Vulgum" understood).—Lat. *To catch the mob.* A speaker who appeals to popular feeling or private prejudice is said to use *ad captandum* arguments.

ADDENDUM—Plural ADDENDA.—Lat. for an addition or appendix to a work; generally speaking, anything *added.*

ADDER-BITE.—The remedy for this is to bathe the bitten part with a strong solution of ammonia, or chloride of lime, until pain and smarting are felt. But if the bite is of an aggravated description, it should first be well washed with water of ammonia, and afterwards thoroughly seared with lunar



caustic; and when there is reason to apprehend greater danger still, the surface of the wound, both external and internal, should be removed with the knife. The poison of venomous reptiles is introduced into the system by means of absorption, and when the poison has been once received, active measures should be resorted to, to prevent its communication to the system generally, and this may be effected by placing a ligature or bandage upon the limb immediately above the wound. It is of the greatest importance to know that the poison of adders is communicable *by absorption only;* if, therefore, the person who is bitten, or any one who happens to be present, should possess the presence of mind to immediately suck the wound, the poison, or at least a greater portion of it, might be withdrawn without incurring any dangerous consequences. In India a favourite remedy for the bite of reptiles is to drink a bottle of Madeira wine in two doses, about three minutes apart, the effect of which is to impede absorption.

ADDRESSES OF PERSONS OF RANK AND DISTINCTION:—

THE ROYAL FAMILY.

Superscription.—To the Queen's *(King's)* Most Excellent Majesty.

Commencement.—Most Gracious Sovereign: May it please your Majesty.

Conclusion.—I remain, with the profoundest veneration, Your Majesty's most faithful subject and dutiful servant.

PRINCES OF THE BLOOD ROYAL.

The Sons and Daughters, Brothers and Sisters, Uncles and Aunts of the Sovereign.

Sup.—To His *(Her)* Royal Highness the Prince of Wales *(Princess Alice).*

Comm.—Your Royal Highness.

Con.—I remain, with the greatest respect (I have the honour to be), your Royal Highness's most obedient servant.

Other branches of the Royal Family.

Sup.—To His Royal Highness the Duke of Cambridge.

Comm.—Your Royal Highness.

Con.—I remain with the greatest respect, your Royal Highness's most humble and obedient servant.

NOBILITY AND GENTRY.

Duke or Duchess.

Sup.—To his Grace the Duke *(Her Grace the Duchess)* of Northumberland.

> *To*
>
> *His Grace*
>
> *The Duke of Northumberland.*

Comm.—My Lord Duke *(Madam).*

Con.—I have the honour to be, My Lord Duke *(Madam),* Your Grace's most devoted and obedient servant.

Marquis or Marchioness.

Sup.—To the Most Noble the Marquis *(Marchioness)* of Westminster.

Comm.—My Lord Marquis *(Madam).*

Con.—I have the honour to be, My Lord Marquis, Your Lordship's *(Madam, Your Ladyship's)* most obedient and most humble servant.

Earl or Countess.

Sup.—To the Right Honourable the Earl *(Countess)* of Aberdeen.

Comm.—My Lord *(Madam).*

Con.—I have the honour to be, My Lord, Your Lordship's *(Madam, Your Ladyship's)* most obedient and very humble servant.

Viscount or Viscountess.

Sup.—To the Right Honourable Lord Viscount *(Lady Viscountess)* Palmerston.

Comm. and *Con.* same as Earl's.

Baron or Baroness.

Sup.—To the Right Honourable Lord *(Lady)* Macaulay.

Comm. and *Con.* same as Earls.

YOUNGER *Sons of Earls, and* ALL *the Sons of Viscounts and Barons.*

Sup.—To the Honourable Arthur Hamilton Gordon.

Comm.—Honoured Sir.

Con.—I have the honour to be, Honoured Sir, Your most obedient and very humble servant.

Baronet and His Wife.

Sup.—To Sir Richard Carr Glyn, Bart. *(Lady Glyn).*

Comm.—Sir *(Madam).*

Con.—I have the honour to be, Sir, Your most humble and obedient *(Madam, Your Ladyship's most obedient and very humble)* servant.

Knight and His Wife.

Sup.—To Sir Peter Laurie (Lady Laurie).

Comm. and *Con.* as preceding.

Esquire.

This title is now accorded to every man of position and respectability, but persons entitled to superior consideration are distinguished by "&c., &c., &c.," added to their superscription.

The wives of Gentlemen, when several of the same name are married, are distinguished by the Christian name of their husbands, as Mrs. *John* Harvey, Mrs. *William* Temple.

Privy Counsellors have the title of *Right Honourable*, which is prefixed to their name thus:

Sup.—To the Right Honourable Benjamin Disraeli, M.P.

Comm.—Sir.

Con.—I have the honour to be, Sir, Your most obedient very humble servant.

THE CLERGY.

Archbishop.

Sup.—To His Grace the Archbishop of Canterbury.

Comm.—Your Grace.

Con.—I remain, Your Grace's most devoted obedient servant.

Bishop.

Sup.—To the Right Reverend the Bishop of Winchester.

Comm.—Right Reverend Sir.

Con.—I remain, Right Reverend Sir, Your most obedient humble servant.

Doctor of Divinity.

Sup.—To the Reverend James William, or To the Reverend Dr. Vivian, D.D.

Comm.—Reverend Sir.

Con.—I have the honour to be, Reverend Sir, Your most obedient servant.

Dean.

Sup.—To the Very Reverend The Dean of St. Paul's; or, To the Very Reverend Henry Milman, D.D., Dean of St. Paul's.

Comm.—Mr. Dean; or, Reverend Sir.

Con.—I have the honour to be, Mr. Dean, or Reverend Sir, Your most obedient servant.

Archdeacon.

Sup.—To the Venerable Archdeacon Hale.

Comm.—Reverend Sir.

Con.—I have the honour to remain, Reverend Sir, Your most obedient servant.

Clergymen.

Sup.—To the Reverend Thomas Dale.

Comm. and *Con.* same as the preceding.

*** When a Bishop or other Clergyman possess the title of *Right Honourable* and *Honourable*, it is prefixed to his Clerical title.

Baronets and Knights have their clerical title placed first.

Sup.—To the Right Honourable and Right Reverend the Lord Bishop of Bath and Wells.

Sup.—To the Right Honourable and Reverend the Lord Bishop of Carlisle.

Sup.—To the Right Honourable and Reverend Lord Wriothesley Russell, M.A.

Sup.—To the Honourable and Reverend Baptist Wriothesley Noel, M.A.

Sup.—To the Reverend Sir Henry R. Dukinfield, Bart., M.A.

No clerical dignitary confers title or rank on the wife of the dignitary, who is simply addressed *Mistress*, unless possessing a title in her own right, or through her husband, independently of his clerical rank.

JUDGES, &c.

Lord Chancellor.

Sup.—To the Right Honourable Robert Monsey Rolfe, Lord Cranworth, Lord High Chancellor of Great Britain.

Rolls.

Sup.—To the Right Honourable the Master of the Rolls.

Chief Justice.

Sup.—To the Right Honourable the Lord Chief Justice; or, the Right Honourable Lord Campbell, Lord Chief Justice of the Court of Queen's Bench.

To

The Rt. Hon. Lord Campbell,

Lord Chief Justice

of the Court of Queen's Bench.

The Chief Justice of the Court of Common Pleas, and the Chief Baron of the Exchequer, are addressed in the same form, and are all styled *My Lord.*

Puisne Judges.

The Puisne Judges, and the Barons of the Exchequer, are Knights; but the title of Judge being superior, they should be addressed thus:

Sup.—To the Honourable Mr. Justice Williams.

Sup.—To the Honourable Baron Bramwell.

Serjeant.

Sup.—To John Humphreys Parry, Esquire, Serjeant-at-Law.

Naval Officers.

Admirals have the rank of their flag added to their own name and title thus:

Sup.—To the Honourable Sir Richard Saunders Dundas, Admiral of the White.

If untitled, they are simply styled *Sir*.

Commodores are addressed in the same way as admirals.

Captains are addressed either to "Captain William Smith, R.N.;" or if on service, "To William Smith, Esquire, Commander of H.M.S."

Lieutenants are addressed in the same way.

Military Officers.

All officers in the army above Lieutenants, Cornets, and Ensigns, have their military rank prefixed to their name and title.

Sup.—To *General* Sir De Lacy Evans.

Subalterns are addressed as *Esquire*, with the regiment to which they belong, if on service.

MUNICIPAL OFFICERS.

Lord Mayor.

Sup.—To the Right Honourable the Lord Mayor *(The Lady Mayoress)* of London, York, Dublin; The Lord Provost *(The Lady Provost)* of Edinburgh.

Comm.—My Lord *(Madam)*.

Con.—I have the honour to be, my Lord, Your Lordship's *(Madam, Your Ladyship's)* most obedient humble servant.

The Mayors of all Corporations, with the Sheriffs, Aldermen, and Recorder of London, are styled *Right Worshipful*; and the Aldermen and Recorder of other Corporations, as well as Justices of the Peace, *Worshipful*.

AMBASSADORS.

Ambassadors have *Excellency* prefixed to their other titles, and their accredited rank added.

Sup.—To His Excellency Count Colloredo, Ambassador Extraordinary and Plenipotentiary from H.I.M. (His Imperial Majesty) The Emperor of Austria.

Sup.—To His Excellency The Right Honourable Viscount Stratford de Redcliffe, P.C., G.C.B., Her Britannic Majesty's Ambassador Extraordinary and Plenipotentiary to the Sublime Ottoman Porte.

> *To*
>
> *His Excellency*
>
> *The Rt. Hon. Viscount Stratford de Redcliffe, P.C., G.C.B., H.B.M. Ambassador Extraordinary and Plenipotentiary*
>
> *To the Sublime Ottoman Porte.*

Comm.—My Lord.

Con.—I have the honour to be, My Lord, Your Excellency's Most humble obedient servant.

The wives of Ambassadors have also Excellency added to their other titles.

Envoys and Chargés d'Affaires are generally styled Excellenas, but by courtesy only.

Consuls have only their accredited rank added to their names or titles, if they have any.

ADDRESSES TO GOVERNMENT DEPARTMENTS, AND PUBLIC COMPANIES:—

Queen in Council.

All applications to the Queen in Council, the Houses of Lords and Commons, &c., are by *Petition*, as follows, varying only the title:

To the Queen's Most Excellent Majesty in Council,

The humble Petition of M. N., &c., showeth

That your Petitioner . . . . .

. . . . . .

Wherefore Your Petitioner humbly prays that Your Majesty will be graciously pleased to . . . . . .

And Your Petitioner, as in duty bound, will ever pray.

Lords and Commons.

To the Right Honourable the Lords Spiritual and Temporal (To the Honourable the Commons) of the United Kingdom of Great Britain and Ireland, in Parliament assembled,

The humble Petition, &c.

And your Petitioner [or Petitioners] will ever pray, &c.

Treasury and Admiralty.

Sup.—To the Lords Commissioners of Her Majesty's Treasury.

Sup.—To the Lords Commissioners of the Admiralty.

Comm.—My Lords.

Con.—I have the honour to be, my Lords.

Navy Office and Ordnance.

Sup.—To the Principal Officers and Commissioners of Her Majesty's Navy.

Sup.—To the Principal Officers of Her Majesty's Ordnance.

Comm.—Gentlemen.

Con.—I have the honour to be, Gentlemen, &c.

Victualling and Auditing Offices.

Sup.—To the Commissioners for Victualling Her Majesty's Navy.

Sup.—To the Commissioners for Auditing the Public Accounts.

Comm. and *Con.* same as preceding.

Custom House.

Sup.—To the Commissioners of Her Majesty's Customs.

Excise Office.

Sup.—To the Commissioners of Excise.

Tax Office.

Sup.—To the Commissioners of Taxes.

Stamp Office.

Sup.—To the Commissioners of Stamps.

Bank of England.

Sup.—To the Governor, Deputy-Governor, and Court of Directors of the Bank of England.

East India House.

Sup.—To the Court of Directors of the United Company of Merchants of England trading to the East Indies.

Com. and *Con.* of the above same as Navy Office and Ordnance.

ADDRESSES OF LETTERS.—As this branch of epistolary correspondence is one of the most important, we subjoin a few hints which letter writers generally would do well to attend to.

When writing several letters, place each in its envelope, and address it as soon as it is written. Otherwise awkward mistakes may occur, your correspondents receiving letters not intended for them. If there be a town of the same name as that to which you are writing existing in another county, specify the county which you mean on the address. Thus, Richmond, *Yorkshire.*

When the person to whom you are writing is visiting or residing at the house of another person, it is considered vulgar to put "at Mr. So-and-So's," but simply "Mr. So-and-So's," *at* being understood.

It is more respectful to write the word "Esquire" in full. The —— substituted for initials is vulgar, and pardonable only in extreme cases; if the Christian name or initials of your correspondent do not occur to you at the moment, endeavour to ascertain them by inquiry.

When addressing a gentleman with the prefix "Mr.," the Christian name or initials should always follow, being more polite, as well as avoiding confusion where persons of the same surname may reside in one house.

In addressing a letter to two or more unmarried ladies, write "The Misses Johnson," and not "The *Miss Johnsons;*" and, lastly, always write an address clearly and legibly, so that it may not be delayed in delivery, nor be missent.

ADDRESS, PERSONAL.—The advantage of this qualification is constantly making itself apparent in our daily intercourse with the world, both social and commercial. It is, in fact, an element necessary to the attainment of success in every grade of profession, and in every branch of trade. From the highest to the lowest, from the richest to the poorest, a "good address" not only tends to advancement and popularity, but by bespeaking the goodwill of others also contributes to happiness. Every one, therefore, should endeavour to attain this advantage, more especially as it is easily acquired, and once known can never be forgotten. But the question arises—what is good address? The answer to this inquiry is subject to modifications arising out of the various tastes and opinions of individuals. To a certain extent good address consists in adapting ourselves to the habits and manners of those with whom we are required to associate, and the business we have to pursue. Excessive politeness would be felt to be as repulsive by one class of persons, as an extreme familiarity by another class. Were a commercial traveller to call upon a tradesman, and in endeavouring to transact business affect the manners and tone of a West-end man of fashion, the tradesman would probably be so disgusted that no effort of persuasion would induce him to transact business with a person against whose absurd foppery he had conceived a deep dislike. On the other hand, were a traveller to assume an undue freedom, and under the guise of bluntness or candour make abrupt and satirical remarks, he would equally defeat his purpose. Good address, especially in its relation to our prospects in life, consists in a careful observance of the manners and the tastes of others, and in such an adaptation of our own conduct thereto, as shall excite favourable impressions, and beget for us the confidence and respect of those with whom we mingle. It should ever be borne in mind, that truthfulness, frankness, and modesty are among the chief elements of good address, which is but the manner of exhibiting our principles, opinions, and objects to others. Practical men of the present day are too discerning to be long deceived by hypocrisy, and too acute in their judgments not to discover rectitude of principle where it really exists.—See ETIQUETTE.

ADHESIVE PLASTER.—See PLASTER.

AD INFINITUM.—Lat. *Without end.* "He had answers to his advertisement *ad infinitum.*"

AD INTERIM.—Lat. *In the meanwhile.* "The Lord Mayor not having arrived, the chair was taken by Dr. Smith *ad interim.*"

ADJECTIVE is a part of speech in grammar used to denote the quality or condition of the noun that follows it. Thus we see in the accompanying cut a man, a girl, a

boy, and balls. So that in order to indicate them more distinctly, we observe that the man is *old*, the girl is *young*, the boy is *little*, one ball is *black*, and the other ball is *white;* the words in italics are adjectives, because they qualify the nouns man, girl, boy, balls. They may be used along with the nouns either in the way given or as follows:—An old man, a young woman, a little boy, a black ball, a white ball.

The name of any colour is an adjective and not a noun, as it does not express the thing itself, but merely the colour of it.—*Miss Corner's Grammar.*

The word *adjective*, in its full, literal sense, means *something added to something else.* There are several turkeys in the yard, some black, some white, some speckled; and, then, there are large ones and small ones of all the colours. I want you to go and catch a *turkey;* but I also want you to catch a *white* turkey, and not only a white turkey but a *large* turkey. Therefore I add, or *put to* the noun the words white and large, which,

therefore, are called *adjectives.*—*Cobbett's Grammar.*

The misuse of the adjective is one of the most prevalent errors in speaking. People frequently say what *beautiful* butter; what a *nice* view. Such errors need only to be pointed out to be at once understood.

ADJOURNMENT, the putting off to another hour or day. A meeting which is convened to discuss a certain question is *adjourned* to a future day in order to give an opportunity for further discussion if it be needed. An adjournment is sometimes effected by stratagem. If, for instance, a public meeting is held in order to promote some measure which has both partisans and antagonists, any person unfavourable to the motion may interrupt the proceedings by moving "that this meeting do now adjourn;" this proposal, if duly seconded, is put to the meeting, and if carried by a show of hands the meeting is virtually broken up, and adjourned accordingly. The adjournment of Parliament differs from *prorogation.* The former is effected by the House itself, the latter is the act of Royal authority.

AD LIBITUM.—Lat. *At pleasure.* A banquet was served in the hall, and the company helped themselves *ad libitum.*" This is also a term in music, showing that the passage indicated may be played at the discretion of the performer.

ADMINISTRATION, LETTERS OF.—When a person having property dies without making a will, the Ecclesiastical Court, upon application, will grant letters of administration, by which the applicant is empowered to take care of and distribute the estate of the deceased person according to the form prescribed by law. This power is usually granted to the widow if there be one, and if not, to the next of kin; and from persons that are equally near in degree the "Ordinary" may select which he pleases. The scale of distribution of the estate is one-third part to the widow, and the remainder in equal proportion among the children; or, if they are dead, to their lineal descendants. If there be none of these, the widow takes one half and the remainder goes to the next of kin in equal degree; if there be no widow, then the whole estate is divided among the children, or their representatives. The order of nearness of kin, in respect to this law, is thus arranged:—Children, parents, brothers, grandfathers, uncles, or nephews (and the females of each class respectively), and lastly cousins. Letters of administration are also granted where a testator makes a will, but names no executor, the distribution in such case being governed by the provisions of the will.—See PROBATE.

ADOPTION, IN LAW, signifies the admission of a stranger to the rights and privileges of a son or daughter. In these cases the adopted child frequently assumes the family arms and name of the self-styled parent, which are accorded to the bearer by "letters patent."

AD REFERENDUM.—Lat. *To be referred,* or to await further consideration.

ADULTERATION.—This species of dishonesty is best guarded against by avoiding dealing at those shops where the low price of the articles sold is a sufficient evidence of their spuriousness. Should a person, however, purchase an article which he has reason to believe by its taste and appearance to be grossly adulterated, he would be conferring a benefit on society, as well as protecting himself, by having the article in question analyzed by a respectable chemist; and if the result confirms his suspicions, to give information to the Board of Excise, who will investigate the matter, and fine the nefarious shopkeeper accordingly. For ascertaining the various methods of detecting adulteration—see BEER, BREAD, CHICORY, COFFEE, SPIRITS, TEA, WINE, &c., &c.

AD VALOREM.—Lat. *According to the value.* Certain articles imported through the Custom-house instead of being estimated by weight or measure pay an *ad valorem* duty. Almost all stamp duties are *ad valorem* in conveyances or leases upon the amounts of the purchase-money or rent reserved.

ADVANCE, IN COMMERCE, implies money paid on goods consigned or deposited. Sometimes a sum equal to half or two-thirds of the value of the merchandise is advanced, and is frequently forwarded upon receipt of the invoice. In some money transactions also a stipulation is made "for payment in advance;" in such cases the greatest precaution should be taken in order to secure subsequently that which has been paid for previously.

ADVERB is a part of speech which signifies a word added to, or used together with, a verb, an adjective, or another adverb, for the purpose of *qualifying* it. With a verb: She rides *well.* With an adjective: She is *very* nervous. With another adverb: She reads *rather* badly. Adverbs may be known by their answering to the questions How? When? Where?

The words that are used to tell us *when* as well as *how* a thing is done are adverbs; for instance, we may say that we dine *early* or *late;* that we mean to go into the country *soon.*—*Miss Corner's Grammar.*

But there are many adverbs which do not express the manner of actions, movements, or states of being, and which are *not* added to verbs. For instance: "*When* you sow small seeds make the earth *very* fine, and if it have *of late* been dry weather, take care to press the earth *extremely* hard upon the seeds." Here are four adverbs, but only the last of the four expresses anything connected with a verb. This shows that the name of this class of words does not fully convey to our minds a description of their use. However, with this name you must be content; but you must bear in mind that there are adverbs of *time,* of *place,* and of *degree,* as well as of manner; and that their business is to express, or describe, some circumstances in addition to all that is expressed by the nouns, adjectives, and verbs. In the above sentence, for example, the words *when, very, of late,* and *extremely,* add greatly to the precept, which, without them, would loose much of its force.—*Cobbett's Grammar.*

ADVERTISEMENT.—This popular mode of intercommunication, by which the various sections of the public correspond with each other, has made such rapid strides of late years as to have almost become a social necessity. It is needless here to enter fully into the advantages of advertising; for it is sufficiently obvious, that with our accelerated means of communication both at home and abroad, no better medium exists for making our wants known than advertisements in the more influential organs of the press.

As an illustration of the truth of this assertion we have only to mention a few facts in connection with *The Times*. This journal has a daily circulation of about 50,000 copies; each copy is probably seen on an average by 10 persons, giving a total number of readers of half-a-million. The area of its circulation is of unlimited extent: it finds its way into the most remote part of England, it is dispatched to our Colonies, travels over the whole of Europe, and is seen in nearly every portion of the civilized world. A person advertising in this journal, therefore, secures for a few shillings an audience more numerous and influential than he could possibly obtain by any individual effort of his own.

Besides *The Times*, there are many other metropolitan journals, both daily and weekly, conducted generally with great ability, and enjoying varied success.

The system of advertising is not confined to publicity through the columns of newspapers; bills, circulars, trade lists, and other forms of advertisement, being generally adopted.

That great benefits are derived from advertising in the public papers cannot be doubted. In some instances large fortunes have been made by a lavish expenditure in advertisements; but far more frequently important sums have been thrown away, and advertisers brought to ruin, by their want of knowledge how to make a proper selection of papers, and how to interest the public by their announcements.

The success of certain quack medicines, which are extensively purchased by the public, notwithstanding the frequent exposure of them in medical and chemical journals, and by parliamentary reports, is commonly instanced as a proof of the fortunate result of extensive advertising. To some extent this is true; but it must be remembered that thousands of adventurers have, from time to time, started favourite nostrums, and spent considerable sums of money thereon, without being able to find success. To what, then, do these successful quack medicines owe their popularity? *First*, to the lamentable ignorance of large masses of the people upon the subject of health and the rational treatment of disease. *Second*, to the great number of cunningly-devised advertisements brought to bear upon the ignorance of those masses. *Third*, to the general expensiveness of professional advice and proper medicines. *Fourth*, to the professions of the quacks, that their medicines cure nearly *all* kinds of disorders, thereby obtaining the largest possible field for the sale of them; and. *Fifth*, because the medicines themselves cost their proprietors a mere trifle, and therefore nearly the whole amount received for them may be applied to cover the costs of advertising.

Here, then, are five distinct and peculiar elements of success, which explain why the advertising of quack medicines has produced, in certain instances, such profitable results. But it cannot be inferred therefrom, that in other matters an equal amount of advertising would be as successful, because the same elements tributary to the desired result may not exist.

The Times is an excellent medium for advertisements of standard classes, that is, for those advertisements which, from their constant appearance in that paper, have become recognized features in its columns, and which are therefore regularly consulted by those sections of the general public who are interested in them. These consist of amusements, books, and music, businesses for disposal, educational establishments, houses and lands to be sold, law notices, lost property, missing friends, money to lend or money wanted, persons wanting employment, persons wanting assistants or servants, public meetings, railway arrangements, sailings of ships, and sales by auction. For such advertisements as the foregoing the *Times* is undoubtedly the *best* medium; but for advertisements not belonging to these classes, any other medium is better than the *Times*, because the large amount of advertising matter, of the standard class, completely swamps the few advertisements of miscellaneous interests, and causes them to be overlooked. For such announcements any paper having few advertisements, which must, from their proximity to the columns of news, fall under the eye of the reader, is to be preferred.

Much depends upon the form of an advertisement. Such charlatanic headings as "Wonders will never cease!" "Read, mark, learn, and inwardly digest!" "Alarming sacrifices — giving away!" &c., generally offend the reader, and defeat the purposes of the advertiser. While announcements in the form of a "Proclamation!" or puffs with the words "Murder!" "Reward!" "One thousand pounds!" &c., thrown out in large letters to attract the eye and deceive the sense, only create disgust, and do injury to the interests they are designed to serve. As a proof of this, no instance is known of success being achieved by such means.

Advertisements, to catch the eye and create a favourable impression, should be brief, explicit, and truthful. A person commencing advertising will find it far more beneficial to carefully decide, before commencing, upon a fitting or "telling" form of advertisement, and to keep to that form for a long period. Every variation of the form estranges the mind of the reader from the recollection of what he has previously seen, and does away with that *cumulative influence* of a series of advertisements, of which experienced advertisers know the value.

No person should venture upon speculative

advertising who needs an immediate return for his outlay. The productiveness of advertisements is a thing of growth, to be developed and expanded by constant attention and continual investment, until a favourable impression is produced. These latter remarks do not, of course, apply to matters of single and temporary need, such as "Houses to let," or "Situations wanted."

The want of employment is one of the great "daily wants" of a large proportion of society, to which the requirement of able and worthy assistance on the part of shopkeepers, merchants, and others, is only second. We will therefore point out a few of the best mediums at present established for bringing persons of particular classes and professions into communication with each other.

The Times, for employment of every description, especially clerks in mercantile houses, town and country travellers, secretaries to companies, and domestic servants of all descriptions.

The Morning Advertiser, for waiters, barmen, potmen, and all relating to taverns, &c.

The Athenæum, for literary, artistic, and educational employment.

Bell's Life in London, for gamekeepers, grooms, jockies, huntsmen, and all relating to country sports and rural occupations.

The Builder, for assistant engineers, architects, builders, and mechanics in general.

The Ecclesiastical Gazette, for tutors, schoolmasters, teachers, governesses, and domestic servants in institutions and families belonging to the Church of England.

The Era, for every description of employment connected with the stage, the circus, exhibitions, and amusements generally.

The Field, for gamekeepers, grooms, jockies, huntsmen, farm bailiffs, gardeners, &c.

The Gardener's Chronicle, for farm bailiffs, gardeners, and domestic situations in country places.

The Guardian, for situations of all kinds in families belonging to the Church of England.

The Lancet, for medical and chemical assistants, appointments to hospitals, poor law unions, and other public offices.

The Law Times, for clerks and assistants to barristers, attornies, conveyancers, auctioneers, engrossers, &c.

The Mining Journal, for mining engineers, managers, and secretaries of mining companies, clerks, &c.

The Nonconformist, for employment in the families of dissenters generally.

The Patriot, for employment in the families of Independents, Baptists, and other dissenters.

The Railway Journal, for appointments upon railways and other public works.

The Record, for situations in Church-of-England families, and for appointments as schoolmasters and mistresses in the national and infant schools of the Establishment.

The Watchman, for employment in Wesleyan families, schools, &c.

There are various newspapers throughout the kingdom whose importance and influence in their localities is relatively as great as that of those metropolitan journals which we have enumerated.

A single advertisement will frequently bring assistance or employment to those who need it, and the investment of a few shillings for such an object is a wise economy.—See EMPLOYMENT.

ADVERTISEMENTS, FRAUDULENT.—It is a well known fact that there exist certain adventurers who seek to entrap the unwary by inserting a class of announcements in the newspapers of a specious and plausible character, the terms of which advertisements, as a matter of course, never are and never were intended to be, carried out. One of the most common forms of conducting these dishonest proceedings is for the advertiser to offer to teach some accomplishment (generally light and elegant) by which a handsome income may be realized, on consideration of receiving a certain number of postage stamps. The knowledge imparted for the stamps so sent is almost invariably of the most worthless description: sometimes it takes the form of a hackneyed receipt for preparing some article that is seldom or ever in request. At another time it consists of instructions in some art that offers little or no employment. And one of these schemers has been known to have the assurance to transmit to his correspondent, as a means of making a handsome income, the process by which a certain quantity of potatoes might be bought at the wholesale price, baked, and retailed to the public at so much per head. It is unnecessary to single out individual instances of fraud committed in this direction; suffice it to say, that where extraordinary advantages are offered in return for a totally inadequate consideration, there is the greatest reason to suspect the good faith of the advertiser.

ADVICE, IN COMMERCE, means *information by letter*. For instance, a person in the country wishing to remit a sum of money to a person in London through the medium of a third party, writes to the person who is to pay the money, authorizing him to do so, and also writes to the person who is to receive the amount, instructing him to that effect. When bills are drawn for payment or acceptance upon persons residing at a distance, they should always be preceded by a letter, with all particulars of the bills, date, amount, to whom payable, &c., this being necessary, not only for convenience sake, but to guard against forgeries.

ADVICE, MEDICAL, is given daily without charge by a number of London Physicians to such persons as are supposed to be unable to pay the customary fee. The same privilege is also accorded by the various hospitals, the medical practitioners at which, in addition to giving advice, perform operations, dress wounds, and dispense medicines gratuitously.

ADVOCATE, IN LAW, a person legally qualified to plead the cause of another. The law, like every other profession, boasts of certain members, who from their abilities stand pre-eminent above their fellows. The manner in which a case is conducted by an advocate conduces materially to its failure or success; when a person goes to law, therefore, he should make a point of se-

curing the services of one who is not only possessed of forensic talent, but who has also a practical acquaintance with that branch of jurisprudence to which the case relates. Advocates' fees are not governed by any tariff, but vary from one guinea and upwards, according to circumstances.

ÆOLIAN HARP.—A well known instrument which produces a pleasing combination of sounds, by the action of the wind. This instrument is of the simplest construction, consisting merely of a number of catgut or wire strings, stretched in parallel lines over a box of thin deal, with sounding holes cut in the top. The strings being tuned in unison, the instrument is then placed in a current of air, and harmony is produced.

ÆRATED WATERS.—See LEMONADE, SODA WATER, &c.

ÆTHER, a volatile liquor, obtained by distillation from a mixture of alcohol and a concentrated acid. It is used for a variety of medical purposes, both externally and internally. Burns and scalds are rendered cool and less inflammatory, by a piece of linen rag dipped in æther being applied to them. It relieves headache when rubbed upon the part where the pain is situated. Its application to the face in cases of toothache considerably alleviates the pain; and in an attack of spasms, relief is almost always afforded by doses of from fifteen to twenty drops being administered in a wine glassful of water at short intervals. As an agent for producing insensibility by means of inhalation, æther was formerly in great repute; but in the present day when this effect is desired to be produced, chloroform, a still subtler spirit, is generally used. As æther rapidly evaporates under ordinary circumstances, this waste should be prevented by keeping the bottle that contains it in a cool place, and by having stoppers which fit the bottle exactly.

Caution.—Æther is a highly inflammable spirit, and when mixed with common air is liable to cause an explosion; when any escape of æther is apprehended, therefore, no lighted candle should be suffered to approach.

AFFIANCE implies in law a mutual pledge entered into between a man and a woman for the purpose of binding themselves to the performance of the marriage contract.—See BREACH OF PROMISE OF MARRIAGE.

AFFIDAVIT, a statement of facts in writing, made on oath. Affidavits must contain, with sufficient certainty that perjury may be assigned thereon, the name, residence, and occupation of the deponent, who signs his name at the foot. He is then asked to swear to his name and handwriting, and also to the truth of the contents of the paper. Stealing an affidavit is transportation for seven years.

AFFILIATION is an order made by justices in petty sessions upon a putative father for the maintenance of an illegitimate child by an unmarried woman. It may be made before the birth of the child upon the application of the mother, but it is necessary that her evidence be corroborated in some material particular by other testimony. The payment may be to the extent of 10s. for the midwife, 5s. per week for the first six weeks after the birth of such child, and not exceeding 2s. 6d. per week afterwards.—See BASTARDY.

AFFINITY signifies in law blood-relationship by marriage. Persons coming within this degree of relationship are prohibited from marrying each other, and the offspring of any such marriages are illegitimate. The degrees of affinity are computed in the same manner as relationship by blood; that is to say, a man may not marry his sister by blood, neither may he marry his sister-in-law; a woman cannot wed her nephew by blood, neither can she her nephew by marriage. A common notion is prevalent with respect to affinity, that first cousins may marry, but that second may not—this is erroneous, as marriage between *all degrees of cousins* is legal. There is one prohibited degree of affinity, to dissolve which strenuous efforts have been and still are being made; namely, marriage with a deceased wife's sister: all such marriages *in England* are illegal, except they were made previously to the 1st of September, 1835, up to which time they were declared legal by Act of Parliament. In contravention of this Act, however, marriages with deceased wife's sisters are constantly being solemnized in various territories that are not subject to the English laws. Such marriages hold good in the countries *where they are made*, but not *in England*. The marriage, however, of subjects of any State, according to the laws thereof, holds good in any other State.

AFFIRMATION.—A simple form of declaration which Quakers and other sects are permitted to use instead of an oath, and which is regarded equally as binding on their conscience. When a person claims the privilege of affirmation he must be prepared to show a good and sufficient reason for claiming this immunity. A false affirmation, like a false oath, is perjury, and is visited with the same penalties.

A FORTIORI.—Lat. *From stronger reasoning.* If an ounce of arsenic will kill a man, *a fortiori* two ounces must be certain to do it.

AGE is a term having a relative signification to certain periods of existence, extending from birth to death. Human life is marked at certain stages by features of a distinctive character in the animal economy:—

The teeth are renewed at the 7th year	7
Puberty arrives at twice seven	14
Full stature at three times seven	21
The vigour of growth at four times seven	28
The greatest vigour of body and mind at five times seven	35
The commencement of decay at six times seven	42
General decay and decrease of energy at seven times seven	49
Old age at eight times seven	56
And the grand climacteric at nine times seven	63

AGE, IN LAW, bears reference to such periods in life as qualify persons to become responsible for certain acts and qualified for

certain offices. At twelve years of age a male person may be called upon to take an oath of allegiance to the Sovereign; at fourteen he may consent to marriage, and choose his guardians; and at twenty-one he may alien his lands, goods, and chattels. A female person is at nine years of age, if married, entitled to her dower; at twelve she may consent to marriage; at fourteen she may choose a guardian; and at twenty-one alien her property. The law recognizes a person of the age of fourteen as competent to become a witness. But if capable of understanding an oath, although of tenderer years, may be admitted as evidence. No person can serve as a member of Parliament until he is twenty-one years of age. No man can be ordained priest till twenty-four, nor be a bishop till thirty. A man cannot be sworn on a jury or inquest until twenty-one; nor can a man be admitted to practise as an attorney, proctor, or notary public until twenty-one.—See INFANTS.

AGE, IN RELATION TO THE ADMINISTRATION OF MEDICINES.—Taking a dose of *one drachm* as proper for a person aged twenty-one, the proportionate doses, calculated upon that basis, will be as follows:—

7 weeks . .	1-15th,	equal to	4 grains.
7 months . .	1-12th	„	5 grains.
14 months . .	1-8th	„	8 grains.
28 months . .	1-5th	„	12 grains.
3½ years . .	1-4th	„	15 grains.
5 years . .	1-3rd	„	1 scruple.
7 years . .	one-half	„	½ a drachm.
14 years . .	2-3rds	„	2 scruples.
21 years . .		„	1 drachm.
63	11-12ths	„	55 grains.
77	5-6ths	„	50 grains.

AGENT, in its general signification, implies a person employed to transact any description of business for another person. An agent may be constituted by direct writing, by word of mouth, or his authority may be implied from his situation. In some cases the former is necessary, and in others the latter is deemed sufficient. The powers of an agent may be derived from a simple letter containing general instructions, or specifying some particular operation. An act performed on behalf of another, although not authorized, constitutes an agency, if the act is not repudiated by the principal. An agent in the general case is entitled to remuneration for his services, and even where no express contract has been entered into, a claim made for commission frequently holds good, as being "according to custom and usage." Generally speaking, payment made to an agent is as if paid to the principal; also contracts undertaken by an agent are imperative and binding on the principal.

AGREEMENT.—A contract in writing between two or more parties, of which mutuality is the basis. All agreements where the subject matter exceeds the value of £20, are required to be stamped, and cannot be received as evidence upon a trial without. Agreements, however, that have not been stamped at the time they were drawn up, may be stamped within fourteen days after date without a penalty, or at any time, upon payment of £10 and the duty.

An agreement that has been obtained by fraud, misrepresentation, or intimidation, may be set aside on due proof thereof.

For the nonfulfilment of an agreement, there are two remedies provided, one by law to seek pecuniary compensation for the breach of the agreement, and the other in equity to compel the defaulting party to perform his part of the agreement according to promise.

An agreement should invariably be drawn up by a solicitor, the expense being too inconsiderable to be worth notice in comparison with the feeling of security; however, printed forms of agreement, with blanks left to be filled, may be purchased at any law stationer's in the locality of the inns of court. The following is the cost of stamp for agreements:—For an amount of £20 and upwards, and less than 2160 words, 2s. 6d.; if 2160 or upwards, then an additional 2s. 6d. for every 1080 words after the first 1080.

AGREEMENT BETWEEN MASTER AND SERVANT.—See MASTER AND SERVANT.

AGRICULTURE.—See HARROWING, MANURES, PLOUGHING, REAPING, SOWING.

AGUE mostly arises from a poisonous state of the atmosphere, and is especially prevalent on damp and marshy soils. The first step in the treatment of a person suffering from ague should be to remove him from the influence of the noxious air; and if this cannot be effected, he should be placed as far away from the soil as possible, in one of the top rooms of the house. Several remedies are made use of for this complaint, one of the most popular of which is the *cobweb* produced by the black spider, which inhabits cellars, barns, and stables. This is administered in doses of ten grains, twice or thrice before the expected time of each paroxysm, and continued for three or four days. Although this singular means of effecting a remedy may excite incredulity, a great many accredited cases are on record, and it is also supported by high medical authority. Another specific is *arsenical solution*, four drops of which, increased to six or eight twice or thrice a day, will prove of the greatest benefit.

Persons who have once been afflicted with ague are exceeding liable to be again attacked by it; they should therefore avoid exposure to damp or night air as much as possible, and in spring and autumn should put themselves under a course of sulphate of quinine.

AIR is composed of oxygen, nitrogen, and carbonic acid gases, in the proportion of oxygen 20 volumes, nitrogen 79 volumes, and carbonic acid gas one volume. The air when once breathed parts with one-sixth part of its oxygen; were it therefore to be breathed six times successively it would be deprived of all its oxygen; the consequence of which would be that the blood would be divested of its vitality, the organs have their action suspended, and death would ensue. Air, vitiated by the different processes of respiration, combustion, and putrefaction, or which is suffered to stagnate, becomes prejudicial to the human frame; hence large

cities, public assemblies, hospitals, burying-grounds, &c., are injurious to health, and often productive of contagious disorders.

The quality of air is greatly influenced by local causes; sea air is well known to be beneficial and invigorating, which is attributable to its constant agitation by the winds and tides, and also to the absence of many deteriorating causes to which land is subject, such as the respiration of animals and the putrefaction of animal and vegetable substances. Lofty and exposed aspects have a bracing effect upon the system, while low situations, if on a dry soil, are more congenial to less hardy constitutions. In many instances, however, the surrounding air may be rendered pure or impure by circumstances over which we have immediate control. If, for instance, we suffer filth and refuse to accumulate near our dwellings, a vitiated atmosphere will be the inevitable consequence of the exhalations arising from these nuisances; or if an impure state of the air exist without any such aggravating causes, the remedy is within our power by the appliance of such means as art and science have placed within our reach.—See also DRAINAGE, EXERCISE, VENTILATION, &c.

AIR, CHANGE OF, is efficacious in many diseases, amongst which are pulmonary complaints, asthma, affections of the throat and windpipe, dyspepsia, and hypochondriasis, chronic rheumatism, scrofula, liver complaints, and the state of convalescence from fevers.

Pulmonary complaints are benefited by removal from a colder to a warmer climate; and Madeira, from the equality of its temperature, is universally esteemed as the best adapted for consumptive patients. In dyspepsia and hypochondriasis, the suitability of climate depends on the habit and constitution of the patient. If there be a relaxation and debility, a dry and bracing air is needed; but if the tendency of the system be to fever and inflammatory action, the soft and humid climates are preferable. In cases of chronic rheumatism, mild climates are generally found suitable, such as Bath in England, and Rome or Nice on the Continent. In scrofula a pure, bracing air is required, such as the watering places on the north-west coast. In liver complaints, and convalescence from fevers, change of air generally, guided by circumstances, is beneficial. The benefits derivable from change of air are not applicable alone to invalids and convalescents, but will yield an equal source of enjoyment and relaxation to all those whose avocations are pursued daily in busy cities and towns, and whose systems become exhausted by the constant and unremitting exertions which their minds and bodies undergo.

AIR-CUSHION.—This useful appliance is made of a textile fabric, rendered air-tight by a coating of the solution of India-rubber. At one corner is a mouth-piece fitted with a screw; when the cushion is required, by unloosing the screw, and blowing into the mouth-piece, the cushion becomes expanded, the screw is then tightened, and the air remains until the cushion is no further required, when the air is freed by turning the screw in a contrary direction. By this means railway travellers by the second and third classes, and others who are likely to be subject to a hard seat for some time, are provided with a cushion which is of great comfort when in use, and which when not in use may be folded up into a small compass and carried in the pocket. Air-beds and air-pillows have been constructed upon the same principle, but these have been found objectionable; for air being a bad conductor of heat, the imprisoned air when made warm by contact with the body or head retains its warmth, and produces an unpleasant sensation of dry heat to the part which rests upon it.

ALABASTER.—A species of soft marble used for ornamental purposes, which derives its name from Alabastron, a town of Egypt, where a manufactory formerly existed of works of art in domestic vessels, executed from the stone found in the neighbouring mountains. As this composition is of a delicate nature, easily scratched, and soon stained by the smoke or atmosphere, all objects should be preserved from these external influences by being kept under glass shades. Should they however become stained, the following is the best method *To clean alabaster*:—Remove the stains by brushing with soap and water, then whitewash the stained part, and let it remain for some hours; after which remove the whitewash, rub the stained part with a soft cloth, and the stains will have disappeared. *Grease spots* may be removed by rubbing the blemishes with powdered French chalk, or a little oil of turpentine.

To bronze, apply to the whole surface of the object a coat of size, after which lay on paint of a bronze-green colour; and when this is nearly dry, gently apply to the most prominent parts a little bronze powder through the medium of a wad of wool or soft cotton. The success of the process greatly depends upon the delicacy with which it is conducted.—See BRONZE and SIZE.

To imitate.—Alabaster ornaments may be imitated by brushing over plaster of Paris models with spermaceti, white wax, or a mixture of the two, or by steeping the models in the warm mixture. Or, instead of this process, they may be brushed over several times with white of egg, allowing each coating sufficient time to dry. Only models made of the finest plaster are suited for these processes.

To join.—As alabaster objects are composed of several parts, they are liable, from a variety of causes, to become disjoined, and when this occurs the parts may be rejoined by a cement made from the white of one egg mixed with a teaspoonful of quick lime. The cement should be used immediately that it is mixed, and the parts to be joined should be previously damped with lukewarm water.

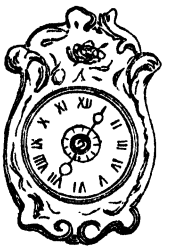
To polish.—First, carefully clean the article with a piece of pumice stone dipped in water; then apply a thick paste made of whiting, soap, and milk; and when this is perfectly done, wash the article thoroughly, dry it

with a soft cloth, and rub with a flannel until the polish is produced.

To stain or colour.—This is effected by simply applying to the surface with a brush the oil or tincture of the colour desired; such as cochineal, saffron, alkanet, or verdigris.

ALARUM is the name given to a mechanical contrivance, by which persons may be awakened on an emergency, or at any particular hour. An ordinary clock may be furnished with an alarum by being fitted with a chain and weight, which is adjusted in such a manner the night previously, as to run down at the hour required, and cause the clock to strike long and rapidly. The *Weaver's Alarum*, so called because it was used by those operatives, is very simple. It consisted of a weight or bell, which was fastened to a piece of packthread, and placed in such a relative position to the candle, that at a certain time the flame reached and ignited the packthread, causing the weight or bell to fall. Another alarum also consists of a cup or other vessel placed over the head, into which water drops from another source above until the cup becomes full, overflows, and drops on the face of the sleeper.

These simple but clumsy contrivances, are now superseded by a new and economical alarum, of American invention and manufacture. The figures upon the face represent the number of hours required to elapse before the alarum shall be allowed to go off. Thus, if a person wished to sleep five hours, he would calculate that number of hours from the time of his going to bed, which, if he retired at eleven at night, would extend to four o'clock in the morning. He would, therefore, set the hands of the alarum at the figure seven, and at the last moment of the fifth hour, which would be four o'clock, the alarum would go off with a loud ringing.



ALBUMEN is an organic nutritive principle, which forms the chief ingredient in the white of eggs. It is one of the elementary constituents of the blood, brain, and glands. It exists in cartilage, horn, hair, and nails, enters into the composition of oysters, whelks, periwinkles, and snails, and also occurs in vegetables. The peculiar property of albumen is that of solidifying, or *coagulating*, when exposed to a moderate heat, in which state vegetable albumen is not to be distinguished from the white of egg. White of eggs, when applied to burns immediately after the accident, generally prevents them from rising in blisters; it also tends to abate recent inflammation of the eyes, if applied to the parts affected, spread upon soft linen. It may also be used as a lotion for the face in the heat of summer, as a preventive against sunburns and freckles.

ALCOHOL is a pure spirit, or essence, produced by fermentation, and constitutes the intoxicating principle in all fermented liquors. It acts as a powerful solvent on many vegetable substances, and therefore is extensively used in the preparation of liqueurs for the table. It has been found hitherto impossible to freeze alcohol with the greatest degree of cold that can be generated, hence its employment for thermometers.

ALE.—A bushel and three quarters of ground malt, and a pound of hops, are sufficient to make 18 gallons of good family ale. As soon as the water boils, dip off half of it into a tub or vat raised upon a bench about a foot and a half from the ground, and which has a hole in its side, near the bottom, into which is put a spigot and faucet sufficiently large, and over the end of which, in the vat, is fixed a bundle of small clean sticks, or other convenient apparatus, to prevent the malt from running out. Let the hot water remain undisturbed in the vat, till it has cooled down to about the temperature of 175 or 180 degrees of Fahrenheit's thermometer; or, in the absence of this instrument, till the face can be seen pretty distinctly in the water; then mix the malt with the water gradually, stirring it with a mashing stick, or other convenient spatula. Preserve a few handfulls of the dry malt to strew over the surface after it is mixed, in order to prevent as much as possible the escape of heat. The vat should also be covered with cloths, more effectually to keep the mixture hot, which must remain undisturbed for three hours. The wort is then to be run out by the spigot and faucet. As soon as it has done so, pour on again upon the malt the same quantity of water, cooled in a tub to the same degree of heat as before, and let it remain with the malt half an hour, or somewhat longer. Then let the wort run off a second time.

As you will now be enabled to judge how much more wort will be necessary to fill your cask, add as much more water, cooled down as before, as will be sufficient for the purpose, letting the last portion stand a short time in the vat, always remembering that for a cask of 18 gallons it is advisable to have at least 7 or 8 gallons of wort more than sufficient to fill the cask, to allow for waste and evaporation.

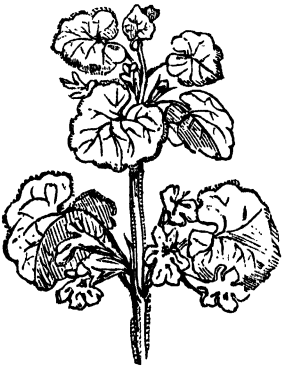
When the worts have all been run off, mix them together, and put them into the copper, making it boil as quickly as possible. When the wort is reduced by boiling to nearly the proper quantity, put in the one pound of hops, and let them boil in the wort for about twenty minutes, covering the copper over in the meantime to prevent the escape of the aroma of the hops. The boiling being completed, let the wort be strained off into proper coolers. When it is cooled down to 65 or 70 degrees, mix one quart of good yeast with a few gallons of the wort first, and afterwards put the whole together into a vat to ferment for two or three days or more; or put it at once into the cask, and let it ferment there.

The necessary care must be taken to watch the fermentation in the cask, and fill it up occasionally with the superfluous liquor. As soon as the cask will bear a bung in it,

it ought to be stopped down slightly at first, till the power of the disengaged gas be ascertained, or otherwise the cask may burst. This ale, if it is brewed when the weather is mild, will be fit for drinking in about six weeks or two months.

To brew *Table Ale*, mix the first and second worts together, suffer it to ferment, and proceed in the same manner as before directed. If the ale is for present use, take three-quarters of a pound of hops to each bushel of malt; but if intended to be kept, take one pound of hops to each bushel of malt. It will be fit for use in about a week. —See also BEER, BREWING, FERMENTATION.

ALEHOOF OR GROUND IVY.—This wild plant creeps upon hedge banks, at the foot of trees, and in many shady places flowering in spring. It has a peculiar and strong smell, and is best gathered when in flower. It is an excellent remedy for wounds,



either by outward application or taken inwardly; and an ointment made of it is particularly healing to ulcers and fistula. The decoction of the herb taken daily for a continuance is efficacious in cleansing the stomach, promoting the proper secretions, and strengthening the blood; it is also an excellent eye-water.

ALE JELLY.—To the prepared stock or jelly add (where the shape is large), a pint bottle of strong ale, a pound of loaf sugar, the peel of one, and the juice of four lemons, a stick of cinnamon, and the beaten whites of eight eggs; put all into a saucepan, stir it gently; let it boil for fifteen minutes, and pour into a jelly bag till it runs perfectly clear.

☞ Ale, 1 pint; sugar, 1lb.; lemons, peel of 1 and juice of 4; cinnamon, 1 stick; eggs, 8 whites.

ALE POSSET.—Boil a pint of new milk with a slice of toasted bread; pour a bottle of mild ale into a punch bowl, sweeten and add spices, and then pour the boiling milk over it.

ALIAS.—A Latin word signifying *otherwise*, and usually used to denote a name or title that has been assumed, as Danby *alias* Jenkins. The assumption of an alias does not absolve the person who adopts it from the responsibility of any act he may have committed under his assumed name. Thus a marriage celebrated under an alias is equally as valid as though the proper name had been used. And a bankrupt who has traded under another name, must account for all such transactions, just the same as though they had been performed under his correct name.

ALIBI, a Latin term signifying *elsewhere*. Sometimes, when a person is charged with a crime, he rebuts it by producing witnesses to prove that at the time the crime was committed he was seen in another place, and this evidence if substantiated is, of course, a complete answer to the charge. A plea of this kind, however, is regarded with great jealousy by the law, owing to the case with which a plea may be concocted by accomplices, or witnesses procured to swear falsely. A case lately occurred where a man committed a crime on a certain night, came home stealthily and *put the clock back two hours*, he then awoke his servant who had been asleep some time, and told him to go down stairs and see what time it was. In the course of events this man was charged with the crime, and the servant's evidence was instrumental in his acquittal.

ALIEN.—A person born out of the allegiance of the Sovereign. It is an error to suppose that because a person is born out of the dominion of the Crown he is therefore an alien, for a child born of a father who is a natural born subject, even though it be in a foreign country and by a foreign mother, is regarded as an English subject. The civil disabilities of an alien are that he cannot hold any landed property either by purchase or devise without the Sovereign's permission. He is debarred from sitting in Parliament or the Privy Council, and is incapable of holding grants or offices of trust under the Crown; nor ought he to be returned on a jury except in cases of high treason, or where an alien is to be tried. An alien, however, may occupy a house and premises, and also possess goods and chattels and money in the funds, the whole of which he may dispose of by will. In matters of trade and commerce aliens lie under no particular restriction, they may sue and be sued in the Queen's court as British subjects, the only legal bar being that the Court of Chancery will not protect by injunction the copyright of an alien. The foregoing relates to *alien friends*. *Alien enemies* are the subjects of another state at actual war with our own, and do not possess even the bare right of residence, or the power of enforcing any contract or suing for any debt due to them. The disabilities which alien friends lie under may, however, be removed.—See DENIZATION and NATURALIZATION.

ALIMENT.—By this term is understood the nutritive quality furnished by every kind of food after it has undergone the process of digestion. Alimentary matter must neces-

sarily be derived from animal or vegetable. There exist, however, certain inorganic agents, such as lime, salt, water, &c., which, though unable to produce nourishment by themselves, yet, when taken in conjunction with alimentary substances, contribute materially to nutrition. Aliments differ from each other in their properties, according to the fundamental principles existing in their composition; they may be divided into nine classes, as follows:—

1. *Farinaceous:* wheat, barley, rice, peas, potatoes, &c.

2. *Mucilaginous:* lettuce, carrot, asparagus, cabbage, melons, artichokes, &c.

3. *Saccharine:* sugar, honey, figs, peaches, apricots, dates, &c.

4. *Acidulated:* oranges, lemons, apples, pears, strawberries, &c.

5. *Oily:* nuts, cocoa, olives, animal fats, oils, butter, &c.

6. *Caseous:* the different sorts of cheese, milk, &c.

7. *Gelatinous:* tendinous parts of animals, such as calf's foot, certain kinds of fish, and the flesh of young animals generally.

8. *Albuminous:* oysters, mussels, eggs, brains of animals, &c.

9. *Fibrous:* the flesh and blood furnished by different animals.

ALIMONY is the provision made from the husband's estate for the support of his wife, in cases of separation. A wife is entitled to alimony only when she is entirely dependent on her husband, or does not possess sufficient means of maintenance suitable to her position in life. But when she has a separate and sufficient income vested beyond the husband's control, she is not entitled to alimony. The amount of alimony awarded is at the discretion of the court, and is governed by the circumstances of the case. For instance, a distinction is drawn between a substantial income and one that is derived from precarious resources. The fortune brought by the wife is likewise taken into consideration, as also the disposal of the children, and the expense of their education. During the progress of a suit, the subsequent assignment of alimony will not free the husband from his liability for past or present debts. But on the conclusion of the suit, and when the court has allotted the wife a separate maintenance, she henceforward becomes responsible for her own contracts, and the husband is entirely freed.

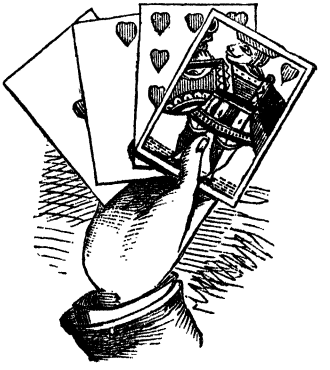
ALKALIES signify those substances which possess the following properties: incombustible, capable of converting vegetable blues into a green colour, having a hot and caustic taste, and a capability of forming salts with acids. They have purifying and antiseptic properties, and hence are used in the form of potash, soda, or soap, for domestic purposes.

ALKALIES, POISONING BY.—Administer immediately vinegar, lemon-juice, or olive oil, with or without water; and if neither of these are within reach, endeavour to induce vomiting by causing the patient to swallow a tumbler full of warm water containing a little salt. Leave the further treatment of the case to medical assistance.—See POISONING.

ALKALIES, STAINS BY.—Quick lime, potash, soda, &c., may be removed by moistening them with vinegar; or where they are very obstinate, by well diluted sulphuric or muriatic acid.

ALKANET.—A plant brought from the southern parts of France, and used in medicine. It grows wild in Kent and Cornwall, but in other counties is cultivated in gardens. The root, boiled with butter or lard, is used as an ointment for bruises, and a decoction of it mixed with honey is excellent in jaundice, ague, and diseases of the kidneys. The leaves with hyssop, drank in infusion, kill worms; and the leaves and root in wine are considered good in uterine disorders.

ALL-FOURS.—This game may be played by either two persons or four, and derives its name from the four chances therein, for each of which a point is scored, namely, *high*, the best trump out; *low*, the smallest trump dealt; *jack*, the knave of trumps; and *game*, the greatest number scored from the tricks. Ace counts 4; king, 3; queen, 2; knave, 1; and ten, 10. Low is always scored by the player to whom it is dealt; but jack is the property of whoever can win it.



Deal is cut for, the highest winning. Six cards are dealt to each player, three at a time; and when the required number of cards are dealt, the next card following is turned up for trump; then if the eldest does not approve of his hand, he *begs*, when the dealer gives either three more cards, or allows a point; if the trump turned up at the second deal is of the same suit as the first, three more cards are given, and so on until a different suit occurs.

Each player should strive to secure his own tens and court cards, or take those of his adversary, to accomplish which a low card should be played, so as to throw the lead into the opponent's hand.

When the dealer shows any of his adversary's cards, a new deal may be demanded; but in showing his own, he must abide by the accident. If discovered previously to

playing, that too many cards are given to either party, a fresh deal may be claimed, or the extra cards withdrawn by the opponent.

Each party must follow suit, or trump, if they can, if not they forfeit one point. Books: *Hoyle's Book of Games, Bohn's Handbook of Games, Brittain's Book of Games.*

ALL-HEAL.—A plant growing on the sides of rivers or lakes, and in moist lands. It has long hairy leaves, and small red flowers in clusters round the stock. The leaves of this plant, when freshly plucked, bruised, and bound over a wound, stop the bleeding without any other combination.

ALLSPICE.—The berry of a species of myrtle tree, in the West Indies. It combines the flavour of cinnamon, nutmegs, and cloves, hence its name. Its agreeable taste and aroma causes it to be frequently employed for domestic purposes; and a few drops of its oil or essence are sufficient to impart a flavour to mulled wine, gravy, or made dishes. This essence may be made as follows:—Bruise one ounce and a half of allspice, and steep it in a pint of brandy for a fortnight, occasionally shaking and pouring off the clear liquor.

ALMANAC.—A term of Arabic origin, derived from *al* and *manac*, a diary. It is, as its name implies, an annual table or register containing a calendar of days and months, the times of the rising and setting of the sun, the age of the moon, the ebb and flow of the tide, and other phenomena, celestial and terrestrial.

ALMOND.—This nut is of two kinds, the *sweet* and *bitter*. Sweet almonds are taken with dessert; they are very indigestible, and should either be eaten with raisins, or have their husks removed by blanching. Bitter almonds are used in flavouring many preparations, but when taken in excess are poisonous.

ALMOND BISCUITS.—Beat up one pound of powdered loaf sugar with the yolks of nine eggs, and whip into a froth separately the whites of twelve eggs, then mix both together, add six ounces of sweet and half an ounce of bitter almonds, blanched and pounded; mix well together, dredging in at the same time two ounces of flour; place in paper moulds, sift over them flour and pounded sugar, and bake in a moderate oven.

☞ Sugar, 1lb.; eggs, 9 yolks and 12 whites; almonds, sweet, 6oz.; bitter ditto, ½oz.; flour, 2oz.

ALMOND BLOOM, a cosmetic. In three pints of water boil one ounce of Brazil dust; strain off, and add six drachms of isinglass, two ounces of grana sylvestria, one ounce of alum, and three drachms of borax, mix the whole well together, boil again, and strain through muslin into bottles.

☞ Water, 3 pints; Brazil dust, 1oz.; isinglass, 6 drachms; grana sylvestria, 2oz.; alum, 1oz.; borax, 3 drachms.

ALMOND BONBONS.—Grate one pound of blanched almonds very fine, and mix with them a pound of powdered loaf sugar; melt the mixture in a stew-pan gradually over a slow fire, stirring it continually until the ingredients are thoroughly mixed, then pour on a tin plate, roll it quickly with a rolling-pin, and cut in forms according to fancy.

ALMOND CAKE. — Blanch, dry, and pound to the finest possible paste, eight ounces of fresh Jordan almonds, and one ounce of bitter ditto; moisten them with a few drops of cold water, or white of egg, to prevent their oiling; then mix with them *very* gradually, twelve fresh eggs, which have been whisked until they are exceedingly light; throw in by degrees one pound of fine dry sifted sugar, and keep the whole light by constant beating with a large wooden spoon, as the separate ingredients are added. Mix in, by degrees, three-quarters of a pound of dried and sifted flour of the best quality; then pour gently from the sediment a pound of butter, which has just been melted, but not allowed to become hot, and beat it gradually but thoroughly into the cake; add the finely-grated rinds of two sound fresh lemons, fill a thickly-buttered mould rather more than half full with the mixture, and bake the cake from an hour and a half to two hours in a well-heated oven. Lay paper over the top when it is sufficiently browned, and guard carefully against its being burned.

☞ Jordan almonds, ½lb.; bitter almonds, 1oz.; eggs, 12; sugar, 1lb.; flour, ½lb.; butter, 1lb.; rinds of lemons, 2

ALMOND CAKES (SMALL).—Reduce to a paste half a pound of blanched almonds, with two or three bitter almonds, adding white of egg to prevent their oiling; then add a pound of sugar, a small teacupful of cream, and twenty drops of orange flower water. Make a flour paste in the usual way, of the thickness of a crownpiece, which cut into rounds or squares, and cover with the preparation of almonds; bake in a hot oven and dredge with sugar.

☞ Blanched almonds, ½lb.; bitter almonds, 2 or 3; sugar, 1lb.; organge flower water, 20 drops; cream, small teacupful.

ALMOND CANDY.—In a half pint of water, beat up the sixth part of the white of an egg, and pour it over a pound of loaf sugar; after standing for a quarter of an hour, let it boil for three minutes, and then let it stand on one side until the scum settles down, skim it, and boil again until it becomes very thick, then throw in four ounces of almonds, which have been dried in the oven, and sliced, mix the whole well, and continue stirring until it is done, which will be known when a spoonful placed on a plate remains in a firm mass, and does not *sink*. It must then be poured out as quickly as possible into moulds or tins, and suffered to remain until quite cool.

☞ Water, ½ pint; egg, ½ part of white; sugar 1lb.; almonds, 4oz.

ALMOND CHEESECAKES. — Pound eight ounces of sweet and ten bitter almonds with a little orange flower water; add eight yolks and four whites of eggs, three-quarters of a pound of powdered loaf sugar, beat all together; add one pound of melted butter nearly cold, one nutmeg, the peel of one lemon grated, a wineglassful of orange flower water, and one of brandy. Mix the

ingredients thoroughly, and bake in patty pans lined with paste.

☞ Blanched almonds, ½lb.; bitter almonds, 10; eggs, 8 yolks and 4 whites; loaf sugar pounded, ½lb.; butter, 1lb.; nutmeg, 1; rind lemon, 1; orange flower water, wineglassful; brandy, wineglassful.

ALMOND CREAM.—Pound six ounces of almonds with a little rose water; mix with a pint and a half of cream which has been boiled with the peel of one lemon; add two eggs well beaten, and stir the whole over the fire till it be thick, taking care not to allow it to boil; sweeten it to taste, and when nearly cold stir in a tablespoonful of orange flower or rose water.

☞ Almonds, 6oz.; cream, 1½ pints; lemon peel, 1; eggs, 2; sugar to taste; rose or orange flower water, 1 tablespoonful.

ALMOND CUSTARD. — Pound eight ounces of blanched almonds with a little rose water; add a quart of cream, and the yolks of twelve eggs well beaten; sweeten to taste, and stir over a slow fire till it becomes thick, but without allowing it to boil.

☞ Almonds, ½lb.; rose water few drops; cream, 1 quart; eggs, 12 yolks; sugar to taste.

ALMOND FRITTERS.—Over a pound of blanched almonds, pour four tablespoonfuls of orange flower water; add a pint and a half cream, and let them stand for three hours, then beat into a paste; add the yolks of nine eggs well beaten; half a dozen Naples biscuits, pounded sugar to taste; mix well together; fry in butter to a good colour, and serve with powdered sugar over the top.

☞ Almonds, 1lb.; orange flower water, 4 tablespoonsful; cream, 1½ pints; eggs, 9 yolks; Naples biscuits, 6; sugar to taste.

ALMOND MILK.—Pound two ounces of sweet almonds and two ounces of bitter; mix with the paste a pint of boiling milk, and strain through a sieve; then add two eggs well beaten, and sugar sufficient to sweeten; put over a slow fire till it becomes thick.

☞ Sweet almonds, 2oz.; bitter almonds, 2oz.; milk, 1 pint; eggs, 2; sugar to sweeten sufficiently.

ALMOND PASTE.—Pound eight ounces of bitter, and one pound of sweet almonds, blanched; add one pound of honey, and mix with a sufficient quantity of orange flower or rose water. Put into pots for use, and tie over closely with paper.

ALMOND PUDDING.—Pound one ounce of bitter, and half a pound of sweet almonds, and add to them a tablespoonful of brandy and a wineglass full of orange flower water; soak a quarter of a pound of biscuit powder in a pint of cream; beat eight yolks of eggs with half a pound of moist sugar; add the peel of one lemon grated, and a quarter of a pound of melted butter; mix the whole thoroughly; and after stirring it over the fire until it is heated, bake it in a pie dish ready lined with a puff paste for half an hour in a moderate oven.

☞ Bitter almonds, 1oz.; sweet almonds, ½lb.; brandy, tablespoonful; orange flower water, wineglass full; biscuit powder, ½lb.; cream, 1 pint; eggs, 8 yolks; sugar, ½lb.; lemon peel, 1; butter, ½lb.

ALMOND ROCKS.—Cut in small slices three-quarters of a pound of sweet almonds, half a pound of candied peel, and two ounces of citron; add one pound and a half of sugar, a quarter of a pound of flour, and the whites of six eggs; roll the mixture into small sized balls, and lay them on wafer paper about an inch apart; bake them in a moderate oven, until they are of a pale brown colour.

☞ Sweet almonds, ½lb.; candied peel, ½lb.; citron, 2oz.; sugar, 1½lb.; eggs, 6 whites; flour, ½lb.

ALMOND SAUCE.—Beat together the yolks of two eggs, a teaspoonful of milk, and a tablespoonful of sugar; stir over a fire until nearly boiling; then let it stand to cool. When partly cooled, stir into it a glass of sherry, and serve in a sauce-boat. This sauce is a great improvement to plum-pudding.

ALMONDS, BLANCHED.—Put them into cold water, and heat them slowly to scalding; then take them out and peel them quickly, throwing them into cold water as they are done. Dry them in a cloth before serving.

ALMONDS, DEVILLED.—Fry blanched almonds in fresh butter, until they become a light brown, drain them, season with salt and cayenne, and serve hot as a relish with wine.

ALMSHOUSES are asylums intended for the reception of the aged and infirm. The principal part of these charities are in connection with, and under the management of, the various City Companies, and other public bodies, and, generally speaking, certain conditions and qualifications are necessary to entitle a person to the privilege of becoming an inmate in one of them. There are in all about 150 almshouses in and about the metropolis; for the particulars respecting each of which see *Sampson Low's Charities of London*.

ALOES, a well-known purgative, of a warm and stimulating character, generally taken in doses of from five to fifteen grains. In cases of jaundice this medicine is very efficacious, as it acts as a substitute for the defective bile, it is also beneficial to costive habits. Aloes, however, should be used with caution, as repeated doses produce irritation about the lower parts, and when this begins to make itself felt, even in the slightest degree, the medicine should be immediately discontinued. One of the best forms of taking aloes is in the compound tincture, which does not produce the injurious effects alluded to. To destroy the extremely bitter and nauseous taste of this drug, it should be taken in a strong solution of extract of liquorice.

To make *Compound Tincture of Aloes*.—Macerate for ten days 2oz. each of extract of spiked aloes and saffron, with a pint and a half of tincture of myrrh. Then strain it off.

ALPACA.—This is one of the most useful and durable woollen textures worn, and is especially useful for linings of coats, dresses, &c., answering all the purposes of silk, at

one-fourth of its cost. The animal from which this fabric is derived, is a Peruvian sheep of a peculiar breed, and of singular habits—it ranges over the wildest and most desolate places, and feeds in the bleakest and dampest situations; it requires neither fold nor manger, and in the severest winter is satisfied to crop the refuse left upon the

moors; in a word, this animal, although of delicate appearance, is one of the hardiest of the creation.

ALTERATIVE MEDICINES are those which re-establish the health, and gradually restore the decayed functions of the system, without producing perspiration, purging, or other sensible evacuations. They are, in fact, medical remedies assuming the mildest form for the purpose of assisting and co-operating with nature.

Alterative Powder.—Recipe: Dover's powder, fifteen grains; mercury with chalk, twelve grains; divide into six powders, and take one every night. The quantities of the ingredients specified are for a *grown-up person;* for a youth under twenty they should be *one-half less,* and for a child under ten *three-quarters less.* See BLUE PILL, CALOMEL, COD-LIVER OIL, GREY POWDER, SARSAPARILLA, &c.

ALUM is a chemical salt, possessing astringent properties, and put to various uses as a domestic medicine; it is useful in diarrhœa, and when given in repeated small doses has an opposite tendency in cases of constipation. The proper administration for the latter is from 5 to 20 grains, every four, eight, or twelve hours, according to the nature of the complaint. As an astringent tonic it may be taken in the form of pills to the extent of ten grains three times a day.

ALUM, ADULTERATION OF BREAD BY. —See ADULTERATIONS, BREAD, &c.

ALUM CONFECTION.—This preparation acts as an astringent in cases of sore throat, relaxed uvula, and ulceration of the mouth. Mix two scruples of powdered alum with four scruples of treacle. *Dose:* half a drachm.

ALUM EYEWASH.--Dissolve half a drachm of alum in half a pint of water, and use two or three times a day.

ALUM LOTION.—Dissolve three drachms of alum in a pint of water. This may be applied to sores and wounds when the inflammation has subsided, and will hasten their healing.

ALUM OINTMENT.—Mix two drachms of alum powder, an ounce of turpentine, and two of hog's lard, and stir them over the fire till well mingled. This is sometimes used instead of the lotion, when the sores have become dry and hard.

ALUM WHEY.—Boil two drachms of alum in a pint of milk, until a curd appears. Then strain off the liquor, and add two ounces of spirit of nutmeg and an ounce of syrup of cloves. A teacupful three times a day will be found useful in discharges of blood, uterine fluxes, &c.

AMALGAM.—The incorporation of mercury with other metals, to render them available for certain processes. Thus an amalgam of tin and mercury is used for silvering the reverse side of mirrors, and an amalgam of silver and mercury is used for filling decayed teeth.

AMBER.—A mineral substance of a resinous character, dug out of diluvial soils, and found in large quantities on the Baltic shores. The chief uses of amber are for ornaments, such as beads, bracelets, &c.; also the heads of canes and mouth-pieces for pipes.

AMBER VARNISH.—To half a pound of powdered amber, add four ounces of scio-turpentine, melted; macerate for half an hour, and add one-third of white resin, warmed, and half a pound of linseed-oil, hot.

AMBERGRIS.—A substance found floating in the seas or the coasts of various tropical countries. It has an exceedingly pungent odour, and when mixed with perfumes in the minutest quantities is supposed to improve them. A grain or two in a hogshead of claret is perceptible to the taste. It is used for imparting a flavour generally accounted agreeable.

AMENDMENT is a term used to express a *counter-resolution* proposed at any public meeting, and which if carried renders the original motion inoperative. When in the House of Commons a bill is proposed to be read by a certain member, and another member proposes by way of amendment "that the bill be read that day six months," the question is put, and if the mover of the amendment gains a majority of votes the bill is thrown out.

AMERICAN CRESS is raised from seed, sown generally in drills nine inches apart. If wanted through the whole of the summer the seed must be sown every six weeks, from March up to August; and if for winter or spring one sowing only, at the end of August or beginning of September is necessary. Water occasionally during dry warm weather and at the commencement of the winter season; shelter the plants by laying a few light twigs among them, and over these a slight covering of litter. The plants being cut or the outside leaves stripped off, shoot again for another gathering. The soil to be preferred is, for the winter crop, light and dry, and the situation open but warm. For the summer a moister soil and shadier border should be chosen. — See CRESS, SALAD, &c.

AMMONIA, ACETATE OF, SOLUTION OF.—Mix one ounce with six ounces of water, from which a lotion is obtained for applying to external inflammation, bruises, scald head, &c.

AMMONIA, AROMATIC SPIRITS OF.—For debility, fainting, spasms, and hysterics, take from thirty to forty drops in a wine-glassful of water.

AMMONIACUM MILK.—Gum ammoniac two drachms, stirred gradually in half a pint of distilled water until it becomes milk. In cases of obstinate cold this is an excellent remedy for loosening the phlegm and promoting expectoration. Take two tablespoonfuls twice a day.

AMUSEMENTS, INDOOR.—See CARDS, CHARADES, CHESS, FORFEITS, &c.

AMUSEMENTS, OUTDOOR.—See ANGLING, ARCHERY, CRICKET, QUOITS, &c.

ANAGRAM.—The changing of the sense or construction of a phrase by the transposition of the letters that constitute it.

TRANSPOSED	FORMS
Astronomers	No more stars.
Catalogues	Got as a clue.
Elegant	Neat leg.
Impatient	Tim in a pet.
Immediately	I met my Delia.
Masquerade	Queen as mad.
Matrimony	Into my arm.
Melodrama	Made moral.
Midshipman	Mind his map.
Old England	Golden land.
Parishioners	I hire parsons.
Parliament	Partial men.
Penitentiary	Nay I repent.
Presbyterians	Best in prayer.
Radical Reform	Rare mad frolic.
Revolution	To love ruin.
Sir Robert Peel	Terrible poser.
Sweetheart	There we sat.
Telegraphs	Great helps.

One of the most remarkable anagrams is *Honor est à Nilo* (Honour at the Nile), which words may be found out of the letters composing *Horatio Nelson*. *Field Marshal the Duke* makes *The Duke shall* (*l*) *arm the field*. The forming of anagrams from family names, and brief mottoes or sentences, constitutes an agreeable occupation by the fireside on winter evenings.

ANCHOVIES (BRITISH).—Pound in a mortar half a peck of fine sprats, with one pound of salt, one ounce of bay salt, half a pound of saltpetre, one ounce of prunella, and a few grains of cochineal; then put into an earthen vessel or small barrel, first, a layer of sprats, then a layer of the compound, and so on alternately to the top. Press down and cover them close for four months, when they will be in a fit state to be eaten.

☞ Sprats, ½ a peck; salt, 1lb.; bay salt, 1oz.; saltpetre, ½lb.; prunella, 1oz.; cochineal, few grains.

ANCHOVY.—A species of small herring found in great abundance on the Mediterranean coast. This fish is esteemed as a relish for breakfast, lunch, &c., and is also much used for seasoning other dishes in the form of paste or essence. Sardines and sprats are both frequently substituted for this fish, but the anchovy may be easily distinguished from these by its rounded back, whereas the backs of the two former are flat. Its head is also thicker, and its colour of a dusky brown.

ANCHOVY BUTTER.—Scrape the skins of twenty good sized anchovies, remove the bones and the heads, and pound the flesh in a mortar until it is quite smooth, then take out the flesh and rub it back into the mortar through a hair sieve; add one pound of fresh butter, a teaspoonful of grated nutmeg, the same quantity of mace, and three parts of a saltspoonful of cayenne pepper. Mix the whole thoroughly together. If for table use serve in moulded shapes, but for preservation it may be kept in gallypots or jars, in the pantry, or other cool place.

☞ Anchovies, 20; butter, 1lb.; nutmeg, one teaspoonful; mace, one teaspoonful, cayenne, three parts of a saltspoonful.

ANCHOVY ESSENCE.—Put two pounds of fine anchovies into four quarts of water, add one ounce of whole pepper, six bay leaves, half an ounce of mace, twelve shalots chopped small, the rind of two lemons, and a gill of port wine; stir over the fire and boil for three quarters of an hour; rub through a hair sieve, and bottle off. The bottles should be corked and sealed down, and kept in a cellar or closet that is both cool and dry.

☞ Anchovies, 2lbs.; water, 4 quarts; pepper (whole), 1oz.; bay leaves, 6; mace, ½oz.; shalots, 12; lemon peel, 2; port wine, 1 gill.

ANCHOVY PASTE.—Scrape half a pound of anchovies very clean; remove the bones, and pound the flesh in a mortar until quite smooth; add one pound of fresh butter, a teaspoonful of mace and nutmeg mixed, and a saltspoonful of cayenne, mix well together, and let it stand for six hours, then pot, and pour on the top of each pot a slight covering of melted butter, just warm.

☞ Anchovies, ½lb.; butter, 1lb.; mace, half teaspoonful; nutmeg, half teaspoonful; cayenne, 1 saltspoonful.

ANCHOVY TOAST.—Cut slices of bread of a moderate thickness, pare off the crust, and fry the slices in melted butter until quite brown, spread them with anchovy butter (as above), and serve hot.

ANEMONE, Greek name for a plant signifying *wind-flower*. There are two species of this flower, the poppy anemone (fig. 1), and the broad-leaved anemone (fig. 2). The soil most suitable is a mixture of earth turf and cow-dung, made very fine on the surface. Sow the seed in January, and sprinkle over them a light sandy soil to the thickness of a quarter of an inch, water the seed gently in dry weather, and as the young plants spring up, shelter them both from the frost and the sun; take up the roots in March, and preserve them in a dry place. They may then be re-planted in October, to bloom in the following spring. Anemones may be propagated by cuttings from the parent plant, they should be placed in raised beds, so as to prevent the wet from injuring

their roots; they should be taken up in June, and replanted in October.

ANGELICA, a plant so called from its supposed angelic properties. It is to be found both wild and in gardens, and will grow in any soil or situation. It is propagated by seed which should be sown in August or September, and the plants may be cut in the May or June following. It will also grow from cuttings.

ANGELICA CANDY.—Cut the stalks off the angelica, when they have obtained a good size, and before they have become tough cut them into slices, remove the skin, and boil them in water till they become tender; then take them out and wash them two or three times in cold water; boil them in a strong syrup, made from loaf sugar, for an hour, let them stand for twenty-four hours, and then boil them twice a day until the syrup has almost all been absorbed by the fruit. When this is done, take them out and place them apart in an oven to dry. Angelica will thus keep for years, and forms an agreeable addition to a dessert.

ANGELICA RATAFIA.—Put a quarter of a pound of angelica shoots into one quart of brandy, half a pint of water, one pound of sugar; add a quarter of an ounce of allspice. Let the mixture infuse in a close vessel for six weeks, then drain off, and bottle.

☞ Angelica shoots, ½lb.; brandy, one quart; water, half pint; sugar, 1lb.; allspice, ½oz.

ANGLE, a form in geometry which indicates the inclination of two lines measured by arcs of a circle, the centre of which is the point where both the sides of the angle meet. Angles are divided into right angles, equal to 90 deg., four of which are equal to the whole circle; obtuse angles, those greater than 90 deg.; and acute angles, those which are less.

ANGLING.—The "regular season" for this sport is between the months of April and November. The *best time of the day* for angling is, during the summer months, from sunrise to two or three hours after, and from two hours preceding sunset until an hour after that time. In the colder months the best hours are from twelve to three, for the fish are shy at biting until the air is warmed by the sun. The *best weather* is as follows:—A warm lowering day is, of all others, the most propitious; on a cloudy day also succeeding a moonlight night the fish will bite readily; the most favourable winds are south and south-west—easterly the most unfavourable.

HINTS.—When fishing, keep at some distance from the margin of the stream, so that your shadow may not fall upon the water, and frighten away the fish; to avoid the same consequences, do not indulge in laughter or loud conversation.

If the water be still, throw in small pieces of ground bait; if a strong current, large pieces; do this quietly and cautiously, for fish are so wary and suspicious, that it requires the nicest delicacy and management to circumvent them.

When the wind blows right across the water, fish with your back to the wind, as you will not only be able to throw your line better, but the fish will be on that side, attracted thither by the flies and other natural bait which the wind will blow into it.

NOTE.—That *bream* are to be found in the most secluded places; *eels* under the banks of rivers; *perch* and *roach* in clear swift streams; *chub* in deep shaded holes; and *trout* in clear rapid brooks. Situations abounding in weeds, or old stumps of trees, often harbour large numbers of fish that bite freely; but in such cases the line requires to be managed with great care, so that it does not become entangled or broken. The openings of sluices and mill-dams always invite fish up the current to seek the food which is conveyed with the stream, so that angling in these places is generally attended with success.

ANGLER'S CALENDAR.

January.—Pike, chub, and roach only. The best time the middle of the day. The weather should be still and the water clear.

February.—Perch, carp, chub, roach, and pike. The best time the middle of the day. The mildest days preferable in eddies and near banks.

March.—Pike, carp, perch, roach, dace, chub, and gudgeon will bite. Middle of the day the best time, in eddies and shallows.

April.—Trout, tench, barbel, bleak, flounders, and eels; also those mentioned in March. Trout and tench in rivers; the others in shallow waters.

May.—All sorts of fish bite well this month. Eels bite both by night and day.

June.—Not a favourable month for the angler—the spawning season. Trout may be taken.

July.—All sorts begin again to bite.

August.—Fish begin to bite more boldly. Morning and evening the best times.

September.—Barbel, roach, chub, and dace are found in deep water. Baits must be shotted to reach the bottom.

October.—Roach and chub in bottoms. Not a good month for ponds or still waters.

November.—Roach, jack, and chub if the weather be genial. The middle of the day the best.

December.—A month of rest and inactivity both for the fish and the angler.

The *favourite places for angling near London* are Richmond, Twickenham, Teddington, Kingston, Thames Ditton, Hampton, Sunbury, Walton, Weybridge, Chertsey, Staines, and Windsor; also Waltham Abbey, Broxbourne, and Tottenham. There are many other resorts for the angler scattered over the United Kingdom, in many instances possessing peculiar and distinct characteristics.

Books: *Davy's Salmonia, Walton and Cotton's Angler, Salter's Angler's Guide, Ilofland's Angler's Manual,* and *Carroll's Angler's Vade Mecum.* See also FISH BAIT, FLIES ARTIFICIAL, FISHING LINE, FISHING ROD, &c.

ANIMALCULE, a minute form of animal life existing and generated in decayed animal and vegetable substances. Animalcules in water are supposed to have purifying properties, by removing from it the substances injurious to human life, and by expiring oxygen gas. Animalcules may be removed by boiling the water or filtering it through charcoal.

ANIMATION SUSPENDED.—See COLD, DROWNING, HANGING, INTOXICATION, and SUFFOCATION.

ANISEED CORDIAL is made by mixing three gallons of proof spirits, half an ounce of oil of aniseed, one gallon and a half of water, and two pounds of loaf sugar. This is an excellent stomachic, very comforting for pains in the bowels, flatulency, &c.

ANNATTO, a colouring matter, formed from the pulp of a plant common in the West Indies. The extract is imported into this country in the shape of cakes or

balls, and is extensively used not only for dyeing purposes, but also for colouring cheese. As there are several imitations of annatto palmed off for the genuine article it may be well to know that the West Indian annatto possesses the following properties. It is of a yellow flame colour, brighter in the interior part than on the outside, soft to the touch, and with an odour resembling violets. The proportion of annatto used in colouring cheese is one ounce to one hundredweight, and it is added to the milk previously to turning it into curds.

ANNEALING.—The process of gradually cooling bodies that have been subjected to the influence of heat. This is particularly practised in the manufacture of glass, which if suffered to *cool suddenly* would be extremely brittle, and it is therefore *gradually* cooled in an oven constructed for that purpose. Metals which have imbibed a harshness in the process of manufacture are softened in the same manner.

ANNO DOMINI (A. D.)—Lat. *The year of our Lord*—a computation of time, the first year of which dates from our Saviour's birth.

ANNUITY signifies, in its general sense, a yearly income, payable at stated periods, and derivable from a certain source. Annuities may be secured to persons at given periods of their lives, and to continue until death, by the payment of a certain sum of money which is estimated as equivalent in value to the annuity secured. Insurance offices grant such annuities, which are calculated according to the ascertained probabilities of human life, and which also depend upon the fulfilment of certain specified conditions.

The most important and practicable of these are—1. *Immediate Annuities.* 2. *Deferred Annuities.* 3. *Survivorship Annuities.*

An IMMEDIATE ANNUITY signifies that upon condition of a certain amount being *paid down*, a yearly sum shall be paid from that period until death, and an explanation of this will be fully illustrated by the following table, showing the amount of annuity granted for every £100 paid.

Age.	Amount of Annuity per Annum.	Age.	Amount of Annuity per Annum.
	£ s. d.		£ s. d.
35	5 8 6	53	7 11 9
36	5 10 0	54	7 16 3
37	5 11 7	55	8 1 2
38	5 13 2	56	8 6 5
39	5 14 11	57	8 12 2
40	5 16 8	58	8 18 3
41	5 18 5	59	9 4 6
42	6 0 2	60	9 10 8
43	6 2 0	61	9 16 6
44	6 4 0	62	10 2 7
45	6 6 1	63	10 9 1
46	6 8 4	64	10 16 4
47	6 10 9	65	11 4 4
48	6 13 6	66	11 13 2
49	6 16 6	67	12 3 1
50	6 19 10	68	12 14 2
51	7 3 7	69	13 6 9
52	7 7 6	70	14 0 10

Example. — An immediate annuity of £5 16s. 8d., payable during the remainder of life, may be secured at 40 years of age by the single payment of £100.

A DEFERRED ANNUITY signifies that upon the annual payment of a specified amount, for a given term of years, an annuity shall be secured from a certain period of life until death, as follows:—

ANNUAL PREMIUM TO ASSURE AN ANNUITY OF £10 PER ANNUM, ON ATTAINING THE AGE OF 50, 55, 60, AND 65.

Age next Birthday.	Age at which the Annuity is to commence.								
	50			55			60			65		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
20	2	8	4	1	11	5	0	19	6	0	11	4
21	2	11	2	1	13	1	1	0	9	0	11	11
22	2	14	2	1	14	10	1	1	7	0	12	6
23	2	17	6	1	16	10	1	2	8	0	13	1
24	3	1	1	1	18	10	1	3	11	0	13	9
25	3	4	11	2	1	1	1	5	2	0	14	5
26	3	9	2	2	3	6	1	6	6	0	15	2
27	3	13	10	2	6	0	1	8	0	0	16	0
28	3	18	10	2	8	11	1	9	7	0	16	10
29	4	4	5	2	12	0	1	11	3	0	17	9
30	4	10	8	2	15	4	1	13	1	0	18	9
31	4	17	7	2	18	11	1	15	0	0	19	10
32	5	5	3	3	2	11	1	17	2	1	0	11
33	5	14	0	3	7	4	1	19	6	1	2	1
34	6	3	9	3	12	2	2	2	0	1	3	5
35	6	14	4	3	17	7	2	4	10	1	4	10
36	7	7	9	4	3	7	2	7	10	1	6	4
37	8	2	7	4	10	3	2	11	1	1	7	11
38	9	0	0	4	17	9	2	14	9	1	10	9
39	10	0	9	5	6	3	2	18	9	1	11	9
40	11	5	9	5	16	0	3	3	3	1	13	11
41				6	7	2	3	8	2	1	16	2
42				7	0	0	3	13	9	1	18	10
43				7	15	5	4	0	0	2	1	7
44				8	13	6	4	7	2	2	4	10
45				9	15	4	4	15	4	2	8	4
46							5	4	9	2	12	3
47							5	15	8	2	16	8
48							6	8	7	3	1	8
49							7	3	11	3	7	4
50							8	2	5	3	13	11
51										4	1	6
52										4	10	11
53										5	0	9
54										5	13	2
55										6	8	4

Example.—A person aged 20 at his next birthday may secure an annuity of £10 per annum on his attaining the age of 50, by the annual payment of £2 8s. 4d., such payment to commence on his twentieth birthday, and to terminate on his fiftieth.

In addition to the securing of this annuity, there is another mode by which the whole of the premiums paid (except the first) may be made returnable in the event of the person dying before he reaches the age for which he assures. This is accomplished by the payment of a certain amount in excess of the ordinary premium.

Examples.—A person at the age of 20 wishing to secure an annuity of £10 per annum at the age of 50, with *premiums returnable in case of death*, would have to pay an annual premium of £2 15s. 4d.; or if a person at the age of 30 wishes to secure at the age of 60, the same annuity with the same proviso, he would have to pay an annual premium of £2 0s. 9d., the excess in both instances being about seven shillings per annum on the preceding table.

A SURVIVORSHIP ANNUITY signifies that a person may, on behalf of himself and another, assure an annuity to be paid to whichever of the two parties survive the other.

ANNUAL PREMIUM TO INSURE A SURVIVORSHIP ANNUITY OF £10 ON THE LIFE OF A. AFTER THE DEATH OF B.

Age of A.	Age of B.	Annual Premium.			Age of A.	Age of B.	Annual Premium.		
		£	s.	d.			£	s.	d.
10	10	2	2	2	25	10	1	12	1
	15	2	10	2		15	1	18	1
	20	2	18	2		20	2	4	0
	25	3	9	3		25	2	12	3
	30	4	2	8		30	3	2	8
	35	4	18	1		35	3	15	0
	40	5	19	0		40	4	12	2
	45	7	2	9		45	5	12	1
	50	8	18	1		50	7	2	8
	55	11	13	8		55	9	11	3
	60	15	9	2		60	12	17	6
	65	19	12	6		65	16	10	6
	70	26	8	2		70	22	10	0
	75	35	14	6		75	30	14	8
	80	45	14	7		80	39	10	10
15	10	1	18	8	30	10	1	9	0
	15	2	6	0		15	1	14	5
	20	2	13	5		20	1	19	6
	25	3	3	8		25	2	6	9
	30	3	16	4		30	2	16	0
	35	4	10	9		35	3	7	0
	40	5	10	7		40	4	2	7
	45	6	13	3		45	5	0	9
	50	8	7	2		50	6	9	2
	55	11	0	6		55	8	15	0
	60	14	13	2		60	11	18	0
	65	18	13	3		65	15	7	1
	70	25	4	0		70	21	0	7
	75	34	3	8		75	28	17	0
	80	43	16	0		80	37	4	4
20	10	1	15	5	35	10	1	6	0
	15	2	2	0		15	1	10	8
	20	2	8	8		20	1	15	3
	25	2	17	9		25	2	1	7
	30	3	9	7		30	2	9	8
	35	4	3	1		35	2	19	0
	40	5	1	8		40	3	12	9
	45	6	3	0		45	4	9	0
	50	7	15	4		50	5	14	9
	55	10	6	5		55	7	17	7
	60	13	16	0		60	10	16	7
	65	17	12	8		65	14	1	6
	70	23	18	3		70	19	8	6
	75	32	10	8		75	26	16	2
	80	41	15	8		80	34	13	7

Age of A.	Age of B.	Annual Premium. £	s.	d.
40	10	1	3	1
	15	1	7	4
	20	1	11	1
	25	1	18	8
	30	2	3	6
	35	2	11	5
	40	3	3	2
	45	3	17	0
	50	5	0	1
	55	6	18	11
	60	9	13	7
	65	12	13	7
	70	17	13	6
	75	24	11	8
	80	31	19	0
45	10	1	0	2
	15	1	4	0
	20	1	7	2
	25	1	11	10
	30	1	17	9
	35	2	4	1
	40	2	13	10
	45	3	5	3
	50	4	5	1
	55	5	19	8
	60	8	8	10
	65	11	3	1
	70	15	14	8
	75	22	2	3
	80	28	19	7
50	10	0	17	3
	15	1	0	8
	20	1	3	4
	25	1	7	4
	30	1	12	3
	35	1	17	2
	40	2	5	3
	45	2	14	0
	50	3	10	4
	55	5	0	2
	60	7	3	2
	65	9	10	1
	70	13	11	4
	75	19	5	3
	80	25	6	10
55	10	0	14	7
	15	0	17	4
	20	0	19	8
	25	1	3	0
	30	1	7	2
	35	1	11	2
	40	1	17	6
	45	2	4	0
	50	2	16	8
	55	4	1	8
	60	5	18	4
	65	7	19	9
	70	11	7	6
	75	16	6	7
	80	21	11	3
60	10	0	12	1
	15	0	14	8
	20	0	16	6
	25	0	19	3
	30	1	2	8
	35	1	5	11
	40	1	10	0
	45	1	15	6
	50	2	5	3
	55	3	5	8
	60	4	16	3
	65	6	8	6
	70	9	7	7
	75	13	12	6
	80	18	1	10
65	10	0	9	9
	15	0	12	2
	20	0	13	5
	25	0	15	10
	30	0	19	2
	35	1	1	2
	40	1	5	3
	45	1	8	4
	50	1	15	3
	55	2	11	7
	60	3	16	8
	65	5	1	8
	70	7	10	3
	75	11	1	7
	80	14	15	8
70	10	0	7	11
	15	0	9	9
	20	0	10	7
	25	0	12	7
	30	0	15	0
	35	0	16	10
	40	1	0	2
	45	1	2	0
	50	1	6	8
	55	1	19	5
	60	2	19	5
	65	3	17	10
	70	5	15	7
	75	8	12	8
	80	11	10	2
75	10	0	7	2
	15	0	7	10
	20	0	8	5
	25	0	9	10
	30	0	12	0
	35	0	13	6
	40	0	16	2
	45	0	17	4
	50	1	0	3
	55	1	10	0
	60	2	6	2
	65	2	19	7
	70	4	8	10
	75	6	14	8
	80	8	19	6
80	10	0	4	10
	15	0	6	3
	20	0	6	8
	25	0	7	10
	30	0	9	6
	35	0	10	6
	40	0	12	11
	45	0	13	7
	50	0	15	6
	55	1	2	7
	60	1	15	8
	65	2	5	3
	70	3	7	2
	75	5	3	10
	80	6	17	9

Example.—By this table a husband, for instance, aged 30, may secure to his wife, age 25, an annuity of £10 per annum after his death by the annual payment of £3 2s. 8d. See also ENDOWMENT and INSURANCE.

ANODYNES, from a Greek word *anodunos*, which signifies "that which relieves pain." Anodynes act in three ways: by *actually assuaging pain*, as by cupping; by *inducing sleep*, as with laudanum; or by *stupifying the senses*, as with chloroform. These remedies should be applied with great care, or they may only aggravate the pain which is sought to be relieved. It should also be observed that an habitual resort to these agents should by all means be avoided, as by repetition their operation is weakened, and the means must necessarily be augmented from time to time in order to accomplish the desired end. It is obvious, therefore, that these repeated demands upon the system tend to enervate and weaken it, so that the good accomplished by the temporary lulling of local pain is far outbalanced by the permanent injury sustained by the general health. See CAMPHOR, CANTHARIDES, COLCHICUM, CREASOTE, CUPPING, DOVER'S POWDER, FOXGLOVE, HEMLOCK, HENBANE, LAUDANUM, LETTUCE, MORPHIA, OPIUM, PAREGORIC, POPPIES, &c.

ANT.—There is a variety of methods for destroying this insect, so troublesome and noxious both in pasture lands, and to fruit and flower trees. To *prevent* their approach to trees night-soil should be laid about the roots, or the earth round the foot of the tree should be constantly turned up, and plentifully strewn with coalashes or sawdust. To *drive away or kill them*, dig up the nests, and mix the earth with gas lime, or pour some quick lime with boiling water into the mouth of the nest. Another way is to smear the inside of a garden pot with honey, invert it over the nest, and when crowded with them hold it over the steam of boiling water; and a simpler method still is to turn a flower-pot with its hole stopped up over the nest. After a time ants will build in it, and the whole colony may be removed with the spade. These insects may be kept away from cupboards by having a small bag of camphor hung up in it.

ANTE-MERIDIEM (A.M.).—Lat. signifying before noon.

ANTHONY'S FIRE.—See ERYSIPELAS.

ANTHRACITE COAL.—See COAL.

ANTIDOTES, from two Greek words, signifying *given against*, remedies which are used both externally and internally to counteract the effects of poison. See POISONS; also ARSENIC, COPPER, LEAD, PRUSSIC ACID, &c.

ANTIMONY is a metal of a silver grey colour, which for commercial purposes is chiefly used as an alloy with other metals. For medical uses a great variety of preparations are made from it, but it is chiefly employed for the cure of febrile and inflammatory diseases *when at their height*, its operation being to increase the action of the skin,

to promote perspiration, and to stimulate the fluids of the stomach and the biliary secretions. The mode of administering this medicine in inflammatory diseases, is from a quarter of a grain, or less, to one grain (according to the character of the inflammation), dissolved in water, and given every two hours until the fever subsides. This remedy, when applied with caution and skill, often effects a cure in the most aggravated cases of fever, without subjecting the system to the debilitating effects which bleeding and other violent remedies entail.

In larger doses antimony excites vomiting and in this character is commonly known as *tartar emetic*, the ease with which it produces the desired effect causes it to be much used for this purpose It should be known, however, that in cases of poisoning antimony should be by no means administered, as its action is always preceded by nausea, during which time the poison would be absorbed by the stomach.

ANTIMONY WINE. — Dissolve two scruples of tartar emetic in sixteen ounces of boiling distilled water, filter, and add four ounces of rectified spirits of wine. In cases of acute rheumatism six drachms of this wine, mixed with one drachm of laudanum, will form an excellent compound, of which twenty drops may be taken in water four times a day. For eruptions of the skin also the following mixture will be found beneficial:—Mix four drachms of antimonial wine, one drachm of laudanum, and one drachm of the solution of oxymuriate of mercury, of which twenty-five drops may be taken in water every night and morning.

ANTI-SCORBUTICS.—See SCURVY.

ANTISEPTICS.—See DISINFECTION and PRESERVING.

ANTI-SPASMODICS.—See CHOLIC, CRAMP, SPASMS, &c.

APARTMENTS.—The arrangement and decoration of the different apartments of a house agreeably to their *suitability and uses* is an art by no means to be despised, since it is not only capable of gratifying others, but also of administering to that comfort and happiness which is always associated with *home*. The following hints, therefore, in connection with this subject may not be unacceptable:—

Apartments that are lighted from south and west should be *cool* in their colouring; but those lighted from north and east should be *warm*.

The colours employed in the interior of an apartment should be so distributed as to *contrast with each other*. Thus, the colours of the carpet should neither be so brilliant as to destroy the effect of those of the paper, nor the contrary; and with regard to the curtains, they should all be of a colour, so as to blend and harmonize with both. For instance, a very brilliant coloured carpet, say crimson, may have a drab or other quiet colour, both in the curtains and the paper; but by way of relief, the bordering of these should introduce a little of the same brilliant colour. So a room with a bright blue or crimson carpet may have white, yellow, or drab curtains and paper; but blue or crimson ornaments or bordering should be introduced to preserve harmony of effect. A green carpet may have black, white, or red curtains, with green borders or ornaments. A yellow carpet may have black curtains and a dark grey paper, with yellow borders and ornaments.

The *designs or patterns* of both carpet and paper should be in keeping with the apartment; that is to say, *large patterns* are most suitable for *large rooms*, and *small patterns* for *small rooms*. It should also be observed that for *low-pitched* rooms striped paper is preferable, because it gives an effect of height; whilst on the other hand patterns with lines across, or borders, should be avoided as detracting from the height. The designs of curtains and other hangings should always be what is termed "up and down," as more in keeping with their character than any other.

The *arrangement* of apartments should be such as to combine comfort with effect, neither being unnecessarily sacrificed to the other; in this particular the judgment and the eye are the best monitors, as they seldom fail to dictate that which is most proper and artistic. The following suggestions apply to the suitability of decoration and arrangement of individual apartments.

Drawing-rooms should be characterized by light and cheerful colouring; and this is produced by the introduction of the light tints of brilliant colours, with a considerable degree of contrast and gilding. The furniture should be light in make and tasty in design. There should also be introduced sculpture, paintings, and a few illustrated books, all selected with the greatest taste. And it should be remarked here that a drawing-room should not be *crowded with ornaments*, especially those of a trivial character, as it not only betrays a vulgarity of taste, but also renders every step and movement of a visitor hazardous.

Dining-rooms.—The characteristic colours should be warm, rich, and substantial; and when contrasts are introduced they should not be vivid; the furniture should be massive, and principally made from mahogany or other dark wood, and the whole of the apartment should be so furnished and ordered, as to convey the greatest possible amount of *ease and comfort*. This room should be so situated in the house as to be at a convenient distance from the kitchen, without being subject to the odours arising from the culinary operations.

Parlours, which are intended, on an exigency, to supply the place of either drawing-room, or dining-room, should be furnished in a medium style between those apartments.

Libraries and Studies should have a grave and quiet tone pervading them, without being too dull or monotonous. The furniture and appliances of these apartments of course mainly depends upon the taste and pursuits of the occupant.

Bed-rooms should have a light, cleanly, cheerful style of colouring; a greater degree of contrast may be admitted here than in any other apartment. The carpets may even

be brilliant and gay, and the paper florid and fanciful.

In addition to the foregoing, we subjoin the following hints appertaining to the subject of decoration generally.

Bright red or crimson colours assort *ill* with mahogany furniture — green colours assort *well*.

Violet or blue stuffs combine *well* with light woods, such as satin-wood, maple, &c.

Dark red stuffs are *more durable* than any other colour.

With old paintings, gilt frames harmonize *well*; black or bronze *badly*.

With engravings light gilt frames or maple harmonize *well*; black or dark coloured woods *badly*.

Hangings of a light green colour are the *most favourable*; those of an orange colour the most unfavourable.

Small patterned paper-hangings are generally *preferable to large ones*.

Light coloured carpets are *more serviceable* than dark coloured.

Bright coloured carpets are best for *large apartments*.

The brightest colours of a carpet should be *in the centre*.

The frames of paintings and engravings occupying the same room should be similar both in their *fashion and colour*.

The valance for hangings in low-pitched rooms should be fixed as *near to the ceiling* as possible.

In furniture *no one new article* should be intruded amongst that which has been long in use.

APARTMENTS, LAWS OF LETTING.— See LANDLORD AND TENANT.

APERIENT MEDICINES are those which have a purgative quality, and facilitate evacuations by removing obstructions. Remedies possessing this property in a milder or more intense degree should be administered according to the requirements of the case. When, for instance, a slight interruption in Nature's laws occurs, it would be injudicious to produce excessive evacuation by purging; whilst, on the other hand, when an obstinate obstruction offers itself, it would only enfeeble the constitution and encourage the continuance of the derangement, to apply to it such means as were inefficacious.

In the majority of cases aperient medicines may be taken without the intervention of medical advice; and when they are needed, either from some accidental circumstance, or from some peculiarity in a person's habit, which has become part of his nature, experience will soon teach him what is the kind of medicine, the strength of the dose, and the frequency of administration required.

In connection with this subject it should be remembered that when aperient medicines are being taken, *their operation should be assisted* by a suitable diet and regimen. If, for instance, a person having recourse to an aperient eats the same food and drinks the same liquids that he does on ordinary occasions, he is obviously wrong in so doing, because, under such circumstances, the operation of the medicine is impeded by the passage of the food through the body, and its demand upon the digestive organs. If, therefore, a person wishes for positive benefit and relief from aperient medicines, his diet for one, two, or three days, as the occasion suggests, should be of a light nature, and chiefly confined to what are called slops. For breakfast he should take a little dry toast, and a large cup of tea; for dinner a basin of mutton broth or beef tea; and for supper gruel or arrowroot. By adopting this course, the medicine will work off freely and thoroughly, and fresh energy and renewed appetite will be the reward for this temporary discipline.

At the same time, persons should be cautious not to take aperient medicines too frequently, as their repetition induces a state of the system sometimes constipated and sometimes relaxed, and which in the end becomes confirmed and habitual. There are, indeed, persons who have a morbid propensity for flying to these remedies to cure some trivial ailment, which a little judicious management of diet and regimen would relieve, without the aid of medicine at all.

The two most popular aperients that are used are "brimstone and treacle" for children, and "blue pill and black draught" for adults; both of these remedies are excellent and efficacious. To meet the several requirements for aperient medicines, however, we append here a few recipes, which may be fully relied on for performing the offices indicated.

Mild Aperient Pill for Adults. — Powdered rhubarb, half a drachm; powdered ipecacuanha, six grains; powdered Castile soap, fifteen grains; to be mixed with water, and made into twelve pills. Two to be taken every other night.

Strong Aperient Pill for Adults.—Compound extract of colocynth, half a drachm; powdered scammony, fifteen grains; powdered gamboge, fifteen grains; calomel, fifteen grains; to be mixed with water and divided into twenty pills. Two for a dose as occasion requires.

Purgative Pill for Adults.—Powdered aloes, half a drachm; powdered Castile soap, half a drachm; made into pills. Two to be taken as required.

Aperient Draught for Youth (from 10 to 12 Years of Age).—Senna leaves, four drachms; sliced ginger, half a drachm; tartrate of soda, half an ounce; extract of liquorice, one drachm; boiling water, six ounces. After these have stood for three hours, strain the liquor off and add tincture of cardamoms, half an ounce. Take two teaspoonsful every morning.

Mild Aperient Powder for Children (from 5 to 8 Years of Age).—Mercury with chalk, twelve grains; rhubarb powder, twenty-four grains; divided into six powders, one to be taken at night.

For Children from 3 to 5 Years of Age.—Mercury with chalk, six grains; rhubarb powder, twelve grains. To be divided and taken as above.

For Children from 1 to 3 Years of Age.—Mercury with chalk, five grains; rhubarb powder, ten grains. To be divided and taken as above.

To Infants under 1 Year of Age.—Mercury

with chalk, three grains; rhubarb powder, six grains. To be divided and taken as above.

See also ALOES, CALOMEL, CASTILE SOAP, CASTOR OIL, COLCHICUM, COLOCYNTH, CROTON OIL, EPSOM SALTS, JALAP, RHUBARB, SENNA, &c.

APIARY, a place for keeping bees, the name of which is derived from *apis* the Latin word for bee. This adjunct to a farm or cottage is greatly to be recommended, not only on account of the interest attached to it, but also for the profitable produce which it affords from a comparatively trifling outlay, and with little care or trouble.

The *aspect* of a hive should be towards the south, and during the winter months the entrance of a hive should never face the sun, as the bees are by that means tempted forth in the morning, and are probably overtaken by the cold and dark, and perish before they can return.

The *situation* of the hive should be in a sheltered part of the garden, protected by a wall or hedge from the cold and biting winds.

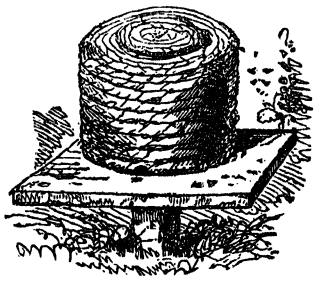
The *position* of the hive should be about two feet from the ground, so as to keep out the humidity arising from the earth, and also to guard it against the entrance of toads, mice, and other enemies to the bees. The board on which the hive stands should be nailed firmly to the pedestal in a somewhat slanting direction, to admit of the rain running off.

The *arrangement of the hives* should be in a right line, but if their numbers be too great to admit of this it is more advisable to place them one above another than in double rows. As bees use much water, the hives should be situated in the neighbourhood of a stream; but where this is not practicable shallow pans of water should be placed within their reach. The entrance to the hive should be clear, and unobstructed by shrubs or plants, so that the bees upon their return home weary and laden may reach the hive without difficulty.

Cleanliness in bee-keeping is of the utmost importance; the stand upon which the hive is placed should be cleansed about four times a year, the first cleansing taking place at the commencement of spring. During the winter the snow that has accumulated on the hives should be assiduously brushed away to prevent dampness, which is very injurious to bees. And the entrance of the hive should also be frequently examined in order to remove any damp masses which may have formed to the exclusion of the air.

The *construction* of hives admits of great variety, the most common form is that of a thimble or flower pot in an inverted position. The Polish hive, which has many advantages, is made of wood, standing from three feet and a-half to five feet high, and of a conical shape. The size of the hives should be in proportion to the swarm, so that the labours of the bee and the capacity of the combs may correspond. One of the best constructed hives is that known as Payne's Improved Cottage Hive, as shown in the accompanying engraving.

In the spring, when a hive is well peopled with many thousands of young bees, a particular period arrives when they look out for another asylum than that of their mother. A *swarm*, therefore, is a colony of bees which



forsake their native home to establish themselves in another.

In England the swarms generally appear in the months of May and June, by which time the new hives should be placed to receive them; or where this may have been neglected, a pail, box, or large garden-pot will sometimes act as a substitute in retaining the swarm.

It seldom happens that the first flight of a swarm is to any great distance, but it generally alights on a neighbouring bush, and every exertion should be then made to hive it. The best method is to watch the swarm in silence, and when it has collected, an empty hive should be held immediately beneath the bush or branch upon which the bees hang suspended, and which being tapped, with a quick firm stroke, will cause the bees to fall into the new hive. Sometimes the swarm will settle upon the stump of a tree, or other situation similarly inconvenient. In these cases a hive prepared with sugar and beer should be *held over* the crown of the swarm, and gradually and gently lowered until the swarm is secured.

It sometimes happens that a swarm divides itself into different clusters; this is a certain sign that there are several queens, each cluster having one. These clusters should not be molested, but quietly watched until they incorporate, which they will presently do.

When swarms from different hives form a junction, as they sometimes will, it will be prejudicial to the apiarian, and to separate them the following process may be pursued. The swarm being collected into one hive, a sheet must be spread on the ground, the hive must be held over it, and giving it a smart knock the bees will all fall upon it; no fear need be entertained of their flying away, and the queen should be immediately sought for. Having detected a queen in the midst of a group, cover it with a small bell glass, and then proceed to divide the bees as nearly as possible into two equal portions. For this purpose two hives must be in readiness, and having allotted a proper number to the queen, who is at large, the hive should be placed in a remote part of garden, and as far as possible from the

parent hive. The imprisoned queen is then set at liberty and conducted to her hive with that proportion of bees which has been assigned to her. The whole being placed in the hive, it is placed as far as limits will admit in a contrary direction to the former hive. No further fear need be entertained of their adapting themselves to their several homes.

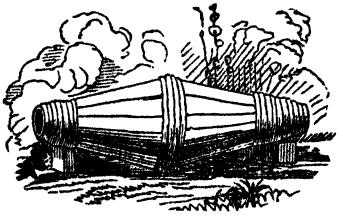
If, on the days immediately succeeding the hiving, the weather be rainy, a little food consisting of a mixture of honey, sugar, and water should be administered to them each night.

When persons are engaged in the operation of swarming, the head and face should be covered, as a safeguard against the stings of the bees; and the clothes should be neither black, brown, blue, or any other dark colour.

The intention of swarming is betrayed by the bees, for two or three days previously by an extraordinary number of bees hanging in clusters about the entrance of the hive, in an unusual state of commotion, and by an apparent idleness reigning in the hive.

When the swarm is hived, and the bees appear restless and confused, it is a certain sign that the queen is not among them, and the bees will soon return to the parent hive: in this case a queen bee should be taken from the parent hive and introduced among the swarm. The presence of a queen bee may be ascertained by a group of bees being formed around her. After swarming, the hive should not be moved for some hours, in order that stragglers may have time to return to their new home.

The Polish method of making a swarm pass from one hive to another is as follows:—Take both hives in the evening (when all the bees are at home), the full and the empty one, which must be smeared with honey; put the opened bottoms of both hives together in such a manner as to prevent any single bee escaping, as seen in the cut;



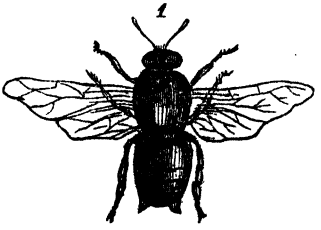
smoke the full hive at the top with smoke produced from dry rags, and the bees will speedily remove to the new hive. After that allow the swarm time to settle, and remove them to the stand prepared for them.

The best time for taking the honey from the hives is the month of July, and this is done in two ways, partially and wholly. When a *part* of the honey only is to be taken, the full hive should be inverted and an empty one placed over it, and the two fastened together by a large sheet or tablecloth. The hives being thus arranged, beat the sides gently with a stick, being particular not to strike those parts where the combs are attached. After a few minutes the bees will have ascended into the new hive, and it may then be placed on the pedestal formerly occupied by the old hive. Having extracted the requisite quantity of comb, the hive may be returned to its former position, reversing the hive which contains the bees; and placing the deprivated hive over it, they may be left in that position for four and twenty hours, by which time the bees will be once more in possession of their old habitation. When the honey is to be wholly taken, the bees are suffocated by the introduction of smoke into the hive. The first-mentioned method, however, is not only more humane, but also more in keeping with apiarian economy.

In the early spring and autumn, when there is a scarcity of flowers, bees require *feeding*. The most appropriate food is a syrup composed of sugar, ale, and salt, the proportions being one quart of ale, one pound of sugar, and half an ounce of salt, the whole to be boiled for a quarter of an hour and carefully skimmed. A well-stocked hive will require about one pound of syrup in a fortnight. A plant called the golden rod should be cultivated in the vicinity of the paper, as this begins to blow when other flowers fade, and continues in bloom until the middle of November.

To extract the honey from the comb, three things are necessary, heat, celerity, and cleanliness. Two or three earthen pans with wire frames should be placed in readiness. The hives should then be brought into a warm room, and the combs loosened from the hive with a long thin knife; those parts of the comb that are empty should be cut off first, and those that are black and drossy should be drained by themselves. The pure combs should be cut into small pieces, sliced twice in a horizontal direction and laid on the wire frames to drain; in two or three hours they may be turned; the honey must then be run through horsehair sieves into jars. When the jars are filled they should be fastened down and stored in a dry place.

It is highly important that the apiarian should be made acquainted with the habits and characteristics of the bee tribe, and able

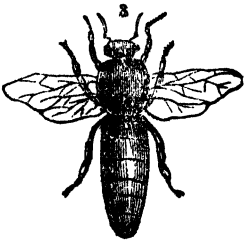


to distinguish them by their forms. Bees are divided into three classes—the male bee, or *drone*; the neuter bee, or *worker*; and the female bee, or *queen*. The drone (Fig. 1) is

easy to be distinguished from the other bees in the hive by the bulkiness of his body, its obtuse termination, and a thick covering of short pale brown iris about the throat; he is also known by the loud humming noise that he makes in his flight.

The neuter bee, or worker (Fig. 2), is of a

nearly black colour, and neither so large as the drone or queen. The abdomen is of a conical shape, and composed of six distinct divisions. The queen bee (Fig. 3) is wholly



different in form from the former two, her body is longer and more taper than that of the drone and bee, and she is also distinguished by the extreme shortness of her wings. The breast of the queen is of a golden colour, and the upper part of her body is of a brighter hue than that of the common bee. Books: *Huish's Treatise on Bees, Harrison on Bees, Huber's Treatise, Beekeeping for the Many*, and *Chylinski's Beekeeper's Manual.*

APOPLEXY. — Apoplexy is a disease which arrests all voluntary motion, and deprives a person of consciousness, as though he had been struck by a blow. Sometimes a person is warned of the approach of apoplexy by various symptoms, such as giddiness, drowsiness, loss of memory, twitching of the muscles, faltering of the speech, &c.; but most frequently he falls to the ground without any warning, and lies as though in a deep sleep. While so lying he breathes heavily, with a *snorting* kind of noise, and with considerable muscular action of the features. The face is red and swollen, the veins distended, the eyes protruding and blood-shot, remaining half-open or quite closed, and a foam frequently forms about the mouth.

Apoplexy mostly arises from accumulation of blood in the system, but it may be the result of an enfeebled constitution, and general want of vitality.

Where a person is seized as described, a medical man should be sent for, and the patient should be carried into a cool room and placed in a sitting posture, in such a situation that the air may be freely admitted to him. The neckcloth, shirt collar, waistband, and other ligatures should be unfastened, and cold water should be poured over the head. Mustard plasters may be applied to the soles of the feet and the calves of the legs, or where the mustard cannot be immediately procured, the feet and legs should be placed in hot water.

If the attack occurs with a person of *full habit* of body, a dozen leeches may be applied behind the ears and on the temples. It is of great importance that the bowels should be freed of their contents, and as there is a great difficulty of swallowing, *one drop of croton oil* should be placed on the tongue and repeated every two hours, until the object is entirely accomplished. Blood-letting should in no case be attempted by a non-professional person. Where the fit arises from enfeebled strength (which is indicated by a small irregular pulse) the remedies should be of a milder form, and stimulants may be cautiously administered at intervals.

The most common *immediate cause* of apoplexy is pressure of the brain, either from an effusion of blood or serum, or from a distention of the vessels of the brain by an accumulation of the blood in them, independently of effusion.

The *predisposing causes* are the habitual indulgence of the appetite in rich and gross food, or stimulating drinks, coupled with luxurious and indolent habits, sedentary employments carried to an undue length; the habit of sleeping, especially in a recumbent posture after a full meal; and lying too long in bed.

The *exciting causes* are excesses in eating and drinking; violent mental emotions; the sudden suppression of piles, gout, rheumatism; or any other cause which augments the circulation of blood to, or extracts the flow of blood from the brain.

Persons below the middle height, robust, with large hands and short thick necks, are generally recognized as apoplectic subjects; but it is, in truth, confined to no particular conformation of the body, *all persons* being alike liable to be attacked by it.

Persons, however, who are *predisposed* to this disease should not fail to profit by the warnings of its approach mentioned at the commencement of this article. Their diet should be light and nutritious; all luxurious habits should be abandoned, and moderate exercise should be taken. Above all, they should avoid giving way to their passions, as it is well known that many persons have been struck with death in the midst of a fit of anger.

APOTHECARIES' WEIGHTS AND MEASURES.—The standard by which apothecaries dispense medicines. Apothecaries' weight differs from that which is used for the buying and selling of every-day commodities, and is as follows:—

20 grains	1 scruple.
3 scruples	1 drachm.
8 drachms	1 ounce.
12 ounces	1 pound.

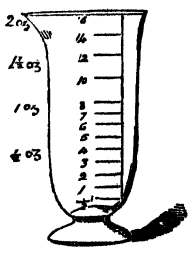
The above quantities have certain abbreviations and signs by which they are expressed in prescriptions and medical works, thus: *grain*, gr.; *scruple*, ℈; *drachm*, ʒ; *ounce*, ℥.

Liquids have their equivalent in weight as follows:—

60 minims	1 drachm.
8 drachms	1 ounce.
16 ounces	1 pint.

The medical signs for these quantities are—*minim*, ♏, *drachm*, ʒ; *ounce*, ℥.

In compounding medicines, measures and weights should be always used, as articles of domestic use vary so widely in their size and capacity that it is impossible to convey through them the correct instructions for the various doses to be taken. In twenty different houses the teaspoons, tablespoons, and wineglasses will perhaps be of as many different sizes; in one case, therefore, the dose intended will be much lessened, and in the other considerably augmented—a variation which might in many instances be attended with sad consequences. Again, in domestic recipes, to express *minim* the word "drop" is frequently made use of, but in these there is as much difference, comparatively, as in larger quantities; the capacity of a drop will depend upon the neck of the vessel from which it is poured, upon the momentum with which it is forced from the bottle, and upon the character of the fluid itself; and besides, when a person is pouring out drops he is liable to miscount them by having his attention distracted, and many other causes. To obviate these consequences there are *graduated glasses* sold by chemists which contain a given quantity in the whole, and which is divided into its component parts, marked accordingly on the glass.



Failing the possession of apothecaries' weights and measures, however, it will be useful to know the following estimated *average* of *miscellaneous measures and their equivalents*:—

Teaspoonful	is equal to	1 fluid drachm.
Dessertspoonful	,,	2 ,,
Tablespoonful	,,	4 ,,
Wineglassful	,,	2 fluid ounces.
Teacupful	,,	5 ,,
Breakfastcupful	,,	8 ,,
Tumblerful	,,	8 ,,
Teabasinful	,,	12 ,,
Thimbleful	,,	½ fluid drachm.
Pinch (of leaves and flowers, &c.)	,,	1 drachm.
Handful	,,	10 drachms.

APPAREL may be considered in a variety of interesting aspects relating to domestic economy. In *buying* apparel, cheapness should not so much be regarded as substance and durability. As a general rule, the purchase of low-priced clothes is an unwise economy, as they are almost invariably of an inferior description, and also badly made. A coat displayed to the greatest advantage in a ready-made clothes shop window will look well to the eye, but if it be purchased and placed on the back it soon assumes quite a different character; in the course of a few weeks the cloth loses its gloss and begins to turn white, the buttons drop off, and the seams give way, and in three or four or six months' time at the furthest the garment is no longer fit to wear. This matter is easily accounted for. Cloth, like every other staple commodity, bears a certain market value relative to its quality, so that garments made of certain qualities of cloth cannot be honestly produced under a certain price. The cloth, therefore, from which ready-made clothes are fashioned, is not what it professes to be, but is an inferior article, got up with a *face, or artificial surface*, in imitation of the true material.

It is more satisfactory, therefore, to order clothes from a respectable tailor, or to purchase the materials from a woollen warehouse, and have them made according to direction.

In the *make* of clothes, comfort should not be wholly sacrificed to fashion, nor, on the other hand, should fashion be totally disregarded; in most cases a compromise may be made between the two without overstepping the boundaries of either.

Apparel should possess a certain *suitability*, that is to say, that every person should appear in such clothes as are adapted to his pursuits, and conformable to his station in life. A man who occupies a humble position is not expected to dress extravagantly. Neither is he who possesses the means justified in ignoring conventionalities by wearing apparel absurdly mean and ill-fashioned.

The *harmony* of apparel should always be considered, both as it affects the wearer as a

whole, and also in the contrast and combination of the different garments. The first rule in the harmony of dress is a quiet and subdued tone of colouring, elegance, neatness, and simplicity. All gaudy colours and large staring patterns are offensive to the eye, and convey an idea of *vulgarity* The object of the wearer of such apparel is avowedly to attract attention and produce an impression; and this is most effectually achieved, but whether favourably or unfavourably it is unnecessary to state. It has been truly said that a gentleman to be *properly dressed* should not be able to leave behind him the remembrance of any one particular garment he has on, but only the conviction of a *gentlemanly style* not easily definable.

The opposite appearances which different styles of costume give to the wearer is well known and should be taken advantage of. Tall persons, for instance, will look shorter in dress coats, short persons taller in surtouts; stout men appear thinner in black, and thin people stouter in light colours. Persons with dark complexions should be very careful in the selection of colours; but fair persons are allowed a greater latitude, because the contrasts created are seldom so conspicuous. *Black is always becoming;* it also sets off the whiteness of the linen, and serves as the groundwork or frame for the introduction of any other colour.

The manner in which *clothes are worn* materially affects their appearance: if they be ever so well made in the first instance, and are carelessly put on and negligently adjusted, they will always have a clumsy and awkward look. On putting on a coat it should be pulled down at the waist, and fitted to the figure by two or three gentle movements of the arms. Waistcoats should be *buttoned from the top*, and the buckle at the back adjusted to the figure; trousers should be put on after the *boots*, and not before, and their height should be properly regulated by the braces. It is always better to have two suits of clothes, and wear them on alternate days; otherwise, incessant use produces a confirmed derangement of shape, such as bagginess at the knees, bulging at the elbows, and creases about the waist.

The *preservation of clothes* depends, as a matter of course, greatly upon the care that is bestowed upon them, for under favourable circumstances they will last twice as long as when they are neglected. It is better to brush them with a whisk made of loose twigs than with a hard brush, as the nap is soon worn off by the frequent application of the latter. When mud in any quantity has collected on clothes it should be removed by rubbing two parts against each other. When clothes are put away they should be hung up in a wardrobe or closet in preference to being folded up in drawers or boxes, as wrinkles are almost sure to follow the latter method. Apparel should be occasionally beaten in the open air with a thin smooth cane, and then laid on a table and thoroughly brushed, but this should not be done too frequently or roughly. A lounging dress should always be adopted for the house, which by being substituted in the evening for the costume that has been worn during the day will add both to comfort and economy. But when it is not practicable to change the whole attire the coat at least should be substituted; this not only applies to home wear of an evening, but should also be adopted during an employment that is likely to be prejudicial.

The *renovation of apparel* is another great consideration, especially to persons with limited means. The following receipt will be found useful for renovating *black cloth.* Boil four ounces of logwood in a boiler or copper containing two or three gallons of water for half an hour. Dip the clothes (which have been previously well brushed) in warm water, and squeeze them dry, then put them into a copper, and boil for half an hour, then take them out and hang them up for an hour or two; take them down, rinse them in three cold waters, dry well, and rub with a soft brush which has had a few drops of olive oil rubbed on its surface. If the clothes are threadbare about the elbows, cuffs, &c., raise the nap with a teazel or half-worn hatter's card, filled with flocks, and when sufficiently raised, lay the nap the right way with a hard brush. *Grease spots or stains* may be removed by a teaspoonful of the essential oil of lemon, mixed with a wineglassful of spirits of turpentine.

The next important consideration in connection with apparel is its *influence upon the bodily health* and comfort. The natural heat of the body is ascertained to be 98 deg., any degree of heat or cold above or below this is prejudicial to health if it continue for a length of time; the great aim with regard to clothing should be, therefore, so to regulate it according to climate and season, that it may have the power of retaining or passing off heat, as occasion may require. In our variable climate we ought never to discard our winter clothing too early, nor to wear our summer apparel to late; and the safest plan is to make the change gradually, so that the body may be accustomed and inured to it. *Apparel should always be easy and loose* fitting, so that every member of the body may be unimpeded in its action, and permitted to develop itself naturally. No stress or pressure should be allowed on any part of the body. Cravats, garters, buckles, and other ligatures fastened tightly tend to obstruct the natural flow of blood, and act injuriously upon the system generally. In cold weather an addition to the clothes usually worn in the house should be made upon venturing out, and upon returning into a warm room from the cold air the extra clothing should be gradually laid aside. *Persons of delicate constitutions* should pay the strictest attention to their apparel, and study health in preference to appearance. It is absolutely necessary that such persons should always be well protected next their skin, so as to be prepared for any atmospheric changes that may suddenly take place. Damp or wet clothing should be taken off as quickly as possible, the serious consequences of neglecting this precaution are too well known to be further dwelt on.

The clothing of infants demands the greatest attention, for their organs and functions are so feeble as to be liable to serious and even fatal consequences from any sudden or undue exposure of the body. *The clothing of the aged* should also be of warm materials and of sufficient quantity, as a sensation of coldness is inseparable with the decline of life, and artificial means are therefore needed to supply the place of the natural warmth.

Cleanliness in apparel is necessary both to comfort and health; linen should be changed three times a week, and flannel once; and where washable clothes are worn in summer they should undergo that process every month or six weeks.

Apparel, as appertaining to female attire, will be treated separately. See also BOOTS, COATS, HATS, SHIRTS, TROUSERS, WAISTCOATS, &c.

APPAREL, FEMALE, from its very nature and fashion, favours elaboration and the exercise of the decorative art. Indeed, females are permitted and even expected to bestow such an amount of care and attention upon attiring their persons as will tend to render them the charm of the household and the ornament of society. No female, therefore, need despise studying dress as *an art*: by which we mean that exercise of taste and judgment which teaches what style and colour of dress is *most becoming to the figure, race, age, &c.*, and also what fashions and colours best blend and harmonize with each other. The following rules illustrating this subject may be confidently relied on and advantageously applied. *Short females* should not wear flounces to their dresses, because the undue breadth which it gives to the lower part of the person tends to diminish its height. For the same reason they should not wear large check patterns or stripes running round the dress. *Tall females*, as a matter of course, may wear their dresses on principles diametrically opposite to this. *Stout females* should wear dark-coloured dresses, and simple patterns, as they diminish the apparent size of the figure; the skirts also should have few or no flounces except where the figure is above the ordinary height. *Thin females* should wear light-coloured dresses, and patterns displaying breadth of design, such as large checks, broad stripes, &c.; flounces may also be freely adopted, as they serve to diminish the angles of the figure, and to impart a certain degree of rotundity. *Young females* have a wide latitude allowed them for dress; gayer colours and more fanciful styles may be indulged in, so long as they do not amount to over-dressing or unsuitableness. *Elderly females* should attire themselves in a neat quiet manner; the materials of their dress should be substantial, the colours dark, and the design small. Above all things they should avoid a juvenility of style, since, instead of making old people look younger, it has an immediately opposite effect, and only serves to bring out more prominently, and to contrast more painfully, *the youth of the dress with the age of the wearer*. *Dark females* look best in light colours, which supply a pleasing contrast to the complexion, or in yellow, which sheds a subdued violet hue favourable to brunettes. *Fair females* appear to the best advantage in black, on account of the contrast which is derived from it; or in light green or sky blue, both of which colours possess the power of imparting to pale or fair complexions what are called complimentary tints.

The science of colour, as it exercises so important an influence on personal attire, ought to be studied much more carefully than it is, for it is no uncommon thing to meet females whose costume creates an unfavourable impression, simply because the colours of the various articles of the dress have been selected without the slightest regard being paid to their harmony with each other. This reciprocal agreement of colours is based upon certain laws of harmony, relation, and contrast, thus: *red* has an affinity for *green*, *blue* accords well with *yellow*, *white* with *violet*, *black* with *white*, *violet* with *yellow*, and *blue* with *red*. To ascertain what colours will harmonize with each other, the following simple plan may be adopted. When making a dress or other article, cut a piece of it of the size and shape of a large wafer, and lay it on a black ground; look on this for a few seconds either by the light of the sun or candle, then suddenly turn the eye on to a sheet of white paper, and the tint which presents itself will indicate the colour that will harmonize best with the article being made.

We now come to *the suitability of dress generally*, in regard to which it may be safely laid down as a rule that the style universally regarded as the most becoming is that which is elegant without being gaudy or ostentatious, and simple without savouring of prudery or affectation. Extravagance or singularity of design, large staring patterns, and a profusion of gay colours, instead of being agreeable are positively repulsive to the eye. Many females appear to labour under a delusion in this respect, and when dressed in this grotesque fashion imagine that because they are stared at they are admired, whereas if they could but hear the comments which these vagaries provoke, they would not be long in exchanging their style of costume for one of a totally different nature.

As *personal ornaments* may be considered a part of dress, a few hints respecting them will not be unacceptable here. In the first place, all ornaments should be made of those materials of which they are supposed to consist; mosaic jewellery in place of gold, paste instead of diamond, and numerous other substitutions, are paltry artifices which no person of respectability or good taste would descend to. In most cases they fail to produce the effect intended; their very lavishness, taken in connection with the wearer's means, beget suspicions of their genuineness; and when they are at length detected, the exposure only causes discomfiture. In the second place, a profusion of ornaments, however valuable they may be, are not to be approved of. Such a profuse indulgence appears like an endeavour to

outshine everybody else, and also suggests the idea that more importance is attached to these decorations by the wearer than to any mental endowments which they may possess, or any personal advantages with which nature may have gifted them. In the third place, ornaments should be appropriate to the dress, and appear designed to answer some useful purpose; a chain, for instance, when worn round the neck should support a watch or locket; and a brooch or other ornament should be placed in that part of the dress where it fulfils its intended uses. No article should be worn in a manner that would make it appear simply as an *ornament*. The only exceptions to this rule are *rings* and *bracelets*.

With regard to the *economy of dress*, it is certainly wiser to select the better class of materials in preference to inferior fabrics, because the cost of making up, lining, trimming, &c., is as expensive in the one case as in the other; so that with the lower-priced dress this outlay is incurred twice or thrice as frequently as with the higher priced, thereby rendering the cost much greater and never appearing half so well. Plain dresses are also more economical than fancy, and single colours than varied, because as fresh patterns and new combinations of colours are springing up every day, it is quite possible for the fashion to be obsolete before the material is half worn. And besides, in dresses of varied shades, the colours may not be equally fast; and if one of them fades, the whole dress loses its freshness and beauty. The most serviceable materials of all are French merino, black satin, black satinet, and black silk.

Dresses may be preserved better in presses or wardrobes than in drawers, and when put away should be hung up, with the lining outwards, to preserve them from dust or discolouration. Where flounces are worn care should be taken when sitting down to remove those out of the way which are likely to come in contact with the seat, otherwise they become creased and tumbled, and spoil the whole appearance of the dress.

In purchasing dress it should be borne in mind that a good article is always worth a good price. As a rule bargains are wholly unworthy of that name; and when linen-drapers and others pretend to sell articles at a "tremendous sacrifice," "immense reduction," "twenty per cent. under cost price," &c., it is in the majority of cases simply a specious artifice by which they get rid of their stock at a much higher price than that for which the same goods could be obtained at less pretentious establishments. Our advice to the ladies, therefore, on this head is, deal with shopkeepers who have a character for integrity and fair dealing, and do not endeavour to obtain goods for a less price than it cost to make them.—Book: *Housewife's Reason Why*.—See CLEANING, DRESS-MAKING, DYEING, MOTHS, STAINS, &c.

APPEAL, IN LAW, signifies the removal of a cause from a lower to a higher tribunal. To entitle a party to appeal, some matter of erroneous judgment must be stated. The proceedings are termed proceedings "in error." The writ of error on any judgments of the Queen's Bench, Common Pleas, or Exchequer of Pleas, is returnable in the Exchequer Chamber, and from thence to the House of Lords, which is the *final* judgment, and conclusive upon all parties.

APPEAL TO THE SESSIONS is allowed from the convictions or orders of justices of the peace, or magistrates generally, as a matter of right, where the defendant is dissatisfied with their adjudication; but the right is in many cases barred by various statutes, which render convictions and orders of magistrates final. *All* appeals are subject to various regulations as to security for costs, deposits, bail, &c.

APPEARANCE, IN LAW.—It is not necessary in *civil causes* for defendants to appear personally at the bar of a court; but an appearance is recorded in a book kept by the proper law officers, who receive a memorandum delivered to them by the defendant, or an attorney employed by him. When a defendant has been personally served with a *writ of summons*, if he have good defence to the action, or seeks to gain time by making terms of settlement, he should, within eight days inclusive after such service, cause an appearance to be entered for him in the court out of which the writ issued; or in default of his so doing, the plaintiff may, on the *morning of the ninth day*, proceed to judgment, and on the 11th day, reckoning from the serving of the writ, execution at his option against his goods or his person.

APPETITE in its general sense signifies the desire for food, which desire may either be natural or artificial. *Natural appetite* depends upon the proper performance of the digestive and other organs of the body, and it immediately results from the waste which the system is constantly undergoing and the instinctive desire for a further supply of stamina to replace that which has been parted with. *Artificial appetite* is that which is induced by certain medicines, cordials, sauces, or other provocatives, which rouse the organs of taste from their torpor, and excite a temporary energy. A person to be healthy should always have a natural appetite, and the want of it is one of the surest indications of the derangement of the system. Loss of appetite is not only occasioned by ill health, but may also arise from other causes, such as grief, over-exertion, and even atmospheric influences. Sometimes it is produced by protracted fasting, the lengthened interval between the periods of taking food having induced an exhaustion of the system, which renders it incapable of receiving food.

With regard to artificial appetite, although it may be stimulated on occasions, and for a time, it cannot be done so habitually. Incentives applied in the first instance lose their power on a second or third trial, and the appetite subsides into its former inanity. Upon this, weakness and a want of nervous energy follow, and the system sinks lower and lower, until serious illness at length arrives, frequently ending in death. It is obvious, therefore, that the preservation of the natural appetite is of the utmost

consequence, and this, in the majority of instances, may be accomplished by attending to certain rules of both regimen and diet, which experience and common instinct tell us we ought to follow. In the first place exercise daily in the open air is necessary. We all know when we take a walk in the country before dinner with what a zest we return to that meal; while, on the contrary, if we remain within doors all day, our meals are partaken of more as a matter of routine than to satisfy any particular desire. Early rising and early going to bed should also be habitually practised, and an excessive indulgence in wine, spirits, or beer, should be carefully avoided. The mind should also be kept in as calm and equable a state as possible, excessive grief, violent paroxysms of anger, and other mental emotions, are extremely prejudicial to the appetite, and if indulged in during the time of taking meals, will render the process of eating more hurtful than beneficial. It should also be borne in mind that the appetite is materially influenced by the regularity with which meals are taken, and that stated intervals should be observed between each meal, so as to allow the food which has been previously eaten to undergo the process of digestion thoroughly, without being interrupted by the introduction of fresh materials into the stomach.

The length of time required between each meal for the process of digestion differs according to the nature of the food taken, to the employment of the body afterwards, and other accidents. As a general rule, however, an interval of from four to five hours may be regarded as the standard for persons whose health is moderately robust, and whose occupations are of an ordinary character.

In cases where the appetite fails without any apparent cause, the operations of nature may be assisted by having recourse to the following remedies.

Mix a saltspoonful of rhubarb in a wineglassful of extract of gentian, and take morning and night; or,

Take Rhubarb . . two drachms
„ Syrup . . . one drachm
„ Oil of Caraway . ten drops

make into forty pills, and take two every morning. Frequently also appetite may be encouraged by taking a wineglassful of bitters half an hour before a meal, or by chewing two or three ginger or peppermint lozenges. — See BREAKFAST, DIGESTION, DINNER, FOOD, SUPPER, TEA, &c.

APPLE.—This well-known fruit, comprising upwards of 1500 varieties, is to be found in every part of the kingdom, and in all kinds of situations and soils. The apple is propagated chiefly by seed, and by grafting: by seed in order to produce new varieties, and by grafting to increase the stock of those kinds already held in esteem. In *propagation by seed*, they may be sown during the autumn in pots or beds, in rich light earth, and about an inch below the surface. At the expiration of a year they are *transplanted* into nursery rows, and are so placed as to have a foot of clear space for each plant. From the nursery they are afterwards removed to their destined place in the orchard or garden, and planted in the midst of a clear space of six or eight feet. They will then bear fruit in five or six years. When a selection is to be made from the plants raised from seed, those having broad round leaves are preferable to others having long narrow leaves: the former indicating a more fruitful tree than the latter. The seeds selected should be those of the largest and most convex form; care should also be taken that the stock is of a superior class, sound and healthy, as any defect in the parent tree is perpetuated in the youthful plant. When it is desired to improve or strengthen any species already existing through the medium of seedlings, recourse is had to mixing, or "crossing" seeds of various fruits having properties in common, but with different qualities: thus the various kinds of pippins will cross better together than when mingled with a totally opposite class, such as the codling.

Propagation by grafting is achieved by two kinds of stocks, the *wild crab* and the *paradise:* the former should be used only for standards, being of a vigorous growth; while for dwarf trees the paradise is more suitable, as it possesses the property of curbing the growth of the shoots, and rendering them more fertile. The period for grafting is generally the first or second week in March. It may, however, be more particularly guided by the rising of the sap, indicated by the enlargement of the buds.— See GRAFTING.

Apple trees are trained in the form of *standards, dwarfs,* or *espaliers.* When *standards* are planted they should be supported by a stake, in order to protect and strengthen them. At the end of the first year the branches should be thinned so as to encourage the formation of a good head. After this they will require only an ordinary amount of care and attention, and may be left to their own natural growth. *Dwarfs* are generally trained for garden culture, their fruit being of the finer sort for supplying the dessert table. Plants which have been grafted one year will train best for this purpose after standing untouched for a year, at the end of which time the head should be thinned, and redundant branches pruned; and on the completion of the second and third years the same process should be had recourse to, but more sparingly. *Espaliers* entail an elaborate mode of culture, and demand the greatest care to keep them in order. They are mostly trained so as to form a leading shoot from the centre, with lateral branches from the stem, as seen in the accompanying engraving. The young

plant when first put into the ground is not more than a foot high, and the lower branches are secured by small stakes. These

supports must be changed and shifted according to the growth of the trees. When they bear their full crop of fruit from eight to twelve stakes will be sufficient to sustain the branches, and at other times not more than six. Another method of training is known as *balloon*, which is accomplished by attaching cords to the extreme ends of the principal branches, and fastening them to pegs placed around the stem. By this means the branches acquire an inverted and downward growth, and the whole tree assumes the shape which its name imports. The advantages of balloon trees are, that they do not require so much room for growth, are more accessible for the purposes of culture and gathering, and their crop being more protected is not liable to the accidents of rough and windy weather.

The fruitfulness of the apple tree depends much upon *the nature of the soil*, the most congenial being a strong loam. The subsoil especially should be dry; and where there is a tendency to undue moisture it should be drained. Old apple trees may be nursed and rendered more fruitful by a timely *application of manure*. This should be done by removing the soil round the foot of the tree to the depth of four or five inches, laying down the manure in its place, and covering the whole with a slight surface of earth. If this remedy is applied about once in every three years the old tree will continue to produce fruit equal in size and flavour to that of its most vigorous days. The following is also an excellent mode for resuscitation. Take fresh made lime from the kiln, slake it well with water, and thoroughly dress the tree with it by means of a brush: by this process both moss and insects will be completely destroyed, the outer rind of the tree will fall off; a new, smooth, clear, and healthy one formed; and finally there will be an abundant produce of fruit.

Apples should be *taken from the tree* when slightly unripe, they should be gathered on a dry day, and care taken not to bruise them, as the decay occasioned is not confined to the particular apples bruised, but is also communicated to the remainder of the fruit. The best method of *preserving* apples is, after they are gathered to spread them lightly on the shelves or floor of a dry room; when they have thus lain for about ten days or a fortnight, and have freely thrown off a gum-like moisture termed sweat, each apple should be rubbed singly with a dry cloth, and replaced on the floor or shelf, so that they do not touch each other, in layers, with thin coatings of straw between each layer; they may be piled up in this manner to the height of a foot or a foot and a half, but not higher, as the apples which are undermost are liable to be bruised and crushed, by too great a weight resting above. About once a month they should be carefully examined; and any apples betraying symptoms of unsoundness, such as discolouration or speckles, should be removed. As the cold weather advances the covering of straw should be increased, and when the frost sets in the apples should be completely enveloped in straw, and remain so until the approach of a more genial season.

Books: *Loudon's Encyclopedia of Gardening; Lindley's Guide to the Orchard and Kitchen Garden; Glenny's Handbook to the Fruit and Vegetable Garden; Neill's Fruit, Flower, and Kitchen Garden; Bucknal's Orchardiast; Coxe's View of the Cultivation of Fruit Trees; Lawrence's Fruit Gardener; Knight's Treatise on the Apple and Pear; Forsyth's Treatise on Fruit Trees; Billington's Series of Facts; Switzer's Practical Fruit Gardener.*

APPLE BISCUITS.—Boil a dozen fine apples until they become pulpy, then take them out and rub them into a mortar through a hair sieve; add two pounds of powdered loaf sugar, and two or three drops of oil of lemon or cloves; mix thoroughly together, then roll the mixture into separate masses of the size and thickness of a bun, and cut them into any shape desired; they may then be dried in a very slow oven, care being taken that the sugar does not melt.

☞ Apples, 12; sugar, 2lbs.; oil of lemon or cloves, 2 or 3 drops.

APPLE BREAD.—Take a quantity of fresh gathered apples and boil them to a pulp, which mix with double its weight of flour, little or no water is required; yeast is employed in the same proportion as in ordinary bakings, and after being allowed to rise for about ten hours, it is then baked in long loaves. This bread is much eaten in France, and is to be recommended for its light and agreeable properties.

APPLE BUTTER.—Peel, quarter, and core, one bushel of sweet apples; put them into a stew-pan over a gentle fire. When the apples begin to get soft, add the juice of three lemons, one pint of rum, and one pound of loaf sugar dissolved in a quart of water. Boil the whole together, and pour into jars.

☞ Apples, 1 bushel; lemon juice, 3; rum, 1 pint; sugar, 1lb.; water, 1 quart.

APPLE CAKE.—Peel and core eight or ten good sized apples, add the peel of one lemon and half a stick of cinnamon. Make them into a marmalade with a half pint of water; boil the whole with one pound of loaf sugar, and keep stirring until it falls in masses from the spoon, when it will be done. Turn it out when cold into moulds or dishes, and add cream or custard.

☞ Apples, 8 or 10; lemon peel, 1; cinnamon, ½ stick; water, ½ pint; sugar, 1lb.

APPLE CALF'S FOOT JELLY.—Pare and core a pound and a half of apples, add to them three pints of apple juice, simmer till the apples are broken, then strain, and let it cool. Put a quart of this juice into the stew pan with three pints of calf's foot stock, three quarters of a pound of powdered sugar, the juice of three lemons and the rinds of two, with the whites and shells of ten eggs; let it boil gently for ten minutes, then strain it through a flannel bag, and when cool put it into moulds.

☞ Apples, 1½lbs; apple juice, 3 pints; stock, 3 pints; sugar, ¾lb.; lemons, juice, 3; rinds, 2; eggs, 10 (whites and shells).

APPLE CHARLOTTE.—Peel, core, and slice one dozen large sized apples, and stew them with half a pound of sugar, one ounce of butter, the peel of one lemon, half a stick of cinnamon, and half-pint of water; continue boiling until the mixture becomes a thick paste. Line the bottom and sides of a mould with thin pieces of bread dipped in clarified butter. Fill the space with the apple marmalade, and cover the whole with a piece of bread dipped in clarified butter. Bake it in a hot oven till it is of a pale brown colour, and when done turn out, and serve in a dish.

☞ Apples, 12; sugar, ½lb.; butter 1oz.; lemon peel, 1; cinnamon, ½ stick; water, ½ pint.

APPLE CHEESE.—Take two dozen moderate sized apples and three pounds of sugar; boil the sugar in half a pint of water and clear the scum as it rises, then add the apples (peeled and cored) and the peel of one lemon grated; mix thoroughly and boil till it becomes a thick paste, then turn into moulds. When cold a cream made as follows may be added; the yolks of two eggs beaten in a pint of milk and flavoured with cinnamon. Boil these together, sweeten to taste, and when cold pour round the dish that contains the above.

☞ Apples, 24; sugar, 3lb.; water, ½ pint; lemon peel, 1; (for the cream) eggs, 2 yolks; milk, 1 pint; sugar and cinnamon to taste.

APPLE COMPOTE.—Peel and core some choice pippins and boil them until they are soft, then take them out and beat them into a marmalade, place over the fire again and continue to stir until it becomes a stiff thick paste, then add an equal weight of sugar and mix both well together; press the mixture into the thickness of a quarter of an inch, and dry in a cool oven.

APPLE CREAM.—Peel a dozen and a half large apples and boil them to a pulp, then add two pounds of powdered loaf sugar and the whites of three eggs; mix thoroughly together and serve when cold in a dish.

☞ Apples, 18; sugar, 2lb.; eggs, 3 whites.

APPLE CUSTARD.—To one pound of flour add two eggs, two ounces of butter, and two tablespoonfuls of sugar; mix thoroughly together and make into a paste; line a mould with the paste and fill it with apple marmalade. Bake in a moderate oven, and when done turn it out of the mould into a dish; powder with sugar and serve.

☞ Flour, 1lb.; eggs, 2; butter, 2 ounces; sugar, 2 tablespoonfuls.

APPLE DUMPLINGS.—Make a good puff paste, peel, core, and cut into quarters some large apples, then roll some of the crust round each apple; dip a clean cloth into boiling water, slightly flour it, tie each dumpling up separately, and put them into the boiling water; keep them boiling for three quarters of an hour and they will be done.

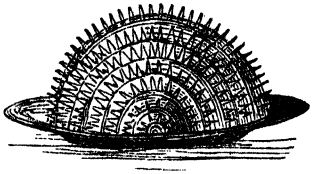
APPLE FOOL.—Put two dozen apples cored and peeled and a pound of sugar into a stone jar, add a tablespoonful of water, and stir the whole over a fire until it becomes a thick pulp; rub the mass through a colander or hair sieve, and add to it a cream made of a quart of new milk with two eggs beaten in it; mix the whole gradually and sweeten to taste.

☞ Apples, 24; sugar, 1lb.; water, 1 tablespoonful; milk, 1 quart; eggs, 2.

APPLE FRITTERS.—Peel, core, and slice one dozen fine apples, put them into a basin, and add a wineglassful of brandy and six drops of essence of lemon; let them remain in this for some hours before use. When required take them out and strew them lightly in a frying pan prepared with heated lard; fry them until they are of a light brown colour, lay them on writing paper to drain, dust with powdered loaf sugar and then serve.

☞ Apples, 12; brandy, 1 wineglassful; essence of lemon, 6 drops.

APPLE HEDGEHOG.—Place some marmalade in a dish in as compact a form as possible, and cut apples into small pieces of a conical form, dilute them in a little saffron, and boil them once. Let them cool, and when perfectly coloured, arrange them on the marmalade in alternate colours—white, red, and yellow, and in the form seen in the accompanying engraving.



Pour over it apricot or angelica jelly, which must be of sufficient consistence as not to run down the sides.

APPLE JELLY.—Peel, core, and slice very thin six fine apples; boil them in a quart of water, until a fourth part is consumed; strain off and add one pound of sugar and half a stick of cinnamon: boil the whole until moderately thick, add a quarter of a pound of isinglass, strain it off repeatedly until quite clear, and then put up in jars. Calf's foot jelly may be used instead of isinglass.

☞ Apples, 6; water, 1 quart; sugar, 1lb.; cinnamon, ½ stick; isinglass, ½lb.

APPLE MARMALADE.—Peel and core two pounds of apples and put them into an enamelled saucepan with half a pint of white wine and one pound of powdered loaf sugar; stew them over a slow fire until the fruit is very soft, and squeeze it through a hair sieve; if not sufficiently sweetened add sugar to taste and put away in jars. It may afterwards be eaten with milk or with cream.

☞ Apples, 2lb.; white wine, ½ pint; sugar, 1lb.

APPLE MIROTON.—Peel, core, and slice, twenty fine apples, melt a quarter of a pound of fresh butter and stir in it half a pound of sugar, the peel of one lemon grated and the juice of two. Fry the apples in this mixture, and serve them in a dish.

☞ Apples, 20; butter, ¼lb.; sugar, ¼lb.; lemons, 1 peel, 2 juice.

APPLE PIE.—Make a good puff paste and lay it round the inside of the dish you intend using; peel, core, and slice a sufficient number of apples according to the size of the dish, and lay half of them in, cover these with sugar, and add half a lemon peel grated with a few drops of the juice a sprinkling of cloves, and half a stick of bruised cinnamon; then put in the rest of the apples and sprinkle again with sugar; add the upper crust and bake.

APPLE PRESERVE.—Peel and core two dozen apples, and place them in a jar with three pounds of powdered loaf sugar and a quarter of a pound of ground ginger distributed in layers. Let them remain two whole days, and during half that time let a quarter of a pound of bruised ginger infuse in a pint of boiling water; strain and boil the liquor with the apples for about an hour, skim and take off the fire when quite clear.

☞ Apples, 24; sugar, 3lb.; ginger ground, ¼lb.; ginger bruised, ¼lb.; water, 1 pint.

APPLE PUDDING, BAKED.—Peel and core twelve large apples, and put them into a saucepan with a teacupful of water; boil them until very soft, beat them well, and stir in a quarter of a pound of butter, a pound of loaf sugar, the peel of two lemons cut into shreds, the juice of three; the yolks of eight eggs, previously beat up; mix all well together, turn into a dish lined with puff-paste, and bake in a moderate oven.

☞ Apples, 12; water, teacupful; butter, ¼lb.; sugar, 1lb.; lemons, peel 2, juice 3; eggs, 8 yolks.

APPLE PUDDING, BOILED. — Peel, core, and slice apples in sufficient quantity for the size of the pudding intended, make a good puff-paste, roll it out to about half an inch in thickness, place the apples in, and close up the crust, tie it up in a cloth, and set in on the fire; if it is a moderate sized pudding, two hours will be sufficient to boil it; if large, three hours will be required.

APPLE PUDDING, SWISS.—Line a dish with thin paste, put in a layer of sliced apples and sugar, then a thin layer of pounded rusks that have been soaked in milk, then another layer of apples, and another of rusks; add melted butter, and powdered sugar.

APPLE PUFFS.—Peel and core a sufficient number of apples, and stew them in a stone jar in the oven; then let them cool, and mix the pulp with sugar and lemon peel shred fine. Bake them in thin paste, and in a quick oven.

APPLE SAUCE.—Peel, core, and slice apples according to quantity required; put them in a stone jar into a saucepan of water; when done, beat them to a pulp, add a small piece of fresh butter, and sweeten sufficiently with brown sugar.

APPLE SAUCE, BAKED.—Fill a quart basin with apples, pared, cored, and quartered; add a tablespoonful of water, cover it over, and set it in a moderate oven until the apples are reduced to a pulp; beat them with a spoon till quite smooth, adding a small piece of fresh butter, and sugar in sufficient quantity.

APPLE SAUCE, BROWN.—Pare and core a pound of choice apples, and stew them in a teacupful of rich brown gravy until they have become a thick and smooth marmalade; season with black pepper or cayenne, and serve very hot.

APPLE SNOWBALLS.—Pick and wash well three quarters of a pound of rice, boil it in plenty of water for a quarter of an hour then drain, and let it cool. Pare and core (but without dividing them) half a dozen large apples, enclose them in the rice separately, and boil them for one hour. When eaten, a little butter and sugar, with powdered nutmeg or cinnamon, will improve their flavour.

APPLE SOUFFLÉ. — Peel, core, and slice twelve apples, put them into a deep dish, and cover them to about the depth of two inches, with rice boiled in new milk and sugar; beat up the whites of two eggs, and pour it over the rice, and bake it to a pale brown.

APPLE SOUP.—Boil two quarts of shin of beef-stock, which has been thoroughly skimmed; at boiling point add a pound of apples, and stew them gently until they become a soft pulp, strain through a hair sieve, skim, and serve hot.

APPLE TANSY.—Peel, core, and slice thinly, four choice pippins, fry them in butter, then beat up together four eggs, a teacupful of cream, twelve drops of rose-water, half a teaspoonful of nutmeg, and a quarter of a pound of powdered loaf sugar, pour this over the apples, and fry the whole till brown; garnish with lemon, and strew with powdered sugar.

☞ Apples, 4; eggs, 4; cream, teacupful; rose-water, 12 drops; nutmeg, half a teaspoonful; sugar, ¼lb.

APPLE TART, WITH QUINCE.—Prepare the apples as for apple pie, and lay them in a dish; then stew two quinces with a little water, sugar, and butter, and pour them on the apples; then add a layer of pounded sugar, and the rind of a lemon grated, cover with puff-paste, and bake to a light brown.

APPLE TRIFLE.—Scald such a quantity of apples as when pulped through a sieve will make a thick layer at the bottom of the dish; mix with them half a lemon-rind grated, and as much sugar as will flavour it agreeably. Mix half a pint of milk, half a pint of cream, and the yolk of one egg; give it a scald over the fire, and stir it all the time; do not let it boil; add a little sugar only and let it grow cold. Lay it over the apples with a spoon, and then put on it a whip made the day before of rich cream, whites of two eggs, sugar, lemon-peel, and raisin wine.

☞ Apples, sufficient; lemon, ½ rind; sugar, to taste; milk, ½ pint; cream, ½ pint; egg, 1 yolk.

APPLE WATER.—Cut four large apples into slices, put them into a jug, and pour a quart of boiling water over them, cover the jug; and when quite cool, strain and sweeten, and flavour with lemon juice.

APPLE WINE.—Bruise two bushels of

apples, and put them in a gallon and a half of cold water; add seven pounds of honey, three pints of rum, one ounce of white tartar, and a nutmeg grated; boil it as long as any scum arises, then strain it through a sieve, and let it cool; add some good yeast, and stir it well; let it work in the tub for two or three weeks, then skin off the head, draw the liquor clear off, and tun it.

☞ Apples, 2 bushels: water, gallon and ; honey, 7lb.; rum, 3 pints; tartar, 1 oz.; nutmeg, 1.

APPLES, PROPERTIES AND USES OF.—All apples contain sugar, oxalic acid, and gum, and the flavour and properties of the fruit depend upon the distribution and proportions of their constituents. In the raw state, apples are injurious to weak stomachs, not only on account of their acidity, but also because they contain a large amount of fixed air, which, upon being introduced into the stomach, causes flatulency. Even the strongest stomachs are unable to digest apples when unripe, because in that condition the cells containing the gum, acid, &c., are unopened and insoluble by the gastric juice. These injurious properties, however, may be made to disappear by cooking, by which process a great deal of the acid is decomposed, and converted into sugar. Other inconveniences may be obviated by simply scraping the fruit when ripe into a pulp, and thus eating it, by which means the fixed air is liberated, while the juice and flavour of the apple are retained. When eaten ripe, and partaken of fasting in the morning, apples act as a mild laxative, and cool the blood, and from their wholesome and unwholesome properties at various times of the day they are said to be "gold in the morning, silver in the afternoon, and lead at night." When cooked they also partake of a slightly laxative character, and thus in the form of sauce are eaten for the purpose of assisting the digestive process of gross food, such as pork, goose, and duck. Under the same condition they are also cooling to the system, for which reason roasted apples, sweetened with sugar, may be safely given to patients suffering with diseases of a febrile and inflammatory nature. It should be remembered that the peel, core, and pip of the apple are highly indigestible and irritating to the stomach, and should therefore never be eaten.

The domestic uses of this most popular and abundant fruit are almost innumerable, and as an article of food, a confection, or beverage it is capable of being prepared in endless form and variety. The best kinds of apples are—For *eating:* the Colville, Kent, Godolphin, Dowton, and other pippins, especially the ribstone. For *cooking:* the pearmain, codling, russet, and English rennet.

APPLES A LA PORTUGAISE.—Peel, halve, and core a dozen fine apples, place them in a pan thickly spread with butter, powder them with sugar and grated lemon-peel, and bake them in the oven. Nearly fill an ornamental tin with apple marmalade, leaving an opening in the centre; pile the baked apples upon the marmalade in the form of a dome, fill the opening that has been left with custard, and cover the whole with orange marmalade. Bake in an oven and serve hot.

APPLES BAKED.—Put the apples whole into an earthen pan, or jar, with a few cloves and a little lemon peel, some coarse sugar, and a glass of port wine; bake them in a quick oven, and take them out in an hour.

APPLES BUTTERED.—Peel and core apples of the choicest kind, stew in their syrup as many as will fill the dish, and make a marmalade of the rest. Cover the dish with a thin layer of marmalade. Place the apples on this, with a bit of butter in the heart of each, lay the rest of the marmalade into the vacancies. Bake in the oven to a pale brown colour, and powder with sugar.

APPLES DRIED.—Choose apples having clear rinds and without blemishes, wipe them, and put them on a baking pan into a very slow oven, let them remain for four or five hours; draw them out, rub them in the hand, and press them gently; return them to the oven, and press them again to a nearly flat shape; when cold, if they look dry, rub them over with a little clarified sugar.

APPLES FROSTED.—Peel some pippins, stew them in a thin syrup till they become tender, dip them into the white of an egg that has been whipped into a froth, and sift pounded sugar over them thickly; put them in a cool oven to candy, and serve in a glass dish.

APPLES IN BUTTER.—Peel some small sized apples, and remove the cores without dividing them, place them in a pie dish upright and singly, and with a space between each; fill the vacancies left by the cores with sugar and grated lemon-peel; pour butter round and upon the apples, and bake in a moderate oven.

APPLES STEWED.—Peel, core, and slice apples, and stew them in a syrup just sufficient to cover them, made of equal portions of water and red wine; when they are tender, add a stick of cinnamon, a few cloves, and a little fresh butter, mash them; sweeten to taste, and serve.

APPLES STEWED WITH RED CABBAGE.—Wash thoroughly and cut up a large sized red cabbage; peel, core, and slice an equal weight of apples; put them into a stewpan together with a very small quantity of water and a piece of butter; stew them gently until quite tender; season with pepper and salt; stir and mix well together, and serve with roast pork.

APPOINTMENTS UNDER GOVERNMENT are certain employments connected with the public revenue or administration of the country. In the various departments coming under the above denomination there are between fifteen and twenty thousand persons employed in all, whose salaries are regulated by the department in which they are placed, and the position that they occupy. Government situations possess peculiar advantages which are denied to any other occupation. In the first place, the duties are light and the hours are short; in the second place, the salaries are in the majority of cases sufficient to enable a man to maintain himself and his family in comfort and respectability;

and, in the third place, the situations are permanent so long as a man conducts himself properly. On the other hand, there are some objections to be urged against Government situations, which materially detract from the charms they appear to possess at first sight. The chief of these is monotony; for when once a person is appointed to any particular department, he is seldom or ever removed into another; so that day after day, and year after year, he is continually engaged in the same dull unvarying routine of duty. Nor has a man an opportunity of achieving an independent position. It is true that he is gradually promoted through the various grades of his department, but to this there is a limit at last; and the utmost point which he reaches is that of being a well paid servant. Notwithstanding these drawbacks, however, Government situations are greedily coveted, and the number of appointments are totally inadequate to the number of applications. The patronage of Government situations is vested in the Ministers of the Crown, and is by them distributed amongst those Members of Parliament who support the Ministry by their votes. Unless a person, therefore, is acquainted with some Member of Parliament on the Ministerial side, it is in vain for him to hope to succeed in obtaining a Government situation; nor does the bare knowledge of such a person, or the mere application to him, ensure a favourable issue. On the contrary, a Member of Parliament is so beset with these applications, and is bound as it were to return an encouraging answer to all, when, in many instances, he well knows that it will be utterly impossible for him to grant the request that is being made. It is not sufficient, therefore, to simply make the request and there let the matter rest, but it is absolutely necessary that from time to time, and at frequent intervals, the Member should be constantly reminded of his promise, until at length (perhaps with a view of escaping further importunity) the favour is granted. With regard to patronage, a new order of things has been recently established, by which certain Government appointments are supposed to be bestowed by public competition. This, however, is only a nominal concession producing no result, and the patronage is in reality administered under precisely the same system that it ever was.

Before a person enters upon the duties of a Government situation, he has to undergo a term of probation to fit him for his appointment. He is accordingly placed under certain persons in the department to which he is about to be appointed, and is instructed by them in the various branches of the duties that will be required of him. He then undergoes an examination upon these points, which, if passed satisfactorily, qualifies him for his post. In addition to this initiation into official duty, the candidate is also examined in various branches of elementary knowledge; such as writing, arithmetic, history, geography, bookkeeping, composition, French and Latin translation, and other acquisitions, according to the exigencies of the department.

Candidates for Government situations are only eligible for admission at certain ages, and, generally speaking, the condition is, that they shall not be less than sixteen or older than twenty-five. The salaries given in Government offices, although small at the outset, are augmented periodically; so that a youth beginning with £60 a year at sixteen may be in receipt of £250 before he is five-and-twenty. In many of the public offices the privilege is allowed of adding to the salary by working after office hours; and as this interval is generally from ten till four, or nine till three, a few hours extra labour may be performed without overtaxing the mental or bodily energies. Having thus stated the necessary requirements for a Government situation, we append the following list of the principal Governmental departments:—

The Admiralty is devoted to the administration of naval affairs, and is composed as follows:—

Naval Department, 39 clerks; salaries, £100 to £1000.

Accountant-General, 194 clerks; salaries, £90 to £800.

Seamen's Register, 35 clerks; salaries, £90 to £500.

Dockyards, 113 clerks; salaries, £80 to £450.

Somerset House, 40 clerks; salaries, £70 to £200.

In addition to these there are other minor branches, each employing from six to twenty clerks, with salaries ranging from £80 to £400.

Audit Office.—The duties of this office consist in examining the public accounts; it employs a staff of 92 examiners and inspectors, with salaries varying from £90 to £400.

Custom House.—This branch of the service is considered one of the best, both on account of its varied employments, and for the value of its appointments. The duties consist of the examination of imports and exports, taking the accounts of and levying the duties thereon. The Custom House may be primarily divided into two classes—the first comprising officers of various grades, who are charged with the actual examination of merchandise for import and export; and the second class consisting of clerks, who prepare and examine the accounts and other documents belonging to their respective departments. The first class is divided as follows:—*Weighers*, whose duty it is to assist the landing waiters in unpacking, opening, weighing, &c.; salaries from £25 to £35 per annum, with half-a-crown a day when employed. *Lockers*, to attend to the receipt and delivery of the goods from the warehouses; salaries from £100 to £120 per annum. *Landing Waiters and Surveyors*, to take an account of goods landed from all vessels arriving from foreign countries; salaries, £160 to £600. *Gaugers*, to measure the contents of casks containing wine, spirits, oil, and other liquids; salaries from £125 to £500. *Tide Waiters*, to remain on board ship from the time of their arrival until their departure, in order to prevent smuggling, and to take an account of all drawback

goods received on board; salaries from £55 to £75 a year, with 1s. per day when employed.

The second class of officials in the Customs department is distributed among a variety of branches, each having its peculiar duties, but all possessing the usual features of office routine generally, salaries rising from £75 to £500.

Inland Revenue.—Under this title are included the Excise, and the Stamps and Taxes. To the Excise branch is assigned the collection of revenue arising from home or inland sources. One portion of this department is worked by what are popularly termed "Excisemen," each of whom have a certain district placed under his control, and in which he is expected to take an account of and levy the duty upon all articles manufactured and chargeable with duty. The occupation of an Excise officer is harassing and attended with great discomfort, inasmuch as he is liable to be removed from district to district at a week's notice. This continual change coupled with the peculiar and somewhat unpopular post that he fulfils, totally debar him from enjoying the amenities of social life, or of cultivating the friendship and acquaintance of those with whom he may be brought in contact. The salary of an ordinary Excise officer is £100 a year; the higher grade of supervisor from £150 to £250. The clerks employed in the Excise receive salaries much on par with those given in the better departments of the Custom House.

Stamps and Taxes.—This branch employs between three and four hundred clerks, whose duties are of the usual official character; the salaries range from £80 to £400. The latter sum is, however, rarely attained to, the maximum in the majority of cases being £200, at which salary many clerks remain in this department after a service of twenty years.

Ordnance Office.—The province of this department consists of providing for the exigencies of the army and navy. The appointments are both numerous and valuable, consisting of clerks with salaries of from £90 to £600, and store-keepers £190 to £700.

Post Office.—This department employs an immense number of servants in a variety of grades and capacities. The appointments in contrast with other Government situations are not to be coveted, for its duties are exceedingly heavy, and the remuneration unreasonably small. The usual hours of attendance are from ten till four, but in the Inland Office attendance is required from five in the morning till nine, and from five to eight in the evening. In this office the greatest punctuality is exacted, and no allowances are made for being behind time. The clerkships are distributed among various offices, the salaries ranging from £60 to £200. Connected with this department are also letter-carriers and sub-sorters; the scale of remuneration for the first named is from 20s. to 30s. per week; to this may be added gratuities received in the shape of Christmas boxes; but as this is an observance now fast dying out, it cannot be considered as a certain source of additional income. The sub-sorters are selected from the letter-carriers, and receive from £65 to £110.

War Office.—Employs a limited number of clerks from £80 to £500; its duties are generally light, and an appointment in it difficult to secure.

In addition to the foregoing there are *The Treasury, Board of Trade, Colonial Office, Foreign Office*, and a variety of other branches which employ a limited number of clerks, appointments in which require an immense amount of influence, being generally given to the relatives and connections of the ministerial members of both houses.

APPOINTMENTS, VARIOUS.—Distinct from Government appointments, and yet partaking of a similar character, and possessing equal privileges, are the *Bank of England*, and the *East India House*. The patronage of the Bank of England, with the exception of every seventh vacancy, is in the hands of the directors, a clerk being appointed by each director in rotation, until the vacancies are filled. Clerks are admissible from the age of seventeen to twenty-five; the salary for the first year is £50, increasing yearly until twenty-one; from the age of one-and-twenty to five-and-twenty, the increase is £5 per annum, and then at the rate of £8, until it reaches £260 a year, which is fixed as the limit. In addition to these salaries, extra remuneration may be made by overwork, as at certain seasons the augmentation of labour is made to devolve upon the clerks already upon the establishment, instead of fresh hands being engaged. The Bank of England also employs about 80 porters at salaries of £76 and £84.

East India House.—The appointments in connection with this institution, although not very numerous, are respectable and well paid.—The patronage is vested in the directors of the company and the president of the Board of Control. The clerks are divided into two classes, "established clerks" and "extra clerks." The established clerks are eligible from the ages of eighteen to twenty-five; the commencing salary is £96, and gradually progresses to £400. The extra clerks are qualified for admission until thirty years of age, their salaries commence at £80, and progress to £200. They possess the privilege, however, of adding to their stated pay by extra attendance, and by this means are enabled with diligence and energy to double the salaries specified.

Akin to these appointments are those of *Railways, Insurance Offices, and Private Banks;* the hours of attendance and the remuneration being governed by a similar scale to that which applies to Government departments. The increase of salary being also certain and progressive, and the permanency of the employment greatly depending upon the capacity and good conduct of the employed. It is almost needless to state that the appointments in these last mentioned are left to the nomination of those gentlemen who are either directly or indirectly connected with the respective undertakings. The chief qualifications for these situations are a sound commercial education, an apti-

tude for correspondence, a gentlemanly deportment, and a good address. Books: *Thomson on the Choice of a Profession; The Imperial Calendar (Annual); Mitchell's Guide to Government Situations.*

APPRAISEMENT.—The valuing of anything. In cases where goods or chattels are distrained for rent the person distraining must cause the distress to be appraised by two sworn appraisers, whom the constable will attend at the time they make their appraisement and swear them before they begin, that they will appraise them truly.

APPRENTICE signifies a person who is bound by indenture to serve a master for a certain term, and receives in return for his services instruction in his master's profession, art, or occupation. Apprentices and masters are equally bound to perform their portion of the contract towards each other; and if the master neglect to teach the apprentice his business, or the apprentice refuse to obey his master's instructions, both are liable to be summoned before a magistrate to answer the complaint against them. A master cannot legally compel his apprentice to work an unreasonable length of time. There is no specific duration marked out by law, but doubtless the habitual employment of an apprentice for more than twelve hours daily (exclusive of meal times) would be deemed unreasonable. Compelling an apprentice to work on Sunday is clearly illegal. On these points, however, justices have not the power to interfere where the premium paid exceeds £25. When an assignment is made of a trader's effects, the apprentice may form part of the assignment, and he is bound to serve him to whom he is transferred in all respects the same as his original master. Bankruptcy, however, is a discharge of the indenture. In cases of dissolution of partnership, the apprentice is bound to serve the remaining members of the firm, just as though the partnership remained intact. When the master dies the apprenticeship is at an end, for the contract is held to be a personal one between master and servant. But, by the *custom of London*, if a master die, the apprentice is bound to continue his services to the widow, provided she carry on the same trade. Indentures may be cancelled by mutual consent; the safest and most economical mode in such a case is simply to cut off the names and seals of the parties in the indenture, and endorse thereon a memorandum, signed by all parties, to the effect that they give their consent to the cancelling of the same. If there be any covenant for maintenance in the indentures, the executor of the deceased master is bound to make provision for the same so far as the assets will allow. A master may administer reasonable corporal chastisement to his apprentice, but he cannot discharge him. If any apprentice, whose premium does not exceed £10, runs away from his master, he may be compelled to serve beyond his term for the time which he absented himself, or make suitable satisfaction, or be imprisoned for three months. If he enters another person's service, his master is entitled to his earnings, and he may bring an action against the persons who enticed him away. An apprentice cannot be compelled to serve in the Militia, nor if impressed in the Royal Navy. Apprenticeship indentures need not of necessity be legally prepared, but may be drawn up on printed forms designed for that purpose, and sold at the various law stationers.

APPRENTICING.—As this step has the most important influence upon success in life, it ought to be exercised by parents and guardians with the most scrupulous care and discretion. In apprenticing a youth it is not alone sufficient that he should learn a trade from which good earnings may afterwards be derived, but that the trade selected should be in accordance with his taste, and also conformable to his mental and physical capacity. It may be said that a boy does not know his own mind, and that it is consequently idle to consult him upon a subject when his seniors are better qualified to judge. But in the majority of cases a boy will be found to give unmistakeable indications of the branch of mechanical employment upon which his mind is most bent, and for which his hands will be consequently most fit. And if this evidence of a distinctive perception is disregarded, and the boy is apprenticed to a trade of a totally opposite nature to that for which he has a predilection, the incessant struggle between natural desire and constrained duty will frequently entail failure and disappointment and irrevocably blight the youth's prospects in life. Equally necessary is it that the mental and bodily faculties should be considered before apprenticeship. It is, for instance, manifestly unjust both to master and apprentice to place a youth of notoriously dull parts in a situation where a constant demand will be made upon him for mental labour which he is unable to supply. And it is also a species of cruelty to select for a youth of a weak and delicate constitution such a trade as is only adapted for the robust and hardy. Obvious as these deductions may appear, yet it is certain that they are continually being disregarded, and youths without number *are* apprenticed to trades for which they have neither the inclination, aptitude, or strength, simply because some relation or friend happens to be of a particular trade which seems to offer an excellent opportunity for advancement.

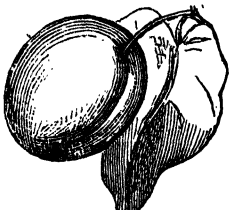
The *moral character* of the future master, together with his commercial reputation, should be strictly inquired into; for there are some employers whose only anxiety is to secure the premium, and when that is received to allow the apprentice to pursue his own undirected course as best he may. The wisest plan, therefore, when the particular trade is determined on is to place the youth with a person who has been established for some years, and whose reputation and ability can be testified to by former apprentices.

The *premiums* for apprenticeship are governed by no stated tariff, but as a general rule they are proportioned to the wages which the trade affords. For instance, instruction in an art by which three pounds

a week may be earned is as a matter of course worth more than that from which only five and thirty shillings a week can be gained. The amount of the premium, therefore, is a secondary consideration to the advantages which its outlay secures. In apprenticing, another consideration is to be attended to, which is, that the trade chosen shall not be one which materially fluctuates, or that depends upon the caprices of fashion. That handicraft is the most reliable, which produces articles that are and must be as a matter of necessity always in request. Amongst these may be enumerated bootmaker, hatter, tailor, carpenter, engineer, plumber and painter, sadler, turner, watchmaker, &c.

The usual term of apprenticeship is seven years, namely, from fourteen to twenty-one years of age, but that period of probation is not always necessary, and, generally speaking, it is optional to determine upon a shorter term.

APRICOT.—There are twenty-nine varieties of this delicious fruit, of which the Moorpark and Turkey are the most esteemed. Apricots, if not too ripe, agreeably strengthen the stomach; but when over-



ripe they lose their aromatic flavour, and become less easy of digestion. The *propagation* of the apricot is best accomplished by *budding*, which is performed in the months of June and July, on muscle or plum stocks two or three years old; dwarfs should be budded at nine inches from the earth, half standards at three feet, and standards at five feet. The period for *planting* extends from October to March; for this, maiden plants should be chosen in preference to those that have been headed down. If a maiden plant comes on well, it will furnish two or three shoots on each side, the lowest shoot on each side must be trained horizontally, and the others in an oblique direction. The trees should be pruned short, and the branches trained thin, by which means the trees will keep their vigour, and the size and flavour of the fruit both be improved. The *most suitable soil* is a sound rich loam, having little or no manure. The *aspect* should be warm, a southerly one being the most congenial.

The apricot tree is liable to be attacked by wasps, flies, and other insects, to protect it from which it should be covered by a net, extending about a foot outwards from the wall. Mildew is also a disease to which this tree is liable, arising generally from too damp a soil at the roots; to remedy this, careful drainage should be had recourse to, and where this fails, powdered sulphur may be gently dusted over the tree. In the rough months of February and March, the young blossoms are apt to be torn off by the wind; the best protection at such times is a covering of canvass, or the material known as bass. *Gathering* should take place a day or two before the fruit arrives at maturity, otherwise it will have a spongy taste. *Thinning* should be resorted to at the latter end of May or the beginning of June, to accomplish this effectually the apricots should be left upon the tree in such a manner as to be half a foot apart from each other, this prevents them from dropping off the tree. Apricots are generally deemed in perfection when the fruit nearest the sun becomes a little soft, or the ends begin to open. Apricots may be preserved for two or three weeks later by being gathered when half ripe, and placed in an ice-house, dairy, or other cool place where it may be suffered to ripen gradually.

The fruit is justly held in the highest estimation, not only for its agreeable flavour, but also on account of the ease with which it is digested. The best kind of preserves are made from it, and the kernels of it are extensively used in a variety of confections.

APRICOT BISCUIT.—Peel and boil ripe apricots, and to the pulp produced add an equal weight of sugar, mix thoroughly together, and boil for twenty minutes; then pour out the mass on to paper in the shape of small cakes, and dry in a very slow oven for five or six hours, turning them occasionally.

APRICOT CHEESE.—Stone a dozen ripe apricots and put them into a stewpan with three quarters of a pound of sugar and a teacupful of water; boil and stir them till reduced to a pulp, which rub through a hair sieve into a basin; add one ounce of isinglass, and pour the preparation into a mould; when set firm turn it out on to a dish, and fill the centre with whipped cream.

☞ Apricots, 12; sugar, ¾lb.; water, teacupful; isinglass, 1oz.; cream, sufficient.

APRICOT CHIPS.—Peel, stone, and cut into chips a dozen apricots, add a pound of sugar, and put them on the fire together; when the sugar is dissolved, turn them out of the dish into the syrup. Warm them together again the next day, stirring in the meantime, and continue doing so day after day until the fruit has absorbed the whole of the syrup.

APRICOT COMPOTE.—Peel and halve ripe apricots; remove the kernels, and set the fruit over the fire in a small quantity of water, when they become soft take them off and turn them into cold water; drain them and immediately put them into clarified sugar; boil two or three times and skim thoroughly, drop in the kernels which have been previously blanched, let the compote stand to cool, and then serve.

APRICOT ICE.—To twenty fine apricots add three quarters of a pound of sugar, half of the apricot kernels, mash them together and strain through a hair sieve; add a pint

of cream, the juice of a lemon, and then freeze.

☞ Apricots, 20; sugar, ½lb.; apricot kernels, 10; cream, 1 pint; lemon juice, 1.

APRICOT JAM. — Take a dozen apricots, not too ripe, halve them and remove the stones, lay them with their insides uppermost in a dish, and strew over them three quarters of a pound of sugar; let them lie until the sugar becomes absorbed, then add the kernels which have been previously blanched, and boil the whole together for half an hour, let it cool, and pot.

☞ Apricots, 12; kernels, 12; sugar, ½lb.

APRICOT JELLY.—Divide two dozen ripe apricots into halves, pound half of the kernels in a gill of water, and a teaspoonful lemon juice; reduce the fruit to a pulp and mix the kernels with it; put the whole into a stewpan with a pound of sugar, boil thoroughly, skim till clear, and pot.

☞ Apricots, 24; kernels, 12; water, 1 gill; lemon juice, teaspoonful; sugar, 1lb.

APRICOT MARMALADE. — Divide, stone, and slice thirty apricots and their kernels; put them into the pan with a pound and a half of sugar and half a pint of water; boil them till tender, scum till clear, and pot.

☞ Apricots, 30; kernels, 30; sugar, 1½lb.; water, ½ pint.

APRICOT PASTE.—Put any quantity of fruit required into a stewpan, stew it till tender; then remove the stones, and pass the fruit through a hair sieve; add an equal weight of clarified sugar; mix well together and dry in a very slow oven.

APRICOT PIE.—Pick and wash the fruit and fill the dish with it, raise the centre high, and introduce a teacup beneath; add sugar as required, cover with a light paste, and bake in a moderate oven.

APRICOT PUDDING.—Mix the grated crumbs of a stale penny loaf with a pint of hot cream, add a quarter of a pound of sugar, the yolks of four eggs, and a glass of white wine. Halve twelve ripe apricots, and pound them with six of the kernels, then mix the whole of the ingredients together, place them in a dish, cover with a light paste, and bake for half an hour.

☞ Bread, 1 penny loaf; sugar, ½lb.; eggs, 4 yolks; cream, 1 pint; white wine, 1 glassful; apricots, 12; kernels, 6.

APRICOT RATAFIA. — Cut two dozen apricots into small slices, pound half of the kernels and put both together into a jar; add three pints of brandy, half a pound of sugar, a stick of cinnamon, and six cloves. Make the jar air tight, and let it remain for a fortnight, frequently shaking it in the meantime; then strain off into bottles, and keep in a cool place.

☞ Apricots, 24; kernels, 12; brandy, 3 pints; sugar, ½lb.; cinnamon, 1 stick; cloves, 6.

APRICOT TART. — Spread puff-paste equally on a baking tin, and cover it with apricot marmalade about a quarter of an inch in depth; then cut some paste into narrow strips, roll it, and arrange it crosswise over the marmalade, bake in a moderate oven.

APRICOT WINE.—Boil seven quarts of water and six pounds of sugar together; scum it and put in twelve pounds of apricots, pared and stoned; boil till the fruit is tender, then drain the liquor off; let it stand to cool, and bottle.

☞ Water, 7 quarts; sugar, 6lbs.; apricots, 12lbs.

APRICOTS DRIED.—Pare apricots, remove the stones, blanch the kernels, and replace them in the apricots; on every pound of fruit strew a pound of sugar, and let them stand till the sugar has extracted the juice, then boil them together slowly; when the fruit becomes tender, take it out and boil the syrup separately till rich and thick, then pour it over the fruit, and in three days put it upon dishes and dry them on glasses in the sun.

APRICOTS IN BRANDY.—Put apricots whole into a jar that has a close cover, add to them one fourth their weight of sugar, and brandy so that it covers them; lay a piece of thick paper between the fruit and the lid, and close it; set the jar into a saucepan of water over the fire till the brandy becomes hot, but not boiling; let it stand to cool, and close securely.

APRICOTS PRESERVED. — Pare apricots, and remove the stone without dividing the fruit; lay them in a dish, and strew over them an equal weight of sugar; let them stand for a night, then simmer gently, add the kernels which have been previously blanched, skim till clean, place the fruit into jars, pour the syrup over it, let it cool, and then fasten down.

APRICOTS PRESERVED GREEN.—Lay vine or apricot leaves at the bottom of the pan, then fruit, and so on alternately till full, the upper layer being leaves; then fill with spring water and cover down; set the pan at some distance from the fire, and let it remain for five hours. Make a thin syrup of some of the juice, and drain the fruit, let both cool; then add the syrup to the fruit and set the pan at a proper distance from the fire, so that the fruit may green without cracking or boiling; then remove them and let them stand for three or four days; then pour off a portion of the syrup, which boil with more sugar, and a little sliced ginger added. When cold, and the thin syrup has been absorbed by the fruit, pour the thick over it, then pot.

APRIL, GARDENING FOR.—The following is an alphabetical list of plants and roots in the *Kitchen Garden*, which require attention during this month. *Alexanders*, sow. *Angelica*, sow. *Artichokes*, dress and plant. *Asparagus*, sow, plant, force in hot beds, dress established beds. *Beans*, plant, hoe, and advance. *Brocoli*, sow, prick out seedlings, leave for seed. *Cabbages*, plant, prick out seedlings, sow, earth up, and advance. *Carrots*, sow, weed advancing crops. *Cauliflowers*, plant out from glasses, prick out seedlings, sow. *Celery*, sow, earth up, dress old plantations, leave for seed. *Cucumbers*, sow, prick out seedlings, ridge out, and advance. *Cress* (American), sow. *Endive*, sow. *Fennel*, sow or plant. *Horseradish*, plant. *Kale*, sow and plant. *Leeks*, leave for seed. *Lettuces*, sow, plant out from frames,

prick out seedlings, tie up, and advance. *Lavender*, plant. *Mint*, plant. *Melons*, sow, prick out, ridge out, and advance. *Mustard* and *Cress*, sow, leave for seed. *Mushrooms*, prepare bed for. *Mangolds*, sow. *Onions*, sow, leave for seed, and advance. *Potatoes*, plant. *Trees* (generally), plant. *Parsley*, sow, leave for seed. *Parsnips*, sow, weed, and advance. *Peas*, sow, hoe, stick, and advance. *Pennyroyal*, plant. *Radishes*, sow, thin, and advance. *Rhubarb*, plant. *Spinach*, sow, thin, and advance. *Savoys*, sow, prick out seedlings. *Sage*, plant. *Tomato*, sow. *Thyme*, sow and plant. *Turnip Cabbage*, sow, and water when dry.

General Remarks.—During this month particular attention should be paid to the preparation of the earth, both as regards digging, dunging, and trenching. The hoe should be applied freely and in all directions between the rows of young plants, in order not only to beat down the weeds, but also to loosen the surface of the ground, and gather earth about the stems. Seed beds should undergo a careful and unremitting weeding; as the weeds are apt to spring up very fast during this month to the prejudice of the rising plants.—See GARDENING, AND THE NAMES OF THE VARIOUS GARDENING OPERATIONS.

Flower Garden.—Anemones, finish planting. *Annuals* of all sorts, sow. *Auriculas*, place in sheltered situations, and propagate by suckers. *Biennials*, sow. *Carnations*, sow, and finish planting. *Evergreens*, plant, transplant, and water. *Hyacinths*, shelter from the wind and rain. *Mignonette*, sow, and put young plants in pots. *Passion Flower*, plant, thin, and nail up. *Perennials* of all sorts, sow. *Pinks*, plant both roots and slips. *Roses*, plant suckers or full plants. *Stocks*, sow in patches for transplanting. *Wallflowers*, sow, transplant, and propagate by slips and cuttings.

General Remarks.—This is one of the most important months for the garden during the whole year; for it is now that nature, after a long season of inactivity, begins to display new life and fresh vigour. Everything possessing life, whether animal or vegetable, now increases wonderfully in strength and growth, which reminds us that this season of the year, while it is congenial to the beauties of the garden, is also favourable to the development of that species of creation that is noxious to vegetation. Active measures, therefore, should be taken to destroy everything that tends to retard and interrupt the progress of plants and flowers. Grubs, slugs, and flies should be killed, and weeds exterminated as quickly as they appear. Borders and beds should be dug, trimmed, and weeded. New edgings may be planted and old ones clipped. Gravel walks should be fresh laid, and kept well swept and rolled. Mow and roll grass lawns so as to maintain an even surface. Place sticks to every stalk or plant requiring support, drive them in the ground, and tie each stem at two or three places. If there is a succession of dry days the beds should be watered, especially those that have been lately planted or sown. In a word, the garden should, during this month, be watched with unremitting solicitude, and tended with assiduous care, leaving nothing undone that can assist the operations of nature and improve the vigour and beauty of vegetation.

APRIL.—THINGS IN SEASON:—*Fish:* Carp, chub, crabs, cray-fish, herrings, lobsters, mullet, skate, soles, tench, trout, turbot.

Fruits: Apples, pears.

Meat: Beef, grass-lamb, mutton, veal.

Poultry and Game: Chickens, ducklings, fowls, leverets, pigeons, pullets, rabbits.

Vegetables: Asparagus, beet, brocoli, burnet, carrots, celery, endive, lettuce, onions, parsley, pot-herbs (all sorts), radishes, spinach, sprouts, salads (small).

A PRIORI.—Lat. A mode of reasoning by which we proceed from the cause to the effect. Anything demonstrated *à priori* is done so independently of any actual knowledge; mathematical problems, for instance, are resolved in this way.

APRON.—This article of ladies' attire is made with little trouble or expense; remnants of stuff, and the least worn parts of left-off dresses, may be converted into aprons. If a new one is desired, the best material is black *glacé* silk, about three or four shillings a yard; three quarters of a yard of eighteen-inch wide silk being a sufficient quantity to make it with. An apron may be trimmed with velvet or braid, and in order to give it a lighter appearance the trimming should be varied in width. The pleats or gathers should be done very neatly, and not drawn into too narrow a compass, say about ten inches. The neatest and most convenient method of fastening aprons is to sew the ribbons on to them at one end, and to fasten the other end to the apron by means of hook and eye. The colours of aprons should be dark, and the materials plain.

APTHÆ.—A papillary eruption attended with slight fever, extending from the lips, mouth, and fauces to the stomach, and often the whole length of the alimentary canal.—See THRUSH.

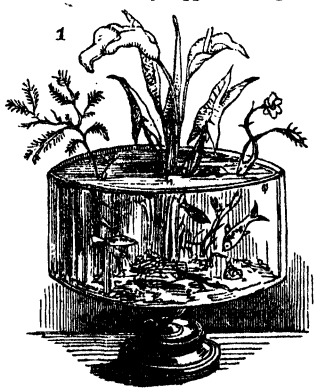
AQUA FORTIS.—A common term first applied by the alchemists to nitric acid, and so called on account of its strong corrosive action on many animal, vegetable, and mineral substances.—See NITRIC ACID.

AQUARIUM.—To construct and maintain successfully this really elegant and instructive parlour ornament, three considerations have to be constantly borne in mind. 1. That the tank or bowl is free from all extraneous impurities. 2. That the stock is healthy when put in. 3. That a proper balance is maintained between the animal and vegetable inhabitants.

The principles upon which the aquarium is founded are very simple, and may be thus stated. All animal life, whether terrestrial or aquatic, is sustained by a due supply of oxygen. This supply, when exhausted by the breathing organs of aquatic animals, is renewed through the medium of vegetation which generates oxygen when exposed to the action of the sun's rays.

Carbonic acid gas is the result of exhausted air: in other words, it is the refuse of vital air after it has performed its invigo-

rating functions upon animal life. This carbonic acid gas is the food of plants. Thus what would prove fatal to animal life if not withdrawn is the very support of vegetable



life. But both plants and animals *die* When the latter cease to breathe, it is easy to remove their bodies from any receptacle so much under observation as the aquarium. But a certain portion of its vegetable occupants are always dying. Hence the necessity for the introduction of an agent, whose proper occupation it is to remove all such decaying matters, whose food in short is putrefaction. An aquarium, then, is a little world of animal and vegetable life. For its due regulation, although no infallible rule can be given, careful observation joined to experience will ever prove the best guide, the following particulars are to be attended to:—The *form* of the tank is immaterial. The familiar fish-bowl of past years will do, and no additional expense in that direction need *necessarily* be incurred. The tank, or bowl, must be quite clean. Where this is circular, and made entirely of glass, there is little risk; but when the tank is formed, as usual, of four sides and a base, care must be taken that no poisonous emanations from putty or paint, or any other metallic substance, be present. To avoid this, the water, which may be either river water, rain water, or pump water, *that has not been boiled*, must be put into the tank some time previous to the introduction of the plant. If after standing for a few days no prismatic scum appears upon the surface of the water, it is a proof that it is sufficiently clean.

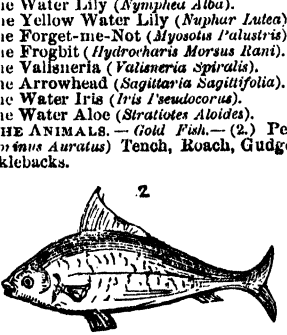
The plants proper for an aquarium will live and flourish without mould or gravel. Where these are admitted they should be so disposed that while they form a rest or anchorage for the plants, they do not interfere with the purity of the water. Shells and rockwork are to be admitted subject to the conditions of cleanliness and freedom from metallic taint, which may easily intrude in the form of cement. The directions above given with reference to the jointing of the tank must therefore be followed, and the whole framework be carefully washed. It is hardly necessary to remark that marine shells should find no place in a fresh water aquarium, or fresh water adjuncts in one intended solely for marine animals and algæ.

Light is necessary to the healthy growth of plants; and although both animal and vegetable life may exist for some time without it, neither will flourish or perform their several functions properly in the dark. The amount of solar light admitted to an aquarium should be regulated by the consideration of how much is usually received into a pond. In short, the aim should be to afford the same proportion of the sun's rays as the plants and animals have been accustomed to in their natural habitations. It will be obvious to every observer that the surface of any artificial water receptacle is *unnaturally calm*. Hence the water in such receptacles is devoid to a certain extent of the proper amount of air. The wind that sweeps over the face of a lake or pond, while it agitates that face, carries into the water fresh globules of air, thus conveying the vital oxygen to its inhabitants. This aerating process should be occasionally imitated by means of a pair of hand bellows, to the nose of which a tube of gutta percha has been affixed. Where a fountain can be attached to an aquarium, the necessity for any other mode of aeration is obviated.

With respect to the tenants of the aquarium, as the stores of nature are inexhaustible it is impossible to give a complete list of them within anything like limited space. For a *fresh water aquarium* the most common plants are:—

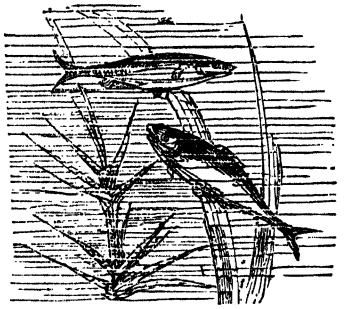
The Great Water Plantain (*Alisma*).
The Water Lily (*Nymphea Alba*).
The Yellow Water Lily (*Nuphar Lutea*).
The Forget-me-Not (*Myosotis Palustris*).
The Frogbit (*Hydrocharis Morsus Rani*).
The Vallisneria (*Vallisneria Spiralis*).
The Arrowhead (*Sagittaria Sagittifolia*).
The Water Iris (*Iris Pseudocorus*).
The Water Aloe (*Stratiotes Aloides*).

The Animals.—*Gold Fish.*—(2.) Perch, (*Cyprinus Auratus*) Tench, Roach, Gudgeon, Sticklebacks.



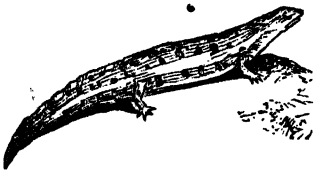
(3.) Minnows. (4.) The Molluscæ (who act as the scavengers of the establishment), are

the Mud Snail (*Limneus Peregeri*); the Marsh Shells (*Paludina Vivipara* and *Paludina Achatina*); the Pearl Mussel (*Alos Modon Margaritiferus*).



From some mysterious instinct of our nature the order Reptilia has never been a favourite object of study; yet the move-

ments and economy of such specimens as may be successfully introduced into the least pretentious aquarium are as full of



beauty and as worthy of an attentive study as those of the most gorgeous denizen of the grove. Among these are:—The Tree Frog (*Rana Arborea*). (5.) The Smooth Newt (*Lissotriton Punctatus*). (6.) The Water Persicaria (*Polygonum Amphibium*). The only insects to be safely entrusted into an ordinary

aquarium are (7, 8) the lesser and greater waterbeetles (*Dytcus Marginalis*). (9) The Diving Spider (*Argyroneta Aquatica*); Caddis Worm (*Phryganea*); the Shrimp, &c.

For the *marine aquarium* the same kind of tank will serve; but sea water, real or arti-

ficial, must be obtained. The former may be procured by Londoners for a trifling fee through the master or steward of most of the sea-going steamers. For its conveyance a cask, which has not been previously used, is the best. No taint of spirits, wine, acids,

or chemicals, should attach to the vessel, even the bung should be newly cut, or failure will result. Artificial sea water may

however, be readily purchased, or home-made from the annexed receipt:

Common salt	3½oz.	Avoird.
Epsom salts	½oz.	
Chloride of magnesium	200 grains	Troy.
Chloride of potassium	40 grains	
New River water	4 quarts.	

The marine plants are:—*Rhytiphlœa Pinastroides*; the *Polysiphonice*, *Corallina Officinalis*, *Delessaria Alata*, *Chrondus Crispus*, *Phyllophora Rubens*; the *Griffithsiæ*; the *Callithamnia*, *Codium Tomentosum*; the *Cladophoræ*, *Bryopsis Plumosa*; the *Enteromorphæ*; the *Ulvæ*.

The *Fishes* are:—The Smaller Sticklebacks, Grey Mullets, Blennes, and Gobies; the Spotted Gunnel, Wrasses, Rocklings, Flounders, Dabs, Eels.

The Mollusca.—The Seahare; Periwinkles; Tops; the Purple; the Murex; the Chilons; the Bullas; the Scallops; the Mussel; the Modioles; the Anomia; the Oyster; and some of the sand-burrowing bivalves—*Venus*, *Mactra*, *Pullastra*, &c.

The Crustacea.—Strawberry Crab, Swimming Crab, the Shore, Masked Soldier, and Broad Clawed Crabs; the Shrimp; the Pounder.

The Zoophytes.—Sea Anemone, and both species of Madrepore.

An easy method of renewing the water in the tank is by means of a syphon, the use of which needs no description. Where there is an objection to applying the mouth to the end of the pipe, this is rendered unnecessary by a simple contrivance: let the syphon be held the reverse way, like the letter U, and be then filled with water; with a finger stop the lower end, and quickly plunge the short end into the tank. The water will flow through the lower end, and continue to do so until the whole has run out. Books: *Lankaster's Aquavivaria*; *Gosse's Handbook to the Marine Aquarium*; *H. N. Humphreys' Ocean Gardens and River Gardens*; *J. Bishop's Plain Instructions for the Management of the Aquarium*; *Ward's Wardian Cases and their application*; *Warrington's Garden Companion*.

AQUA TINTA.—A species of etching on copper, producing an effect resembling a drawing in Indian ink. It is performed by sifting powdered asphaltum or lac resin on the plate, previously slightly greased, and after shaking off the loose powder, gently heating it over a chafing dish; on cooling, the lights are covered with turpentine varnish, coloured with lampblack, by means of a hair pencil; and a rim of wax being placed round the plate, a mixture of aqua fortis and water is then poured on it, and allowed to remain for five or six minutes, when it is poured off, the plate dried, and recourse had to the pencil as before. The process of stopping and etching is repeated again and again until the darkest shades are produced.

ARBITRATION is the submission of matters in difference between parties to the decision or arbitrament of other persons. An arbitration clause always forms part of properly prepared partnership articles, and is to the effect that any difference between the partners shall be referred to the arbitration of two indifferent persons, one to be named by each partner, and an umpire to be named by such two arbitrators in case they differ; and that the decision of the arbitrators or umpire, as the case may be, shall be binding and conclusive on all parties. It is essential that a submission to arbitration should be by some legal instrument under the seal of the parties to be bound thereby, and should contain a clause that it be made a rule of one of the courts of law at Westminster; but where such instrument is not in existence at the time of the difference arising, the more economical mode is for one of the parties, by mutual consent, to give a writ against the other, whereupon a judge's order is drawn up referring all matters in difference to a gentleman named. Where the arbitrators are not in the legal profession, they should be at liberty to employ a solicitor to advise them, and to prepare the award, as many references have failed in effect for want of proper precautions being taken to bind the parties to fulfil the decision of the arbitrators or umpire after all the trouble and expense of a reference has been gone through. Indictments for assaults, nuisances, &c., may be referred by leave of the Court where they are depending; but without such permission indictments cannot be preferred. For arbitration of disputes between masters, labourers, and servants, see SERVANTS.

ARBUTUS is an evergreen shrub, with flowers shaped like the strawberry. There are two species, one being hardy and the other demanding some little protection. For the common kind the ordinary garden soil is suitable, but for the more delicate class, greenhouse culture is necessary, and a soil composed of equal parts of rich loam and peat. They are propagated by seeds or layers, but sowing is most generally adopted as being productive of the better sort of plants.

ARCHERY is a sport, but little practised in England at the present day; but is nevertheless to be commended as a healthgiving pastime, and one that affords a harmless and pleasurable excitement. In this sport the size of the target to be aimed at, and the distance for shooting, are regulated by a variety of circumstances; the field distance for beginners is generally one hundred feet, with a circular mark four feet in diameter. In the act of shooting with the bow the whole muscles of the body are called into play, and it is particularly necessary that the legs should be planted firmly on the ground, otherwise the body will be thrown off its equilibrium, and the aim destroyed. In sending the arrow from the bow the string should be quickly loosened, but without a jerk or jar, nor should the hand or elbow be either elevated or depressed, for the slightest derangement in the delivery of the arrow weakens its aim, and a deviation of a quarter of an inch while in the hand causes it to fall a hundred feet wide of the mark. The archer should study the wind so as to make allowances for the various currents of air, the flight of the arrow being as a matter of course materially expedited or impeded by the state of the atmosphere.

Bows are of different degrees of strength, the standard for a man being fifty-four pounds; the distance of the string from the centre should not in a bow five feet long exceed five inches, and in the longest bow not more than six inches, nor less than five and a half. The best description of woods for arrows are deal and ash for light, and lime for heavy shafts. Arrows should be selected according to the strength and size of the bow; for bows of five feet, twenty-four-inch arrows are used; five feet nine inches, twenty-seven-inch arrows; and for six feet, from twenty-eight to thirty inches. The arrows that are thickest directly under the feathers and taper gradually to the pile carry the furthest. The nock of the arrow should adjust itself closely to the string without requiring force to fix it. Books: *Blaine's Encyclopedia of Rural Sports; Walker's Manly Exercises; Hansard's Book of Archery; Hastings' British Archer; Archer's Guide.*

ARCHITECT.—The education for this profession consists in a pupil being articled for a period of four or five years to some architect who is in practice. The premiums vary from £100 to £500; and the outfit, which chiefly consists of drawing instruments, &c., costs only a few pounds. The great aim of an architect pupil is for him to become a finished and expert draughtsman, and a quick and correct arithmetician. The education of the pupil is greatly benefited by a visit to Rome and Greece, where he may have an opportunity of studying the principles of his art from the purest models, but this should be done under the guidance and instruction of an experienced person, otherwise he may derive more detriment than advancement from his journey. Students in architecture are admitted to the privileges of the Royal Academy, by which they have free access to the schools for a period of ten years, and may attend the lectures given by the professors. There is also an Institute of British Architects, for which a person is eligible to become an associate after he has studied seven years.

The total expense of education for an architect, including living, instruments, books, &c., will not cost far short of £1000. The progress in the profession is slow unless expedited by some extraordinary accident; but when once established, it yields a fair income, and confers a good standing in society.

Books: *Haskoll's Architects' Guide; Wightwick's Hints to Young Architects; Gwilt's Elements; Donaldson's Maxims and Theorems; Pugin's Ancient and Modern Architecture; Brook's City, Town, and Country Architecture; Richardson's Designs; Stuart's Dictionary; Gwilt's Encyclopedia; Rickman's Styles; Bartholomew's Specifications; Inwood's Studies; Ruskin's Examples of Architecture; Seven Lamps of Architecture;* and *Lectures.*

AREOMETER.—All liquids, though possessing equal bulk, have not the same specific gravity: for instance, wines, spirits of wine, and ethers are lighter than water, while many mineral acids and saline solutions are heavier; it is therefore possible to determine whether by adulteration or other means the due proportions of any liquors have been altered; and to ascertain that point recourse is had to the *areometer.* This instrument consists of a glass tube, terminating with a bulb containing mercury, and is marked at intervals with graduated figures, representing degrees. When this instrument, therefore, is plunged into the liquid, it will sink or float in proportion to the increase or decrease of the density. Thus in distilled water, or in pure alcohol, the areometer will invariably sink to a certain depth; but upon adding water to the alcohol or alcohol to the water, the degree indicated will undergo a change proportionate to the amount of the foreign liquid that has been introduced.

ARGAND LAMP.—This lamp is so constructed that the wick, and consequently the flame, assume the form of a hollow cylinder; through this a current of air is made to ascend, so that a free supply of oxygen is communicated to the interior as well as the exterior of the flame. By this means a more perfect combustion and a greater brilliancy of light is ensured than can be obtained by the usual means; and this object is further assisted by chimney-glasses which confine the current of air round the wick, and by producing an upward current causes the flame to rise high above the wick. The invention takes its name from Argand, a native of Geneva.—See LAMPS.

ARITHMETIC.—The science of numbers, or that part of mathematics which is concerned with the properties of numbers. Every number is, properly speaking, only a ratio or relation, thus: the number 4 expresses the ratio which one magnitude has to another smaller than itself; while, on the other hand, ¼ expresses the ratio of one magnitude to another greater than itself. Having distinguished the numbers or relations of magnitudes which we have conceived in our minds by particular signs, arithmetic becomes the art of combining these relations with one another. Hence the four operations—addition, subtraction, multiplication, and division, include the whole science; and although for facilitating commercial and other calculations many other rules have been invented, still they are all primarily based upon these four principal rules.—See CALCULATION, DECIMALS, FRACTIONS, PRACTICE, RULE OF THREE, &c.

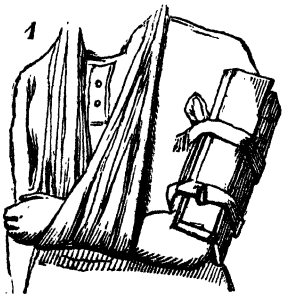
Books: *Darby's Practical Arithmetic; Hind's Principles of Arithmetic; Wright's Self Instruction; Bonnycastle's System; Taylor's Use of Arithmetic; Felton's Mental Arithmetic; Laurie's Mercantile Arithmetic.*

ARM, BROKEN.—Broken bones or fractures are usually divided into two kinds, the simple and compound fracture. A simple fracture is where the bone alone is broken without any injury to the skin and surrounding parts. The term *compound fracture* implies not only a broken bone, but considerable external laceration of cuticle, muscles, and probably arteries. A third condition of fracture sometimes presents itself where, in addition to the last form, the bone has been crushed or splintered into several pieces; this form of accident is called a *compound comminuted fracture.* Again: a

simple fracture may be of two kinds, either transverse where the bone is broken directly through its centre, or oblique where the bone is as it were splintered obliquely in the direction of its length. As a general rule, there is very little displacement of parts when the fracture is transverse; while in the oblique, from the contrary action of opposing muscles on the broken ends of the bone, there is at once shortening of the limb, displacement, and disfigurement.

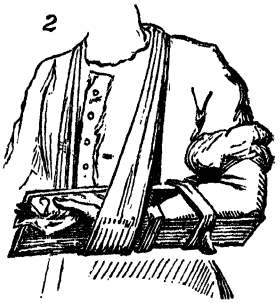
The arm by anatomists is divided into two portions, the arm proper or brachius, that portion extending from the shoulder to the elbow, and the forearm or cubit, the extent from the elbow to the wrist.

THE ARM PROPER.—The bone of the arm or humerus may be broken in any portion of its length; though the parts where fractures most frequently occur are about four inches below the top of the shoulder, about the centre of the bone; and, lastly, about three inches above the condyles, or those sharp projections that define the elbow. *Treatment.*—When the fracture of the bone of the arm is transverse, there is seldom any shortening or disfigurement; and the injury is only known by the pain, loss of power, and grating noise made by the edges of the bone as it is moved about for examination; consequently little trouble is experienced in placing the two ends of the bone in exact apposition. When, however, the fracture is oblique, the bones frequently overlap, and some care and skill is required to place them again in their natural position. To effect this the patient must be seated, and one person grasping the arm with both hands above the fracture and keeping the limb firm, another must take hold of the arm above the elbow with his *left*, and bending the patient's fore-arm with his *right* hand, gradually extend or stretch the extremity till the edges of the bone are brought down to their natural position. Two pads, or long narrow bags, loosely filled with wool or



chaff, and a little longer than the splints, are to be placed, one on the inner and the other on the outer side of the arm, and the splints applied over them; two or three ligatures of broad tape are then to be passed over all and tied with tolerable tightness; the fore-arm is then to be bent and supported on the breast by a handkerchief passed over the neck and spread out into a sling, as represented by fig. 1. A bandage is next to be passed once or twice round the chest and over the splints to keep the arm in steady repose by the side; and the bone is then left to the process of reunion and ossification. Lastly, the bandages should be frequently wetted with an evaporating lotion to soothe and allay inflammation.

THE FORE-ARM.—Fractures may occur in either one or both of the bones that constitute the fore-arm or cubit, and at any part of the length of either, though most frequently occurring in their centres. The larger bone or radius being more exposed to blows, accidents, and shock from falls on the hand and from lying on the outer or thumb side of the arm, is more liable to be broken



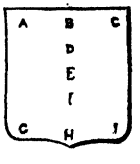
than its smaller and inner companion, the ulna. Fractures of the fore-arm are most frequently transverse, and except from the pain and immovability of the limb, present no particular feature of accident. When, however, the fracture is oblique, the displacement is sometimes considerable, and the shortening very evident. *Treatment.*—Although, generally speaking, fractures are injuries that cannot be safely entrusted to non-professional persons, yet as fractures of the fore-arm sometimes occur in situations where no surgeon is at hand, and as none are easier to reduce, with the following precaution observed, the most unskilful may effect the setting of the limb with safety. The circumstance to be remembered is, that in fracture of either or both of the bones of the forearm, the limb is to be placed *half way between pronation and supination*; that is, *narrowise* with the *thumb uppermost*. By this means both bones are placed in their natural position, one directly over the other. The arm is always to be set in this situation; for if placed in any other, the bones will unite twisted, and the proper action of the forearm destroyed. Extension is to be made in the same manner as for fracture of the arm or humerus. An assistant is to grasp the elbow, and keeping the arm steady, is carefully to extend or pull it, while another taking the hand and keeping the thumb uppermost, gradually pulls the limb towards him, at

the operator, or a third person, adjusts the ends of the broken bone to their place with his fingers. Pads are then applied to either side of the arm, sufficiently long to reach from elbow to wrist, the splints placed on them, and the whole secured by a series of tape ligatures or strings; the arm is then to be bent, and with the thumb side uppermost, the limb suspended by a sling, as shown by fig. 2. See FRACTURE.

ARMS, COATS OF.—Honourable badges of more importance formerly than at the present day, but a knowledge of and a slight acquaintance with which is now generally admitted to be necessary, not only as part of a polite education, but as a key to biography and history. The existence of coats of arms may doubtless be traced to a very remote antiquity; but the laws by which they are regulated, and the nomenclature of the science of heraldry, as we find it at present, date no further back than the commencement of the fourteenth century. The most obvious reason for the adoption of coats of arms is to be found in the wars of the Crusades, when some badge or distinctive mark became absolutely necessary to prevent the respective combatants from turning their swords upon each other. The earliest roll of arms is of the time of Henry III., and the first-known book written upon the subject is dated 1300.

Arms are thus classified:—1. Arms of *Dominion*—as the Royal Arms of Great Britain and Ireland; 2. Of *Pretension*—where the bearer claims or pretends to something not actually in his possession; 3. Of *Community*—as those of universities, dioceses, or the like; 4. Of *Assumption*—where the bearer sets up of his own proper right and motion any addition to his coat of arms; 5. Of *Patronage*—as of governors of provinces, patrons of benefices, &c.; 6. Of *Succession*—borne by the heritors of estates either by will, entail, or donation; 7. Of *Alliance*; 8. Of *Adoption*; 9. Of *Concession*; 10. *Paternal* and hereditary.

The first thing to be noticed about a coat of arms is the shield, escutcheon, or banner—the name of shield being the one most generally adopted—the form of which is arbitrary, but the parts or *points* of which are thus disposed:—

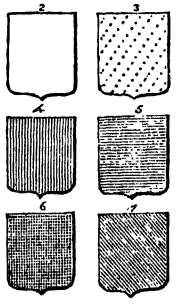


The upper half, occupied by the letters A B C D, is called the *chief*. The lower half is termed the *base*.

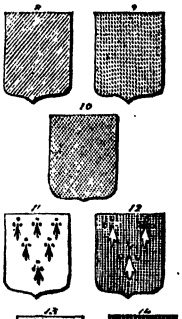
The point A is the dexter chief point.
" B is the precise middle chief.
" C is the sinister chief.
" D is the honour point.
" E is the fess point.
" F is the nombril or navel.
The point G is the dexter base point.
" H is the middle base point.
" I is the sinister base point.

These various terms of *chief*, *fess*, and others to be mentioned, namely, the *pale*, the *bend*, the *chevron*, &c., are so many lines or bands which cut the shield in a variety of ways and are readily distinguishable when once attentively considered.

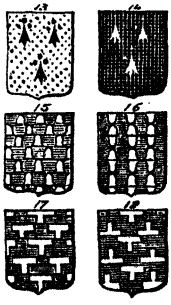
The colours on a coat of arms are of great importance; and where, as in the case of coats engraved upon metals or sculpture, the presentation of actual colours is inadmissible, certain dots or lines variously disposed, stand for them. These colours or their corresponding signs are as follows:—



(2) *Argent* or silver (white), the shield *quite plain*.
(3) *Or*, gold, shown by a *dotted* shield.
(4) *Gules* (red), vertical lines.
(5.) *Azure* (blue), horizontal lines.
(6) *Sable* (black), lines cross-hatched at right angles.
(7) *Vert* (green), lines from the right upper corner to the left lower one.



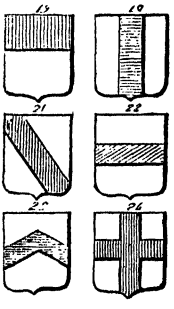
(8) *Purpure* (purple), lines the reverse of the above.
(9) *Tenne* (or orange). Thus.
(10) *Murrey* (Sanguine or blood-red). Thus.
Besides the metals or colours are *furs*. These are:—
(11) *Ermine*, black tails on a white ground.
(12) *Ermines*, white tails on a black ground.



(13) *Erminois*, field gold, tails black.
(14) *Pean*, field black, tails *or* (gold).
(15) *Vair*, several rows of cup-like figures reversed.
(16) *Counter-vair*, differing from the former by the cups being base to base and point to point.
(17) *Potent*.
(18) *Counter-potent*.

The last four furs are always understood to be *azure* and *argent* (blue and white) unless it is otherwise expressed.

Shields are distinguishable by their *charges* or the figures expressed upon them. These may be simply divisions or subdivisions of the field in the plainest manner; but the ways in which the lines are disposed are—



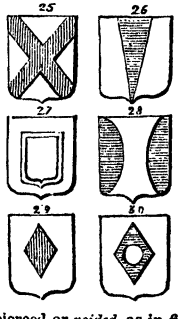
1. By a horizontal line, parting off the upper third of the shield or *chief*. (19)
2. By a third part parted off perpendicularly and called a *pale*. (20)
3. By a third portion formed by two diagonal lines drawn from the right or dexter chief point to the left or sinister base point, and termed a *bend*. (21)

(A *bend sinister* is a similar partition drawn from the left upper corner to the right base point.)

4. By a third portion parted off beltwise exactly through the centre of the shield, called a *fess*. (22)

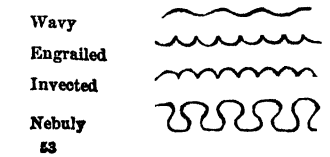
(A *bar* is similarly formed, but is only one-fifth of the shield in depth.)

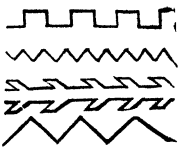
5. By an angular partition, called a *chevron*. (23)
6. By a *cross*. (24)



7. By a *saltier*, or figure commonly known as St. Andrew's Cross. (25)
8. By a wedge-shaped figure called a *pile*. (26)
9. By an inner frame or shield placed upon the first called an *orle*. (27)
10. By *flanches*. (28)
11. By a *lozenge*, or a figure like the diamond upon playing cards. (29)
12. By the *rustre*, which resembles the lozenge, but is pierced or *voided*, as in fig. 30.

There are other divisions of the shield, but the foregoing are the fundamental ones. They are all subject to a variation as to their outer or inner edges, or both; and these edges are named as follows:—



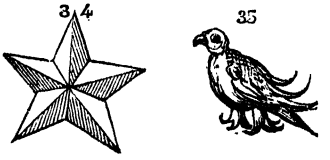


Thus, in speaking of a shield which is charged with a chief or pale of another colour, we must say a *chief* (or a pale) *wavy* (or *embattled*), *or gules* or *azure*, as the case may be.

Differences are marks superinduced upon shields for distinction sake, as thus:—

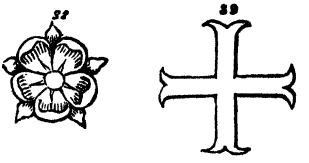
A *label* or *file* denotes the shield of an eldest son or heir. (32) A *crescent* denotes the shield of the second son (33)

The shield of the third son is distinguished by a five-pointed figure called a mullet. (34) That of the fourth by a *martlet*. (35)



That of the fifth by an *annulet*. (36) The sixth by a *fleur-de-lis*. (37)

The seventh by a *rose*. (38) The eighth by a *cross moline*. (39)



The ninth by a *double quarter-foil.* (40)

40

By the term *charge* is to be understood any figure whatever described upon the field of the escutcheon or shield.

The *crest* is the object surmounting the shield, sometimes attached to a helmet, at others simply resting upon a wreath.

Supporters are generally animals real or fanciful, placed at either or both sides of the shield. They are not of very ancient origin, Henry VIII. being the first English monarch who assumed them.

Mottoes are supposed to derive their origin from the old war-cries of the feudal times. They may be indifferently in any language, and are inscribed upon a ribbon which forms a base or rest for the shield and supporter.—See HERALDRY.

ARMY.—Appointments in the higher grades of this profession are, generally speaking, obtainable by purchase, and consequently it is an occupation that is principally confined to the sons of the upper and richer classes. In addition to the first expense thus incurred, it is well known that it is almost impossible for an officer to maintain himself from the pay that he receives, and as a matter of necessity he must possess other means independent of his professional remuneration. It is certain, then, that the profession of arms is one which persons of limited means are debarred from embracing. The established prices for commissions in the army are as follows:—

Life Guards	Lieutenant	£1785
"	Cornet	1260
Horse Guards	Lieutenant	1600
"	Cornet	1200
Dragoons	Lieutenant	1190
"	Cornet	840
Foot Guards	Lieutenant (with rank as Captain)	2050
"	Ensign (with rank as Lieutenant)	1200
Regular Infantry	1st Lieutenant	700
Regiments	2d do.	500
"	Ensign	450

These commissions permanently retain their value, so that an officer wishing to sell out may obtain the same amount for his commission as he gave for it.

Promotion may also be purchased by the payment of the difference in value between the inferior and superior rank. It must be borne in mind, however, that although these large amounts are paid for commissions, it does not ensure immediate appointment; the names of candidates are, as a rule, upon the list for years, and it requires influence to hasten any particular preferment.

Commissions, either with or without purchase, are obtained by nomination, or by passing through the course at the Military College at Sandhurst. After a cadet has pursued his studies for a certain period at this establishment, he undergoes an examination, embracing history, geography, arithmetic, fortification, and one of the three European languages at his discretion. The expenses of education at Sandhurst College are: for the sons of officers in the army under the rank of field officers, £40 per annum; for the sons of regimental officers, £50; for the sons of colonels and lieutenant-colonels, £70; and for the sons of general officers, £80. The sons of naval officers of equal rank are also admissible upon the same terms.

No person is eligible to a commission until the age of sixteen; application must be made by letter to the military secretary of the Horse Guards, accompanied by recommendations certifying the eligibility of the candidate with respect to education, connections, and bodily health.

When a subaltern first joins the army, he undergoes a drilling from the sergeant-major and adjutant until he has acquired a military bearing, and an insight into his duties; and when reported fit for duty, is permanently posted.

Promotion without purchase is extremely slow, except in the time of war, and this tardiness is naturally the result of the number of superior officers being wholly disproportionate to that of the inferior grades. The pay of officers in the army is at the following rate *per day*:—

	Cavalry. £ s. d.	Infantry. £ s. d.
Lieut.-Colonel	1 3 0	0 17 0
Major	0 19 3	0 16 0
Captain	0 14 7	0 11 7
Do. with Brevet	....	0 13 7
Lieutenant	0 9 0	0 6 6
Do. after 7 years' service	....	0 7 6
Cornet	0 8 0	....
Ensign	....	0 5 3

Officers are entitled to half-pay, which is an allowance made when their services are dispensed with for a time, and a species of retaining fee for securing their services for future need. This allowance becomes forfeited if the officer engages in any occupation which prevents him from taking arms in the event of his being again called upon.

The moral and physical qualifications for an officer are a power to resist disease, and endure fatigue, energy not easily daunted, a cheerful disposition, and the power of adapting himself to every situation and circumstance. During the varied and bustling life of a soldier, each and every one of these qualifications will be called into requisition, and considerably tend to diminish the disagreeable phases of a necessarily unsettled life. Independently of Her Majesty's Service, a large body of officers are employed by the *East India Company*, the appointments to which are by cadetships, and either with or without military education. A candidate is not eligible for this service until he has attained the age of sixteen, unless he shall have been for the space of one year at least a commissioned officer in Her Majesty's Service, or in the Militia or fencible corps

when called into actual service, or in the Royal Artillery. Candidates previously to admission as cadets are examined in English dictation, mathematics, history, geography, fortification, and drawing. Testimonials must also be produced of good moral conduct during the two years previously. Although the officers of the East India Company's Service are disqualified for taking rank except in that part of the empire they serve, they have reason to congratulate themselves upon occupying a much better position than the officers of Her Majesty's Service, for in addition to their pay being much larger, their promotion is more certain and rapid, the opportunities of employment more numerous, and the pension more liberal.

A great deal of the patronage of the East India Company is vested, as a matter of course, in the Court of Directors; but a son of a retired or deceased company's officer is regarded as possessing peculiar claims for selection.

Books: *Campbell's British Army as it Was, &c.; Griffith's Artillerists' Manual; Bismark's Cavalry Tactics; Gurwood's Wellington Dispatches; Hodge's Catechism of Fortification; Pasley's Elementary Fortification; Muller's Elements of Fortification; Stocqueler's Catechism of Field Fortification; Malroti's Treatise on Permanent and Field Fortification; Spearman's British Gunner; Lewis's Infantry Drill Manual; Sinnott's Light Infantry Manual; Suasso's Infantry Movements; Montmorency's Lance Exercises · Palmer's Line Movements; Scott's Military Code; Burn's Military Dictionary; Martin's Guide to Military Examination; Samuel's Military Law; Malroti's Military Plan Drawing; Bordieu's Military Position; Ney's Military Studies; Mitchell's Military Tactics; Stocqueler's Officers' Duties; Malcolm's Instructions to Officers.*

ARNOTT'S STOVE is a close fireplace, invented by Dr. Arnott with a view to economy in both fuel and heat. The stove consists of an exterior iron case, lined with fireclay: the fuel is burned in a box or vessel within the case; there is one opening in the outer case to admit fuel, another to remove ashes, and a third at which a flue may be fixed to carry off the products of combustion. These apertures being closed, air is admitted by a very small opening near the level of the burning fuel, and this closes by a self-acting valve. When the fire is too fierce, the valve refuses to admit any more air until the heat becomes subdued; but under average circumstances, the valve admits only a steady stream of air. By this process the heat of the apartment is regulated, and the wasteful consumption of fuel is rendered a matter of impossibility.—See CHIMNIES, FIRES, GRATES, STOVES, &c.

AROMATIC CONFECTION.—Nutmeg, cinnamon, and saffron, each two ounces; cloves one ounce, cardamoms half an ounce, prepared chalk one pound, white sugar two pounds. Rub the dry ingredients together into a very fine powder, and keep them in a well stopped bottle. When the confection is to be used, to each ounce of the powder add two fluid drachms of water, and mix all the ingredients together until they are thoroughly incorporated.

☞ Nutmeg, 2oz.; cinnamon, 2oz.; saffron, 2oz.; cloves, 1oz.; cardamoms, ½oz.; prepared chalk, 1lb.; white sugar, 2lbs. *Proportion:* powder, 1oz.; water, 2 drachms.

AROMATIC MIXTURE.—Mix two drachms of aromatic confection with two drachms of compound tincture of cardamoms, and eight ounces of peppermint water. *Dose*, from one ounce to one and a half. *Use*, in flatulence, cholic, and spasms of the bowels.

AROMATIC TINCTURE.—Mix bruised cinnamon, cardamom seeds, and bruised white ginger, one ounce each, with two drachms of long pepper, and a quart of spirits. Infuse for a fortnight in a warm, dry place, and strain. *Dose*, two teaspoonfuls in a glass of weak wine and water. *Use*, as a restorative for debility, langour, and depression.

AROMATIC VINEGAR.—Mix acetic acid one pound, oil of cloves one and a half drachms oil of rosemary one drachm, oils of bergamot, cinnamon, pimento, and lavender, each half a drachm; neroli twenty drops, camphor two and a half ounces, rectified spirit two fluid ounces. Or the following for extemporaneous purposes: acetate of potash one drachm, oil of vitriol twenty drops, oils of lemon and cloves, of each three drops. *Use*, as a refreshing perfume for faintness, &c. *Caution*, it is highly corrosive, and therefore should be kept from coming in contact with the skin and clothes.

AROMATICS.—This term includes certain drugs or spices possessed of considerable warmth, and a strong aroma used in medicine to impart an agreeable flavour to mixtures or lotions; but though generally used as mere condiments, or as vehicles for unsavoury physic, aromatics are frequently employed from their stimulating and antispasmodic properties in combination with other articles as carminatives.—See CARMINATIVES.

ARRACK is the Indian name given to all spiritous liquor, but chiefly to that which is distilled from rice, and a vegetable juice from the cocoa tree called toddy. Arrack is but little known in England, and is seldom used except occasionally to flavour punch, and other compounds.

ARRACK, MOCK.—Mix three gallons of rum, half an ounce of flowers of benzoin, quarter of an ounce of balsam of tolu, quarter of an ounce of pineapple juice; let them stand for a month, with occasional stirring, then rack.

ARRANGEMENT WITH CREDITORS is the mode by which a debtor extricates himself from pecuniary embarrassment, without the interference of the Courts of Bankruptcy or Insolvent Debtors. A debtor finding himself in the position of being unable to meet his engagements, but believing that time be given him by his creditors he will be able ultimately to satisfy their demands, should call his creditors together, and take their advice as to the best course for him to pursue. To conduct this proceeding successfully a little judgment and tact are required; and, in the first place, the debtor should avail himself of the services of a respectable solicitor, who is both able

and willing to assist him *personally* in the matter. Thus provided, he should wait upon his creditors, and acquaint them with the state of his affairs; and having so done, a meeting should be called and a proposal laid before them, showing how their claims may be compromised or liquidated with the greatest advantage to themselves. After the circular calling the meeting has been despatched, it would be as well that the debtor should again wait in person upon those creditors favourable to an arrangement, and urge their attendance. The law has made provision against unreasonable opposition to such a course, by declaring that a deed of arrangement executed by 6-7ths in number and value of the creditors is (under certain conditions) binding upon the whole. The mode of payment is generally by instalments, at stated intervals.

Another method of arrangement is for the debtor to be empowered to wind up his affairs, under the superintendence and control of two or more of his largest or most influential creditors, and, as his estate is realized, to declare dividends from time to time until the produce thereof, up to the period of his stopping payment, has been exhausted. By this means the debtor is enabled to carry on his business as heretofore; all transactions subsequent to the suspension of payment being kept distinct and separate, and wholly free from any claim by previous creditors. Should the debtor fail to persuade the creditors to allow him to wind up his affairs under either of these arrangements, he ought then to propose to place his affairs in the hands of trustees, by whom the estate should be got in, and divided amongst the creditors.

A third arrangement is that which is conducted under the control of the Court of Bankruptcy. These proceedings are commenced by the debtor himself petitioning the Court for protection. But in order to do this successfully, he must have immediate assets to the value of £200 and upwards, and deposit a sum of not less than £10, and not exceeding £30, for expenses. The protection having been granted, an official assignee is appointed, under whose supervision the arrangement is carried out. Matters are then conducted by private meetings of the creditors; and the terms of compromise having been agreed upon, the estate of the petitioning trader vests in the official assignee, who accounts to the Court once in every six months for all monies and effects appertaining to the estate. When the arrangement is carried into effect, the petitioning trader receives a certificate that is equally as operative as one received under the ordinary bankruptcy proceedings. The advantages derivable from private arrangement with creditors, in addition to the saving of expense and the avoidance of exposure, is, that a person is permitted to conduct his affairs undisturbed, and without any material detriment to his prospects or position. It should be borne in mind that the success of an arrangement with creditors depends in a great measure upon the debtor himself. He must not only be able to convince his creditors of his integrity and good faith, but must also submit such a clear statement of his affairs as will carry out by facts and figures the representations and proposals made.

ARREST.—An arrest is the taking into custody the defendant's person for a debt or damage during the progress of a suit. The debt or damage must be for £20 or upwards, and the plaintiff must show a reasonable presumption for believing that the defendant means to go abroad promptly, and to reside abroad. An arrest may be made at any hour even of the night, but not on a Sunday. An officer may not break open an outer door of the defendant's own dwellinghouse, but after admission to the house he may an inner door. In the house of a stranger, after demand of admission and refusal, an officer may break open even an outer door.

ARROWROOT is a farinaccous substance obtained from the grated root of an East and West Indian plant, *maranta arundinacea*, and its name originates through being confounded with another root used by the Indians as an antidote against poisoned arrows. The *properties of arrowroot* consist in being an easily digestible and soothing food, and is thus adapted for children, invalids, and weak stomachs generally. It should not, however, be persisted in as a diet for any length of time, as it is destitute of the nitrogenous elements of nutrition, and consequently does not possess sufficient stay or support for the stomach. It should also be observed that, except in inflammatory diseases, a little brandy should be mixed with this food in order to correct the acidity which it is liable to create in the stomach. The *adulteration of arrowroot* is, perhaps, more extensive than in any other article, owing to the ease with which it may be imitated, and the difficulty of detection. This, however, applies to that casual glance which persons are generally content with giving when purchasing articles of food, for upon a close inspection, and the exercise of discriminatory powers, the mock arrowroot is easily distinguished from the true. *Genuine arrowroot* is of a dull white colour, and when pressed in the hand yields a peculiar crackling sound, and also retains the impression of the fingers; it is perfectly free from either taste or odour, and retains these characteristics even when mixed with boiling water. The jelly will also remain firm and sweet for three or four days. *Adulterated arrowroot* is concocted in a variety of ways, but chiefly from equal parts of potato flour and sago meal. The colour is of a clearer white than the genuine kind, it contains glistening particles, feels soft to the touch, and has both the flavour and smell of raw potatoes; when mixed the jelly is wanting in firmness, and will turn thin and sour in twelve hours or less. Arrowroot should never be bought in canisters or other packages—firstly, because greater facilities are thereby offered for adulteration; secondly, because arrowroot having no aroma does not require to be kept closed; and, thirdly, because the price of tin canisters or other enclosures adds materially to the price of the article. The chief inducement

held out to purchasers in this, as in every other article of adulterated food, is lowness of price; it will easily be understood, however, that this is an unwise economy, since adulterated arrowroot has properties the very opposite of the genuine, and instead of soothing the stomach, irritates and corrodes it; this is the reason why we so frequently hear patients say that they cannot take arrowroot, because "it does not agree with them." Genuine arrowroot may be obtained at first-class grocers, and Italian warehouses.

ARROWROOT WITH MILK.—Mix three tablespoonfuls of arrowroot with a little water until it has become quite smooth; after standing a quarter of an hour pour off the water, and add the necessary quantity of sugar. Then boil a pint of milk, gradually pouring it over the arrowroot and stirring it well.

ARROWROOT WITH WATER.—Mix the arrowroot as in the preceding, and add boiling water instead of milk in which a piece of lemon has been boiled; add a glass of sherry or port wine, sweeten with sugar, and flavour with nutmeg.

ARROWROOT BLANC-MANGE.—Mix a teacupful of arrowroot with a little cold milk until quite smooth; boil a pint of milk with ten sweet and four bitter almonds that have been blanched and pounded; stir in powdered loaf sugar sufficient to sweeten, and after straining pour it gradually upon the arrowroot, stirring in the meantime; then boil it up for a few minutes, pour into a shape, and let it remain till cold.

☞ Arrowroot, teacupful; milk, 1 pint; almonds, 10 sweet, 4 bitter; sugar, sufficient.

ARROWROOT CREAM.—Mix two tablespoonfuls of arrowroot with half a pint of water, let it settle well, and then pour the water off; boil two quarts of milk with the peel of one lemon and a stick of cinnamon, strain it, and pour over the arrowroot, stirring continuously till cold, sweeten to taste. This is an agreeable addition to fruit tarts or preserved fruits.

☞ Arrowroot, 2 tablespoonfuls; milk, 2 quarts; lemon, 1 peel; cinnamon, 1 stick; sugar, sufficient.

ARROWROOT JELLY.—Mix a tablespoonful of arrowroot with half a pint of water till quite smooth; boil for five minutes, season with nutmeg and sugar and place it in a mould or dish to grow cold. This jelly is a specific for simple diarrhœa.

ARROWROOT PUDDING.—Mix two tablespoonfuls of arrowroot in a teacupful of milk, and pour upon it a pint and a half of boiling milk; add to this when nearly cold the yolks of four eggs well beaten, two ounces of pounded loaf sugar, and two ounces of butter in small pieces; season with nutmeg, and bake in a dish for twenty minutes.

☞ Arrowroot, 2 tablespoonfuls; milk, 1 pint and a half and teacupful; eggs, 4 yolks; sugar, 2oz.; butter, 2oz.; nutmeg to season.

ARSENIC is a metal existing under a variety of conditions, and extensively used in arts and manufactures. When it takes the form of arsenious acid, or *white arsenic*, it becomes a deadly poison if taken incautiously, but when administered with certain restrictions, has several valuable medicinal properties. Arsenic is also vaguely said to possess the property of imparting an *embonpoint* to the figure, and of bestowing a bloom to the complexion and a brilliancy to the eyes. A short account of circumstances recently occurring in connection with this subject will be neither irrelevant or unimportant.

One of the most extraordinary criminal trials on record is that of Madeline Smith, who was accused of having caused the death of Emile L'Angelier by the administration of arsenic. The trial lasted several days, and the verdict of not proven was returned. In the course of the defence the counsel, in order to account for the purchase of arsenic by the accused, declared that she habitually used it as a cosmetic; and to explain away the presence of arsenic detected in the body of the deceased, raised a theory partially believed in, that the eating of arsenic improved and beautified the person. With regard to the first statement of arsenic in the character of a cosmetic, it was proved by actual experiment that if an ounce of arsenic were placed in a basin of water, it would sink to the bottom and remain nearly intact and insoluble, and it could not possibly impregnate the water sufficiently to produce the effect desired. With regard to the eating of arsenic, it was said to be habitually practised in several parts of the world, and works were referred to, to carry out the hypothesis. In *Chambers' Edinburgh Journal and Johnston's Chemistry of Common Life*, it is stated that in Lower Austria, Styria, and Hungary, especially among the peasantry and mountaineers, it was a common practice to eat arsenic for the purpose of producing a fulness and plumpness of the figure, together with a fresh healthy complexion, and a brilliancy of the eye. It was stated that the arsenic was so taken during several days in the week, and that the dose was gradually increased until as much as four grains had been known to be taken at one time. It was also stated that at Vienna and Frankfort-on-the-Maine it was a common practice for coachmen and horse-dealers to administer arsenic to the horses, in order to give a sleekness to their appearance and a polish to their coats. These extraordinary assertions, so utterly opposed to preconceived notions in connection with arsenic, gave rise to a strong controversy among the medical profession; and Dr. Inman, who is regarded as an authority on questions of this nature, undertook to meet and rebut the statements made. He set out by saying that as the poison, in the instances in question, is purchased from hucksters and pedlars, the probability is, as in all cases where articles are largely consumed by the lower classes, that the poison is extensively sophisticated by foreign admixtures, so that even in so large a dose as four grains there would be but a small percentage of arsenious acid. The plump and blooming appearance referred to, he says, are merely swelling and inflammation, the natural consequences of the action of the arsenic known to every medical man. In reference to

horses, he ascribes the sleekness of their appearance to the constant falling off of the old hairs, and the as constant renewal of young ones, arsenic being a powerful depilatory. Dr. Juman further states that one-tenth part of a grain is the limit for safe administration for an adult, and concludes thus: "If any one feel disposed to try the effects of arsenic, let me give them the following caution—to use only a preparation the real strength of which they know. Fowler's solution contains the 1-120th of a grain in a drop. Very few indeed can bear to take five drops three times a day. It is best borne on a full stomach. It soon produces griping, sickness, and purging. Its use should be universally suspended every alternate fortnight. The dose cannot be increased indefinitely or with impunity. When once the full dose that can be borne is ascertained, it is better to begin with that, and go on diminishing it to the end of the fortnight, than to begin with a small dose and go on increasing it daily. Lastly, let me urge upon all who take this step to make some written memorandum that they have done so, lest in case of accident some of their friends may be hanged in mistake."

ARSENIC, POISONING BY.—The symptoms of poisoning by arsenic are pricking and burning pains in the stomach, heat in the mouth, and excoriated lips, violent gripings in the bowels, succeeded by vomiting and purging, unquenchable thirst, pains in the region of the heart, great anxiety and collapsing of the features, twitching of the muscles, rigors, convulsions, and death. The main thing to be achieved is to empty the stomach as quickly as possible with the stomach-pump or an emetic; for this latter a dose of fifteen or twenty grains of sulphate of zinc, or ten grains of sulphate of copper, is the most efficacious, producing almost instantaneous vomiting, without exciting the previous stage of nausea which so frequently characterises other emetics. On the other hand, violent emetics are objected to, because they increase the irritation caused by the poison. With this view of the case, it is recommended to excite vomiting by making the patient drink large quantities of warm water, milk, water containing sugar or honey, linseed tea, and other mucilaginous fluids, the throat in the meantime being tickled with the finger or a feather. Of the two modes of treatment, the latter is undoubtedly the most advisable for unprofessional persons to pursue. Or in the absence of ordinary emetics, give a tablespoonful of mustard seed, or a dessert spoonful of powdered mustard made thin with warm water and drank off immediately. When the stomach has been emptied, honey, treacle, mucilage, flour and water, the whites of eggs and milk, must be given in quantity and frequently repeated, the object being to involve any particles of arsenic remaining, and to protect the coat of the stomach from the further irritation of the poison. These remedies are suggested, supposing that a medical man is momentarily expected, and that the operation produces the desired effect. But where medical aid is not to be obtained, and the sufferer is not relieved by the application last-named, the sulphate of zinc must be administered. Arsenic produces its fatal effects by absorption; and agreeable with this principle, such liquids should be administered as are least liable to dissolve the poison in the stomach. When the stomach, therefore, is emptied of its contents by vomiting, lime water should be drunk. After the immediate danger has been overcome, the regimen of the patient should be carefully attended to, in order to restore him as speedily as possible to convalescence; for this purpose his diet should chiefly consist of milk, gruel, cream, rice, and beverages of an emollient and mucilaginous character. In connection with this subject, persons should be cautious in their use of many articles which have arsenic in their composition; thus, for instance, the envelopes which are tinted on the inside are dangerous, because arsenic is mixed with the colouring matter, which being frequently brought in contact with the tongue is apt to produce the worst consequences. Arsenic is extensively used in the arts and for many articles of domestic manufacture besides giving a tone to envelopes; the papering of our rooms is so deeply impregnated with arsenic, especially the green colours, that crystals of arsenic may be obtained from the air of the apartment where these arsenical papers are used. It also enters largely into the manufacture of candles, to purify foul tallow and give the candle hardness; the arsenic consequently given off from the combustion, and inhaled into the system in the form of vapour, is often dangerously large. Again: arsenic is employed to a great extent to colour children's toys and sweetmeats; and the utmost care should be employed in selecting all such articles for the use of children.

The principal medicinal properties of arsenic are those of a tonic and febrifuge character, and its dose is from 1-16th to 1-10th of a grain taken three times a day.

ARSON is the wilfully and maliciously setting fire to any church, chapel, house, warehouse, office, barn, hovel, or shed; any stack of grain, hay, straw, wood, turf, or coals, whether the same shall then be in the possession of the offender, or of any other person, with intent thereby to injure or defraud any person. It is a felony, and the offender is liable to be transported for his natural life, or for not less than fifteen years, or to be imprisoned for any term not exceeding three years, with or without hard labour, or solitary confinement. If the offender is under eighteen years of age, in addition to any other sentence, he may be publicly or privately whipped, not exceeding three times.

ARTERIES are long, hollow, pulsating tubes, consisting of three coats, muscular, fibrous, and mucous, which like pipes from a reservoir, spring from the heart, and convey the blood from that organ to the remotest part of the body. Arteries are highly elastic, and admit of considerable expansion and contraction, according to the exigencies of circumstance and motion. The great difference

between an artery and a vein consists in the former arising in large vessels from the heart, and after dividing and subdividing, gradually diminishing in calibre as they recede from it, till terminating in the finest filaments on the surface of the body. Veins, on the contrary, commence in minute fibres or capillaries, and gradually enlarge into branches and trunks as they converge to the heart, *into* which they all terminate by two large vessels. The next distinguishing feature of an artery is its pulsation, the blood being propelled along its tube in jerks, exactly synchronous or in rhythm with the action of the heart; this peculiarity of the artery is perceptible in the smallest and most removed ramification, as accurately as to time as in the great vessels in immediate proximity to the heart. Lastly, arteries are distinguished by the colour and warmth of the blood they carry; arterial blood being of a bright scarlet, and of a slightly higher temperature than venous blood, or the blood of veins, which is always of a dark red or purple colour. See CIRCULATION, HEMORRHAGE, PULSE, WOUNDS.

ARTESIAN WELLS are perpendicular perforations through which water rises from various depths below the surface of the soil. The name is derived from Artois, a district in France. Artesian wells are most available for supplying water to houses situated in low and level districts, where water cannot be obtained from springs or wells of ordinary depth. They may also be introduced into fish-ponds, for the water being of a warm and equal temperature, obviate the effects produced by the extreme variations of the seasons.

ARTICHOKE, CULTURE OF.—Of this plant the globe shape are considered most serviceable, and the conical or French as possessing more flavour. Generally speaking artichokes are produced from July to November, but, under peculiarly favourable circumstances, they may be produced a month earlier or later. Their *propagation* is by young shoots rising in the spring from the old plants. These offsets should be taken from the parent plant in March or April, according to the progress of the season, and separated with as much root as possible. Holes fifteen inches in diameter and twelve inches deep should then be dug and filled with dung, and compost. These holes should be made in double rows; each plant four feet asunder, and each row two feet apart. Water occasionally, and hoe and weed the ground between them. When the entire crop is taken, the plant should be cut close to the ground, so as to allow more room for young shoots. But when it is desired to encourage the production of the large main heads, the lateral shoots are separated when young. For *winter dressing* the large leaves should be removed in November, the earth dug round, and raised close about each plant; and in frosty weather they should be covered with litter a foot deep. These plants require to be well manured every twelvemonth or two years at the furthest. They thrive best in a rich deep soil; and a liberal supply of sea-weed mingled with the earth is singularly efficacious in promoting their growth and luxuriance. The artichoke plant continues productive for four or five years, but at the end of that time it begins to degenerate, and new plantations are required. Artichoke bottoms may be preserved for winter by blanching them in water and then drying them.

ARTICHOKE, USES AND PROPERTIES OF.—The *uses* of the artichoke are for cooking purposes, salad, and pickling. Their flowers also contain a coagulating milk, sometimes used instead of runnet. The *properties* of the artichoke are a bitter taste and a diuretic tendency. When cooked it is agreeable to the taste, but not very nourishing; it is, however, easy of digestion, and less productive of flatulence than many other vegetables.

ARTICHOKES A LA BARIGOULLE.—Cut several small and tender artichokes into quarters, and throw them into some water slightly mixed with vinegar; then melt some butter in a stewpan, and put in the artichokes, having first drained them; fry them till they are of a good colour, then add some shred parsley and green onions, salt, pepper, and a handful of bread crumbs; moisten with a ladleful of stock, and let them stew till the liquid is quite thick; serve hot.

ARTICHOKES BOILED.—Cut off the ends of the leaves, the stalk, and the hard leaves underneath; put them in a kettle with boiling water, so as to three parts cover them; add salt, pepper, a bunch of mixed herbs, and a piece of butter. To ascertain if done draw out a leaf, which if easily detached is a safe criterion. Take them out of the water, and put them upside down to drain.

ARTICHOKES BROILED. — Parboil them, remove the chokes, and in their place put a pinch of chopped parsley and chives, some bread raspings, a teaspoonful of oil, salt, and pepper; broil on a gridiron and serve hot.

ARTICHOKES FRICASSEED. — Pare artichokes, and boil them in milk and water for twenty minutes; have ready a sauce made of a piece of butter the size of a walnut, a tablespoonful of flour, and a half-pint of milk, seasoned with salt, pepper, and nutmeg; stew the artichokes in this for five minutes, and serve either plain or with melted butter.

ARTICHOKES FRIED.—Remove from young artichokes all but the tenderest leaves, the ends of which take off. Put into a large dish six tablespoonfuls of flour, three of oil, one of vinegar, two eggs beaten, a wineglassful of water, a little pepper, salt, and nutmeg; beat the whole into a batter with a wooden spoon, and dip in the artichokes, stir them about, and detach those that stick together. When they are of a brown colour, take them and throw into the fry a handful of parsley, which when done take out and drain on a cloth, sprinkle with salt, and dress the artichokes on a folded napkin set round with the fried parsley.

ARTICHOKES PICKLED. — Gather young artichokes as soon as formed, slightly

boil them, then remove them into jars, and cover them with a cold brine of salt and water; let them lie in this for a day, then draw off the brine, and pour in hot vinegar, add ginger, mace, and nutmeg, and tie down.

ARTICHOKES PRESERVED.—Select the finest and cut off the ends of the leaves, scald them long enough to extract the hay, then sprinkle with salt, and let them stand; the following day remove them into an earthen pan with cold water and salt; after lying six hours, change the water, and make a stronger pickle with three or four handfuls of salt, and a quarter of a pint of vinegar; cover them with melted mutton suet, and keep them in jars. When required for use steep them in luke-warm water, and afterwards boil them in a large quantity of water to get rid of the taste of the pickle.

ARTICLE, IN GRAMMAR, is a part of speech used before a noun to define or limit its application. There are two articles, the definite *The* and the indefinite *a*. This last becomes *an* when used before a noun commencing with a vowel or an *h* not aspirated. The definite article *The* is used when we wish to point out any particular person or thing, as "The man who called yesterday called again to-day." The indefinite article *a* or *an* is used when we speak generally of any one person or thing, as "A man called to-day with a message;" or, "A walk by the seaside is pleasant." The absence or omission of the articles *a* or *The* denotes the plural number, as "Man is mortal"—meaning all men; birds fly"—*i.e.*, all birds.

ARTIST, in a limited sense, has reference to a person who occupies himself in drawing or painting. The most profitable branch of this profession is *portrait painting*, in which, if an artist once succeeds to establish a reputation, he is furnished with a certain and handsome income. This is frequently accomplished by the patronage of some notability in the first instance, whose portrait having been taken and extensively exhibited acts as an advertisement and recommends the painter. Sometimes also a portrait painter is established by the countenance and encouragement of a large circle of friends and relations, through whom he is enabled to extend his connection and introduce himself to the world. Without the probability of being aided by one of these auxiliaries, it would be hazardous for a person to attempt portrait painting as a profession by which to obtain a subsistence.

The education of an artist consists in placing the pupil with some professor of the art or at a private school, the cost of which is from £200 to £500. To assist the artist in his education there is the School of Design, where he may pursue his studies during certain hours, and also the Royal Academy; this latter institution confers what are termed travelling studentships, by which the student is enabled to reside on the continent during the space of three years, having £80 allowed for his journey and return, and £130 per annum for his expenditure.

Drawing on Wood is a branch of the pictorial art which, owing to the large increase of illustrated works, employs a great number of persons at various scales of remuneration. An artist having a good conception and a ready hand may, when regularly employed in this capacity, earn a decent income. It is necessary, however, to gain the ear of the publisher before this can be accomplished, and the best method for doing this is to strike out some idea of a novel character, or to pourtray passing incidents in such a manner as will be likely to awaken popular sympathy and gain public approval.

The first essential to an artist is the possession of a natural gift or aptitude to perceive *character*. By character is meant the appearance which one object presents as distinct from every other. The next is, the power to depict the same. This is to be gained by study only. *Ruskin's Elements of Drawing* is an excellent first-book to place in the hands of a beginner; and *Harding's Lessons on Art* is a very useful work considered as an introduction to landscape painting. For mechanical drawing, *R. Scott Burn's Treatise* is a good one. To an artist who aims at the highest results, a thorough knowledge of the proportions of the human figure is essential. This is scarcely to be obtained without "life studies" or drawing from the "nude," as practised at the Royal Academy. For less exalted purposes, a portfolio of *Jullien's Etudes en deux crayons* will serve. Books:—*Harding's Elementary Art; Harding's Lessons on Trees; Harding's Lessons on Art; Harding's Guide and Companion to Lessons on Art; Prout's Microcosm; Bell's Anatomy for Artists; Bell's Expression; Burnet's Practical Treatise on Painting; Burnet's Education of the Eye; Jameson's Sacred and Legendary Art; Chevreuil on Colour; Barnard's Theory and Practice of Landscape Painting; Lavorte's Handbook to the Arts of the Middle Ages; Reynolds's Discourses; Siddons's Gesture and Action; Howard's Drawing-book; R. Scott Burn's Illustrated Drawing-book; R. S. Burn's Mechanical and Geometrical Drawing; Jullien's Etudes; Burchett's Practical Geometry; Bean's Drawing Copies; Calvert's Drawing-book; Needham's Landscape Album; Jarves's Art Hints.*

ARTS, SOCIETY OF.—This is an association established in London which has for its object the encouragement of the arts, manufactures, and commerce of this country, by means of exhibitions, meetings, and correspondence, and by adjudging rewards for works of merit, inventions, discoveries, and improvements. This object is more particularly carried out by committees appointed to consider the various communications received, and to recommend their adoption or rejection by the council. It will be seen by this that where a person has made any invention, discovery, or improvements, in connection with arts, manufactures, or commerce, he can adopt no better course for testing its merits, and making it known among the most influential classes, than by putting himself in communication with the society referred to.

ART UNION.—A society for the encouragement of the fine arts by the purchase of works of art out of a common fund raised

in small shares or subscriptions. The principle upon which the Art Union of London is conducted is, that every person subscribing one guinea or more annually becomes entitled to one or more shares in the advantages held out. A committee of management is appointed out of the body of subscribers, under whose direction the funds collected are expended on the general behalf. At the conclusion of the year each subscriber receives an engraving, statuette, or some other work of art, as an equivalent for his guinea. It will easily be understood that, although this engraving or work of art could not be purchased in the ordinary way for less than a guinea, the large number that is produced in this instance renders the cost of each much less, and consequently leaves a large profit on the transaction. The surplus thus formed is appropriated to the purchase of paintings, sculptures, bronzes, and other works of art, each of which is estimated at a stated value; a public drawing then takes place, in which each member has a chance of obtaining a prize from £10 up to £200, and which, if he is fortunate enough to win, he is allowed under certain restrictions to select for himself.

ASAFŒTIDA.—The article sold in the shops and generally known under this name is a gum resin, of a strong disagreeable odour, resembling onions or garlic, extremely acrid in smell, and remarkably volatile; and as its efficacy depends mainly on the essential oil that gives it its pungency, it requires to be preserved in bladders or well stoppered bottles. Asafœtida is obtained by incisions from the full-grown roots of the plant "Ferula Asafœtida," a shrub common in Syria and Arabia, but found in greater abundance and perfection in Persia. The roots of the old plant are selected as yielding the best gum, from which it exudes in tears, or small conglomerate masses of a red and white or whitish brown appearance, that become hard by exposure to the sun. The leaves of the young plant are used by the natives as a vegetable, and when cooked form a kind of spinach, and the roots cleansed and roasted are eaten as a substitute for the yam and potatoe. As a medicine, the pharmacopœia hardly contains an article of more use and benefit than this most disagreeable but really excellent drug. As an antispasmodic, expectorant, emmenagogue, anthelmintic, and stimulant, it is equally efficacious and certain, and especially in the first-named class for hysteria, or in cases of syncope or fainting, as well as in colic or pains the result of flatulence and indigestion, it is a remedial agent of the highest order. Though kept in the shops in the form of tincture, emulsion, spirit, and pills, it is in the latter shape,—the compound asafœtida pill,—a combination of myrrh, galbanum, aloes, asafœtida, and ginger, that it is most frequently given. One of these pills may be taken three times a day, or two at bedtime and one in the morning; or a small piece of the gum the size of a pill made round by the fingers may be swallowed at any time, as an excellent remedy for flatulence or indigestion, the result of torpidity of the digestive organs.

ASBESTOS.—A soft fibrous mineral, composed of easily separable filaments of a silky lustre. It consists essentially of silica, magnesia, and lime. When woven into cloth, it possesses the property of resisting the action of fire, enabling persons to walk through flames, or carry red-hot iron without being burnt in the slightest degree. In the United States of America asbestos is sometimes used as a lampwick.

ASH.—This is one of the most valuable and useful of British trees. It is prolific in ripening seed, and rapid in growth, hence it is to be met with in every portion of England. The most favourable soil for the growth of the ash is a good strong loam, rather rich, and slightly moist; the moisture, however, must have ready access away from the roots, and not suffered to stagnate. The ash is also fond of shelter, and its most advantageous situation is a valley or glen, or in the midst of a plantation. It will, however, grow well in other soils, excepting thin and wet soils, peaty earth, or gravel. The *culture* of the ash requires that the seed should be gathered in autumn, and immediately sown in nursery beds. Some of the seeds may not rise till the second or third year; but as soon as the seedlings are five or six inches high, they should be rowed out to gain strength, till finally transplanted. There are several varieties of this tree; the most ornamental of which is the weeping ash, which forms an arbour of itself when grafted on a lofty stem. It is most useful when the trunk attains a diameter of three inches, and the underwood is fit to cut every seven years. The wood of the ash combines hard and elastic properties, and being held in universal esteem is put to a variety of uses: among which are spokes of wheels, poles and shafts for carriages, beams for ploughs, tops for kitchen tables, milk pails, oars and ship blocks, handles for gardening and agricultural implements, hop-poles, ladders, and hoops. The bark is used for tanning fishermen's nets and calfskins; and also for dyeing green, black, blue, and yellow colours. The leaves and shoots form a food for cattle, and are also dishonestly appropriated to the adulteration of tea. The ashkeys or buds were formerly considered a delicacy, pickled in salt and vinegar, and served to table for sauce. The sap is used for medicinal purposes. As a fuel it is excellent, burning when new or green better than any other tree.

ASHES.—The remains of anything burnt, whether of animal or vegetable origin, and, to some extent, of mineral bodies also. *Coal ashes* consist almost entirely of the various earths, a small portion of charcoal, and the saline matters, of which sulphate of lime (gypsum) and lime constitute about a fourth. The presence of these substances renders coal ashes favourable to fertilization; it is therefore extensively used as a manure, and as a top dressing for lucern, red clover, sainfoin, and other grains, is superior to any other. As a manure for the garden, they require to be used sparingly and with

caution, their employment in too large quantities is detrimental rather than beneficial. They are extensively used in the formation of walks for gardens and ornamental grounds; spread over the surface of the mould they prevent the depredation of garden mice; and in the case of early sown peas, it will be found that where the surface of the ground is covered with coal ashes, the peas will make their appearance three or four days earlier than those to which no ashes have been applied. Coal ashes are also employed in brickmaking, and are also turned to a variety of domestic uses. *Vegetable ashes* contain carbonate and muriate of potash, phosphate of lime and magnesia, silica, and the oxides of iron and manganese. These constituents, which comprise all the salts required for the food of plants, render vegetable ashes invaluable as a manure, especially when mixed with common manure, the quality of which is considerably improved thereby. The quantity of ashes produced by a plant depends upon its soil, age, and aspect. But all vegetables when green will produce more ashes than when previously dried. Potash and pearlash are obtained by lixiviating the ashes of wood. Animal ashes, peat ashes, and mineral ashes, are also extensively used as manures.

ASPARAGUS.—The soil best adapted for this delicious and highly prized vegetable is a light rich sandy loam, well mixed with rotten dung or seaweed; the soil should not be less than two and a half feet deep, and before planting the bed should be trenched over to that depth, burying plenty of dung at the bottom. The site of the beds should be such as to derive as much sun as possible during the whole of the day, and neither trees or shrubs should be near. *To raise plants from seed*, they may be sown from the end of February to the beginning of April, the first or second week in March being the usual time. The seed should be inserted with a dibble six inches apart, and an inch below the surface; if the weather be dry, they should be watered frequently, but moderately. When the plants begin to appear, which will be in three or four weeks from the time of sowing, the beds should be carefully weeded. If two plants arise from the same hole, the weaker of the two should be removed. Sometimes asparagus is suffered to remain in the bed where it has been sown, and at other times it is *transplanted*. This operation is performed about the end of March in a variety of ways; but the following is one of the most approved methods:—Dig the space required to the depth of five feet; sift the mould that is taken from it, and reject all stones, both large and small; put aside the finest portion of the mould for dressing the bed. Then lay in the materials of the bed in the following order: dunghill manure, eight inches; turf, six inches; manure, six inches; sifted earth, six inches; turf, eight inches; dung, six inches; finest mould, eight inches, which well incorporate with the preceding layer of dung. Divide the whole space into beds five feet wide, by paths constructed of turf two feet in breadth and one inch in thickness. The beds being thus prepared, remove the plants carefully from the seed bed, with a narrow elongated dungfork, taking the greatest care not to injure the roots; the plants must then be laid evenly together, to prevent the roots becoming entangled; this process should be performed expeditiously, as the plants suffer from protracted exposure to the air. In planting them, the bud or top of the shoot must be placed to the depth of an inch and a half in the ground, and at the same time the roots must be spread out as widely as possible, somewhat in the shape of an open umbrella. As each plant is put in the ground, a small piece of stick must be placed near to mark the spot. As soon as the earth is settled and dry, a spadeful of fine sand should be heaped on each plant in the form of a molehill. The plants ought to be two years old when they are transplanted; they will even take at three, but at four they are apt to fail. After the plants have been transplanted three years, they will be fit to cut for use. Cut off the buds within the ground with a narrow sharp pointed knife, or small saw, thrusting it down straight close to each shoot, separately; cut it off slantingly and with care not to wound the younger buds shooting below. Cutting should be discontinued about the first week in June, the common practice being to let asparagus grow when green peas come in. Towards the end of October or beginning of November, the stalks which have run up to seed having done growing, or begun to decay, cut them down close, and carry them away; then hoe off all the weeds from the beds, and lay on a coating of good dung, and thus let it remain till spring. About the end of March, or the beginning of April, before the buds begin to advance below, loosen the surface of the beds with a three-pronged fork, and turn up the top earth carefully without injuring the roots; this process, by admitting air, moisture, and sunshine, enables the shoots to rise in free growth. *Forcing* asparagus takes place in the beds themselves, without disturbing the roots; the trenches are filled with hot dung, and the beds are covered with the same material about six inches deep; by these means the plants will be fit to cut early in the spring, but at the same time the tenderness and flavour suffer in proportion. When it is desired to have exceedingly large heads of forced asparagus, pieces of bamboo, or any other hollow tubes, should be put over the shoots when they first make their appearance, they will thus acquire a length of as much as eighteen inches. As the successful culture of asparagus mainly depends on the preparations that are made for it, it would be as well for an inexperienced person to have in the first instance the assistance of a practical gardener.

ASPARAGUS A LA FRANCAIS.—Boil asparagus, and chop the heads and tender part of the stalk, together with a boiled onion, into small pieces; add a little salt and pepper, and the beaten yolk of an egg; beat it up. Serve it on sippets of toasted bread, and pour over it a little melted butter.

ASPARAGUS A LA PARMESAN.—Boil asparagus tops in water with a little

salt; spread on some grated cheese, with butter; place on this a layer of asparagus, then cheese and butter, and so on, alternately, finishing with the cheese and butter; brown in a Dutch oven.

ASPARAGUS AS PEAS. — When the asparagus are young and green, cut the heads off in pieces of equal size, about the third of an inch in length; wash them well, and put them into boiling water with the customary quantities of salt, and a very small portion of carbonate of soda: let them boil for ten minutes, drain them thoroughly, and lay them on a clean napkin; wipe them gently until they are quite dry, and then put them into a stew pan with a good slice of butter, which should be dissolved just immediately before the asparagus is put in. Stew them in this over a brisk fire for ten minutes, shaking them well; dredge in a teaspoonful of flour, and half that quantity of sugar; then pour in boiling water to cover the asparagus, and boil it rapidly until nearly all the liquid is absorbed; stir in the beaten yolks of two eggs, heap the asparagus high on a dish, and serve hot.

ASPARAGUS, BOILED. — Scrape the stalks quite clean, and then let them soak in salt and water for an hour. Cut them of an equal length, and tie them up in small bundles with tape; boil them gently in three different waters till the stalks are tender, which will be in about half an hour. Dip a delicate toast, about half an inch thick, with the crust cut off, into the asparagus liquor; untie the bundles; lay the asparagus upon the toast, and serve with melted butter in a sauce boat.

ASPARAGUS IN CREAM.—Boil asparagus as usual; parboil half a pint of cream with a little butter, stir till the butter is melted, season with pepper and salt, and pour it over the asparagus.

ASPARAGUS PICKLED. — Select the largest asparagus, and after cutting and washing the heads, immerse them in water, and let them lie for three hours. Scald them in boiling salt and water, drain them quite dry, and lay them on a napkin to cool. Make a pickle of vinegar and salt, according to the quantity of the asparagus. To a gallon of pickle put two nutmegs, and a quarter of an ounce each of mace and white pepper, whole; put the asparagus into a jar, pour the pickle hot, but not boiling, over them, cover the jar with a thick cloth and let it stand for a week; then boil the pickle a second time, and when it has stood another week in the same manner boil a third time; let it stand till quite cold, and then cover the jar close.

ASPARAGUS PRESERVED.—Asparagus may be preserved for a day or two by keeping the stalks immersed in cold water an inch deep; and for a week or so they may be kept by burying in fine sand, damped. To preserve green for winter use, take away the white part, and boil the remaining portions for three minutes with salt and butter; then take them out, and put them in cold water for an hour. Then drain thoroughly, and put them by in jars or other vessels, with a sprinkling of salt, a few cloves, a lemon cut in slices, and vinegar and water in equal proportions; cover with butter that has been previously melted to the thickness of a pennypiece, and store in a moderately cold place.

ASPARAGUS, PROPERTIES AND USES OF.—Asparagus is accounted one of the most wholesome and nutritious of our culinary vegetables; it is both a diuretic and a sedative, and is recommended in cases of dropsy, stone, and affections of the chest and lungs. For the latter complaint especially the following extract will be found serviceable:—Boil the asparagus in water for several hours, then strain, and evaporate the liquor gradually over a very slow fire until it becomes exceedingly thick; then add a wineglassful of brandy to each pint, and put by in bottles. Take a tablespoonful night and morning in warm milk.

ASPARAGUS SALAD.—Boil the heads of large asparagus, previously scraped, till nearly done; strain and put them into cold water for five minutes, and drain them dry, afterwards lay them in rows on a dish; mix with dressing as other salads.

ASPARAGUS SOUP.—Cut the greenest half of the asparagus into pieces about an inch long; reduce the remaining portion to a pulp, and boil in water till quite done; boil the pieces separately, strain the soup made from the pulp, add the pieces, and serve hot with sippets of toast.

ASPARAGUS WITH EGG.—Beat up two or three eggs, and season with pepper and salt; boil asparagus as usual, cut them into small pieces of the size of peas, and stir them thoroughly into the eggs; melt two ounces of butter in a stewpan, and pouring in the mixture stir it till it thickens, and serve not on toast.

ASPECT.—Previously to a house being built or occupied, its position in relation to air, light, &c., is a consideration of the highest importance, both as regards health and general comfort. A southern aspect has the advantage of the sun's rays during the greater part of the day; a northern aspect on the contrary never has full sunshine. An aspect to the east has the sun only in the morning; an aspect to the west, the sun only in the evening. The most preferable aspect of any however is south-east; not only because it affords a due amount of both warmth and light, but because in most parts of Great Britain the wind blows less frequent from that quarter than from any other; and when it does blow it is always warm. This aspect is beneficial also to the grounds and garden attached to a house; the former drying sooner after rain, and the latter producing earlier and finer crops of vegetables, fruits, and flowers. The consideration of aspect is not confined to the house itself, but also extends to the apartments of a house; of these the most important in connection with this subject are the sleeping-rooms, the children's nursery, and the chambers of the sick. A *sleeping-room* should have an eastern aspect, because it then receives the first rays of the sun, and has time to become cool again before the hour of retiring to rest. *Children's nurseries* should have a south-

eastern aspect, because it has the advantage of receiving the morning rays of the sun, without the drawback of the sultriness of an afternoon. *Sick chambers* should have a northern aspect, because the heat of the mid-day and afternoon sun is avoided, and the degree of air and light may be regulated, which cannot be done if the windows face any other quarter. The aspect of the remaining apartments of a house is a matter of minor importance.

ASPHALTE.—This is a material recently introduced into building, and which has many valuable properties. It is a compound of carbonate of lime and mineral pitch, and is found in a natural state in the south of France. The chief properties of asphalte are, that it is impervious to both sun and rain, repels vermin, is slightly elastic, and possesses an equable temperature. These properties, independently of their several advantages, are generally conducive to durability, and consequently render asphalte a desirable material for many uses in domestic and rural economy. Among these are as floorings for stables, barns, and other outbuildings; foot-pavements for gardens, yards, and terraces; covering for flat roofs, and lining of water-cisterns. Asphalte may be formed artificially in England, equally as good and cheap as that which comes from France. The following is the recipe: eighteen parts of mineral pitch, and eighteen of resin; put into an iron pot, and boiled for a short time; after which add sixty parts of sand, thirty of small gravel, and six of slacked lime. The foundation must then be rendered dry, and brought to a level with gravel or small stones; then take the mixture out of the pot with a shovel, and spread it evenly in a boiling state over the prepared surface; the depth required is, two inches for ordinary pavement, and three for floors and flat roofs.

ASPHYXIA is that condition of the body most nearly allied to death, in which the vital principle may be said to be in abeyance, but not extinct; where the heart and lungs have ceased to act, and the body without pulsation or feeling presents the appearance of an inert mass. Whatever interrupts the respiration and arrests the action of the heart, throws the body into that state which is known as suspended animation or asphyxia. In this manner drowning, hanging, and the inspiration of mephitic air or noxious gases, if continued only for a very brief time, produces a simulation of death, which, if carried out a little longer, would eventuate in perfect dissolution. The difference between syncope or fainting and asphyxia consists in this: that in syncope the respiration and the circulation are only *impeded*, in the latter they are *suspended*. The same characteristics of insensibility, paleness of countenance, and cold extremities, belong alike to each. Besides the above causes of suspended animation there is another peculiarly fatal to life, and arises from protracted labour, causing a child previously alive, seemingly to die in the birth, and to be brought into the world still born. *The Treatment* of asphyxia is nearly the same from whatever cause it results. The usual mode of procedure is to open the external jugular vein, and relieve the head by a copious bleeding, to inflate the lungs by artificial respiration, dash cold water on the face, stimulate the nostrils with burnt feathers and ammonia, and apply heated bricks to the feet and spine. For the asphyxia of infants, it is necessary, before cutting off the connection between mother and child by tying the umbilical cord, to place the infant in a basin of hot water, or at a temperature of 80 degrees, cleanse the nostrils and mouth of all mucus and inflate the lungs by means of a pair of bellows; at the same time friction must be employed rapidly along the spine by the fingers or hand of the operator. Should these means fail, it may be necessary to change the hot for cold water, repeating the same operations. When the cord has been tied remove the child from the basin, rub the chest and spine with brandy, wrap the body in flannel, and lay it on its back on hot bricks, or across a heated warming pan, till some convulsive twitchings of the face give evidence of restored vitality. A few drops of brandy and water may be administered to promote reaction, and the child kept warm till its loud cries give confirmation of its safety.—See DROWNING, HANGING, &c.

ASPIRATE, the peculiar expression or emphasis given to certain letters of the English language, chiefly to the letter H. This emphasis is produced by the mouth or lips in the same way as breath is *expired* or driven out after its *inspiration* or reception into the body.

The H, aspirated, is found at the commencement of a great number of words; in fact, the number of instances when in such a situation it is *not* aspirated are very few, amounting in all to not more than ten or twelve. The following list may be said to comprehend the whole:—Heir, herb, honestly, honour, hospital, hostler, hour, humble, humility, humour. Even in some of these the use of the aspirate would not be offensive. The real difficulty lies in the avoidance of an aspiration before words which begin simply with vowels, as *h*ounce for ounce, *h*egg for egg, &c. The effect can only be avoided by a careful attention to the spelling of words, and to the conversation of good and correct speakers. It is, however, frequently the case that an educated person finds himself aspirating the vowels. This would probably arise from a hurried mode of utterance when the speaker was carried away with his subject, and did not give himself time to articulate correctly. The best remedy in that case would be in the adoption of a more deliberate style. To avoid putting an H before words beginning with a vowel a very good plan to adopt is, to join the final consonant of the previous word to the commencing vowel, thus: for instance, supposing a person was in the habit of saying "a boiled hegg," let him pronounce the sentence, "a boile-degg." That, strictly speaking, would not be the true pronunciation, but it would be an ap

proximation to it, and the ear would be less offended by such a sound than by the aspiration given to the vowel e. The omission of the aspirate in cases where it ought to be used, is not less an offence against euphony and grammar: for a speaker to say,

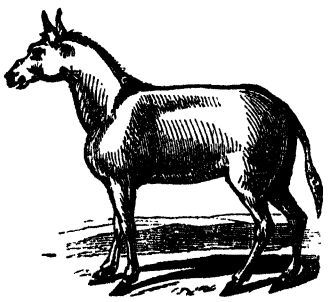
"*E* laughs at scars who never felt a wound,"

is equally as faulty as for a vocalist to sing,

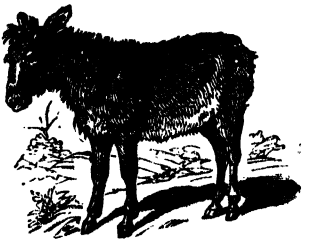
"*H*all is lost now."

There are cases where the aspirate has to be used in a medium degree. In such words as *when*, *where*, *what*, and *why*, the *h* should be heard, or, if the expression may be allowed, *felt to be present*. It is related of the great actor Edmund Kean, that to correct any tendency to drop the *h* in these words, he used to exercise himself in their repetition by adopting an exaggerated pronunciation in the opposite direction, uttering them as if spelt, "*oo-when*," "*oo-why*," "*oo-where*." Another defect in the use of the aspirate sometimes arises from a too great anxiety to be correct. This causes a speaker to lay so much stress upon his H's that they appear to stand out in relief from the other and smooth portions of his discourse. The only genuine remedy, however, for the omission or misapplication of the aspirate is that already pointed out, namely, careful reading, and a close observation of the most cultivated speakers. Read "H? or no H?" in *Enquire Within*.

ASS.—This well-known and valuable species of horse is a descendant of the *Onager*, or wild ass, inhabiting the mountainous deserts of Tartary, &c. The real merits of this animal are but little known in England; the neglect and ill-treatment which it universally receives, have debased and degraded its nature, until we have become accustomed to regard it proverbially as a stupid and almost worthless animal. Buffon attributes this to the fact, that the horse as a



beast of burthen monopolizes all our care and solicitude, he being tended with an amount of care almost equal to that assigned to a human being. But if the ass were to receive only a portion of the same considerate and tender treatment, there cannot be a doubt but that the advantage and profit derived would be equal to, if not greater than, that which is repaid by the more favoured animal. The best proof of this assertion is, that in Spain, Arabia, Egypt, and other countries where the ass receives careful attention, his appearance and capacities are so superior, as almost to engender the belief that he belongs to a totally distinct species from that of our ragged-looking and stunted drudges. The accompanying engravings will illustrate more clearly, the appearance this animal presents under these different modes of treatment.



The nature of the ass is robust and hardy; he is capable of long-sustained efforts, and is peculiarly adapted for hilly and mountainous districts. The most general colour of the ass is a mouse-coloured gray with a black or blackish stripe extending along the spine to the tail, and crossed by a similar stripe over the fore-shoulders. In proportion as the colour of the ass merges into reddish-brown, or bay, it is considered as an indication of a bad disposition and an inferior capacity. The ass is much healthier than the horse. He requires but little sleep, and only lies down when extremely tired: eats sparingly, and is content with the coarsest food; is patient and sure-footed; and above all, evinces the strongest attachment towards his owner.

An ass can be purchased for about one thirtieth the price of a horse, and may be kept in first-rate health and condition for less than quarter the expense attending the keep of that animal. A good draught horse cannot be purchased much under £30. A capital ass, in the prime, of his age can be purchased for £1. A good draught horse, in full work, will cost his owner upwards of £20 per annum; but the expense of keeping an ass is not as many shillings; for so long as there is a hedgerow overgrown with briars and thistles, or a piece of waste land furnishing a few tufts of rank and bitter grass, the ass will live contentedly and work on, and cost little.

ASSAULT.—An attempt, with force or violence, to do a corporal injury to another, as by holding up the fist in a menacing manner; striking at another with a cane or stick, though the party striking misses his aim; drawing a sword or bayonet; throwing a bottle or glass with intent to wound or strike; presenting a gun at a person who is within the distance to which the gun will

carry; pointing a pitchfork at a person who is within reach; riding after a man and threatening to horsewhip him, so as to compel him to run into a place of shelter; or by any other similar act to denote at the time an intention, coupled with a present ability, of using actual violence against the person of another.—See BATTERY.

ASSAY.—The process of trying or analysing metals, by which their composition and consequent value are determined. This operation is of the utmost importance on account of the fabrications to which plate and trinkets are subjected by unscrupulous manufacturers. The process requires considerable practical skill in its performance, and cannot be undertaken successfully by any person unacquainted with the art. It is, therefore, practised as a profession by itself, there being in London and other large cities persons termed assayers, who undertake to test any metals submitted to them, and to render a faithful account of the result of their operations.

ASSEMBLY, UNLAWFUL.—When three persons or more shall assemble themselves together, with an intent mutually to assist one another, against any who shall oppose them, in the execution of some enterprise of a private nature, with force or violence, against the peace, or to the manifest terror of the people, whether the act intended were of itself lawful or unlawful; and if they only meet for such a purpose or intent, though they shall after depart of their own accord without doing anything, this is an unlawful assembly. If after this first meeting they shall move forward towards the execution of any such act, whether they put their intended purpose into execution or not, this is a *rout*; and if they execute such a thing in deed, then it is a *riot*.

ASSES' MILK, from the close resemblance it bears to the milk of the human female, has long been celebrated for its sanative and nutritious qualities. Asses' milk is particularly beneficial in cases of derangement of the digestive organs and assimilative functions, because it is at once nutritious, and unproductive of irritation while digesting. Consumptive patients, especially, derive the greatest benefit from this source, for frequently when all other remedies have failed, asses' milk alone has been the means of sparing and prolonging life. In order that the remedial properties of the milk may not be prejudiced, care should be taken that the animal furnishing the supply should have foaled but a short time previously, and also that the quality of her food is good, and her stabling comfortable. In order that the warmth of the milk may be retained, it should be drawn into a vessel that has been previously heated by means of hot water. It should also be observed that the fixed air which the milk contains is apt to occasion pains in the stomach; to obviate which a teaspoonful of rum may be taken with the milk, but should only be put in just immediately before it is drunk.

ASSES' MILK, ARTIFICIAL.—Mix a quart of water with a quart of new milk, ½ ounce of white sugar-candy, half an ounce of eringo root, and half an ounce of conserve of roses; boil till the quantity be half wasted. This mixture is wholesome only so long as it remains sweet.

ASSETS comprise the estate or property of a deceased debtor, whether in the hands of his executor or administrator, or in the hands of others, that can be got in, liable to the payment of his debts. Thus all outstanding debts mentioned in the inventory exhibited by an executor in the Court of Probate are assets in his hands, for which reason, an executor in such inventory ought to set forth which debts are sperate, and which desperate. Executors or administrators should never attempt to administer a possibly insolvent estate without the advice of a solicitor, for by an admission of assets an executor may render himself personally liable to pay legacies, and will certainly be held personally liable (to the extent of the assets received) for the payment of debts, though he had no notice of them at the time of distribution. By an Act of Parliament passed in the 4th year of the reign of William the Fourth, the freehold and copyhold estates of a deceased person were made assets for payment of his simple contract debts. The word assets, is sometimes used as a designation of the estate and effects of a bankrupt or insolvent.

ASSIGNEE.—A person deputed by the act of a party, or the operation of law, to do any act or enjoy any benefit on his own account. A purchaser of a lease is an assignee by deed or act of the party. An executor is an assignee by operation of law to his testator.

ASSIGNEE, OF A BANKRUPT.—Until the Bankruptcy Act, 1869, came into operation, the administration of a bankrupt's estate was conducted by two officers, the Official Assignee and the Creditors' Assignee. The duties formerly performed by these officers are now undertaken by trustees chosen by the creditors at the first meeting after the adjudication has taken place.

The trustee is chosen by the majority in value of the creditors present at the first meeting, and has the entire management of the bankrupt's estate under the supervision of a committee of inspection chosen by the creditors at the same meeting. The duties of a trustee are—to take possession of all deeds, books, and documents belonging to the bankrupt; to receive and decide upon proof of debts and administer oaths; to carry on the business of the bankrupt; to bring or defend actions relating to the property; to sell the bankrupt's property either by auction or private contract; to receive all debts due to the bankrupt; to prove against any bankrupt's estate of which the bankrupt he represents is a creditor. With the consent of the committee of inspection the trustee may mortgage any part of the bankrupt's property, refer disputes to arbitration, compromise debts, or make compromises with creditors. He may also transfer stock, shares, &c., as the bankrupt might have done.

Every three months the trustee is bound to summon a meeting of the committee

of inspection, and to produce to them an account, which he is afterwards to transmit to the comptroller in Bankruptcy. As soon as a sufficient amount of property is in hand the trustee must declare a dividend and distribute the realized assets among the creditors who have proved their debts, having previously given reasonable notice to such creditors as have not proved. When all the property has been realized the trustee is to declare a final dividend, and report the same to the court, when the court will declare the bankruptcy closed, and the trustee may then apply for his release, which will be granted him by the court unless cause be shown to the contrary. On the release of a trustee the registrar becomes the trustee of the estate.

At the close of the bankruptcy the trustee is to deliver up all unclaimed dividends and other moneys under his control, and to deliver to the registrar a list of all the outstanding property of the bankrupt. The trustee receives such remuneration for his services as the creditors may from time to time determine.

All moneys received by the trustee are to be paid into such bank as the committee of inspection may appoint, and if he at any time keeps in his hands more than £50 he is liable to pay 20 per cent. interest on the excess over that sum, and any creditor may apply for his dismissal, while at the same time he forfeits all claim to remuneration.

If no trustee is appointed in an estate the registrar of the court acts as trustee.

ASSIGNMENT.—The technical name of the deed, by which personal property is transferred from one person to another. Thus there is an assignment of a lease of a house. No interest in land can be assigned without a deed. An assignment of a debtor's property to trustees to wind up his affairs, may stipulate that they divide the proceeds rateably amongst the creditors, or suffer the debtor to remain in possession and continue his business, whilst he pays a certain sum to the trustees monthly or quarterly, as may be agreed upon.

ASTER.—This plant comprises numerous species, all of which are especially valuable as flowering late in autumn. There are seven species in common culture which bloom in August, six which bloom in September, eleven which flower in October, and three which continue in bloom from the 1st of November until Christmas. The propagation and culture of all these species are of the easiest kind, and they will grow in almost any soil. The *China Aster* is a well known annual. It should be sown the first week in April, in order to get the plants strong and forward, either in pots or seedpans, keeping the sorts distinct; the pots may then be placed in a cold frame till the plants spring up. When they are sufficiently advanced, they may be transplanted into the beds or border where they are to flower.

ASTHMA is a functional affection of the respiratory organs, frequently depending on constitutional causes, but seldom the result of organic disease. Asthma generally attacks persons of advanced years, and of a weak and lax system; it is, when not hereditary, often the result of sudden changes of temperature, disorder of the digestive organs, or of mental anxiety. An attack of asthma is usually indicated by a sense of constriction or tightness round the chest, a fulness of the stomach, lassitude, drowsiness, and headache. All these symptoms become more urgent towards evening, accompanied with laborious breathing and difficult expiration, attended at the same time with a wheezing noise in the chest and windpipe at every inspiration. As night approaches a hard dry cough succeeds to these symptoms, while the oppressed breathing and sense of suffocation become so acute, as the paroxysm reaches its climax, that the patient is compelled to spring up in bed, or rush to the open window, from fear of instant suffocation. Asthma generally attacks the patient in the night, and most frequently the severity of the fit endures for three or four hours usually terminating about two in the morning, when, after a free expectoration of frothy mucus, the symptoms gradually subside, and the patient, after much anxiety and suffering, falls asleep. A succession of such paroxysms occur for several consecutive nights before the symptoms give way, and allow the exhausted patient time to recover his strength and tone. *Treatment*—The first endeavour must be directed to shorten the fit and to relieve the most distressing symptoms: the next, to remove the exciting and predisposing causes. Where the patient is strong and not far advanced in life, an emetic, composed of ten grains of ipecacuanha and one grain of tartar emetic, mixed in a cup of warm water, should be given in the first stage of the attack; followed up for some hours by nauseating doses of antimony and squills, as in the following mixture:—Antimonial wine, one ounce; water, four ounces and a half; tincture of squills, three drachms. Mix; and take a tablespoonful every hour so long as the urgency of the symptoms continue. When the attack is slight, and devoid of the marked features of a paroxysm, and the difficulty of breathing and sense of tightness in the chest are the chief symptoms, much benefit will be derived from taking from five to ten drops of hydrocyanic acid in a tablespoonful of water every two hours, for three or four times.

The asthma of old age, however, must be treated very differently: here, instead of debilitating, it becomes necessary to support and stimulate the patient under the exhaustion of the paroxysms. For this purpose, warmth should be early applied to the body and extremities, by the hot bath or bottles of hot water. The chest and pit of the stomach should be rubbed for a few minutes with hartshorn and oil; hot coffee, or small doses of brandy-and-water, administered occasionally; and the following mixture, according to the age and sex, given in doses of one or two tablespoonfuls every two or four hours, as the state of the patient may demand:—Carbonate of ammonia, one scruple; Dover's

powder, half a drachm; peppermint water, six ounces; mix, and add tincture of squills, spirits of lavender, and sulphuric ether, of each one drachm. When asthma has been induced by a derangement of the digestive organs, it will be necessary to give a dose of castor oil or an alterative pill; while for the shortness of breath and difficulty of breathing that often precedes and follows the full paroxysm, a poultice, composed of equal parts of mustard and flour, and applied warm to the chest for ten or fifteen minutes, will yield considerable relief. As an aperient, two compound asafœtida pills will be found of the utmost benefit, especially to those advanced in life.

ASTRINGENT MEDICINES are those substances that act on the human system, by drawing together, contracting, or binding the pores or tissues of the body. Some astringents are applied externally, as in the form of collyrium to the eye, or lotion to an inflammatory action or swelling; but by far the greater number are employed internally, to check relaxation or undue action in the alimentary canal. While other medicines are dissolved in the stomach, or carried by absorption to the blood and nervous system, astringent medicines, as a general rule, act only mechanically; requiring no absorption to produce their effects, which are attained by the mere contact of the medicine with the surface to which it is applied. Astringents are divided into two classes—the mineral and the vegetable. The most important articles that come under the denomination of mineral astringents are, iron, zinc, copper, lead, antimony, chalk, lime, alum, and muriatic and sulphuric acid. Of the vegetable; oak bark, gallnuts, kino, catechu, logwood, whortleberry, alkanet, pomegranate, bistort, rose leaves, and tormentill root, are the chief, and in a medical point of view, the most important.

ASTRONOMY, in a literal sense, signifies *the law of the stars*; but in its more general application, it bears reference to the various phases, movements, and general phenomena of all the heavenly bodies. It is by a study of this science that much valuable knowledge has been arrived at in connection with many arts conducing to the happiness and well-being of mankind, particularly in agriculture and navigation. Books: *Christie's Practical Astronomy; Guy's Elements; Arago's Popular Astronomy; Moseley's Lectures; Herschell's Treatise; Galbraith & Hangston's Manual; Lardner's Popular Astronomy; Hind's Illustrated London Astronomy.*

ASYLUM.—See BLIND, DEAF AND DUMB, IDIOT, ORPHAN, &c.

ATROPHY is that condition of the system where, from diseased action of the whole or part, the entire body, or a portion or member of it, loses its nutrition and vitality, and becomes gradually thin and emaciated. When atrophy is general, it is regarded only as a symptom of some other disease, as of scrofula, tubercles, tabes mesenterica, &c., and is called marasmus. It is a disease not confined to the muscles and soft tissues of the body, but equally attacks the bones, vital organs, and even the brain itself. The causes of atrophy, apart from the predisposing one of diseased action, are the disuse of the body, or parts of it, through sedentary habits, paralysis general or local, inaction, the consequence of a bedridden position, pressure from ligature or bandage, and an imperfect nutrition. *Treatment.*—In *local atrophy*, or that wasting and emaciation which is confined to a part or limb, and which may be the result of pressure or disease—as exemplified in the loss of substance in an arm or leg that has been long bandaged, or where paralysis has deprived the part of its natural use or action—the treatment must be deduced from the cause that produced the disease. This must be removed; and if it be the consequence of compression, expose the limb to air and light to recover its elasticity. At the same time friction, with stimulating embrocations and exercise, must be employed to give impetus to the vessels, and restore tone to the part. In *general atrophy* or *marasmus*, where the whole body is wasted, the treatment must be dictated by the primary disease that caused it: but in general, a rich and abundant diet, with a due admixture of animal and vegetable food, and a just proportion of wine or stout, must be adopted. At the same time the occasional use of the warm bath, with daily friction of the flesh-brush, must be employed as a collateral means. As regards medicine, that must depend on the character of the disease that has caused the atrophy; but if the result of mere functional derangement, a simple alterative, with a full diet, the warm bath and friction, will be sufficient; for this purpose one of the following pills may be taken three times a day, intermitting every three days:—

Precipitated sulphuret of antimony	24 grains.
Grey powder	12 grains.
Powdered aloes	15 grains.
Powdered ipecacuanha . . .	2 grains.

Castile soap, sufficient to make into a mass, divide into 12 pills.

ATTACHMENT.—The name of the process, to bring before Her Majesty's judges at Westminster a party in contempt, to be punished at the discretion of the Court: as a witness not appearing when subpœnæd—refusing to be sworn and examined, or prevaricating in his evidence when sworn—non-observance of an award duly made—perverting the proceedings of the Court to private malice—extortion or injustice—speaking or writing contemptuously of the Court, or a judge acting in his official capacity—printing a false account (or even a true one, without proper permission) of a case then depending in judgment; and by anything, in short, that demonstrates a want of that regard and respect which, when once a Court is deprived of, degrades and destroys its authority among the people.

A creditor having obtained a judgment in one of the superior courts at Westminster, may have an order to attach a debt due to his judgment-debtor from a third person; and if such person (called the garnishee) disputes

his liability, the creditor may sue him for the amount alleged to be due to the debtor.

A *Foreign Attachment* is peculiar to the cities of London and Exeter, and may issue immediately after a suit has been commenced in the Mayor's or Sheriffs' Court. It is a notice served upon the garnishee not to part with any monies or effects in his hands belonging to the debtor, without license from the Mayor's Court. It is the speediest and most efficacious mode of recovering a debt, when it can be resorted to, which is in any case where the garnishee can be served with the notice before described, within the city; even walking in the street, although he has no residence or office within the city, and the goods or monies are not in the city. For example: If Brown has monies in a branch bank at Birmingham or Brighton, the principal establishment of the bank being in the city of London, and is indebted to Jones; Jones may, by giving a notice from the Mayor's Court to a partner in the Bank in London, compel payment of his claim to the extent of Brown's monies in the branch bank at Birmingham or Brighton.

ATTEMPT, IN LAW.—Anything which manifests an *intention* to commit, or to aid another in committing, an offence against the law; for example, were a party to place bad money upon a table for a person to buy it, this would be an attempt to utter.—See SOLICITATION.

ATTESTATION.—The subscribing of a name as a witness to the signature of any other person to a legal instrument. Thus the signature of a testator to his will must be attested by two persons, who, by writing their names opposite to his, certify that they were present at the same time, and saw him sign his name thereto.

ATTORNEY.—One who is duly authorized to prosecute and defend suits for other persons in the courts of law. He is faithfully bound to exercise care and skill in the management of his client's affairs; and if, through his negligence, or want of skill, his client sustain any pecuniary loss, an action may be brought against him and damages recovered. He may do all acts for his client necessary for the due conduct of the business upon which he is engaged, and his client is bound to abide by what he so does. He is not permitted to disclose in evidence any matter communicated by his client to him as an attorney. Payment or tender to him, is payment or tender to his client. Any person employing an attorney, should appoint him to each particular business by writing. Pending a suit a client cannot change his attorney without leave of the Court; and if he be changed, he will not in general be restrained from acting for the opposite party. An attorney is entitled to insist on an advance of money by his client, not only to the amount out of pocket, but for his own costs at any stage of the proceedings, and may abandon the cause on the ground of want of money, upon reasonable notice of his intention to do so. Any unqualified person acting in any respect as an attorney, may be imprisoned for one year.

ATTORNEY, LETTER OF, frequently called a "power of attorney," is an instrument in writing under seal, whereby a principal delegates another person to act for him in his absence; such as to receive debts and legacies, and give receipts, to settle accounts, compound debts, bring or defend actions, submit claims to arbitration, execute deeds, grant leases, distrain for rent, accept bills, and do any other act, necessary and proper, for the general management of his affairs.

ATTORNEY, PROFESSIONAL EDUCATION FOR.—In order to become an attorney, a person must be articled, in the first instance, to a practising attorney or solicitor, whom he must serve as a clerk for, and during the term of, five years. Having duly served his clerkship, he must be finally examined and sworn in. The clerk may, however, serve one year of his time as the *bonâ fide* pupil of a barrister or special pleader, or as clerk to the London agent of his original master, if he be articled in the country. An exception is made in favour of persons who have taken the degree of B.A., within six years of matriculation, or of Bachelor of Laws, within eight years after matriculation, in any of the universities of Oxford, Cambridge, Dublin, Durham, or London, and who enters into articles within four years after taking the degree. These persons are required to serve only three years.

First-class attorneys, when taking articled clerks, generally demand a heavy premium, varying from £300 to £500. The articles of clerkship also require a stamp of £100. These form the principal items of expense, other minor ones being incurred by law books, fees, &c. It must also be borne in mind, that, as the articled clerk generally lives away from his family, and receives no remuneration during his five years' clerkship, an annual sum of at least £100 or £150 will be required for his support.

Before being admitted an attorney, the articled clerk has to pass an examination, which is by law under the management of the judges, but is, in fact, controlled by an institution known as the Incorporated Law Society. This society consists of about 2000 members of the profession, and is governed by a president, vice-president, and council, who are delegated by the judges, and authorized by Act of Parliament, to examine into the fitness and capacity of all applicants for admission to practise as attorneys and solicitors. The examinations are conducted by four members of the council, over whom one of the masters of the courts presides. The following is the course of procedure adopted:—On the appointed day in each term, candidates for examination repair to the hall of the institution, in Chancery Lane, and each having a number given him, takes his seat at a table on which such number is placed. A paper of questions is then delivered to him, with his name and number upon it, containing questions to be answered in writing. The answers must be on separate papers for each class of questions, and the candidates are expected to finish their papers by four o'clock. After the examination is

begun, no candidate is allowed to leave the hall, (without permission obtained from the examiners) until he shall have delivered his answers; and any candidate who leaves the hall without permission will not be allowed to return. The questions propounded have been from time to time published, and are of great assistance in preparing a student for his examination. Lectures are given in the hall of the society by gentlemen of the bar appointed for the purpose, the attendance on which is voluntary. Articled clerks are admitted to the library of the institution on payment of £1 annually; and the students have a room appropriated to them, free of expense, for the discussion of legal questions among themselves.

The profession of an attorney or solicitor is one that affords the person who adopts it the opportunity of an early and ample competence. It is possible for an attorney to make as much as £2000 a year by the practice of his profession exclusively; but independent of this source of income, there are many opportunities of making money presented to the legal man of business in the way of buying, borrowing, and lending, in connection with property, respecting which he frequently has the first and most valuable information. The influence of his position, and the nature of his employment, also enable him to form an accurate judgment on speculations that are safe or unsafe. But to achieve such a position as this, an attorney must work laboriously, endure much anxiety, and undertake great responsibility. Books: *H. B. Thomson's Choice of a Profession; G. Thompson's Suggestions to Young Attorneys; Warren's Moral Duties of Attorneys and Solicitors; Buckland's Letters to Attorneys' Clerks; Hobler's Exercises for Attorney and Clerk; Gardener's Articled Clerks' Assistant; Willeburn's Guide to Articled Clerks; Wharton's Manual for Articled Clerks; Wood's Attorneys' and Solicitors' Book-keeping; Carrighan's Guide to Chancery Students; Serjeant's Conveyancing Aid for Students; Phillips's Conveyancing Student's First Book; Law's Student's First Book; Law's Student's Guide; Wharton's Student's Manual; Law's Student's Questioning Book; Warren's Introduction to Law Studies; Wright's Advice on Law Study; Fulbeck's Direction for the Study of the Law; Slack's Hints on the Study of the Law; Williams's Study and Practice of the Law; Petersdorff's Student's Commonplace Book; Barnham's Questions for Students.*

ATTRITION.—See FRICTION.

AUCTION.—A method employed for the sale of property through the medium of competition. Sales by auction are conducted on various principles, differing according to the custom attached to particular trades, localities, or effects. The most general mode adopted, however, is for the auctioneer to offer the property for disposal in lots, whereupon biddings are made, and the person who makes the highest bid before the fall of the hammer becomes the purchaser. The following are the usual *Conditions of Sale:* 1. If any dispute arise between two or more bidders, the lot in dispute to be put up again for sale. 2. No person to advance less than sixpence when the lot is under one pound; above one pound, one shilling; above five pounds, two and sixpence; and so on, in proportion. 3. The purchasers to give their names and places of abode, and to pay down five shillings in the pound as deposit (if required), in default of which the lot or lots so purchased will be put up again and re-sold. 4. The lots to be taken away, with all faults and errors of description, within three days after the sale. 5. If the property purchased is not cleared within the time mentioned, it shall be put up and re-sold, and the deficiency (if any), together with all expenses, to be made good by the purchaser of the unclaimed property. These conditions, which are usually appended to catalogues, constitute the terms of the bargain, and purchasers are bound to abide by them. As several questions of law have from time to time arisen in reference to sales by auction, the following decision, affecting both buyer and seller, should be noted:—A bidder may retract his bidding at any time before the fall of the hammer. If a person, by any statement or other means, prevents other persons from bidding against him at a sale, he cannot compel the delivery of the lot, even though he should have paid a deposit. If a vendor employs agents at a sale, to bid solely for the purpose of exciting competition, and without any view of purchasing, he must announce it, or the sale is void. If after purchasing the goods, the purchaser discovers that the description has been wilfully misrepresented in the catalogue, the auctioneer is bound to return the purchase-money, or such part of it, as shall make good the deficiency. For instance: if an auctioneer puts up a lot, as a *gold* watch and a *gold* chain, and if the purchaser discovers that the watch only is gold, and the chain counterfeit, the value of the chain must be returned; but if the lot is described simply as "a gold watch and chain," the auctioneer can only be made liable for the watch, and not for the chain, the latter not being individually specified as gold.

At sales by auction, articles can be bought at a much lower rate than at shops, especially personal effects and household furniture. The latter, when made of good materials and well constructed, is bought more advantageously at second-hand than when new, being what is termed "seasoned," or more fit for use. Purchasing advantageously at an auction, however, depends greatly upon the purchaser, who ought to have some knowledge of the value of the articles, and their adaptability. Failing this knowledge, recourse should be had to the experience and advice of some other person. Another precaution to be taken, in connexion with sales by auction, is not to lay out more money than was intended to be expended; persons attending sales are extremely apt to do this; for in the first place, they are unable to resist the temptation of buying articles they do not stand in need of, simply because "they are such great bargains;" and, in the next place, they frequently give more than they determined on giving, owing to their judgment being carried away by the excitement of

competition. When persons attend a sale, therefore, they should mark in the catalogue the articles they wish to purchase, and place against them the sum they intend to give; by this they should be strictly governed, and not overstep the limits defined, no matter how strong the inducement or how great the temptation. The most advantageous sales by auction are those which take place at private houses, the articles generally being genuine property, and sold without reserve; whereas the sales held at auctioneers' rooms have frequently articles introduced, made expressly for sale, to be bought in by the auctioneer himself if the bidding does not reach the desired amount. All sales are attended by "brokers," who undertake to purchase articles for persons, in consideration of receiving a commission of five per cent. (a shilling in the pound) on the amount of purchases. The common practice among brokers is to enter into a mutual arrangement not to bid against each other, so that when any one of them indicates the articles he has a commission to buy, the other portion of the fraternity refrain from bidding, and the articles are consequently purchased at a much lower rate, through not being subjected to competition. On the other hand, if a person attending a sale declines the services of a broker, and determines to act for himself, the fact is immediately whispered about, and the whole of the brokers bid against this person upon an organised system of opposition. The result generally is, that the bidder, who is thus unfairly opposed, becomes annoyed and irritated, and falls into the trap laid for him, by resisting the opposition at a great pecuniary sacrifice. It is obvious, therefore, that however pernicious this system of combination may be, the best course is to allow a broker to transact these matters, rather than for a person to act for himself, for the mere gratification of protesting against an irremediable injustice.

AUCTION, MOCK.—A well known species of nefarious venture which, though employing the same machinery as genuine auctions, has a very different object in view. The mode of procedure is as follows:—A number of dishonest persons league themselves together, and occupy premises conspicuously situated in one of the leading thoroughfares. A collection of articles is then exposed to view, such as writing-desks, plated articles, watches, pictures, &c., manufactured for the purpose of sale, and so artfully "got up," that the unwary are easily persuaded that the articles are what they are represented to be. At intervals during the whole of the day, and evening, one of the confederates of this organised gang assumes the character of an auctioneer; another accomplice, termed a "barker," stands on the threshold haranguing the passers by, and inviting them within; while the other impostors connected with the concern, termed "puffers," attired in every variety of costume, to represent clergymen, country squires, city merchants, &c., eagerly bid for the worthless articles as they are handed round, and make such remarks as are calculated to incite the unsuspecting to become purchasers. The trash once bought, no subsequent discovery will tend to the return of the purchase-money. The complaints of the unfortunate dupe are only laughed at, and he is compelled to sustain, as best he may, the loss entailed by his unfortunate bargain.

AUCTIONEER.—A person licensed to sell property by public biddings. Printed particulars cannot be varied by any statement of the auctioneer. He is the agent of both the seller and the buyer, and, as such, may bind both. He is as a stakeholder entitled to retain the deposit until the contract is complete without paying interest; and he is personally liable for it if he pays it over before. If both parties set up a title to the deposit, he must compel them to interplead, and establish their right. He has a special property in the goods sold, and may maintain an action against the buyer for the price. If he sells without saying on whose behalf he sells, the buyer is entitled to look to him for the completion of the contract.

AUGUST, GARDENING FOR.—The list of plants and roots in the *Kitchen Garden*, which requires particular attention during this month, is as follows:—*Alexanders*, sow. *Angelica*, sow. *Aromatic* herbs, gather for drying and distilling. *Artichokes*, break down. *Asparagus beds*, weed. *Balm*, plant, gather for drying. *Beans*, plant. *Brocoli*, plant. *Cauliflowers*, plant out and sow. *Celery*, plant out under-crops. *Coleworts*, plant and sow. *Cardoons*, earth up. *Carrots*, sow. *Cress (American)*, sow. *Cucumbers*, plant or sow; attend to advancing. *Dill*, earth up, gather. *Endive*, plant, sow; blanch advancing crops. *Fennel*, sow, plant. *Hoeing*, attend to. *Kidney Beans*, sow. *Leeks*, plant. *Lettuces*, sow, plant out. *Melons*, attend to. *Mint*, gather for drying. *Mushroom beds*, make, attend to. *Nasturtium berries*, gather. *Onions*, sow. *Parsley*, sow. *Peas*, sow. *Radishes*, sow pods, gather for pickling. *Shalots*, take up. *Savoys*, plant. *Seed*, gather, as ripe. *Salad (small)*, sow. *Spinach*, sow, stir between plants in rows. *Turnips*, sow. *Watering* and *Weeding*, attend to. *Wormwood*, plant.

General Remarks.—In this month all weeds must be got rid of before they incline to seed. The weather generally is fine, and favours gardening operations, which, if properly conducted at this period, exercise a beneficial influence on the spring and winter crops. Watering demands especial attention; for instance, for fifteen days after sowing, this should be done twice each day, morning and evening, and for ten days subsequently, every second day.

Flower Garden.—Anemones, sow. *Auriculas*, sow, transplant, and pot. *Autumnal Bulbs*, plant. *Canterbury Bells*, plant. *Carnations*, plant, and propagate by suckers. *Dahlias*, tend and tie up. *Pinks*, thin out, and plant. *Polyanthuses*, sow. *Ranunculuses*, sow. *Rockets*, propagate by slips and suckers. *Roses*, prune and manure. *Stocks*, plant. *Sweet Williams*, plant. *Wallflowers*, plant.

General Remarks.—This is the month for clipping and cutting hedges, especially such as are only cut once a year. Trim edgings

and box-borders, and keep them low and narrow. Mow grass walks and lawns once a fortnight, and keep them close and even. Weed and sweep gravel walks, and roll them once or twice a week. Hoe and rake carefully borders and flower-beds, so as to loosen the surface and destroy weeds. Tie up all irregular and straying shoots and branches, and remove decayed stalks and dead leaves. Gather the seeds of the flowers that are ripe, dry them in the sun, and put away in bast or boxes.

AUGUST—THINGS IN SEASON.—*Fish.*—Carp, cod, craw-fish, eels, flounders, haddock, herrings, lobsters, mackarel, mullet, oysters, pike, prawns, thornback, skate.

Fruit—Apples, currants, figs, filberts, gooseberries, grapes, melons, mulberries, nectarines, peaches, pears, plums.

Meat.—Beef, buck, lamb, mutton, veal, venison.

Poultry and Game.—Chickens, ducks, fowls, geese, leverets, pullets, pheasants, pigeons, plovers, rabbits, wheat-ear, wild ducks.

Vegetables.—Artichokes, beans, cabbage, carrots, cauliflowers, celery, cucumber, endive, herbs of all sorts, kidney beans, mushrooms, onions, parsley, potatoes, radishes, salad various, shalots, spinach, sorrel.

AURICULA.—This flower is propagated either by slips or seed. *The best time for taking off the slips* is the first week in August. This should be done by removing only as much of the parent bulb as can be done without injury to the root; and the operation can be best performed with a blunt piece of wood or with the fingers. The pots into which the plants are placed should be provided with the same compost as they have been accustomed to. By the beginning of November the plants will have become

established, and with the return of spring will have attained a vigorous growth. The surest and best method *to obtain fine auriculas from seed*, is to provide young, healthy, and strong plants, which, on the approach of bloom, should be removed to a remote part of the garden, and there exposed to the sun, air, and rain; but they must be protected from an excess of the latter by small hand-glasses or a covering of matting. The time for sowing seed is the end of February or the beginning of March. This should be done in pots of about an eighth of an inch in depth. The soil should be properly prepared with a warm manure, and each pot covered with a square glass and shading until the seedlings appear. When the seedlings can be easily handled they should be pricked out into a bed, about five inches apart, supplied with a frame so as to winter there, and potted the following year. *The characteristics of a good auricula* are, stem long and erect; tube round and of a yellow colour; footstalks strong and elastic; and flower-leaves or pips round at the edges; the eye or interior circle, round, and very white; the exterior with a ground colour rich and uniform; and the green edge or margin, in equal proportion with the ground colour. The truss or cluster of flowers upon one stalk, to consist of not less than five blown pips, or more than ten, and these should show boldly without overlapping.

AUTHOR.—Under this general term are comprised writers of original works, compilers, translators, and journalists. The profession of literature bears the reputation of being precarious and unremunerative, but in reality it is not more so than any other employment depending on mental capacity and bodily health. Although there is no regular training for an author, he should as a matter of course possess certain attainments, natural or acquired, fitting him for his peculiar walk in life. A *writer of original works* must be a person of liberal education, extensive reading, and varied information; as well as possessing many natural gifts, of which imagination and fancy are the foremost.

The most popular class of works is that devoted to educational purposes. The second class, that blending instruction with amusement, such as history, science, or domestic economy, conveyed through the medium of narrative or dialogue. The third class, of a moral and religious tendency, comprises stories based on scripture history, or tales illustrating the career of virtue and of vice. But whatever department of literature an author occupies himself in, he should, if writing with a view to pecuniary recompense, take care that the title of his work be attractive, the subject popular, and treated in such a comprehensive and interesting manner as shall entitle it to universal acceptation. *Compilers* are employed in producing, from scattered sources, a class of works fitted, by condensation and simplicity of arrangement, for popular use. Such books are frequently the speculations of publishers, who remunerate the compilers at an agreed rate according to the nature and amount of the work performed. At some establishments a staff is permanently maintained, while at others any proposal is listened to, even from a stranger, and rejected or

adopted according to its merits. Compilations generally should be undertaken with a view of interesting a large class of readers. *Translators* are employed upon terms somewhat similar to compilers; they are required to be quick and industrious to an extraordinary degree, for it frequently happens that the same work is being translated by two or more rival establishments, and on such occasions priority of production is of course the grand aim. A compiler or translator may frequently succeed in obtaining employment by advertising in the journals allied to literary interests, such as the *Athenæum*, *Literary Gazette*, *Critic*, *Publishers' Circular*, &c.

One of the most efficient aids to the literary man of the present day is that afforded by the British Museum Reading Room for the purposes of study. In this noble apartment a ready reference is permitted to hundreds of thousands of works, a separate desk supplied with writing materials is provided for each reader, and everything that can assist the literary man in his pursuits is most liberally accorded. A ticket, which will entitle the holder to visit this room daily, and remain in it, if he so pleases, during the day, may be obtained upon application to the chief librarian, Mr. Panizzi, accompanied by a reference to a clergyman, or some other responsible person.

Journalism is the branch of literature connected with the public press; it employs a large number of persons, from the writer of leading articles to the fabricator of paragraphs; all more or less requiring a keen perception, retentive memory, and facile pen. The latter is especially needed, as the journalist is frequently called upon to write against time, and to report events almost simultaneously with their occurrence. A person who intends adopting journalism, therefore, as a profession, should endeavour to qualify himself previously, by taking down speeches, sermons, &c., during delivery; tasking himself to write a certain amount of original matter within a given time, and otherwise exercising unremittingly every faculty that is likely to be called into requisition. A journalist may by dint of industry earn a good income, and, if he possesses even moderate ability, secure constant employment.—See COMPOSITION; LIBRARIES PUBLISHING.

AUTHORITY.—See AGENT; CLERK; MARRIED WOMAN; PRINCIPAL AND AGENT; SERVANT.

AVERAGE is the generalization of numbers or quantities from varying items. To find the average of any number of quantities, add them together, and divide by the number expressing the aggregate of those quantities. Thus:—39, 17, 62, 23, 54, make together 195; divide this total by 5: that being the figure which expresses the number of the items, the product 39 is the average. This rule applies so far as simple quantities are concerned. In commerce it frequently occurs that several lots of goods of the same class, are bought at various prices, and in order to regulate the selling price, and ascertain the ratio of profit, it is necessary to know the average price at which the goods have been bought. To arrive at this, each quantity must be multiplied by its price; these results must be added together, and the total divided by the number representing the total of the quantities. The product given will be the average. Example:—B buys the following: 6240 yards of calico at 3½d.; 7960 yards, at 4d.; 8230 yards at 5½d.; 6420 yards at 7½d.—what is the average price per yard?

Yards.			d.
6240	at	3½d.	20280
7960	,,	4d.	31840
8230	,,	5½d.	47323
6420	,,	7½d.	48150
28850			147593

144250) 147593 (5d.

3343 / 28850 or ⅛th

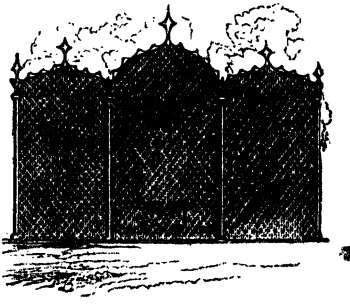
Answer:—5⅛d. per yard.

To prove the correctness of this result, multiply the total by the average, thus:—

1/9) 28850		
5		
144250		
3205		
147455	Total of prices .	147593

It will be seen that there is a slight difference between the two products. This is occasioned by the fractions which it is the very province of average to ignore. The conclusion arrived at is sufficiently satisfactory for all practical purposes.

AVIARY.—A place where birds are kept. The availability of this picturesque addition to a house depends upon a person's means,

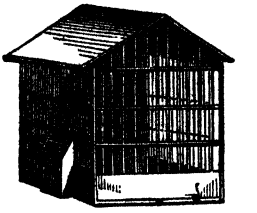


and the space he has at his disposal. In some instances a portion of the garden is wired over, and converted into an aviary; and in other instances, one end of the conservatory, or

greenhouse, is partitioned off as required, and made to serve this purpose. The aviary most favourable to the health and cheerfulness of birds is as follows:—In that part of the garden where shrubs and trees most abound, mark out a space 15 feet long by 12 wide. Fix up boarding at the extreme end, so as to form the back of the aviary, and let the height be 15 feet. To this, attach the wire-work, and cover the whole with a flat zinc roof, provided with a properly adjusted gutter, to let off the rain. The style of architecture and degree of ornamentation are purely matters of taste and fancy; the preceding engraving will, however, convey some idea of a pleasing style of construction. The flooring of the aviary may be made of wood, or of earthen tiles; but if of wood, a bed of shingle, or rough gravel, 8 inches deep, should be laid beneath, to prevent the burrowing of rats and other vermin. The perches of the aviary should consist of four poles, about 12 feet high, and an inch and a-half in diameter. These should be securely nailed to the floor, and on the top of them square perches should be fastened, in such a manner as to meet each other, and thus form a kind of gallery around. At intervals of five or six inches apart, round perches, about half a foot in length, and a quarter of an inch in diameter, should be inserted. In the centre space, a fountain may be introduced, for the double purpose of utility and effect. Other perches should be disposed in various parts of the aviary most favourable to light, sunshine, and warmth. The door of the aviary should be made of glass, and open outwards, and all the interior fittings well and strongly painted. As birds are peculiarly susceptible to cold, the aviary must be kept warm in winter, and to accomplish this, cover the wire-work with green baize, and introduce an Arnott's stove, regulated to a proper temperature. A curtain should also be constructed, to be drawn partially or wholly down in damp and foggy weather. The occupants of an aviary may be comprised of blue tits, bullfinches, canaries, chaffinches, goldfinches, hedge-sparrows, linnets, mules, redpoles, titlarks, wheatears, and woodlarks. From this association of birds the blackbird, redbreast, and jenny wren must be excluded. The natures of the two former are too pugnacious and cruel to admit of their being domesticated with other birds, while the jenny wren is so tender and delicate as to be unfit to live in the midst of so much excitement and bustle.

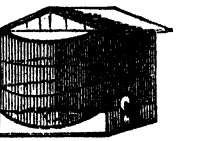
Cages, being aviaries to a limited extent, form the next subject for consideration. These habitations vary, according to the different dispositions and habits of birds. The cage for a blackbird, for instance, would be quite unsuitable for a canary; and that for a nightingale would be ill adapted for a linnet.

The Blackbird's Cage should be made of mahogany or other wood, in the form of the accompanying engraving, having wicker rails running through cross-bars in front and at the two sides; the back of wood; a drawer at the bottom to facilitate cleaning; and two small receptacles for food and water project-

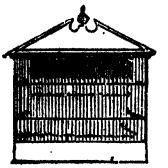


ing from the sides. This cage is also suitable for thrushes.

Canaries' Cages, used also for bullfinches, goldfinches, chaffinches, and Linnets, are made in a variety of forms—Gothic, Chinese, arched, cottage, &c. The materials sometimes consist wholly of brass, and at other times of brass and wood. These cages generally have three perches—one near the floor, to enable the bird to reach the water-bottle, another in the centre, and a third near the top.



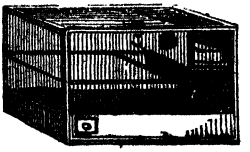
The *Lark's Cage* has a boarded roof and back, with wire-work on each side, and in the front a projecting bow, raised about an inch from the bottom, with a circular wire front. In this bow a piece of fresh turf is placed, from time to time, upon which the lark sits and sings. For this cage no perch is required, and the door is made to open at the back or side.



The *Nightingale's Cage* has a roof, back, and sides of wood, the front only being wired. It has one perch extending from side to side, padded with green baize, while a small perch is supported by two stems in the centre of the front part of the cage, just below the bottom of the wires. An inch or two beneath the roof, a false top of baize or other soft material is stretched across, so that if the bird, as is its custom, dash upwards in its song, it may not hurt itself; for this reason the perch is also padded. In both of the front corners a little shelf is fixed, and in these a round hole is cut for the reception of the cups containing the food and water. The cages are also furnished with a sliding drawer for cleaning, and the door is made at the back or side.

A *Breeding Cage* may be made of a double or single form, with the usual conveniences for

food and cleaning, and the doors placed where deemed most convenient. The size of the perches should be proportioned to the size of the cage, and they should be placed at inter-



vals most fitting for the birds. In a single cage the top, front, and sides should be of wire, and the back of wood; but if it be a double cage, then both ends of wood. A shelf, within a few inches of the top, should be made to project from the back, and a partition run up from the edge of the shelf to the upper wires. On this shelf two square open boxes, about two inches deep, are to be placed for the birds to build in, the entrance into which is from two holes made in the partition. A net-bag, filled with moss, hair, down and feathers, suspended from the roof near the perches, completes the fitting of this habitation.

Within the last few years a great improvement has taken place in the design and construction of fancy bird cages, and a new material is largely employed, consisting principally of zinc, coated with enamel, which excludes all vermin.

The health and happiness of birds depend greatly on *cleanliness*: to promote this, every week, or fortnight at the farthest, the floor and perches of the aviary or cage should be thoroughly cleansed, and fresh sand strewn on the floor. If this be neglected, not only do the birds suffer in health and spirits generally, but they contract a disease in their feet, frequently resulting in lameness, or the loss of one or more of their claws. A difficulty is sometimes experienced in taming birds to a sufficient degree to set them at liberty from the cage, and allow them to fly about the room. The following is the most approved method for accomplishing this:—Cut from the inner plume of the pen-feathers a larger or smaller portion, according to the wildness of the bird; then touch the nostrils of the bird with bergamot, or any other odorous oil, by which it is rendered so stupified for a time as to perch quietly on the finger, or to hop from one finger to another. As soon as it sits quietly on any one finger, another finger must be placed in such a position as to cause the bird to step upon it; and so soon as it is accustomed to hop quietly from one finger to another the chief difficulty is overcome; for the bird, gradually arriving to a sense of consciousness, and perceiving that it is not treated roughly, is brought to pay obedience to its master's commands. The *food* of birds should be as near a resemblance to their natural diet as possible. Canaries, bullfinches, goldfinches, linnets, &c., eat seed only. Larks, yellow-hammers, and the various kinds of tits, eat both seeds and insects. Nightingales, redbreasts, thrushes, blackcaps, &c., eat insects and berries. Wagtails, field-larks, white-tails, &c., eat insects only. To meet this difficulty, all the dead flies found on window-sills and in corners should be collected, and these, added with a few meal-worms, will supply the want specified. Canaries prefer a mixture of canary, summer-rape, and crushed hempseed; goldfinches, poppyseed, now and then mixed with a little crushed hempseed; Linnets and bullfinches, rapeseed alone. Larks prefer barleymeal, mixed with cabbage and water-cress, cut small; chaffinches, rapeseed, occasionally mixed with a little hempseed. The various kinds of tits prefer hemp seed, oats, and meal. The following are two *receipts for a paste* suitable for birds generally. Thoroughly soak in cold water the crumb part of a stale loaf, press the water out, pour milk over the bread, and mix it with two-thirds of its own weight of barleymeal. Or, grate a carrot, which has been kept in a cool place for a whole year, then thoroughly soak a penny roll in water, strain the water off, and mix the bread and carrot with two handfuls of barleymeal. These pastes, must, however, be made every day, as after that time they become sour. All birds need a *fresh supply of water* every evening to quench their thirst, as well as to bathe with; and if a considerable number of birds inhabit the same room, the water should be placed in an earthen vessel, 8 inches long by 2 wide, divided into several compartments. Cage birds are subject to a variety of diseases, foremost amongst which is the *pip*. This disorder is a cold, in which the nostrils are stopped up, and the external skin of the tongue hardened by inflammation. A pill of butter, garlic, and pepper, with occasionally sipping of infusion of speedwell, will soon effect a cure; and, to assist the remedy, a fine feather should be drawn gently through the nostrils. The symptoms of this disorder are a yellowness at the root of the beak, dryness of the tongue, roughness on the feathers of the head, and a frequent gasping as if for breath. *Moulting* may be considered a disease. It is of annual recurrence, and its cure mainly depends on time and attention. During this time the food of the bird should be wholesome and varied; all drafts and cold should be excluded, and the most scrupulous cleanliness observed. *Tympany* is a disease in which the skin of a part, or the whole of the body, is puffed up and tightened by an accumulation of air beneath. The simple remedy is to prick the skin with a needle, and let out the confined air. *Pairing fever* generally attacks cage birds in the month of May. The birds affected cease to sing, allow their feathers to become and continue rough, and waste away. One of the best remedies for this is to hang the cage before a window, by which means the bird becomes cheered and enlivened, and resumes his wonted blithesomeness. *Epilepsy.*—This disease is brought on by a *plethoric habit of body*; and results from an excess of food, and a deficiency of exercise. A few drops of olive oil are frequently beneficial, but if this prove inefficacious, dip the bird once or twice in ice-cold water, and cut the claws so closely

that they let blood. *Giddiness* is rather the result of bad habit than a disease. It sometimes happens that birds acquire the habit of looking upwards to such an extent, as frequently to turn round backwards on the perch;—the best means of preventing this, is to cover the top of the cage with a cloth, by which the upward look is effectively checked. *Decline.*—The symptoms which betray the presence of this disease are general roughness of the feathers, and an inordinate appetite, coupled with a gradual wasting of the flesh. The most effectual remedy is to force the bird to swallow a spider, and to put a rusty nail into its water, which imparts vigour and strength to the stomach. Green food should be chiefly given during the prevalence of this disease, and more particularly watercress. *Costiveness* may be cured by the administering of a worm bruised with saffron and linseed oil; and *cold* should be treated with a pectoral elixir in an infusion of speedwell. See BLACKBIRD, CANARY, GOLDFINCH, LARK, LINNET, PARROT, THRUSH, &c.

AVOIRDUPOIS WEIGHT is the common system of weight in England, now applied to all goods except medicines and the precious metals. The avoirdupois pound is divided as follows:—

Grain.	Dram.	Ounce.	Pound.
27 11/32	1		
437½	16	1	
7000	256	16	1

28 pounds make one quarter.
112 pounds, or 4 quarters, one hundred weight.
20 hundred weight, one ton.

The usual contractions are as follows:—

Ounce.....oz.	Hundred weight..cwt.
Grain.....gr.	Pound .....lb.
Dram .....dr.	Quarter .....qr.

To reduce a large number of pounds to hundred weight roughly, *from the first three figures deduct the first two*, the remainder gives the hundred. Thus, 13,263 will give in this way 119 hundred weight:—

132
13
119

The exact equivalent of the above number of pounds is 118cwt. 1qr. 19lbs.

A ready mode of ascertaining *the price of an ounce* is to deduct the fourth from the price per pound in shillings, and the remainder will be the price per ounce in pence, as follows:—

2s. per pound.	3s. per pound.
½ deduct	¼ deduct
1½d. per ounce.	2¼d. per ounce.
4s. per pound.	**5s. per pound.**
1 deduct	1¼ deduct
3d. per ounce.	3¾d. per ounce.

To arrive quickly at the price per pound of an article sold by the hundred weight, divide the number of shillings by 9, and it will give the price in pence per pound, thus:—45s. per cwt., 5d. lb.; 81s. per cwt., 9d. lb. When the number cannot be divided exactly add a farthing or a halfpenny, according to its relative position to the intervening figures, thus—70s. cwt. would be 7¾d. lb., because 70 is seven figures distant for 63, which would be 7d. lb., and two figures present 72, which would be 8d. lb. The relative price of the pound to that of the ton may be ascertained in the same manner, thus—£18 per ton, 2d. per lb.; £27 per ton, 3d. per lb.; £36 per ton, 4d. per lb., and so on. As a matter of course, this method is not arithmetically correct, but it is sufficiently near to guide a person *when he wants to know on the instant* about what the retail price of an article will be as compared with the wholesale. The positive difference between the price arrived at by this method, and the price which is strictly correct, is an excess of from a farthing to a halfpenny per pound, ranging from 10s. per hundred weight to £5. If this fact, therefore, is borne in mind, and the excess allowed for, the result will be as near the precise amount as possible.

AWAKING PERSONS.—There can be no question that to rouse a person abruptly out of sleep by sudden violence or noisy exclamation, is a cause of serious injury to the brain and nervous system; this is particularly the case where the frame and organization is delicate and weak; and dangerous, if not fatal effects, have resulted from the mental terror evoked by a sudden and undefined noise startling the nerves before the judgment has had time to analyse the nature of its alarm. Few persons enjoy such perfect health as to admit of the total quiescence, in sleep, of all the nervous systems; and the brain in most persons is kept in a sort of torpid consciousness, easily accessible to strong emotions. Instances have been known where the imagination has been so worked upon during sleep that the unconscious slumberer has obeyed the voice of a mischievous friend in performing all the actions of swimming, rowing, and hauling, till under the violence of the muscular power put forth, the body has been covered with perspiration, and the sleeper, when at last awoke, was perfectly exhausted from the effort with which he buffetted the imaginary waves in a supposed struggle for life. In whatever state the brain may be, it is always wrong to use sudden noises to arouse a sleeper. A gentle or rough shake with the hand is always a safe and better means; or the application of burnt feathers or hartshorn to the nostrils may be adopted where the sleep is particularly heavy; but shouting in the ear should never, on any account, be resorted to, except in cases of coma or apoplexy.—See SLEEP.

AWARD—Is the decision of the arbitrators or umpire upon a reference to arbitration reduced into writing. It must be stamped with a 35s. stamp, and it is a principle of law, that arbitrators should all execute an award, at the same time and in the presence of a witness. Publication of an award, is the giving notice to the party in whose favour it is made, to take it up. A judge has an absolute power to enlarge the

time for making an award; but the order for so doing must be obtained before the award is made.—See ARBITRATION.

AXLE-TREES.—These important agents in the mechanism of a carriage were formerly of wood, but are now almost universally constructed of iron. To secure the wheel from coming off, an iron collar, called the axle-tree nut, is placed on the small or outer end of the arm, and through this and the axle arm the linch-pin passes; both of these require to be well lubricated with grease, and they should also be tested from time to time, and if ever so slightly out of order, immediately repaired. For common coarse axles, such as those of waggons and carts, a thick unctious grease is best adapted; but for axles that are made to fit with greater nicety, oil, either animal or vegetable, of the purest kind, and free from all mucilage or jelly, should be applied. To prevent friction in wooden axles, soap or black lead are the best materials.

AZALEA.—The American or hardy azaleas are to be found growing in shrubberies with ordinary plants. They frequently thrive in the common garden soil, but generally they grow better in soil with which peat earth has been incorporated. They may be raised from seed sown in beds in the open air, but it is considered preferable to sow them in pans or wide-mouthed pots. When they have attained a proper growth they should be planted out in peat beds, six inches apart, the second year taking out every alternate plant, and placing it elsewhere to allow room; and this system should be pursued as the growth of the plant increases. Their propagation, however, is chiefly by layers, and cuttings of the last years' wood will take root readily in sand. The *Indian Azaleas* are evergreen greenhouse shrubs of great beauty, raised by cuttings in sand under a bell of glass, and with moderate bottom heat. The cuttings should be severed up to a joint, the lower leaves to the extent of an inch stripped off, and the stem fixed an inch deep in clear silver sand, and covered with a bell glass. When struck, they must be potted off into small pots, and shifted as they require more room.

B.

BABY.—See INFANT.

BABY LINEN.—The provisions which every expectant mother ought to make under this head comprise the following list:—Six night gowns, six shirts, four long flannels, two flannel squares, four barrows, three swathes, three dozen diapers, three flannel ditto. The *night gowns* are made of long-cloth, from 8d. to 10d. per yard; the *shirts* of lawn, at 1s. 4d. per yard; the *long flannels* and the *barrows*, or *baby flannels*, at 1s. 6d. per yard; the swathes, fine Welsh flannel, 3s. per yard; the diapers, 8d. per yard; but for this purpose old table-cloths cut up will answer equally as well. The total expense of these articles, supposing the mother makes them, is about £3; to which must be added other sundries, such as boots, brushes, binding, tape, &c., amounting to about 10s. No mention has been made of robes, as they may be considered luxuries, and their number and quality entirely depend upon the means of the parents. All these articles may be purchased ready-made, but as a matter of course the cost is much greater, and the articles not proportionally good.

BACHELOR'S KETTLE. — This is a useful invention, by which boiling water may be obtained in a few minutes, without the trouble and expense entailed by the ordinary mode. The apparatus, as seen in the engraving, consists of a minature grate

and a shallow kettle, which takes on and off. Beneath the kettle a bundle of patent wood is placed, which is sufficient to make the water boil; and beyond igniting the wood, no further attention is required. The merits of this domestic contrivance are obvious, so many emergencies arise, such as illness in the night, sudden accident, early departure for a journey, &c., where hot water is in immediate request, that any mode which supplies the demand, without the difficulty and delay so generally experienced on these occasions, cannot fail to be acceptable. The other advantages in connection with this invention are cleanliness, and an economy of fuel, as by this means the necessity for keeping the fire in, during the summer time, for the express purpose of obtaining boiling water, is obviated.

BACK, MALFORMATIONS OF, arise from a weakened and imperfect development of the organization, which exposes the child to the readier influence of accidental causes in infancy, when from a fall or undue pressure that part in the system already preternaturally weakened or predisposed gives way, and either displacement or absorption of certain parts takes place. Thus, in the spine some of the vertebræ, or bones of the back, are forced from the line of their true axis, either in the form of a bow outwardly, or like the letter S laterally, and a permanent deformity becomes the result. Or the malformation may proceed from suppuration, or ulceration of the cartilages of the vertebræ, excited, as not unfrequently happens, by some injury received during the birth, which, unobserved and unsuspected at the time, only becomes evident when the evil

has taken place. In this way a deformity may be established in some part of the spinal column, that only shows its real nature when all hope of arresting or curing the disease is at an end.

Malformations of the back may occur in any part of the column, though the portions more liable to become the seat of organic disease are the vertebræ comprising the neck and loins. Rickets are often the immediate cause of curvature or twisting of the bones of the spine, giving that peculiar deformity known as hunch-back. In this state the spine is shortened, the shoulders are thrown up, the breast protrudes, and the ribs become depressed, narrowing the natural cavity for the heart and lungs, and thereby greatly impeding their healthy action.

Another variety of malformation of the back is called the "cloven-spine," a disease generally born with the infant, and in which one or even more of the bones are deficient, and their place filled up by a fluid swelling, or a bag containing serum or lymph.

Though malformations of the back sometimes arise in scrofulous infants from injury during birth, by far the greater number, as before observed, are the result of "caries," or death of one or more of the bones of the spine or vertebræ, and the interposing cartilage or gristle that lies like a pad between every bone of the back. But besides these cases of deformity arising from disease, there is a third, or what may be called a natural malformation, where, without any actual disease, from a loose and slovenly way of carrying the body in fast-growing girls, a deformity of the back and shoulders may be, and is very often, contracted.

The *symptoms* that usually precede and accompany malformation at an early age are, that the child is first observed to be languid, listless, and easily fatigued, becoming gradually sluggish and unwilling to move, frequently stumbling without any assignable cause, the legs often crossing each other involuntarily and without notice, throwing the child suddenly down. The patient, as the disease progresses, totters at the knees, and cannot stand without support; while to advance or set the foot down firmly is a matter of extreme difficulty. These symptoms are succeeded by twitching pains in the thigh, drawing in or under of the toes, and a slow but increasing loss of power in both limbs, terminating in total insensibility and all power of motion. Loss of appetite, with a painful sense of constriction or tightness of the stomach, follows, with a hard, dry cough, difficult breathing, quick sharp pulse, and all the attendants of hectic fever; at the same time the functions of the bladder and bowels are rendered involuntarily, and the patient's situation becomes lamentable, being reduced to a powerless and incapable mass. It is not till these symptoms are all established that the deformity begins to show itself; the absorption of some and the death of other parts finally produce the displacement, and constitute the curvature, sometimes outwardly and sometimes inwardly, of the spinal column.

The *treatment* in curvature of the spine is extremely simple, but, from the length of time necessary to effect a cure, both disheartening and tedious. In the first place, absolute rest for an indefinite number of months is imperatively demanded; the second object is to establish a steady and constant drain from the affected part; and, lastly, to support the system, under the double exhaustion of the disease and the discharge, by nutritious food and tonics.

To effect the first object, the patient must be kept constantly on his back on a firm bed or hair mattress, so as to take off the weight of the rest of the body from the diseased part. For the second, two large issues must be made, one on each side of the spine, in the following manner:—Take two pieces of adhesive plaster, and having cut an even slip out of each, of from one to three inches in length, and half an inch wide, according to the age of the patient, and the extent of the malformation, apply them warmed on each side of the diseased spine, leaving about three fingers width between each slit, or all the width of the skin over the actual ridge of the spine. Then take a stick of caustic potass, or the "potassa fusa," and wrapping a piece of flannel round one end to prevent its corroding the fingers, dip the other in warm water, and rub it freely over all the cuticle within the margins of the two slits, continuing the application till the part beneath the caustic becomes of a dark or brownish colour. The potass is then to be washed off both sores with lint and warm water, and a poultice of sufficient heat applied, and continued to both till the dead cuticle is thrown off. When this is effected, lay a string of three or six issue peas on the sores, apply sticking-plaster to keep them in their place, then a pledget of lint, with a piece of firm card between the folds, and press all in their place by a tight bandage. As the peas sink deeper into the flesh, suppuration follows, and the issue is established. The wounds are to be washed every day, the peas laid afresh, and the compress and bandage reapplied. After a time the health gradually improves, the patient sleeps, the functions begin to act naturally, and spasmodic twitchings in the legs and feet indicate returning sensation to the limbs, which ultimately regain their vitality and use. The patient must then be fed on light digestible food, farinaceous and animal, with a small quantity of wine daily, the bowels kept open by an occasional aperients, and a course of such tonics as those prescribed below, persisted in, one being substituted for the other, as the stomach becomes weary of the repetition.

No. 1. Quassia raspings, 2 drachms; boiling water, 1 pint; infuse for six hours, strain off the liquor, and add muriatic acid, 30 drops. Mix. For an adult, a table-spoonful every 8 hours.

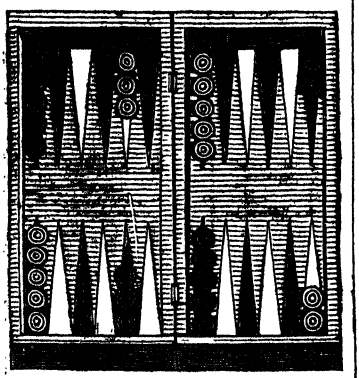
No. 2. Gentian root, cut small, 2 drachms; cardamom seeds bruised, 1 drachm; cascarilla bark and ginger, of each 1 drachm, boiling water, 1 pint: infuse for 6 hours; strain, and add carbonate of soda, 2 drachms. Mix, and take a tablespoonful every 4 or 6 hours.

No. 3. Sulphate of quinine, 15 grains; water, 1 pint; diluted sulphuric acid, 1 drachm. Dissolve and take a tablespoonful three times a day. To protect the teeth from the action of the acid, Nos. 1 and 3 should be sucked through a quill or reed.

For the species of malformation termed natural deformity, the best treatment is air and exercise, assisted by such mechanical means that, while calling into play opposing muscles, shall render no part of the body torpid by pressure or restraint. For the stooping and round back and shoulders, so common with growing girls, the best and most certain cure is to wear a boa, loaded at both ends with lead, increasing the weight from half a pound at each end to two or three pounds. This must always be worn whether sitting or walking. The principle upon which this application acts, is to call into action an opposite set of muscles to those weakened or diseased, and keep them in a state of exertion by the pendulous weight of the loaded boa. When that weight or exciting cause is removed, the muscles having nothing to resist will contract powerfully, and force up the prevously drooping head and shoulders. An exemplification of the practical truth of this statement is furnished in the erect walk and open chests of all tailors, whose occupation calls into greater activity the muscles of the neck and back, to prevent the body falling forward while sewing; the consequence is, that when they leave the board, the head and chest leaps up like an unstrung bow. See SPINE.

BACK, PAINS IN.—See LUMBAGO; RHEUMATISM.

BACKGAMMON.—A game played on a board, divided into two parts or tables, connected by a hinge which enables it to



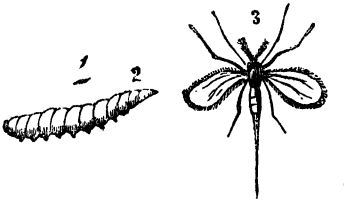
shut up like a box. Every table possesses twelve points, six at each end; and these are coloured black and white alternately. Each player has fifteen men, black and white, to distinguish them, and they are disposed in the following manner:—Supposing the game to be played on the right-hand table, two are placed upon the ace point in the adversary's table, five upon the six point in the opposite table, three upon the cinque point in the hithermost table, and five on the six point in the right-hand table. Each player is then to endeavour to bring the men round into his right-hand table, by throwing with a pair of dice those numbers that contribute towards it; and at the same time to prevent his adversary from doing the like. The first best throw upon the dice is esteemed ace. When the player carries his men home, in order to lose no point, he must carry the most distant man to his adversary's bar point, that being the first stage he is to place it on. The next move is six points further; viz., in the place where the adversary's five men are placed out of his table; and the player must progress in this manner till all his men are brought home except two, when, by losing a point, he may often save the gammon by throwing two fours or two fives. When a hit is only played for, he should endeavour to gain either his own or his adversary's cinque point; and if that fail, by his being hit by the adversary, and he find him further advanced than himself, in that case he must throw more men into the adversary's table, which is done in this manner:—He must put a man upon his cinque or bar point; and if the adversary neglect to hit it, he may then gain a foward game instead of a back game. But, if the adversary hit him, he should play for a back game; and then the greater the number of men which are taken up, makes his game the better, because by these means he will preserve his game at home. He should then endeavour to gain both his adversary's ace and trois points, or his ace and deuce points, and take care to keep three men upon the adversary's ace point, that, in case the latter hit him from thence, that point may remain still secure to himself. The *rules of backgammon* are as follow:—1. When a man is taken from any point, it must be played. 2. A man is not supposed to be played till it is placed upon a point and quitted. 3. If a player have only fourteen men in play, there is no penalty inflicted, because by his playing with a lesser number than he is entitled to, he plays to a disadvantage for want of the deficient man to make up his tables. 4. If he bear any number of men before he has entered a man taken up, and which of course he was obliged to enter, such men so borne must be entered again in the adversary's table, as well as the man taken up. 5. If he have mistaken his throw and played it, and his adversary have thrown, it is not in the choice of either of the players to alter it, unless they both agree so to do. Books: *Hoyle's Games; Bogue's History and Practice of Backgammon; Handbook of Games by Amateurs.*

BACON AND CABBAGE.—Boil some streaky bacon in a small quantity of stock, with eight or ten sausages; in the same stock boil some white cabbages for about two hours; add salt and spices, and serve very hot.

BACON AND EGGS.—Cut a quarter of a pound of streaky bacon into thin slic-

and put them into a stewpan over a slow fire; while cooking, turn them frequently; when sufficiently dressed, pour the melted fat of the bacon into a dish, break over it six eggs, add two spoonfuls of gravy and a little salt and pepper; stew the whole over a slow fire, and serve.

BACON BEETLE.—This insect infests hams, bacon, and all kinds of dried meats, into which it eats small holes; and this is chiefly done when the insect is in its larvæ, or grub state, as seen in fig. 1; when full fed, it becomes a chrysalis, fig. 2; which ultimately changes into a small beetle, fig. 3—



about the third of an inch long, of a dusky-brown colour, with the upper half of the wing cases, whitish or ash-coloured, marked with black specs. The grub, from lying concealed in the meat, cannot be effectually removed; but, by watching the time when the perfect insects appear, they may be destroyed, and a recurrence of the evil in a great measure prevented.

BACON, BOILED.—Bacon will boil better, and swell more freely, if the rind is stripped off before it is dressed. It should be boiled gently, from a-half to three-quarters of an hour being allowed to each pound, according to the thickness. When done, strew bread raspings over it, and place it before the fire to brown.

BACON, CURING OF.—The hogs intended for bacon are kept till full grown, and are usually killed between the months of October and March. The next process after killing is to *remove the hair*, which is better done by singeing than scalding, and is performed in the following manner:—Cover the hog thinly with straw, and set light to it in the direction of the wind. As the straw becomes burnt off, renew it; but, at the same time, carefully avoid scorching the skin. After both sides have been thus treated, scrape the whole body clean, but without using water. The *cutting up* should be accomplished by first taking off the head, then removing the back-bone, and cutting across the ribs; the two sides, or flitches, intended for salting will then be flat; after these have been well dried with a cloth, rub the inside of each flitch with salt, and place them one above each other in a tray having a trench round it to drain off the brine. Change the salt every four days, and reverse the order of the flitches, putting the one that has been at the bottom on the top, putting that again at the bottom, and so on. The *interval of salting* is about six weeks for a hog of twelve score. In this process common salt only is generally used, but a finer flavour is imparted by a mixture in these proportions:—Salt, 4lb.; sugar, coarse and brown, 1lb.; saltpetre, ¼lb. *Smoking* is a preferable method of cure to drying, and is thus effected:—Rub the flitches thoroughly with bran, and then hang them in the chimney in such a position that they shall be protected from the rain and not injured by the fire. With a constant and perfect heat, a month's smoke will be sufficient. The smoke for this operation must either be of wood or peat; the quality of the wood influences the flavour of the bacon, oak and beech being the most preferable. Bacon may be *preserved* in wood ashes, or in very dry sand.

BACON FRAZE.—Beat eight eggs into a batter with a little cream and flour; fry some thin slices of bacon and dip them into it; lay the bacon in a frying-pan, and pour a little of the batter over them; when one side is fried turn, and pour over more batter. When both sides are of a light brown colour, put into a dish and serve hot.

BACON FRIED.—Line the frying-pan with clean white paper, cut the bacon into thin slices, remove the rind, and lay the bacon on the paper; fry till brown.

BACON GRILLED.—The slices should not be cut more than an eighth of an inch thick, and will eat much mellower if soaked in hot water for a quarter of an hour, and then dried in a cloth previously to grilling. If it is desired to have the bacon curled, cut it in slices about two inches long, roll it up, and put a little wooden skewer through it; cook in a Dutch oven for eight or ten minutes, turning it as it gets crisp. The ordinary method is, however, the best, as it is crisper and more evenly done.

BACON OMELET.—Cut some streaky bacon which has been boiled for half an hour into the form of dice, and fry it with a small piece of butter. Beat up a dozen eggs, which pour over the bacon when it begins to get crisp, stir all well together, and when thoroughly mixed and browned, serve.

BACON—PROPERTIES AND USES OF.—As a food by itself, bacon is not to be recommended for habitual eating, especially for weak and delicate stomachs, because the fleshy fibres having been rendered tough by the smoking and salting, the meat becomes exceedingly hard of digestion. Bacon, however, especially the fat part of it, possesses the property of assisting the assimilation of other meats of a dry nature, for this reason veal, liver, fowl, &c., become much easier of digestion when eaten with bacon. The chief *uses* of this meat, in addition to those before specified, are as a relish for breakfast, tea, or supper, or for supplying an impromptu repast in the place of other meats which are procured with greater difficulty.

BACON RELISHES.—Cut cold bacon into thin slices, powder both sides with bread raspings, and put them before the fire in a Dutch oven. In three minutes one side will be done, and in three minutes more the other.

BACON TOAST.—Cut some slices of bread

thin, and about three inches long; chop some streaky bacon into small pieces, and dip them into a raw egg, which has been beaten up with shred parsley, shalots and pepper; fry the bacon and bread together over a slow fire, and serve with clear sauce with a little vinegar in it.

BACON—To Choose.—The fat of good bacon will feel oily and look white, the lean of a fresh red colour, and firmly attached to the bone; if it be young, the rind will be thin and tender, and if old, thick and tough.

BAGATELLE is a game played upon a board, with balls, and a cue or mace. It is an amusing parlour-game, and as such is preferable to billiards, on account of the table being of a more convenient size, and much less expensive. The size of the table ranges from five to ten feet in length, and from eighteen inches to three feet in width; it is lined with green or blue cloth; and a slip of thin wood is placed in a semicircular form inside the upper end. There are nine cups, consecutively numbered 1 to 9, sunk in level with the cloth; into these cups the balls are to be driven, when playing the games known as La Bagatelle and Sans Egal. The board has also a bridge with small arches likewise numbered 1 to 9, through these arches the balls are to be driven in playing the two games called Mississippi and Trou Madame. There are also two small cushions, placed against the sides of the board, when used for the game of Mississippi. The following are the various rules of the four games ordinarily played:

La Bagatelle—1. Any number of players may join in this game, and use either the mace or the cue, as may be agreed upon. 2. Each player strikes a ball up the board, and whoever obtains the highest number is entitled to the lead, and takes possession of the nine balls. 3. The black ball (which counts for double), is placed on the white spot in front of the holes, at the beginning of every round, and must in the first instance be struck by one of the other balls before there can be any score. 4. The striker's ball must be placed on the white spot nearest the other end of the board, and is to be struck with the mace or cue at the black ball, the object being to put it into one of the holes. The rest of the balls are to be played up in the same manner, either at the outstanding balls, or for the holes. 5. Any number of rounds may be played for the game, as may be agreed upon at its commencement. 6. The player who obtains the greatest number—counting the holes into which he puts the balls, according to the figures marked within them—wins the game. 7. Any ball rebounding beyond the centre, or being driven off the board, cannot be used again during that round.

Sans Egal.—1. This game is played by two persons, and numbers 21 or 31, according to agreement. 2. The player who leads (which is decided as in La Bagatelle) chooses four balls of either colour, and places the black ball on the mark in front of the holes, and he begins by striking one of his balls up the board. 3. The adversary then strikes one of his balls in the same manner, and so on alternately. 4. The player who holds the black ball counts it towards his game, as also all that he may hole of his own colour. 5. If a player hole any of his adversary's balls, it counts for the owner of the balls. 6. The player who marks the greatest number of points in each round takes the lead in the next.

Mississippi. — 1. The bridge must be placed close up to the circle, and the small cushions against the sides. 2. Each player strikes one ball only, through the bridge, and he who obtains the highest number, leads off, and plays the nine balls in succession. 3. Every ball must strike one of the cushions, previously to entering the bridge, otherwise the number reckons for the adversary. The game to consist of as many points as may be agreed on at its commencement.

Trou Madame.—This game is played in the same manner as the preceding, with the exception of the balls being played straight from the end of the board through the bridge.

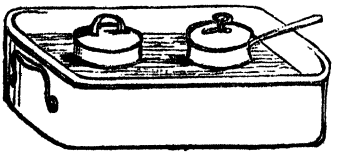
BAIL are the sureties (two in number) taken by a magistrate or a judge for the appearance, upon a given day and time, of a party arrested in a civil suit, or in custody for a criminal offence. Every housekeeper may be bail. Each bail must prove himself upon oath to be worth double the amount of the debt. A man bailed may be taken at any time by his bail, even on Sunday, and kept in custody and rendered to prison.

In misdemeanours, justices are bound to take bail. A very important case occurred at the time of the Chartist riots in 1842, when the magistrates of Staffordshire determined amongst themselves to refuse bail, and acting on that decision, denied it to one O'Neil; and although they were acquitted of any perverse or partial motive, and had decided in the legitimate exercise of their office that such a person ought not, in the then state of the country, to be admitted to bail, yet their refusal was held to be contrary to their duty as magistrates, and they were censured and condemned in costs.

In cases of felony, two justices may admit a person to bail, notwithstanding he has admitted the charge, the principle being, that justices in admitting to bail should be guided by the probability of a party appearing to take his trial, and not by his supposed guilt or innocence; but a justice admitting to bail where he ought not, is punishable as for a negligent escape, and if excessive bail is required, it is punishable as an offence against the liberty of the subject. In general, no notice of bail is requisite, but justices may order the prosecutor to have twenty-four or forty-eight hours' notice of bail. When a party, to avoid being apprehended, voluntarily goes before a magistrate and offers bail, no notice is requisite. The prosecutor or his attorney may examine the bail as to their qualification. Personating bail is punishable with transportation for life, or not less than seven years, or by imprisonment for a term not exceeding four years nor less than two years. The party bailed is considered legally in the custody of his sureties, who are his keepers, and they may therefore re-seize him and get themselves

discharged, but he may find new sureties. The persons of the bail are not liable under recognizance. The bail may bring an action against the party for money paid upon recognizances. A party cannot be bailed when taken in execution on a judgment or after conviction.

BAIN MARIE, or WATER BATH.—A culinary utensil, used when it is necessary to keep the contents of a vessel hot without suffering them to boil. This contrivance is especially adapted for keeping viands warm when a repast is delayed beyond the appointed hour through the non-arrival of the



invited guests, or from other accidents; for by this means the warmth is retained without the quantity being diminished or the quality deteriorated. The application of the *Bain Marie* is exceedingly simple, and fully explained by the accompanying illustration.

BAIT, FOR ANGLING, is composed of numerous and various substances, living and dead, natural and artificial. *Animal* baits, such as rats and mice, are not much used, although they will be taken by *pike*, and even by *trout* occasionally.

Fish baits are used for *pike*, *trout*, *perch*, *chub*, and *eels*, and those are chiefly roach, dace, gudgeon, loach, minnows, and small chub, barbel, and perch; the larger baits for the first mentioned and the smaller for the latter, although large trout will feed upon all descriptions of *white* fish. These fish baits are obtainable at the tackle shops, or must be angled for or taken with a casting, or other net, at convenience.

Frogs, in the absence or scarcity of fish baits, may be used for pike, and occasionally trout, chub, and perch may be taken with them; these baits are used either dead or alive, according to the predilection or convenience of the angler, and are also imitated by ingenious persons: mother-of-pearl, glass, tin, gold and silver wire, and tinsel, being principally the materials of which these artificial baits are composed. The American "spoon bait" and the Archimedian "screw bait," or "otter," have been recently introduced to the angling fraternity, and are made of copper, plated with silver, in the shapes indicated by their nomenclature. The natural dead fish may be kept bright in colour and inoffensive to the smell by being immersed immediately after capture in a mixture of common and bay salt.

Insect baits are very numerous—worms, grubs, larvæ, grasshoppers, gentles, wasp-grubs, cockchafers, cockroaches, and flies of every description, form the principal food of the inhabitants of our rivers, lakes, brooks, and ponds.

Worms are of various kinds. The lob or garden worm, which is an excellent bait for trout, barbel, chub, perch, carp, tench, eels, and even for roach, dace, and gudgeon, is found in abundance in our gardens and fields, and may be obtained by digging, by following the plough (taking a hint from the rooks and crows), or in larger numbers, and 3. a greater certainty, in the evening after rain, and during the whole of warm moist nights, at which times they leave their holes, either partially or entirely, in search of food; to obtain these worms, a lanthorn should be procured: arrived at the place of search, the ground should be closely and quietly scanned, and when found, the worm should be carefully taken between the fleshy parts of the fore-finger and thumb, so as it may not be injured by pressure or by the nails; if the worm is only partly out of its hole great care must be observed not to attempt to drag him thence by force, but after grasping it in the manner directed to prevent it escaping back into its hole by simply "holding your own," and the worm will shortly yield to the gentle and sustained strain. *Red worms* (for carp, tench, trout, perch, barbel, chub, roach, dace, gudgeon, &c.), are found amongst old rich soil, under large stones or planks and baulks of timber, in moss or grass growing on the edge or side of wood-work frequently saturated with water. *Brandlings* (for perch particularly, and all the sorts of fish that will take the red worm), are to be found in dung-heaps.

These are the three principal sorts of worms, although all can be used to advantage. *To preserve worms*, they should be placed as soon after being taken as possible in a wooden tub or bowl, or unglazed earthenware pan, and left therein for from three to six hours, according to the number, in order that they may cleanse themselves from slime, clay, and dirt; and then be placed in another bowl, tub, or pan with damp moss, from which have been carefully removed all leaves, thorns, pieces of stick, and other foreign substances; care must be taken that all the dead or mutilated worms are thrown away; they must be examined every day, or every other day at farthest, and the dead or sickly ones removed, and every six or seven days be placed in fresh damp moss, or removed from that in which they are, and the moss carefully and effectually rinsed in water, clear of all dirt and impurities. Some persons recommend a small quantity of fresh milk and yolk of egg beaten together, or the scum of a pot in which fresh meat has been boiled, being from time to time dropped into the moss, and well disseminated amongst it by turning over.

Of the *larvæ* baits, the *caddis*, *cad* or *straw* bait, is the most numerous and the most sought for by trout, chub, barbel, roach, dace, carp, bleak, &c. It is the chrysalis state of the "ephemeræ," green and grey drake, or May-fly, and of the stone fly, and is to be found in clear shallow streams, under stones, or in the eddies behind obstructions to the current, in a cylinder, formed by fastening together scraps of

straw, stick or bark, and weighting it with sand or gravel, so as to carry these buoyant substances to the bottom. *To preserve these*, peel the green bark from a withy bough, six or seven inches round, and about a foot in length; turn both ends into the form of a hoop, and fasten them together by the aid of a large needle and thread; stop up the bottom with cork, and bore the back full of holes with a thin red-hot wire; tie over it a coleswort leaf, and lay it in the grass every night; keep it in a cool place during the day.

Wasp-grubs are obtained by finding the nest of the swarm in some bank or hedge-row, or on the bank of a stream or pond, and in the evening, when they are all hived, applying lighted straw to the entrance, amongst which gunpowder and powdered sulphur has been strewn, so as to fill the hole in which the comb is built with smoke, to suffocate the wasps; or, strew some powdered sulphur in a dish, pan, or saucer, and place it in the entrance of the hole lighted, and as soon as the fumes of the sulphur begin to penetrate to the nest, and the wasps evince an intention of escaping, plug up the entrance with straw or a sod, or some clay, and be careful that this is efficiently done, or you may have cause to rue your neglect. When sufficient time has elapsed to suffocate the wasps, dig out the comb, in which the larvæ sought for will be found.

Gentles may be procured at the tackle shops, and sometimes from butchers or tallow chandlers; but if it is desired to breed them, take a piece of bullock's or sheep's liver, a chub, or roach of about a pound weight, a rook or moorhen, or any similar substance, and hang it up for a day or two in a place shaded from the direct rays of the sun, where it will be visited by the blue and green bottle-flies, which will deposit their ova therein; after the expiration of three or four days gentles will begin to appear, when a wooden bowl or unglazed earthenware pan, in which is some sand or bran, or both mixed, must be placed under the blown substance, into which the gentles will fall; when the food is gone, or all the gentles have left it, the bowl or pan must be removed, and kept in a cool place, and the gentles taken from it as required. They can be kept through a great part of the winter season by immersing them in mould, with which a small quantity of moist cowdroppings has been mixed, and then burying them in the earth. Gentles are a good bait for all sorts of fresh water fish, except pike.

Grasshoppers are excellent bait for trout, chub, and large dace, they may be caught by the hand amongst grass, and will afford some amusement in their pursuit.

Cockchafers are to be caught whilst they are flying about in the evening, or in the day time, by shaking them from the trees to which they may have resorted to seek food, shelter and rest; horse chestnut, and lime and willow trees are those most delighted in by these insects.

Cockroaches are to be caught in the traps known as black beetle traps; bakers' cellars and sugar-bakeries are their chosen resorts. The two baits last enumerated are excellent for trout, chub, and large dace, and may be most effectually used as a dipping or dapping bait, under overhanging trees or over bushes partly immersed in water.

Flies, both natural and artificial, will be treated of in a separate article under the head "FLIES."

The *vegetable* and the *animal* kingdom each contribute materials more or less manipulated, out of which bait is formed for the finny tribes, viz., *wheat, malt, bullock's pith, cheese, greaves, paste, salmon roe*, &c., &c.

Wheat and malt require to be parboiled before using, and are a good summer bait for roach, dace, bream, carp, and tench.

Bullock's pith is the marrow found in the spinal bone, and is a good bait in the winter months for chub. You will find two skins on it, the outside very thick and tough, which take off altogether, after slitting it up with a pair of scissors, being careful not to drag the inner skin away with the outer one. Slip this inner or under skin up on one side with a pair of scissors, and lay it flat; you will then have skin on one side, and none on the other. Wash it clean, and let it boil in water one minute.

Cheese is a bait used for barbel and chub, and should be made white and tough, without salt, from old milk (unskimmed), and cut up into squares about the size of dice.

Greaves, a substance to be procured from tallow chandlers, is the sediment from the melting pot, and is an excellent bait for barbel, chub, carp, tench, and bream; it should be broken small with a hammer, care being taken not to break pieces that appear likely to make a bait for the hook, then put it into a saucepan with sufficient water to cover it, and allow it to boil for twenty minutes, frequently stirring to prevent its burning by the particles adhering to the interior surface of the pot. If it gets stiff, add more water to make it of a sloppy consistence. When taken off the fire it should be placed in a cool spot to settle.

Pastes are made of flour and water, and of bread, stale or new, to which are added honey or sugar to sweeten them, vermillion or red lead to give them a pinky colour, and cotton wool to make them adhere to the hook, all according to the fancy of the angler. Take the crumb of new bread, well knead it in a piece of linen or cotton rag to keep it clean and to prevent the perspiration of the hand from giving it a flavour; this will not easily wash off the hook even in a swift stream. The crumb of a milk roll makes a very white paste, but it is not so adhesive as that of bread made with water. If new bread cannot be procured, take a piece of stale, and squeeze it well in the hand *before* dipping it into water for an instant—an instant only—then well knead this, as previously directed.

Salmon roe for trout, perch, chub, roach, dace, and indeed for most fish, is a very

effectual bait, if properly prepared and used. The following is a good plan:—Immerse a pound of spawn, the peas of which should be as large as can be got, in very hot water, remove the membrane, skin, film, &c., rinse with cold water, and hang up to drain in a bag or cloth for twenty-four hours; then put to it two ounces of bay salt with a quarter of an ounce of saltpetre, finely powdered, and again hang up for twenty-four hours; then spread it out on a dish in the sun, or before the fire, until it gets dry but not parched up; pot it down, pound some melted lard over the surface, and cover over with bladder. This *will* keep for two years, but it will be better to use it, and to make it year by year.

Ground-baits are used for casting into the water to draw and to keep the fish together in one spot, and of course are only available for those kinds of fish that are to be taken at the bottom. For roach and dace, bran and clay mixed together in lumps about the size of a walnut, into which a few gentles may be sometimes placed, or to the former some bread crumbs may be added; these will also do for carp, tench, and chub, but the best ground bait for carp and tench is worms, both lob and red, chopped up into three or four pieces, and (without any clay) thrown into the place intended to be fished 24 or 30 hours before fishing. Worms thus chopped up are a good ground bait for chub and barbel, but should be deposited about 20 hours before the time chosen for fishing. Worms for ground-bait are the better for not being previously scoured. *Cheese* is also a good ground-bait for chub and barbel. *Carrion gentles* make a good ground-bait for carp, tench, bream, roach, dace, and barbel; they may be procured at the tackle shops, or at the knackers, or skin dressers. *Grains* (fresh) also make a good ground-bait for bream, carp, tench, and roach. *Brains*, either bullock's or sheep's, well cleaned and then scalded for a minute or two, and chewed and dropped into the water, is an excellent ground-bait for chub, particularly when bullock's pith is used for the bait on the hook. Books: *Davy's Salmonia; Walton's Angler; Salter's Guide; Hoffland's Manual; Bailey's Instructor.* See FLIES.

BAKEWELL PUDDING.—Cover a dish with thin paste, and spread it with jam of any kind, half an inch thick. Beat together until thoroughly mixed the yolks of eight eggs, the whites of two, a pound of sugar, the same quantity of butter melted, and a dozen pounded almonds. Pour into the dish, and bake in a moderate oven for an hour.

☞ Eggs, 8 yolks, 2 whites; sugar, 1lb.; butter melted, 1lb.; almonds, 12; paste and jam, sufficient.

BAKING.—This is a cheap and convenient mode of dressing food, and is especially acceptable to persons with small families and to the poorer classes. Although the process of baking deteriorates the flavour and tenderness of some joints, there are others which taste equally well baked as roasted; among these are legs of pork, shoulders of mutton, and fillets of veal. Certain kinds of fish are also better dressed in this manner, particularly pike and red mullet. Hams, also, when covered with coarse paste and baked, have a finer flavour and are more juicy than when boiled. Baking may either be performed at the baker's or at home. In London, the former mode is usually preferred; because for a few pence the expense and trouble that would be otherwise incurred are obviated. When a dinner is sent to the bakehouse, the hour at which it will be required should be named at the time when it is left, and it should not be allowed to remain at the baker's beyond that time, otherwise the meat becomes soddened and the potatoes clammy. On Sunday there are more dinners baked in London than all the rest of the week put together, and the generally understood interval for the process of baking is from eleven o'clock till one. If the baking is performed at home, a good fire should be kept up so long as the joint is in the oven; the time required varies with the nature of the meat, and the size of the joint, but, as a general rule, a quarter of an hour for each pound will not be found unsuitable. While the meat is cooking, the oven should be opened as seldom as possible, otherwise the temperature is disturbed and the cooking considerably retarded. To prepare meat for baking, it should be placed in the dish on a stand, so as to allow room for potatoes underneath; a few spoonfuls of water should be mixed with the potatoes, and a little salt sprinkled over them. In order to prevent the meat from being too much dried by the heat of the oven, two sheets of paper spread separately, with a thick coat of butter or clarified marrow, should be fastened on the outside of the joint.

A receptacle for joints intended for baking has been invented by M. Soyer, which admits of a joint of meat, a dish of potatoes, and a pudding, being baked at one and the same time. This simple contrivance consists of an open framework of wire, which lies upon a deep tin or earthenware dish, in two stages, so that as the meat is raised above the potatoes, and these again are above the pudding, dripping falls on both.

One of the most useful appliances of baking is that known as the Nottingham jar, as shewn in the accompanying illustration. This is adapted for cooking rice, meat, fish, or fruit, and is extremely useful in keeping edibles hot, and at the same time retaining their juices. Food for invalids is recommended to be dressed in this way, as the entire amount of nourishment contained in the food is thus preserved. When this jar is used for baking it should be well pasted down, covered with a fold of thick paper, and placed in a gentle oven. *Pies, cakes, &c.*, require various times for cooking, according to their size, but the degree of brownness they present, gives unmistakable indications

of the stage they have arrived at. Objections are urged against baked meats, and with a great deal of truth, that they are not so wholesome as roasted; the reason of this is, that the process does not admit of the passing off of the vapours, so rapidly as boiling or roasting; the fat is also more retained, and becomes converted, by the agency of the heat, into an empyreumatic oil, so as to render the meat less fitted for delicate stomachs, and more difficult of digestion generally. As a partial provision against these consequences, the meat should not be taken immediately from the oven to the table, but placed on a dish for a few minutes before the fire, so as to allow some of the gases it contains to escape.—See OVEN.

BALANCE, IN COMMERCE, comprehends those figures that remain when a smaller number or quantity is subtracted from a larger. The importance of keeping balances regularly in commercial accounts cannot be too highly estimated Debtor and creditor accounts should be balanced periodically, so as to ascertain, on the instant, how much is either owing or owed. Cash accounts should be balanced weekly or monthly, in order to arrive at the relative amounts of the expenditure and receipts, for future governance; and accounts and books generally should be balanced half-yearly or yearly, so that a person may judge of the progress he is making, and how he stands with the world. Balancing also acts as a check upon ordinary account-keeping, and serves to detect any error that has been committed and escaped observation.—See BOOK-KEEPING.

BALCONY.—In a house where there are children, care should be taken that the balconies, and especially those of the nursery, are constructed in such a manner that it is impossible for a child either to fall through the bars or to be fixed in them; nor should the top rail be so low that a child may climb up and tumble over. For the want of these precautions many frightful accidents have occurred.

BALDNESS.—The proximate cause of the falling off of the hair is an insufficiency of nourishment in the pores of that part of the skin where the hair has been accustomed to grow. This will be the more clearly understood, when it is known that each hair has a separate existence in a tubular form, which, in order to sustain its vitality, imbibes a certain amount of moisture given out by the pores of the skin; when this sustenance is from any cause withheld, the hair withers and falls away, in the same manner that the stem of a plant, when deprived of its sap, droops and decays. Baldness is ordinarily accepted as one of the natural indications of approaching age; but when it occurs in the early stages of life, it is then unnatural, and assumes the form of a disease. Sometimes it shows itself by a general falling off of the hair, while at other times the diminution is partial, and confined to round or irregular patches. Under these circumstances, the disorder is more frequently the result of a want of mere local vigour, than the consequence of constitutional decline; and the remedy mainly depends upon stimulating applications energetically and unremittingly employed. *General baldness* is preceded by an unusual loosening of the hair, which, upon combing or brushing, comes off in large quantities. In order to arrest this, persons who have short hair, should immerse the head in cold water morning and night, dry the hair thoroughly, and then brush the scalp until a warm glow is produced. With females, however, who wear the hair long, this mode of proceeding is almost impracticable, on account of the difficulty experienced in drying the hair; it is better, therefore, in these cases to brush the scalp until redness and a warm glow are produced, and then rub in among the roots of the hair a lotion compounded as follows: Eau-de-cologne, two ounces; tincture of cantharides, two drachms; oil of lavender, and rosemary, of each ten drops. Apply this to the head once or twice daily, until the growth of the hair is restored. But if the scalp become sore, the treatment must be discontinued for a time, or practised at less frequent intervals. When the *baldness occurs in patches*, the skin should be well brushed with a soft tooth-brush which has been dipped in distilled vinegar, and afterwards brushed in the manner previously pointed out. Both these modes of treatment are prescribed by Dr. Erasmus Wilson, who has for many years made the diseases of the skin and the hair his peculiar study. Persons afflicted with baldness should scrupulously avoid having recourse to the many advertised specifics for restoring the hair; for in many instances these nostrums not only fail to effect the remedy they pretend to, but also produce injurious results by the application of deleterious ingredients, which corrode the pores and irritate the scalp.—See HAIR, PRESERVATION OF, and SCALLED HEAD.

BALLACHONG.—An Indian mixture, made as follows:—A pint of picked shrimps, and a pint of apples, slightly ripe, cut the apples into small pieces, and dry them in a stew-pan a little over the fire. Mix two pounds of butter, two cloves of garlic, one onion, chopped, and a tablespoonful of seasoning, comprised of curry, pepper, salt, and cayenne, proportionably mixed. Fry the onions and garlic in the butter, then add the other ingredients, and fry all together; when cold, put in a jar, cover close, and when wanted, fry in small quantities dipped in butter.

☞ Shrimps, 1 pint; apples, 1 pint; butter, 2 lbs.; garlic, 2 cloves; onion, 1; seasoning, 1 tablespoonful.

BALLOT.—A method of voting, employed upon occasions when it is considered expedient to preserve secrecy in regard to the opinion of each voter. The modes of performing this kind of voting vary in some respects according to the object to be attained: as for instance, in the case of an election to an office, where the choice can fall upon only one candidate, or upon a smaller number of candidates than are put in nomination. In the latter it is usual to deliver to each voter a list of the names of the candidates, from which he erases the

names of the candidates he opposes, and after folding up the list so as to conceal the name left, deposits it in a glass or urn, from which the votes are taken when all collected, and counted in order to determine in whose favour the greatest number of votes has been given. In cases where a simple affirmative or negative is alone required the same method is sometimes adopted, and then the papers deposited in the urn or glass bear only the word "Yes" or "No." A third method, and the one that is most usually employed by clubs and societies, for the election of a member or an officer of the establishment, is to have a ballot-box with two compartments, which are severally indicated externally by "Yes" and "No." Between the two compartments is an aperture through which the arm may be put to some depth; each voter is furnished with a ball, which he drops into one of the compartments, but the whole process is so regulated that it is impossible to detect in which compartment the ball has been deposited. Sometimes the original mode is adhered to, each voter being furnished with a white and back ball, the former denoting assent, and the latter dissent; hence comes the expression "to black-ball." In this mode, however, the difficulty of satisfactorily disposing of the unemployed ball, lays the process open to many well-founded objections.

A black-ball, in its general signification, counts more than one vote, being sometimes considered equal to three, five, &c., according to circumstances. In elections at the London clubs, each ball found in the compartment "No" of the ballot-box usually counts as ten.

This mode of election is now almost universally resorted to in England by clubs, benefit societies, and public institutions; the directors of the Bank of England and the East India House are also thus chosen. The leading feature of the ballot is, that it enables a voter to record his opinion without placing himself in avowed antagonism to the candidate against whom he votes, and thereby shields him from those unpleasant consequences which open voting so frequently entails. Supposing, for instance, in the election of a club member the black-balls should be in the minority; it may easily be imagined that if the names of the dissentients were known to the candidate elected in spite of the opposition, no friendly intercourse or cordiality could possibly exist between the contending parties; whereas, by adopting the ballot, the adverse voters being unknown to the elected member, the harmony of the establishment remains undisturbed, and in the event of the opposition having been the result of mere prejudice, a closer intimacy and juster estimate of character may ultimately lead to transforming the foe into a friend.

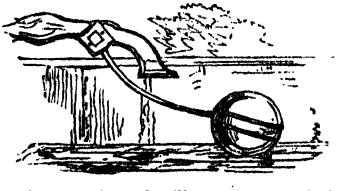
In England the ballot has, up to the present time, been withheld from the people for political elections. Vigouros efforts are, however, being made to have it constitutionally recognised as the system by which members of Parliament shall be elected. At an election for Reigate (1858), the principle was adopted under the following circumstances:—For this seat there were four candidates, one being in the Conservative interest, and the remaining three Liberals; it was therefore evident that the dividing of the Liberal interest among so many candidates was calculated to prevent individual success, and in effect to give a majority to the other side. It was agreed, therefore, among the Liberal candidates, that cards, bearing their several names, should be sent to all such voters as were known not to have pledged themselves to the Conservative candidate. From these cards each voter was requested to erase two of the names, retaining the one whom he wished to vote for. When the cards were returned, an account was to be taken: he who had the greatest number of votes standing for the seat, the two others retiring.

BALL ROOM.—The invitations for this class of entertainment should be issued from seven to ten days previously. They are sent in the name of the lady of the house, and if intended for a family where there are grown-up sons and daughters, one card should be sent for the master and mistress, a second for the daughters, and a third for the sons. Any guest staying with a family should also have a distinct card. Answers should be returned on the next day or the day following. At a *private dance* the lady of the house generally opens the ball, but when prevented from doing so, her husband takes her place, usually leading off the first dance with the lady of the highest rank, or the greatest stranger. Should the hostess dance, she must avoid participating in the amusement to any great extent, and not exceed two or three dances. The host should also observe a like limit and act as a sort of private master of the ceremonies, taking care, amongst other duties, that the ladies are provided with partners and seats. Married ladies are usually attended by their husbands, but this is not absolutely necessary; unmarried ladies, however, cannot well go alone, but should always be accompanied either by their mother, a married sister, or an elder lady. In private parties, a lady may not refuse to dance with a gentleman unless previously engaged, and on no account is she to dance with any gentleman when she has refused another for the same dance. In dancing, a lady should deport herself with grace and ease, not displaying either an excess of sprightliness or a deficiency of it; while all her movements should be dictated by refinement and modesty. A gentleman, on entering the ball room, first addresses the lady of the house, and, after her, the nearest acquaintances he may recognise. If a friend be introduced, he should first of all be presented to the hostess and host, and then made acquainted with the names of the chief persons present. When a gentleman conducts a lady to a *public ball*, he hands her to a seat, and then, from the programme which he has received on entering, he proceeds to make his engagements for the evening. If he wish to dance with

any lady with whom he has no previous acquaintance, he must seek an introduction through the master of the ceremonies, one of the stewards, or a mutual friend. While a gentleman is dancing he should pay exclusive attention to his partner, and engage her in light and agreeable conversation; at the conclusion of the dance he should lead her to a seat, and ask her to take refreshment; he may then leave her with a bow, or if she please, converse for awhile; he should, however, immediately retire, when another gentleman advances to claim the lady for the next dance. No lady is justified in refusing to dance unless previously engaged, and on no account should she dance with a gentleman at a public ball without the usual ceremony of introduction having been gone through. Some difference of opinion exists as to the extent to which a lady may decline or accept the proffer of refreshment; in this, however, a little judgment must be exercised, and the example of the chief ladies present, noticed and followed. A gentleman should not dance too frequently with the lady whom he has escorted to the ball, nor, indeed, with any other lady; such a proceeding giving the appearance of exclusiveness, and a contempt for the remaining portion of the assembly. A gentleman should pay some attention to those ladies who are otherwise neglected, and lead them out quietly and unostentatiously, without endeavouring to make it appear that he is conferring a favour, or undergoing a personal sacrifice. When dancing, a gentleman should hold the hand, and encircle the waist of the lady as lightly as possible; a contrary mode of deportment is both rude and vulgar. The style of dancing should not savour too much of the academy, nor, on the other hand, should it be careless; but quiet, easy, and graceful. The *top* of the ball room is at the same end with the orchestra, but where the music occupies the centre of the room, the top is then at that end nearest the door. A gentleman should always endeavour to place his partner as near to the top as possible. It is ill-bred, however, to take a place previously engaged, or when forming a country dance to push in at the middle, or upper end; the proper station under such circumstances is below the last couple who are standing up. At private parties, refreshments are frequently handed round, and it is the duty of a gentleman to see that the lady, in whose company he is at the time, is provided with the refreshment she desires. At a public ball, a supper is usually spread in another room, to which a gentleman escorts the lady whom he brought, his partner in the last dance, or an unaccompanied lady; having placed her at the table, he waits upon her until she has finished her supper, hands her back to the ball room, and returns to procure his own refreshment. When any guests wish to retire from a private dance, they should bid the host and hostess a quiet farewell; or if this is impracticable, leave without doing so. After a ball—say, during the course of a week—the host and hostess should be visited, but the visit must be limited to a short duration. Any acquaintance formed at a dance does not extend beyond the ball room; and a lady is justified in passing, without recognition, on the folowing morning, her partner of the night previous.

Full dress must be worn at all balls, both public and private. That worn by the lady should be light, and as little cumbersome as possible, so that she may be free in her movements, and not embarrass her partner. The dress of the gentleman should be a black dress coat and trowsers, a white waistcoat, white cravat, and patent leather boots. White or primrose kid gloves should invariably be worn both by ladies and gentlemen, and not taken off during the whole of the evening, except at supper time. A supplementary pair of gloves, carried in the pocket and put on after supper, will be found greatly conducive to comfort.

BALL-TAP.—The regulator of the water supply to a cistern. This contrivance, although very simple, is apt to get out of order: sometimes it is fixed either upwards



or downwards and will not move, and the supply of water becomes consequently interrupted. These defects, however, generally admit of an easy remedy, the application of a little oil, or the tightening of the nut seen in the engraving being in most cases all that is required.—See CISTERN, FROST, LEAD, ZINC.

BALM, IN BOTANY.—A herb frequently used for medicinal and culinary purposes. This is one of the most common and well known plants in the kitchen garden; it has a fragrant smell, and its root creeps rapidly and grows abundantly. It grows in the poorest soil, and never requires manure. It is readily propagated by parting the roots, two or three buds being preserved to each piece, or by slips. If offsets are employed, they may be planted at any time during the spring; eight or ten inches apart. If propagated by slips, they must be inserted during the month of May or June in a shady border; and in September or October transplanted into the beds, where they are to remain. During the summer, all the attention they require is occasional watering and weeding; in the autumn the beds must be dressed, the old leaves and stalks cleared away, and the soil loosened by the hoe. When balm is intended for drying, it should be gathered just previous to flowering, and at such time as the leaves are perfectly free from dew or moisture. The leaves are better dried in the shade than in the oven; when cool, they may be pressed into packages, and wrapped up in white paper ready for use. As a medicine, balm is used

in conjunction with more powerful drugs to supply a moderate stimulant, and to induce profuse perspiration.

BALM TEA is made by simply pouring boiling water over some of the leaves in a teapot, and letting them infuse. It should be drunk a short time previously to going to bed.

BALM WINE.—Put a bushel of leaves into a large vessel, and pour over them eight gallons of boiling water; mix thoroughly together, and let them stand for twenty-four hours; then strain, add twenty pounds of sugar, and bottle off. It will be fit to drink in six weeks, but greatly improves by keeping.

☞ Balm, 1 bushel; water, 8 gallons; sugar, 20lbs.

BALSAM, IN BOTANY.—The varieties of this flower are infinite, the seed from one plant scarcely producing two alike. Double flowers are the most highly esteemed, especially those striped similarly to the carnation. It is chiefly raised from seed, but may be propagated by cuttings. The seed may be sown between the 1st of March and the 1st of May, very thin in pots, and placed in a hotbed as near the glass as possible. When they are five inches high they should be transplanted into larger pots; and as their growth increases, again transplanted three or four times until they reach their utmost growth. The best soil for balsams is a rich loam, somewhat lighter than that used for growing melons.

BALSAM OF HONEY.—To one pound of honey add a teacupful of vinegar; boil and skim well; when cold stir in one ounce of elixir of paregoric, and bottle. This is an excellent remedy for a cough: *dose*, one tablespoonful three times a day.

☞ Honey, 1lb.; vinegar, 1 teacupful; paregoric elixir, 1oz.

BALSAMIC VINEGAR.—Take a handful each of sage leaves, lavender, hyssop, thyme, and savory; two heads of garlic, and a teacupful of salt. Infuse them in a sufficient quantity of the best white wine vinegar, and after standing for a fortnight, strain and bottle close. This is a simple and efficacious application for bruises, contusions, &c.

BALSAMIC VINEGAR, AROMATIC.—Take rue, sage, mint, rosemary, and lavender, of each a handful, cut them small, put them into a stone jar, pour upon them a pint of the best white wine vinegar, cover close, and let them stand for seven or eight days in the sun, or a warm room; then strain off, and dissolve as much camphor as it will absorb. This liquid, either sprinkled about the chamber of a sick person, or heated with a red hot poker, will refresh the air, revive the patient, and tend to prevent contagion.

BALSAMS are vegetable substances, of a gum-resinous nature, obtained from incisions made in the plant or shrub, or by boiling the twigs in water and skimming off the balsam as it rises. Balsams, with but one or two exceptions, are composed of resin, benzoic acid, and volatile oil. They have an agreeable smell, warm aromatic flavour, and an acrid taste. Those employed in medicine are benzoin, Styrax, Tolou, Peruvian balsam, and liquid amber, Mecca, copaiba, Riga, and Canada balsam, and probably the balm of Gilead, though the last is now obsolete. The medicinal action of balsams is that of a stimulant and expectorant, forming, when in combination with other substances, admirable remedies for coughs, hoarseness, and colds. The Mecca balsam is a valuable gum resin, brought from Arabia, and formerly used as a stimulant to weak digestions, and in some cases of asthma. The *balm of Gilead* is the dried juice of a shrub growing in Abyssinia and Syria, very rare and very valuable, no plant yielding above sixty tears a day. *Riga balsam* is a sort of spruce, very hot and resinous, and not unlike a spirituous turpentine. It was in great repute fifty years ago as a styptic for internal and external bleeding; but is now superseded by the composition called friars' balsam, having the name of the compound tincture of benzoin in the Pharmacopeia.

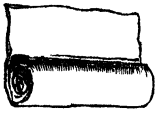
BAMBOO.—A cane which grows in India and China. Although it possesses the combined property of lightness and strength, it is but little used in England as an article of furniture, owing to the difficulty of procuring sufficient quantities for manufacture. The Chinese sailors employ the bamboo as a life-preserver; for this purpose four canes are united in such a manner as to admit of their being readily slipped on and off the body, and the simplicity of the contrivance, together with its efficiency, render it worthy of being more generally adopted.

BANBURY CAKES.—Mix well together a pound of currants cleaned and dried, a quarter of a pound of beef suet, finely minced, three ounces each of candied orange and lemon peel shred small, a few grains of salt, a quarter of an ounce of cinnamon and nutmeg mixed, and four ounces of ratafias rolled to powder; make a light paste of a pound of flour, and fourteen ounces of butter, roll out one half into a very thin square, and spread the mixed fruit and spice equally over it, moisten the edges, lay on the remaining half of the paste rolled equally thin, press the edges securely together, mark the whole into regular divisions of two inches in width and three in length, bake in a well heated oven for half an hour, divide into cakes while still warm, and dust with powdered sugar.

☞ Currants, 1lb.; suet, ½lb.; orange peel, 3ozs.; lemon peel, 3ozs.; salt, few grains; cinnamon and nutmeg mixed, ½oz.; ratafias, ½lb. *Paste:* flour, 1lb.; butter, 14ozs.

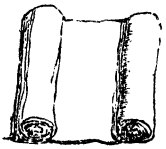
BANDAGES—Are those surgical appliances, made of linen, calico, or flannel, either in long narrow strips called rollers, in belts, fillets, or triangular sections: they are used to keep dressings in a proper situation, to compress blood-vessels, and check dangerous bleeding, to rectify deformities, maintain fractures in their position, and to unite wounds and breaches in the continuity of parts. Bandages of whatever material made should be strong enough to bear extension, and support the part to which they are applied; and sufficiently supple and elastic to fold with ease and yield to the expansion of the tissues below them. They should be

without either seam or selvage, and have smooth unravelled edges. Bandages are either simple or compound. A *simple bandage* is a long narrow piece of linen, calico, or flannel of any length, from three to nine yards, and of a width varying from two to six inches.

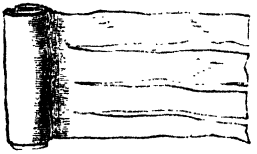


When such a strip is tightly and evenly rolled up, it is called a bandage or roller.

When rolled from both ends, and the two heads meet in the centre, the bandage is called a *double-headed roller.*



Compound bandages are those where several pieces are sewed together in different forms or shapes, as in the more simple one of the letter T, or when the bandage is torn at the end into several strips, in which case it is called a many-tailed bandage.

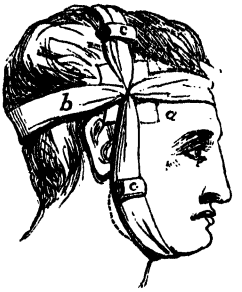


The *handkerchief bandage* is very useful to retain light dressings on the head, or to cover and keep in position bags of ice, or cold applications, where evaporation is not required. For this purpose, take a large silk handkerchief, throw it over the head and face, carry the back ends under the chin, and tie them securely, as at (*a*); then

neatly fold back the loose portion over the face, and making the fold grip the forehead, lead the ends to the nape of the neck, and there crossing, secure them in front of the throat.

In applying a simple bandage to the leg or arm, the envelopment of the limb must commence with the foot or hand, and requires to be performed with neatness and regularity, for if the pressure or tightness is greater in one part than another, the limb will become unevenly marked by swollen and contracted ridges, causing both pain and mischief. Having carefully made a beginning by passing the roller a few times round the foot or hand, making every revolution cover a third of the former, it is in the same order carried up the limb from hand to hand, providing for the increasing size of the part by making a fold of the bandage; turning it sharply back on itself, and laying it smoothly down, each succeeding fold being made in the same line; when the whole limb is enveloped, either pin or sew the end to the folds beneath, or split the end of the bandage, and tie in a knot.

The *application of the double-headed roller*

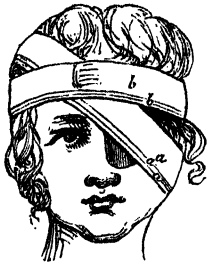


is for wounds or bleeding at the temple. After applying a compress (*a*)—(a piece of lint or linen should be doubled square as many times as is required, and of a size commensurate with the purpose for which it is employed. The operator takes a head of the roller in each hand, and opening the bandage a short length, commences on the opposite side to the wound, and bringing both ends round (*b*) to the compress, gives them a twist, and carrying one over the top (*c*) of the head and the other under the chin (*e*), makes them meet where he began,

and giving another twist, carries them horizontally, one over the forehead and the other round the back of the head, meeting again over the pledget, (*a*) where the same operation is to be repeated, and the ends either tied on the top of the head or pinned over the temple.

Annexed is a *roller bandage* for the eye, to keep the dressings firmly in position; after making a few oblique turns over the eye

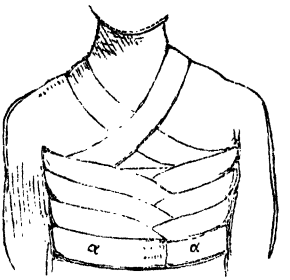
and cheek so as effectually to cover the eye (*a a a*), the bandage is to be doubled back and pinned in its place behind the head, and then carried horizontally round the head (*b b*), to keep the oblique folds in position, and then secured by a couple of



pins over the forehead. Each circle should lie, by the width of a hem, farther back than the preceding one, as shown in the engraving.

The above represents a bandage for injuries to the chin. A piece of calico about six inches broad and a yard long is to be split down each end to within four inches of the centre. The unsplit part is then applied over the dressings on the chin, the outer margin overlapping the point of the jaw; the two outer tails are then carried to the crown of the head and tied, while the inner tails are led in like manner to the forehead, and there secured. The nightcap drawn in the illustration is a precaution to make the grip of the knots more secure.

The next engreving represents a *bandage round the chest for fractured ribs.* This is applied by means of a double-headed roller, which, commencing over the top of the breast bone, is carried round to the back, and then led one over each shoulder, made to cross on the breast, passed under the armpits, cross each other at the back, and gradually tightening as they descend, cross again in front, till a sufficient depth is obtained, when one end is to be pinned over the other (*a a*). But a much simpler and less elaborate bandage for fractured ribs is made out of a broad piece of jean or holland



sewed tightly over in front by a strong needle and thin twine; cross straps, like braces, may be added, to keep the whole in place. When a bandage is thus adjusted it will keep its position, without slackening, for weeks.

The *bandage* T, is generally used for wounds in the groin, or as a suspensory; the cross arms of the bandage on the top of the T are passed and secured round the middle, while the long end is conveyed between the legs, brought upwards, and fastened in the front to the other part.

BANDOLINE. — Boil a quarter of an ounce of Irish moss in one quart of water, and when sufficiently thick, bottle; a teaspoonful of rectified spirit should be put into each bottle to prevent mildew. This mixture is used for the purpose of keeping the hair fixed and smooth.

BANKING.—A system in commerce, in which one party deposits, and another receives, monies and other valuable considerations for safe keeping. The advantages derived by the commercial community generally in connection with banking are numerous and important; but the three leading objects achieved are, a saving of money, labour, and time. It has been estimated, that supposing the whole monetary transactions of Great Britain were obliged to be in actual coin, the cost for manufacturing and the loss by depreciation would amount to no less a sum than three and a quarter millions annually. Again: the expense, labour, and delay incurred in conveying large sums of money from one part of the country to the other would seriously impede the operations of commerce, and raise insuperable barriers to their extension. In short, without the intervention of the process of banking, it would be utterly impossible to conduct satisfactorily one tithe of the business that is now transacted.

The conveniences and advantages of banking are best illustrated by their individual application. Firstly, banks are useful as places of security; money lodged under the owner's own roof is subject to thieves, fire, and other contingencies, against which it is

not always easy to guard. Secondly, there is by this means a great saving of time in money transactions. The man who keeps a banker, instead of having to count out so many pounds, shillings, and pence when he pays an account, simply writes a dratt for the amount, which occupies him only a few seconds. Thirdly, the keeping of a banking account spares the trouble and expense of presenting those bills or drafts which a merchant or tradesman may draw upon his customers, or which he may receive in exchange for his commodities: these he pays into his banker's hands, and has no further trouble than to see the amount entered to his credit in his banker's books. Fourthly, a banker will not only take care of his customer's money, but also of anything else committed to his charge. Thus, leases, policies of insurance, deeds, and other documents, and even plate, may be permanently left in the banker's care, or deposited with him every evening and taken away again on the following morning. Fifthly, the keeping of a banking account furnishes a check upon accounts generally, inasmuch as the banker's book is an authentic record of cash transactions, so that receipts and payments may be traced and vouched for even after a lapse of years, and disputed accounts readily adjusted which could not otherwise be settled.

In addition to these and many other minor benefits, there are also personal advantages derivable from keeping a banker, among which are the following:—It confers upon a person a certain standing in society, and primarily furnishes evidence of substance and respectability. It enables him to give a constant reference to those with whom he is transacting business, and also facilitates his inquiries into the credit of others. And in the event of a person wishing to travel, it also supplies him with available means for doing so in the convenient form of "letters of credit," which not only enable a person to draw the necessary funds at the various places through which he passes, but also acts in some sort as letters of introduction, first to the banker himself, and through him to the most considerable persons of the neighbourhood. There is no difficulty in opening a banking account, but in doing so it is usual to have an introduction through some person who is already a customer of the bank, or to give a reference.

Banks are chiefly divided into two classes, private and joint-stock. A private bank is usually managed by one or more partners, who are limited by law to six in number. At many of these, accounts are kept without either charging the customer for the trouble he gives or allowing interest for the money he deposits. It is usual, however, to make the clerks a present annually, according to the extent of business transacted; and with regard to interest, arrangements may be entered into for its allowance, subject to certain conditions. At many of these banks it is laid down as a rule that a certain sum shall be deposited at the time of opening the account, and that a balance, which the banker deems sufficient, shall uniformly be left in hand.

Joint-stock banks offer, in some respects, greater facilities and advantages than private banks. At these establishments, more particularly than at private banks, there are two kinds of accounts permitted, namely, a drawing account and a deposit account. A *drawing account* may be opened without promising to keep a large balance or even any balance at all, but in the latter case a small sum is charged for commission.

A *deposit account* permits a person to lodge any sum of money from £10 upwards; interest being allowed for the same. The rate of interest is proportioned to that which is charged by the Bank of England for the time being; there is also a difference made between sums below £500 and sums above. When a person goes to a bank to lodge any sum upon interest under £1000, he has simply to hand over his money to one of the clerks behind the counter, and receive a deposit note for the same. This deposit receipt is not transferable, and the depositor must attend in person and withdraw the amount lodged. No portion of a deposit can be withdrawn, so that if a depositor wishes to use a part only, and to let the other part remain, he must withdraw the whole, and re lodge the remainder. Except in cases when monies are deposited for fixed periods, no notice of withdrawal is required, ordinarily any amount may be taken out of the bank immediately. Although no less a sum than £10 is taken in the first instance, any subsequent deposits may be as low as £5. When this is done the old receipt is cancelled, and the interest on it is either paid in money, or added to the amount of the new receipt, as most agreeable to the depositor. The interest is calculated from the day of deposit to the day of withdrawal. Drawing accounts are, under certain conditions, treated as de-deposit accounts, that is to say, interest is allowed upon a specified balance of drawing accounts extending over a certain term, the *minimum* amount of balance during the term being regarded as *the* balance upon which interest is to be allowed.

The books used by a person who keeps a banking account are a pass-book and a cheque book; in the former are entered all the amounts received and paid on behalf of the owner of the book. This book should be frequently made up at the bank, and compared with the account books at home. The cheque book is a collection of blank drafts, intended to be filled in, as occasion may require. When a cheque is drawn, the name, date, and amount should be invariably entered on the foil or counterpart, and these items should be compared with the cheques when they are returned. Both these books should be kept under lock and key, to prevent their being tampered with. All private accounts should be kept distinct from business accounts, and whenever cash is wanted for personal expenditure, a separate cheque should be drawn. When money is lodged at a bank, the total amount in cash, together with the name of the person who lodges it, should be given in with the parcel on a slip of paper.

When a person makes up his mind to open

a banking account, he should, if ignorant of such matters, consult some commercial friend, who may be enabled to give him information and advice on the subject. Public banks issue prospectuses containing the list of their directors, the amount of paid-up capital, and their rules for transacting business. A prospectus may be obtained from each establishment, and the choice determined accordingly. Persons should be very cautious of opening an account with any doubtful concern; for, in the event of failure, the depositor becomes simply a creditor, as in any other commercial transaction, and he is compelled to accept such dividend as the estate may realize. Even if the bank should not fail, its insecure state prejudices the reputation of those doing business with it, their cheques being accepted with distrust, and cashed at the earliest possible moment. Books: *Gilbart's Elements of Banking*, and *Practical Treatise*.

BANK FOR SAVINGS.—A popular establishment designed for the safe keeping of small sums, deposited by the poorer classes. Banks of deposit generally will not receive a less amount than £5 or £10; and the difficulty which persons of very small means experience in accumulating a sum comparatively large to them, as well as the temptations that continually offer themselves to expend the money while attempting to save, render a bank for humble savings a welcome auxiliary to the provident endeavours of the poor man. The management of savings banks is vested in a president, vice-president and trustees, none of whom receive any benefit either directly or indirectly from the deposits received on the produce thereof; neither, on the other hand, are they personally responsible for any misappropriation of monies deposited at the bank. As some sort of guarantee to the depositors, however, there is an act of Parliament ordering all money to be paid into the banks of England and Ireland, and finally to be invested in Bank Annuities or Exchequer Bills; while at the same time all the subordinate officers engaged in the institution are compelled to give good and sufficient security, which becomes forfeited in the event of defalcation.

The following are the principal rules for the regulation of savings banks:—1. Deposits of not less than *one shilling*, and not exceeding *thirty pounds* in the whole, exclusive of compound interest, from any one depositor during each year, will be received and invested until the sum shall amount to *one hundred and fifty pounds* in the whole; and when the principal and interest together shall amount to *two hundred pounds*, then no interest will be payable on such deposit, so long as it shall continue to amount to that sum. 2. The interest allowed is at the rate of £3 0s. 10d. per cent. per annum, which, at the end of the year, will be placed to the depositor's account as cash. Interest is allowed up to the day on which notice of withdrawal is given, but in no case is interest allowed on the fractional part of a pound sterling. 3. In order to withdraw deposits, fourteen days' notice must be given; the money can only be paid to the depositor himself, or to the bearer of an order under the hand of the depositor signed in the presence of the minister or churchwarden of the parish, or a justice of peace for the county, or a manager of the bank. 4. The deposits are entered in the books of the bank at the time they are made, and the depositor receives a book with a corresponding entry therein, which book must be taken to the bank every time a further sum is deposited, also when the notice is given for withdrawing money, and when it is paid. Every person on becoming a depositor is required to make a declaration of his residence and calling, and sign a declaration that he is not benefited in any way, directly or indirectly, by any deposit in any other Savings Bank in England or Ireland, and in the event of such declaration being discovered to be false, the depositor loses all right and title to the deposits so made.

This principle of depositing small savings has been extended still further by the establishment of *Penny Banks*, which, as their title imports, receive the pence of the poor, under conditions somewhat similar to those that govern savings banks generally.

The total number of accounts open at all the Savings Banks throughout the United Kingdom on the 20th November, 1856, was 1,331,369; the total amount owing to depositors, £34,760,933 (of which nearly all was invested with the public debt commissioners). The average rate of interest paid on deposits was £2 18s. 8d. per cent.; the number of payments to depositors, 791,762; and the number of receipts from depositors, 1,543,762. The average amount of receipts from depositors was £5 0s. 1d.

BANK NOTE.—A species of promissory note issued by the Bank of England, payable on demand. Gold and silver can always be obtained for notes upon any day in the week from ten till four. A bank note is a legal tender for the payment of any amount above £5. If a bank note be destroyed by fire or otherwise, and satisfactory proof be given to the directors of the Bank of England of the fact, together with sufficient security to indemnify them in the event of their being afterwards called upon to pay it, a note of equal value to the one destroyed will be given by the authorities.

The *holder* of a bank note is, *primâ facie*, entitled to its prompt payment, and cannot be affected by the previous fraud of any former holder in obtaining it, unless evidence be given to show that he was privy to such fraud. In the words of Lord Tenterden, "If a person take a bill, note, or any other kind of security, under circumstances which *ought to excite suspicion* in the mind of any reasonable man acquainted with the ordinary affairs of life, and which ought to put him on his guard to make the necessary inquiries, and he do not, then he loses the right of maintaining possession of the instrument against the lawful owner." When a person loses a bank note, or has one stolen from him, he should immediately forward the particulars of the note to the Bank of

England, and advertise in the public papers that the payment of the note is stopped; and should it be presented at the bank, notice of the fact will be sent to the loser, and the note detained to allow time for inquiry.

If a person finds a bank note, and after advertising for the owner unsuccessfully, applies it to his own use, he cannot be proceeded against criminally should the owner afterwards establish his claim, but is nevertheless compelled to refund the amount.

The following *precautions in connection with bank notes* are worthy of observation. When a bank note is remitted by letter, one half should be sent first by itself, with a request for an acknowledgment of its receipt; when this comes to hand, the second half may be forwarded. Bank notes should not be left lying carelessly about a room, on chairs, tables, drawers, &c., as they are liable to be swept into the fire, or out of the window; neither should they be carried loosely in the pocket. The best method is to keep them in a pocket-book, and to have them folded in such a manner that the amount at the corner appears outwards, and by thus disclosing its value to the eye, prevents a note of a larger amount being mistaken for one of a smaller. Country bank notes should not be taken in payment in London, unless made payable at some London bankers. When a bank note is taken in payment, the name and address of the person who pays it, together with the date of payment, should be written on it; at the same time a memorandum should be taken of the amount, number, and date of the note. Although notes are forged, which at a casual glance nearly resemble those of the Bank of England, none have yet been counterfeited which, upon due examination, could possibly escape detection. The *genuine bank note* has certain characteristics and distinctive features, which the forger is utterly disabled from producing, not having the requisite appliances. The knowledge of these marks is of the utmost importance to all; and the following hints, if followed, will secure any one from ever taking a counterfeit note for a genuine one: 1. Every genuine note has three edges rough and one smooth. 2. Every note has a water mark. But in reference to this it must be explained that there are two kinds of Bank of England notes, the old and the new. In the centre of both the notes there is a series of waved lines, so arranged as to form a design of themselves. These lines are twenty in number, and the centre are coarser and heavier than the top and bottom. Above and below these lines the words, "Bank of England," appear in the form of a curve, the lettering of the top line in the NEW note being somewhat *smaller* than the bottom. In the new note these words are further from the left hand edge at the top than they are at the bottom. In the water-mark of the old note, the amount appears in letters in the centre, and figures, such as 38 or 48, are introduced on the right hand side. In the new note, the amount up to £50 appears also in letters in the centre, and in shaded figures at each end; in the new note, also, beneath the centre of the waved lines, is the fac-simile of the signature of M. MARSHALL, the present chief cashier of the Bank. In the new note there are several straight lines running horizontally round the entire edges. In the old note these lines run perpendicular at the top and bottom, and horizontal at the edges. All these distinctive marks may be easily seen in both the old and new note by holding them up to the light; and if any one of these characteristics is wanting, the note may at once be pronounced a forgery. Supposing, however, that it is possible to imitate the *mere arrangement* of the several water-marks, the water-mark *itself* may be tested by the simple and ready method of damping it against the tongue: if genuine, it will show more distinctly than before; if spurious, it will become fainter and gradually disappear. The reason of this is, that the forged water-mark is produced by simply pressing the surface of the paper, but the genuine one is produced by dies acting upon the paper when it is in the pulp. In addition to these marks, the paper itself also possesses peculiarly distinguishing features; the feel and colour is unlike that of any other paper, and although extremely thin, the strength is such that it will bear the weight of 50lbs., and sometimes as much as 75lbs.

BANK OF DEPOSIT.—Under this title there are several establishments in London, designed to receive and invest deposits under certain conditions and on peculiar principles. The plan of these banks is to lend the money that is lodged with them upon securities, which, although not immediately convertible, yield a larger amount of profit than ordinary investments. In order to effect these operations, however, it is necessary that the funds employed should be disturbed as seldom as possible, and the board of management accordingly reserve to themselves the power to require six months' notice before the deposits can be withdrawn. In practice this is not often rigidly enforced, the deposit being generally returned in a much shorter space of time—for instance, a week, fortnight, or month, according to the available means of the bank. The rate of interest is ordinarily fixed at 5 per cent. per annum, but at periods when money is either extremely scarce or abundant, the rate is proportionably decreased or increased. The interest is payable half-yearly, in the months of January and July. Accounts may be opened with sums of any amount, and be augmented from time to time at the convenience of the depositors.

BANK OF ENGLAND.—This establishment, justly regarded as one of the most influential institutions of the country, had its origin in a number of private speculators lending a sum of money to Government upon securities connected with the public revenue, and on these principles the business of the bank still continues to be conducted. The affairs of the bank are managed by a governor, deputy-governor, and twenty-four directors, who are elected annually from among the chief merchants and bankers of the city. The commercial

undertakings of the bank are confined to dealings in bills of exchange, gold, and silver. Besides lending money to Government, the Bank of England also assists other banks and traders generally, and is thus enabled to keep several interests bound up in one. The Bank of England, by reason of its pre-eminent position, controls and regulates the monetary transactions of this and many other countries, thereby preventing those fluctuations in the money market which would otherwise prove injurious to commerce. The Bank is empowered to issue promissory notes from £5 and upwards, payable on demand. The total amount of paper issue is limited to £14,000,000 upon securities, and whatever paper may at any time issue over and above this maximum amount of securities, it must have an equal amount of coin and bullion in its coffers. On more than one occasion, when a panic has prevailed, this restriction has been temporarily relaxed, in order to ease the pressure which the money market has been labouring under. The *method of conducting business* with the Bank is as follows:—Drawing accounts are opened with individuals on the same terms as those of a private bank; there is no fixed sum with which a drawing account must be opened, nor is there any fixed balance required by the Bank to be kept at the depositor's credit, as an indemnification for the trouble in answering drafts, &c. A person having a drawing account may have a *discount account*, but no person can have the latter without at the same time having the former. The peculiar privilege of a discount account at the Bank of England is, that it enables a person to obtain cash in exchange for his bills, &c., at a lower rate of interest than is charged through any other medium. When a discount account is opened, the signatures of the parties are entered in a book kept for the purpose, and powers of attorney are granted, authorizing the persons named in them to act for their principals. No bill of exchange drawn in the country under £20, nor London note under £100, is discounted by the Bank in London, nor should the date be longer than three months.

BANKRUPT. — A trader debtor who, being unable to meet his engagements with his creditors, has been proceeded against in the Court of Bankruptcy.

All persons are liable to be made bankrupts who use the trade of merchandise by way of bargaining, exchange, commission, consignment, or otherwise, or who seek their living by buying and selling, or by buying and letting for hire, or by the workmanship of goods; but no farmer, grazier, common labourer, or member of an incorporated society, is liable as such to be made a bankrupt. Immediately upon his being declared bankrupt, he must deliver up to the official assignee, upon oath, all books of accounts, papers, and writings belonging to his estate, and upon every reasonable notice in writing, attend the official assignee, and assist him in making out the accounts of his estate. Before passing his last examination, he may inspect his books at any time, and bring two persons to assist him. After he has obtained his certificate, he is entitled to five shillings per day for settling any accounts, or for assistance rendered in getting in his estate. A bankrupt cannot be arrested in coming up for examination, and if in custody for debt only, he will be discharged, and his person protected; and if arrested afterwards, the officer must discharge him immediately upon taking a copy of the order for protection, under a penalty of £5 per day. The bankrupt, or his wife, may be examined at any time touching his estate, or the disposal thereof, whether he has obtained his certificate or no, and he is liable to be committed for refusing to answer the questions put to him; and in case he is keeping out of the way to avoid being served with a summons, a warrant will be granted for his apprehension. All letters addressed to the bankrupt, the Post Office authorities will be ordered to deliver to the official assignee.

A bankrupt cannot be assignee of his own estate, nor can the solicitor to the commission, or his partner. The assignees may appoint the bankrupt to superintend the management of his estate, or to carry on the trade for behoof of the creditors, and in all or any other respects to aid them in administering the estate in such manner and on such terms as they may think best for the benefit of the persons interested therein.

The Bankruptcy Act of 1869 and the Act Abolishing Imprisonment for Debt, both of which came into operation on 1st January, 1870, extend to England and Wales only, and cancel some of the foregoing rules. The information given in this book under the heads of ASSIGNEE and INSOLVENT is compiled in conformity to the new law.

BANK STOCK.—See FUNDS, PUBLIC.

BANNS OF MARRIAGE.—The publishing of the banns of marriage is the giving public notice of a matrimonial contract, and the intended celebration of the marriage of the parties in pursuance of such contract. The design of the church in publishing these banns is to satisfy itself that the parties so asked may be lawfully joined together in matrimony. In former times all marriages that were not published beforehand in the church were considered clandestine, and were in danger of being invalidated. The banns of marriage are usually published by the officiating clergyman immediately after the second lesson in the Sunday morning service. The concluding words used are, "If any of you know just cause or impediment why these two persons should not be joined together in holy matrimony ye are to declare it." But should any person have an objection, it is not necessary for him to declare it in the face of the congregation, the purpose being equally as well answered by communicating with the clergyman privately at the conclusion of the service.

The impediments to lawful marriage in England are—1. A preceding marriage or a precontract still existing. 2. Relationship either by blood or marriage. 3. Want of

the consent of parents or guardians in cases of minority. The banns of marriage must be published on three several Sundays previous to the marriage taking place. The contracting parties may, if they choose, be wedded on the day following the third publication of the banns; but, if at the expiration of three months they are not married, the banns must again be published three times before the marriage can be solemnized. The banns of marriage must be published in the parish where the parties reside, and if they reside in different parishes the publication must be made in each parish. According to the ecclesiastical law, residence in a parish signifies the dwelling within it for four weeks immediately preceding the day of marriage. All marriages by banns must be solemnized in the place of worship where the publication has been made, and *in no other*. When persons are desirous of having the banns of marriage published, it is necessary to furnish the names, ages, residences, &c., seven days previously. For this purpose it is customary for the man to wait upon the parish clerk, who makes a formal entry of the particulars, and for which he charges a fee of 1s. 6d.—See MARRIAGE, MARRIAGE LICENCE, and MARRIAGE BY REGISTRATION.

BANTAM.—There are numerous varieties of this species of domestic fowl, the most valuable of which are the seabright, the nankin, the game, spangled partridge, &c. Bantams were formerly prized according to the amount of feathers on their legs, but this is now considered their greatest defect. The characteristics of a well-bred bantam are a beak short and curved, the head narrow, with rounded forehead, bright eye, small ear lobes, short back, breast prominent, round full body, and carriage erect. A rose comb is considered essential in most varieties, and always to be preferred. The male bird should not weigh more than twenty ounces, the female not more than fifteen. The mode of rearing and keeping bantams does not differ in any material point from that adopted for the domestic fowl generally. From their size, and the tenderness of their flesh, they may be sometimes substituted for chickens when these are not to be obtained; and their eggs are at all times considered a delicacy for weak and deranged stomachs. Bantams are comparatively inexpensive to keep, and in addition to being prolific layers, they are particularly useful for sitting upon the eggs of partridges or pheasants.—See FOWL and POULTRY YARD.

BARBADOES WATER.—To two quarts of proof spirit add syrup to taste; orange peel, one ounce; lemon peel, four ounces; cloves, half a drachm; coriander, one drachm. Distil in a bath heat till above half is drawn off, and add a little white powdered sugar to sweeten it.

☞ Proof spirit, 2 quarts; syrup, to taste; orange peel, 1oz.; lemon peel, 4ozs.; cloves, ½dr.; coriander, 1dr.

BARBEL.—A fish so called from its having four barbs or beards, two depending from the corners of the mouth, and two rather shorter at the snout. It is also distinguishable by the prominence of its upper jaw, which extends considerably beyond the lower. Its general colour is a greenish brown, becoming yellowish green at the side, and silvery grey on the belly; the dorsal fin is short, and armed with a strong jagged edge, which frequently cuts the net, severs the line, and unless handled with great care will wound the angler. The tail is forked, and of a dull purple colour, the lateral line straight, and marked with minute black dots. It sometimes measures three feet in length, and weighs from fifteen to eighteen pounds. The barbel chiefly abounds in deep and still ponds, or in sluggish rivers that have but little current; it lurks under the shadow of shelving banks, in the mud beds of deep waters, in hollows surrounded by rising ground, and near piles, locks, and bridges. In the hot summer months it occasionally abandons these haunts, and makes excursions into the shallower parts of the stream. A shoal of barbel may be frequently seen distinctly underneath bridges, and counted one by one, and while thus lying, they will suffer themselves to be caught by hooks fixed on a lead, which, dropping among them, fastens one in what is termed a *foul* manner. In winter they are almost in a state of torpidity, and so inanimate, that fishermen push them into their nets with a pole, and bring them to land without a struggle. Their habits are nocturnal, and it is chiefly during the night that they are in motion seeking their food. The barbel inhabits all the English rivers and streams, but in the Thames and the Lea especially they are found in large numbers; so much so, that both at Shepperton and Walton 25*0* pounds weight have been known to be taken in five hours. In the river Lea the range which the barbel takes is from Hackney Marshes to Waltham Abbey, and is seldom to be met with beyond these limits.

The *best kind of rod* is a light one of cane or bamboo, with a whalebone top, the *line* of plaited silk, and the *hook* of a smaller size and stouter materials than those ordinarily used for other fish. The reason for this is, that although the barbel is at times unsuspecting, in bright weather he is extremely shy, which necessitates the whole of the hook being covered with the bait; also, the mouth of the barbel being very small, permits them to suck in a large bait without touching the hook, whereas a small bait on a small hook would entice them to bite readily.

The principal *bait* for barbel are the lob and red worm, the cad or straw bait; greaves are also made use of, particularly in bright weather and in clear waters. When worms are used, they should be two in number; and if greaves, the hook should be carefully covered with an uniform mass. Barbel may also be taken with salmon roe and cheese paste, but these baits cannot be used successfully in strong currents. In the Thames, barbel fishing is generally practised from flat-bottomed

boats, called punts, which are moved about from place to place in the direction of the haunts of the fish.

The *most favourable season* for barbel fishing is from March to November, and the *best time of the day* is either very late or very early. In wet weather they are more easily caught than at any other time, especially if there has been no rain for some days previously. As an edible the barbel is not very highly esteemed; the flesh is coarse and unsavoury, and it is chiefly eaten among the poorer classes and the lower order of the Jews.

BARBEL—To DRESS.—If intended as a principal dish, stew it with wine and water, a slice of butter, onions, turnips, carrots, and parsley, and season with pepper and salt. When done, drain thoroughly, and serve on a napkin, garnished with green parsley. If for a side-dish, streak the sides slightly with a knife, and steep it half an hour in oil, mixed with pepper and salt; then put it on a gridiron, basting it from time to time with the oil that remains, and when done, serve with any appropriate fish-sauce.

BARBERRY CONSERVE.—Take out the seeds from a pound and a half of very ripe barberries; put some water into a deep pan, and drop in the barberries as you seed them; then boil them with one ounce of pounded fennel, until the barberries are broken; afterwards press them in a seive, so as to extract the juice from them, clean the vessel in which the barberries were first placed, and pour into it the juice just extracted from the fruit; add two pounds of boiled sugar, boil the whole together, remove from the fire, and stir with a spoon until the sugar bubbles up, then pour into moulds.

☞ Barberries, 1½lbs.; fennel seed, 1oz.; sugar, 2lbs.

BARBERRY CREAM.—Warm over a clear fire a pint of cream mixed with the peel of a small lemon, half a pound of barberry jelly, and half an ounce of fine isinglass. Stir the whole thoroughly until the jelly and isinglass are well mixed with the cream; then remove from the fire, sweeten to taste, beat it up till frothy, and then pour into a mould to set.

☞ Cream, 1 pint; lemon peel, 1; barberry jelly, ½lb.; isinglass, ½oz.; sugar to taste.

BARBERRY—CULTURE OF.—An indigenous, thorny shrub, bearing bunches of pale yellow drooping flowers in May, which are succeeded by oblong scarlet berries, ripening in September. The barberry is of a hardy nature, and will grow on any kind of soil. It may be *propagated* by seed, or by layers, which should remain undisturbed two years before they are removed. If the shrub stands singly, the gross shoots should be pruned away, and it will fruit better. The barberry is commonly introduced into shrubberies, as it is both useful and ornamental, but on account of its offensive smell, when in blossom, it should never be planted near the house. Respecting this shrub, it is also stated, that corn grown near it becomes mildewed, and proves abortive, and that this influence will extend to the distance of 300 or 400 yards across a field.

BARBERRY DROPS.—Mix the juice of ripe barberries with powdered and sifted loaf sugar till they become a soft paste; heat this over the fire, stirring it all the time, but not letting it boil. Remove from the fire, add a little more sugar, stir well, and deposit it in drops on a tin, or a sheet of paper. Dry the drops in a nearly cold oven.

BARBERRY JAM.—Boil two pounds of refined sugar with half a pint of water until it becomes white, and falls in masses from the spoon; throw in two pounds of thoroughly ripe and sound barberries, and stir the whole over a clear fire for five minutes; skim thoroughly, pour into jars, and cover down.

☞ Sugar, 2lbs.; water, half a pint; barberries, 2lbs.

BARBERRY JELLY.—To one pint of the juice of barberries, add one pound of powdered white sugar; boil down to a jelly. This is a valuable remedy for colds, sore throats, &c.

BARBERRY MARMALADE.—Put a pint of water into a stew-pan, and throw in three pounds of ripe barberries, boil them three several times; then remove from the fire, beat the fruit into a pulp, and put over the fire again until the moisture is absorbed; add to the pulp three pounds of boiled sugar; boil the whole together, stirring well in the meantime, and then pot.

☞ Water, 1 pint; barberries, 3lbs.; sugar, 3lbs.

BARBERRY PICKLE.—Boil the bruised berries of six branches in salt and water; strain, and add one gill of the liquor to a quart of vinegar, with an ounce of salt, a quarter of a pound of loaf sugar, a quarter of an ounce of pounded ginger, and a small portion of horseradish, sliced: boil and strain, then pour it hot over the berries, which have been previously placed in jars; when cold, cover closely with bladder.

☞ Barberries, 6 branches; brine, 1 gill; vinegar, 1 quart; salt, 1oz.; sugar, ¼lb.; ginger, ½oz.; horseradish, a few slices.

BARBERRY—PROPERTIES AND USES OF.—Barberries are of an agreeable, cooling, astringent taste, calculated to create an appetite; and the juice extracted from them when diluted in water is found to allay thirst in fevers. The leaves, in salad, serve the same purposes as sorrel; conserve made from the fruit is good; and it also makes an excellent pickle and preserve. The inner bark, with alum, dyes a bright yellow, and is used in some countries for colouring leather, dyeing silk and cotton, and staining wood for cabinet and other purposes.

BARBERRY TART.—Put into a moderate sized dish three quarters of a pound of barberries, and half a pound of sugar, in alternate layers; pour in a teacupful of water, cover with a light paste, and bake for half an hour.

☞ Barberries, ¾lb.; sugar, ¼lb.; water, 1 teacupful.

BARBERRY WATER.—Put two tablespoonfuls of barberry jam, with the same quantity of the juice of two lemons, and a

gill of syrup, into a basin, dilute with water, and strain through a fine sieve.

☞ Barberry jam, 2 tablespoonfuls; lemon juice, 2; syrup, 1 gill; water, sufficient.

BARBERRIES PRESERVED IN BUNCHES.—Take the finest barberries, without stones, that can be procured; tie them together in bunches of four or five sprigs, and for each half pound of the fruit, boil one pound of fine sugar in water for twenty minutes; skim this thoroughly, throw in the fruit, and let it boil gently for ten minutes; remove from the fire, and when cold, put into jars and cover with parchment. The barberries, thus prepared, make an agreeable garnish for sweet dishes, or for puddings.

☞ Barberries, ½lb.; sugar, 1lb.; water, ½pint.

BARGAIN.—See BUYING AND SELLING.

BARILLA.—The commercial name given to the impure carbonate of soda, obtained by the burning of certain sea-weeds, cultivated for the purpose, or otherwise procured from the ashes of burnt kelp. In either case the product of burning is the same: an ash of a greyish-blue appearance, in irregular masses, or a heavy, coarse powder, which consists, chemically, of carbonate and sulphate of soda, with a small proportion of the base "sodium," and other alkaloid compounds and impurities. Barilla is of different strengths and commercial value, according to the nature of the plants from which it is obtained.

BARITONE.—In music, a male voice, the compass of which partakes of the common bass and the tenor.

BARK, COMMERCIAL USES OF.—Bark is largely employed for a variety of purposes in connection with the arts and manufactures. Oak-bark is applied to hides previously to their undergoing the process of tanning, in order to remove from them the hair, epidermis, and fleshy and fatty excrescences. The substance known as cork is the bark of an evergreen oak which grows in Portugal, Spain, Italy, and the south of France. The barks of certain trees are severally used for the manufacture of cordage, matting, and paper; and lastly, it is put into requisition as a manure, for which it is well adapted, especially when mixed with farm-yard refuse.—See CORK, MANURE, &c.

BARK, MEDICINAL PROPERTIES OF.—This general title is in medical practice understood to refer especially to the rind of a South American tree, and was formerly distinguished by the name of Peruvian, or Jesuit's bark. It has strong bitter qualities, and is extensively administered as a tonic and a febrifuge. In fever, and many other diseases where the frame has become weakened, bark is of eminent utility in restoring strength and vigour; it is also useful in some cases of gout, and in recovery from acute diseases; but in indigestion it is not so serviceable as purer bitters, such as camomile, gentian, and columba. Bark is administered in the form of powder, decoction, infusion, or tincture. Powder is the form in which it is most efficacious, but the compound tincture is the most generally approved preparation, and sufficiently effectual. The extremely bitter taste of this medicine may be disguised by milk, or a strong solution of liquorice; in all cases, the dose should be taken immediately after it is mixed. —See FEBRIFUGE, QUININE, TONIC, &c.

BARKING OF TREES.—The process of stripping off the bark or rind. This operation is performed in England, during the months of May and June; the rising of the sap, at that season, rendering the bark easier of separation from the wood. Good hay weather is good barking weather. Gentle showers are rather beneficial than otherwise, but heavy rains are productive of much evil. During the continuance of wet weather the strong pieces of bark should be so placed, as to preserve the more tender portions dry. The tanner, or merchant, judges of the value of bark by its astringent effect on the palate when tasted, and by the brown colour of the inner rind; both of which properties may be lost through neglect, or by the vicissitudes of the weather.

BARK-STOVE.—The range of temperature which bark-stove plants can endure is from 63 to 81 degrees of Fahrenheit, the instrument being in the middle of the house, at a considerable distance from the furnace, and out of the reach of the sun's rays. When meridian summer is felt, the temperature must keep pace with the increase of heat in the atmosphere. The maximum heat in the house, during July and August, may in general be kept down to 90 degrees, by free admission of air, and by evaporation from the water given to the plants; although the force of the season will sometimes prevail to 95 and 100 degrees.

BARLEY — CULTURE OF. — There are several species of this grain; but the two kinds chiefly cultivated are the spring barley

in the southern and eastern districts; and the winter barley in the North of England and in Scotland. The *best soil* for all kinds of

barley is that of a siliceous, dry, light nature; which must be well prepared by previous harrowings and ploughings, a thorough pulverisation being required, to allow the minute and delicate fibres of the root to penetrate the soil more easily in search of nourishment. The growth of barley is influenced more by the nature of the soil than almost any other grain. This fact will be more clearly shown by the accompanying engravings; illustrating a root of barley taken from a rich light soil; the same from a poor stiff soil. In *choosing the seed* regard must be had to the soil and climate; always remembering that the winter barley is the most hardy, and the spring barley the earliest. If intended for malting the seed should not be sown in the same land where it has grown: and in any case it should be changed constantly: if not, the crop will be both deficient and coarse. The seed should be plump and full-bodied, free from blackness, and of a pale yellow colour intermixed with a bright whitish cast. In dry weather, it will be found of great use to steep the seed in water, for a day before it is sown. The *quantity of seed to be sown* in every acre depends on the character of the soil, the broad principle being, that for poor soils more seed is required and for rich soils less. With a favourable soil, however, properly prepared, the average quantity of seed, is from two to three bushels, according to the method adopted for sowing. The *mode of sowing* is broad-cast or in rows by the drill. It is considered that the latter method economizes the seed, and by being deposited in the soil more uniformly, favours a more certain and regular growth of the crop. The *time for sowing* is generally fixed at the early part of April, but in very dry seasons may be as late as the middle of May: when it is thus deferred a quick growing seed should be selected, and a larger quantity allowed. In England the winter barley is frequently sown in autumn and withstands the severest winters. After the seed is sown, and even after it has grown a few weeks, the action of a light roller will be required to pack the soil round the grain, and to protect the roots when grown from being parched. In the *rotation of crops*, barley succeeds best to turnips that have been fed off by sheep. Tares, potatoes, carrots, mangold-wurzel, peas and beans, are also favourable to its cultivation. *Barley is ripe* as soon as it loses its purple hue, and acquires a light straw colour; or when the ears droop, and fall as it were double against the straw. In *the harvesting* of barley more care is required than with any other white crops, owing to the brittleness of the straw after it has reached a certain stage, as, when it is suffered to stand longer, much loss is sustained by the breaking of the heads. On that account it is cut when the grain is soft, and the straw still retains a great proportion of its natural juices; it consequently requires to remain in the field before either the grain is hardened, or the straw sufficiently dry. Barley *may be cut* either by the sickle or the scythe, and placed in sheaves or shocks. When stacked, air passages should be left in the stacks to prevent their heating and the grain from becoming musty. These passages are usually made by placing a large bundle of straw in the centre of the stack, when its building commences, and as it rises the straw is drawn up after it, leaving a hollow behind. The *separation of the grain from the husk* is performed by three processes, threshing, shaking, and winnowing. Some difficulty is experienced in detaching the beard from the ear. To accomplish this, a machine called a hummeller is frequently had recourse to; or when not used, it is customary to put the grain, accompanied by a portion of threshed straw, a second time through the machine. While this is going on, the heaps should not be suffered to accumulate too largely; the grain should be examined from day to day, it being very apt to heat; and the chaff should be thoroughly cleared up. The *diseases to which barley is subject* are the burnt-ear, smut, blight, and mildew: but its greatest enemy is a wet harvest, as it is so liable to germinate with the least continuance of moisture, that even before it is reaped, the ears are often seen in full vegetation. It is thus rendered unfit for malting, and only of use for feeding fowls and pigs. The *produce of barley* is from 28 to 60 bushels per acre, weighing from 45 to 60lbs. per bushel according to the quality: the average produce being about 32 bushels weighing 50lbs. per bushel. Fourteen pounds of barley yield twelve pounds of meal.—See BLIGHT, BURNT-EAR, MILDEW, SMUT, &c.

BARLEY—PROPERTIES AND USES OF.—As an article of human food barley is less nutritious than wheat or even oats. For the process of malting it possesses certain favouring constituents, more especially a fixed oil of so permanent a nature, as to escape alteration in the progress of fermentation and distillation. Barley also possesses important medicinal virtues, its chief characteristic being that of nourishing without exciting the circulation. The *uses of barley* are various. In many parts of the North of England, and the West of Scotland, it constitutes the bread of the majority of the population. Preparations of it are used as a food for the sick, and also for culinary purposes. In its green state, it forms an excellent spring food for milch cows. Mixed sparingly with the food of horses, it acts medicinally in the place of physic. For sheep it is more nourishing than rye, and comes in earlier. For fattening hogs and poultry it has no equal. Its most important use is its conversion into beer, ale, porter, English gin, whiskey, &c. The *straw* is employed partially for fodder, but chiefly for litter; it is lighter than the straw of oats or wheat and less esteemed than either.—See ALE, BREWING, DISTILLATION, FERMENTATION, MALTING, PORTER, &c.

BARLEY BANNOCKS. — Mix barley meal with water, add a little salt, then roll it out to a paste three quarters of an inch thick, divide it into cakes of the form desired, and bake before the fire or in the oven to a light brown colour.

BARLEY BREAD.—See BREAD.

BARLEY BROTH.—Chop a leg of beef to pieces; put to it three gallons of water, a crust of bread, and a carrot; let it simmer very slowly, till it is reduced to half the quantity; then strain off, and put it into a pot with six heads of celery, cut small; half a pound of barley, a bunch of sweet herbs, two or three sprigs of parsley, cut small; and a large onion. Let this boil for an hour. Then put a large fowl into the broth, and let the whole boil till the broth is very good; take out the sweet herbs and the onions, and serve with the fowl in the middle.

☞ Beef, leg; water, 3 gallons; bread, crust; carrot, 1; celery heads, 6; barley, ½lb; sweet herbs, 1 bunch; parsley sprigs, 2 or 3; onion large, 1; fowl large, 1.

BARLEY CREAM.—Boil a quarter of a pint of pearl barley in milk and water till tender, strain off the liquor, and put the barley into a quart of cream; let it boil slightly. Then beat up the whites of five eggs and the yolk of one, with a tablespoonful of flour, and two teaspoonfuls of orange-flower water. Remove the cream from the fire, mix the eggs in by degrees, and set the whole over the fire to thicken. Sweeten to taste and pour into cups for use.

☞ Pearl barley, ¼ pint; cream, 1 quart; eggs, 5 whites, 1 yolk; flour, 1 tablespoonful; orange-flour water, 2 tea-spoonfuls; sugar, to taste.

BARLEY GRUEL.—Wash four ounces of pearl barley, boil it with two quarts of water and a stick of cinnamon, till reduced to a quart; strain, and add sugar, and wine or spirits, to taste.

☞ Pearl barley, 4oz.; water, 2 quarts; cinnamon, 1 stick; sugar, wine, or spirits to taste.

BARLEY MEAL is the grain reduced to powder. It is remarkably deficient in gluten, and when submitted to the action of water, becomes in a great measure washed away. The starch contained in barley is very similar to that of wheat-starch; but after long boiling in water barley has still a portion of its substance called *hordeine*, remaining undissolved, whilst wheat-flour treated in the same way, is entirely taken up by the water.

BARLEY, PATENT.—The pearl barley ground to flour, and chiefly used for making barley water expeditiously.

BARLEY, PEARL.—The small round kernel that remains after the skin and a considerable portion of the barley have been ground off. For this purpose the spring barley is chosen: it is steamed to soften the skin, dried, and passed between mill stones to take off all the husks, excepting that lying in the deep furrow of the seed, and which causes the short dark line to be seen in pearl barley. Besides its use for broth, it is sometimes boiled in water, and eaten with milk.

BARLEY POSSET.—Boil half a pound of pearl barley in three pints of milk; when sufficiently boiled, add three pints of cream, a stick of cinnamon, and sugar to taste; let it stand until it is lukewarm, then pour in a pint of white wine, beat it into a froth, and serve.

☞ Pearl barley, ½lb.; milk, 3 pints; cream, 3 pints; cinnamon, 1 stick; sugar, to taste; white wine, 1 pint.

BARLEY PUDDING.—Mix half a pound of pearl barley well washed with three pints of new milk, a pint of cream, a quarter of a pound of crystalized sugar, half a nutmeg grated, and half a saltspoonful of salt: put them into a deep pan and bake slightly in a moderate oven: then take it out of the oven, and add four eggs, three ounces of beef-marrow, and two ounces of grated bread, after beating them well together, add them to the contents of the pan, and mix all thoroughly together, bake again to a light brown, and serve.

☞ Pearl barley, ½lb.; milk, 3 pints; cream, 1 pint; sugar, ½lb.; nutmeg, ½ of 1; salt, ½ saltspoonful; eggs, 4; beef marrow, 3ozs.; bread, grated, 2ozs.

BARLEY SUGAR.—Clarify the quantity of sugar required, and boil it to that degree, that upon dipping in a wooden stick and plunging it into cold water, the sugar becomes crisp and will snap; flavour with lemon juice, or oil of lemons; rub a little fresh butter over a stone or marble slab, and pour the sugar along it in narrow strips; twist it to a spiral form while warm; and when it becomes cold, mark it across with a knife, and it will break into any lengths desired.

BARLEY SUGAR DROPS.—Clarify and boil sugar as for barley sugar, and boil with it the thinly pared rinds of one or two lemons. Have ready a large sheet of white paper, covered with a uniform layer of sifted sugar. Pour out the boiled sugar in drops the size of a shilling; when cold, fold them separately in paper, and twist it at the end.

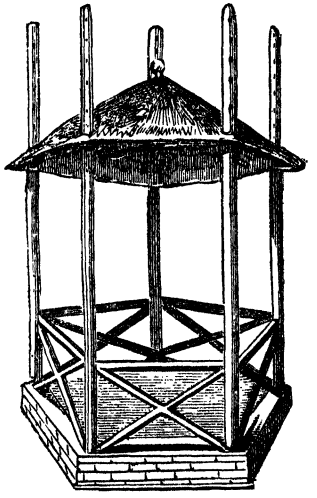
BARLEY WATER.—Wash two ounces of pearl barley thoroughly, and boil it for a few minutes in half a pint of water; then strain the water off, throw it away, and boil the barley in two quarts of fresh water until it is reduced to one quart; strain, and add lemon-juice and sugar to taste. This decoction is extremely nutritious and soothing in cases of fever, inflammatory diseases, pulmonary complaints, colds, coughs, &c.

☞ Pearl barley, 2ozs.; water, 2 quarts; lemon-juice and sugar, to taste.

BARM.—See YEAST.

BARN.—A building where agricultural produce is stored to protect it from the weather and for safety. A barn should not be built unnecessarily large, but of a size sufficient to contain a rick of unthreshed corn of the size that such ricks are generally made on the farm. The size of the ricks, and the capacity of that part of the barn which is to contain the unthreshed corn, should be accommodated to each other; and the size of that part of the barn which is to contain the straw after it has been threshed, if the straw-room is not a separate building, should be accommodated to both. Barns are built of brick, stone, and wood, the latter being generally considered the most suitable for corn. Sometimes the walls are constructed of earth mixed with chopped straw, and if properly made, and covered with a coat of mortar or gypsum, will last many years. The foundations, and for two feet out of the ground, are best made of brick or stone, on account of greater solidity and

protection from vermin. The roof is usually made of either slates, tiles, or thatch: slates are expensive, but the most secure; tiles suffer the snow and rain to lodge and drop through on to the grain; and thatched straw forms a shelter for the rats, mice, &c. The best covering of any is one of reeds, which will last for a long time, keep out the wet, and harbour no vermin. The roof should project considerably beyond the walls, to preserve them dry, and also to admit of carts and waggons with grain, &c., being drawn up underneath. Barns are usually built with two large double folding-doors facing each other, one on each side of the building, for the convenience of carrying *waggon-loads in or out*; *as this constant* heavy traffic, however, is apt to damage the floor, the best mode for unloading is through a *pitch-hole* made in a convenient part of the building. The circulation of air is indispensable for the preservation of corn, the walls therefore should have numerous windows or vent holes let into them to ensure a free current of air. The *situation* of the barn should be on the north or north-east side of the farm-yard, so that the sun at noonday may shine on the threshing-floor; and the leantoos for stock in the yard be thus only open to the south. Another reason is that as the buildings of a farmery generally form a shelter to the cattle-yard, and as the barn is the highest of these buildings, it is most advantageously placed for this purpose, on

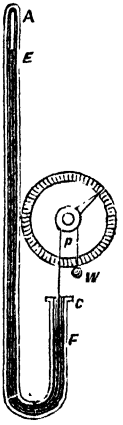


that side from which the coldest winds blow. The *position* of the barn relatively to the other buildings of the farm-yard, depends on the position of the stables, and cattle-houses; it should always adjoin or be central to them, and be close to the rick-yard.

Dutch Barns are in general use in Holland for storing hay. This contrivance, as seen in the foregoing engraving, comprises a floor of a pentagon form, a roof slenderly built and covered with thatch, and upright poles so contrived that they may regulate the height of the roof as required. The purpose of this barn is, that hay may be stored in it, in large or small quantities, the roof being raised or lowered, according to the increase or decrease of the supply; by means of a jack, such as is used for lifting wagons when the wheels are taken off. — See Granary, Threshing-floor, &c.

Barometer. — This philosophical instrument, in general use, indicates the approaching changes in the weather according to the variations in the pressure of the atmosphere. A barometer consists of a narrow glass tube, upwards of 30 inches in length, open at one end and closed at the other. This tube contains quicksilver; and when the pressure of air on the open surface increases or decreases, the quicksilver falls and rises responsively.

The principle on which the mechanism of the barometer acts is explained by *fig.* 1. Thus, A is the glass tube; between A and E there exists a vacuum caused by the weight of mercury pressing downwards. This vacuum renders the barometrical column more sensitive, as there is no internal force to resist or modify external pressure. E represents the height of the column of mercury; C, the open end of the tube; F, the weight resting on the surface of the mercury; P, the pivot over which the string passes, and on which the hand turns; W, the weight which forms the pulley with the other weight, F. This mechanism is placed within a case; the only part of the instrument exposed to view, being a dial-plate engraved with the words "fair, change, rain," &c.; and index hands which point to these words agreeably to the action of the instrument.



The first point of importance in a good instrument is the mercury itself, which, in order to give accurate indications, must be perfectly pure and clean. As commonly sold at the shops, it is adulterated to a great extent with tin lead, zinc, and bismuth, all of which must be removed before the mercury can be advantageously employed. This is effected by agitating it in a glass bottle, containing fine sand or powdered loaf sugar, opening the bottle from time to time in order to blow out the impure air, and afterwards straining it through chamois leather. The metal must then be boiled, to extricate any air it may contain; and when poured into the tube, it should again be heated to boiling-

point, in order to expel moisture, and any particles of air which may still remain. To ascertain whether the vacuum above the column is perfect, the barometer should be held in the hands and suddenly inclined from its vertical position. By these means the mercury will be driven against the top of the tube. If the blow thus given has a hard dry character, the vacuum is in all probability good; if on the contrary, the blow sounds dull and imperfect, it is certain that the space above the liquid contains air.

When accuracy is an object, the barometer should be corrected by a thermometer, since heat, as well as change in the atmospheric density, will influence its indications. For this purpose, a small thermometer should be set in the barometer case, so that the correction can be made, and the proper reading ascertained at once. A barometer should not be exposed to the varying heat of a fire, or of a frequented room, it must also be protected against draughts. The best position is a sheltered nook in a passage; but any tolerably dry and uniformly-heated place will do. With a good instrument at the outset, and a little precaution and care afterwards, the barometer may be rendered a very trustworthy and useful, though not absolutely certain weather-glass. In *noting barometrical indications*, more attention should be paid to the *tendency* of the mercury at the time of the observation, than to the actual state of the column, whether it stands high or low. The following rules of barometric reading are given as generally accurate, but liable to exceptions:—*Fair weather* is indicated by the rise of the mercury. *Foul weather*, by the fall of the mercury. *Thunder*, by the fall of the mercury in sultry weather. *Cold*, by the rise of the mercury in spring, autumn, and winter. *Heat*, by the fall of the mercury in summer and autumn. *Frost*, by the rise of the mercury in winter. *Thaw*, by the fall of the mercury during a frost. *Continued bad weather*, when the fall of the mercury has been gradual during several fine days. *Continued fine weather*, when the rise of the mercury has been gradual through several foul days. *Bad weather of short duration*, when it sets in quickly. *Fine weather of short duration*, when it sets in quickly. *Changeable weather*, when an extreme change has suddenly set in. *Wind*, indicated by a rapid rise or fall unattended by a change of temperature. The mercury *rising* and the air becoming *cooler*, promises fine weather; but the mercury rising, and the air becoming *warmer*, indicates that the weather will be changeable. If the top of the column appears convex, or *curved upwards*, it is an additional proof that the mercury is rising; and fine weather may be expected. If the top of the column is concave, or *curved downward*, it is an additional proof that the mercury is falling; and bad weather may be calculated on.

BAROMETER, CHEMICAL.—This description of storm-glass is very elegant and economical, and from its simplicity and lowness of price, together with the fidelity of its prognostications, is worthy of more attention than it has yet received. This instrument may be purchased at any philosophical instrument maker's, but one that will answer the purpose equally as well may be prepared as follows:—Take two drachms of camphor, half a drachm of pure nitrate of potash (saltpetre), and half a drachm of ammonia; triturate them together until they are thoroughly pulverised, add proof spirits two ounces, and water two ounces. Put the whole into a long narrow bottle, such as eau-de-cologne is sometimes sold in; cork the bottle close, wax the top, and make a very small aperture in the cork with a red hot needle. The bottle may then be hung or placed in any stationary position towards the north, otherwise a shade of some sort must be put up to protect it from the sun, which would soon prove injurious to it, and cause the liquid to become oily. The *indications* which it gives are of this nature:—If the atmosphere be dry, and the weather promises to be fine, the solid part of the composition will be closely collected at the bottom, and the liquid above will be quite clear; but on the approach of *rain*, the solid matter will appear gradually to rise, and small crystalline stars will be observed to float about in the liquid, which, however, will remain otherwise pellucid. On the approach of *winds*, flakes of the composition, apparently in the form of leaves or feathers, will appear on the surface of the liquid, which in this case will seem thick, and in a state of fermentation. These indications often begin to exhibit themselves twenty-four hours before the actual breaking of the storm, and after a short experience in observing the changes of the materials in the glass, not only the degree of violence of the coming storm may be readily estimated, but also its direction, for the quarter of the compass from which the wind blows will be indicated by the solid particles lying more closely to the side of the glass opposite to that whence the tempest comes. During the winter the composition is rendered white by the multitude of small white stars which are continually floating about in the liquid. If during frost, the top becomes covered with a film, upon which small oily-looking drops are seen, the frost will not last long. Should the oil in the glass, on the contrary, increase, and large sharp feathers be seen shooting down from the top, this is a proof that the frost will increase in severity. As a general rule, sharpness in the feathers is a sign of fine weather, and when these have a dull and blunt form, unsettled weather or rain may be expected. In summer, when the weather is warm and serene, the liquid is clear, and the solid matter lies at the bottom of the glass. The leading principle of these indications is the solubility of camphor in alcohol, and its insolubility in water, combined with the well known meteorological fact that the drier the atmosphere, the more aqueous vapour does

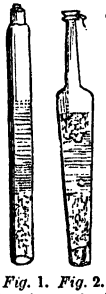
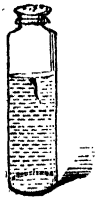


Fig. 1. *Fig.* 2.

it take up, and *vice versâ*; when, therefore, the weather is warm and dry, a quantity of the water of the menstruum is drawn off in the form of vapour, and consequently more of the camphor enters into solution; and, on the contrary, when the air is surcharged with moisture, that moisture begins to be deposited, and the menstruum will again be weakened, and a quantity of the camphor is precipitated from the solution in the form of little crystalline stars. *Fig.* 1 is a storm glass as sold at the shops, price 8*s.* 6*d.*, and is represented as indicating fine weather. *Fig.* 2 is a storm glass prepared according to the foregoing instructions, at the cost of 1*s.* It is drawn as indicating wind and rain.

BAROMETER, LEECH.—Put into a common two ounce phial, three parts filled with pure water, a healthy leech; cover the mouth of the bottle with a piece of linen rag. Change the water in winter once a month, and in summer once a fortnight; and under these circumstances, the leech will give the following prognostications of the weather:—



1. If the weather prove serene and beautiful, the leech lies motionless at the bottom of the glass, rolled together in a spiral form. 2. If it rain, either before or after noon, it is found crept up to the top of its lodgings, and there it remains until the weather is settled. 3. If we are to have wind, it gallops through its limpid habitation with amazing swiftness, and seldom rests until the wind begins to blow hard. 4. If a remarkable storm of thunder and rain is to succeed, for some days before, it lodges almost continually without water, and discovers uncommon uneasiness, in violent throes and convulsive-like motions. 5. In the frost, as in the clear summer weather, it lies constantly at the bottom; and in snow, as in rainy weather, it pitches its dwelling near the mouth of the phial.

BARON, in its general signification, applies to one who holds the rank of nobility next below that of a viscount. *Barons of the Cinque Ports* are the freemen of those ports, and probably so called for the same reason that the citizens of London and other privileged places have that title conferred upon them. *Barons of the Exchequer* are the four Judges in that Court, one being the Chief Baron. — See CINQUE PORTS and EXCHEQUER.

BARONET. — A dignity or degree of honour next below a baron, and above a knight, having precedence of all knights except those of the Garter, and being the only knighthood that is hereditary.

BARQUE. — A ship distinguished by having a gaff topsail instead of the square mizen-topsail.

BARREL.—A cask or vessel for holding liquids, particularly ale and beer. The barrel contains 36 imperial gallons. The term barrel was formerly used to denote in a rough way, other sorts of goods. Thus, a barrel of salmon was 42 gallons; a barrel of soap 256lbs.—See CASK.

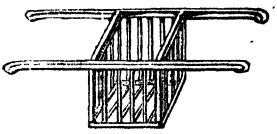
BARRENWORT.—A perennial root growing a foot high, which is found in Yorkshire, Cumberland, and near Edinburgh and Glasgow. It blooms in April and May in a cluster of very handsome and singular drooping flowers, whose dark red petals are contrasted with the pale lemon-coloured nectaries, which are full of honey and very peculiar. It is a native of the South of Europe, and loves shade and moisture, frequenting mountain thickets. It may be propagated by parting the roots.

BARRISTER.—A counsellor admitted to advocate or defend the interests of clients in the courts of law. In order to encourage due freedom of speech, he is not answerable for any matter spoken by him, relative to the cause in hand, suggested in his client's instructions, although it should reflect upon the reputation of another, and even prove absolutely groundless; but if he mentions an untruth, of his own invention, or even upon instructions, if it be impertinent to the cause in hand, he is then liable to an action from the party injured. Counsel guilty of deceit or collusion are punishable by imprisonment for a year and a day, and perpetual silence in the courts. He is privileged from arrest whilst in attendance on the courts.

BARRISTER, PROFESSIONAL EDUCATION FOR.—For this profession all persons are admissible with the exception of attorneys at law, solicitors, writers to the signet, or writers to the Scotch courts, proctors, notaries public, clerks in Chancery, parliamentary agents, or agents in any court; original or appellate clerks in Chancery, clerks of the peace, clerks to any justice of the peace, or of or to any officer in any court of law or equity, or person acting in the capacity of any such clerk. No one of these excepted persons can be admitted to the bar until he has ceased to act in any of the capacities mentioned. There is no limit as to age except in the Inner Temple, where no member is admitted under fifteen. Every candidate for admission is required to furnish a written statement of his age, residence, and condition in life, which must be signed by two barristers, and the treasurer of the society, or in his absence, by two benchers. After admission the law student commences "keeping his terms." Every member of the four societies, of the Inner Temple, Middle Temple, Lincoln's Inn, and Gray's Inn; must keep twelve terms before being called to the bar, which will occupy a period of three years except under extraordinary circumstances. The student is also required to attend the lectures of two readers during one whole year, or satisfactorily to pass a public examination. There are also classes for students in which instruction is given in a more detailed and personal form; every student is permitted to attend these classes regularly, and the fees do not exceed three guineas a year. Each student proposing to submit himself for examination previously to being called to the bar, is required to send his name to the treasurer of the Inn of

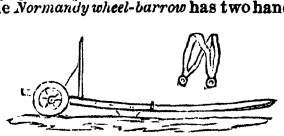
Court to which he belongs. The examination lasts three days, and is conducted partly by written questions, and partly by oral examination. A student may present himself at any number of examinations, until he obtains his certificate. No student can be called to the bar before he has attained the age of twenty-one. The expenses attending the profession are very heavy; during studentship between £200 and £300 a year is at least required; nor does the expenditure cease here. A call to the bar costs £100, and even when admitted, it is necessary that a barrister should possess a private income of £300 or £400 a year; as the chances of immediate employment are but small, and yet notwithstanding he must maintain his position, and provide for contingencies. Books: see ATTORNEY.

BARROW.—An agricultural implement, the common kinds of which are universally well known. In modified forms, however, it is used for various specific purposes. The *halm-barrow* is an open box or case, of



wicker or other work, placed on, or suspended from a pair of handles, sometimes made with a wheel and sometimes without; it is useful for carrying litter, leaves, haulm, spray, prunings of hedges, &c.

The *Normandy wheel-barrow* has two handles



or trams nearly fifteen feet in length, by which, when loaded, nearly all the weight is thrown on the axle; so that the operator, who usually wears a shoulder-strap, has simply to propel the load before him.

The *flower-pot barrow* is a kind of hand-

barrow, on which plants, pots, or leaves are placed, it is useful and almost indispensable for transporting plants, &c., from one part of the garden to the other.

The *hand-barrow* is a frame of wood carried by two levers which form four handles; and is used, in gardening, for removing large pots or tubs of trees, in blossom or in fruit, which wheeling might shake or otherwise injure.

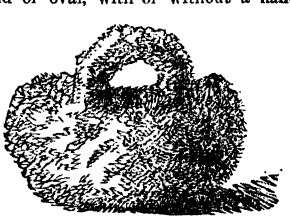
BASIL, SWEET.—A culinary aromatic exotic used in salads and soups; the peculiar flavour of mock-turtle soups is chiefly derived from this valuable pot-herb. There are two species commonly cultivated. The sweet-scented and the dwarf-bush, both annuals, and originally coming from the East Indies. They thrive best in a rich light soil, entirely free from any overshadowing body; but they require, especially for the early plants, a shady border. In wet earth the seed always rots.

BASILICON OINTMENT is made by melting together over a slow fire certain proportions of lard or oil, and yellow wax, and stirring slowly in powdered rosin, till the whole is smoothly incorporated. This ointment was formerly much used as a cure for chronic ulcers, and wounds of a sluggish or indolent character. A better practice now prevails, ointments and all greasy applications being nearly expunged from the vocabulary of medical compounds.

BASIL VINEGAR.—Sweet basil is in full perfection about the middle of August, when the fresh green leaves should be gathered and put into a wide-mouthed bottle. Cover the leaves with vinegar, and let them steep for ten days. If it be wished to have the infusion very strong, strain off the liquor, put in some fresh leaves, and let them steep for ten days more. A small portion of this mixture forms an agreeable addition to soups and salads.

BASKET is a well known receptacle made principally of the interwoven twigs of willow, osier, birch, &c.; but frequently also of grass, rushes, splinters of wood, straw, &c. —See FISHING BASKET, GAME BASKET, GARDEN BASKET, MARKET BASKET, &c.

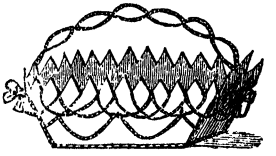
BASKETS, FANCY.—A great variety, at once ornamental and useful, may be made from various materials. The *moss basket* is made of a foundation of pasteboard, shaped round or oval, with or without a handle



according to fancy. It should be neatly lined, and covered on the outside with pale green paper, in order that any little interstices among the moss may not appear incongruous. The handle should be sewn on the outside, so that the parts where it is joined may be hidden by the moss. A great variety of dry mosses may be mingled together, and will thus produce a very pretty effect. They may be fastened on with gum, glue, or paste; but, as they are apt to fall off occasionally, the safest method is to sew them on. An *imitation of moss baskets* may be made of unravelled worsted, of different colours, sewn on thickly in bunches. Each bunch should comprise three or four shades and colours, and so mingled as to

avoid any striped or spotted appearance. The varieties of green, brown, and light blue, are the most appropriate. The effect of these baskets is rendered still more pleasing by placing in them coloured birds' eggs, real or imitated.

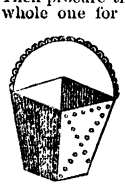
The *Allspice Basket.*—Allspice berries should be previously soaked in brandy to soften them, and then have holes made through them. They are then strung on a slender wire, and twisted into any fanciful form. A



gold bead between every two berries gives a rich appearance to the basket. Around the top are sometimes twisted semicircles of berries, from which are suspended festoons of berries, also strung on silk and drooping over the outside. The foundation may be made of any material, ornamented and lined agreeably to taste.

Rice or Shell Baskets may be made of a pasteboard frame, either white or coloured, and neatly lined; it should then be covered with grains of rice, or very small delicate shells, fastened on with gum, and arranged in picturesque figures.

The *Wafer Basket* is made of card-board and bound neatly at the edges with gilt paper. Then procure the smallest wafers, reserve a whole one for the ground-work, and cut another in halves; wet the edge of one of the halves, and stick it upright through the middle of the whole one; cut the other half into two straight quarters, wet the two sides, and place them on each side of the half wafer; this will form a kind of rosette. When a sufficient number is prepared, wet the bottoms of the wafers that are whole, and fasten them on the basket in any form you please. The *whole* wafers should be of one colour, and the rosette of another. If stars are preferred to simple rosettes, they can be made by placing six quarters around the half instead of two. The wafers should be of one size, and cut perfectly even. The handle may be decorated in the same manner as the basket; but, if it be liable to much handling, it will be more suitably ornamented with ribbon.



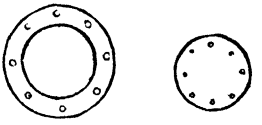
The *Alum Basket.*—Dissolve alum in a little more than twice as much water as will be necessary for the depth of the basket, handle included. Put in as much alum as the water will dissolve; and when it will take no more, pour it into a pipkin, and let it slowly boil until it is nearly half evaporated. The basket should be then suspended from a little stick, laid across the top of the pipkin, in such a manner that both basket and handle will be covered by the solution. It must be put by carefully in a cool place, where not the slightest motion will disturb the formation of the crystals. The framework of the

basket is usually made of thin wire woven in and out, but a common willow basket will do as well; whether it be wire or willow, a rough surface must be produced by winding every part with thread or worsted. Bright yellow crystals may be produced by boiling gamboge, saffron, or turmeric, in the solution; and purple crystals by a similar use of logwood. Blue crystals may be obtained by preparing the sulphate of copper, commonly called blue vitriol, in the same manner that alum is prepared. In order that the crystals may be clear and unblemished, the solution should be strained through muslin before it is boiled. In making this basket, success in some measure depends upon chance; for the crystals will sometimes form irregularly even when the greatest care is taken.

The *Feather Basket.*—Select any variegated feathers and cut off the quill part with the exception of the smallest portion. Make the bottom of the basket of cardboard; at the edges perforate it with little holes, through these holes pass the feathers, taking care that the quill part is cut perfectly even, so that the basket may stand well. For the top, bend a piece of wire into the same shape as the bottom, but rather larger, wind it round with coloured sewing-silk; then fasten the feathers to it at regular distances. A wire or pasteboard handle may be made, if fancied, covered with small feathers.

The *Straw Basket.*—Procure a small bundle of straws of an equal size; cut them the length that you intend the height of your basket to be; for this purpose sharp scissors must be used, and the straws handled most delicately: for if the straws are broken or split, they are useless. Cardboard must form the top and bottom of the basket; the bottom must be whole, and the top cut out in a circle about half an inch wide near the edges; holes must also be made for the reception of the straws. If it is desired to have the basket of the same size top and bottom, the cardboard must be of the same

size, but if it is wished to have the bottom smaller than the top, the cardboard should be cut thus. It will be seen that although



the bottom is smaller than the top, yet each must have the same number of holes in them. The number of holes should be *even*, or else when the ribbon is passed in and out two straws will come together. The straws should be put through the holes, and if any of them are found loose they should be fastened with gum; let them protrude half an inch beyond the cardboard, both at top and bottom. The edges of the cardboard may either be bound with gilt paper, or cut into vandyke or other forms. After the straws are fitted, take very narrow ribbon of any colour, and pass it over and under the straws alternately; always observing that the straw passed *under* in the *first* row must be passed *over* in the *second* row, and so on. Handles of cardboard may be made to correspond with the top and bottom; bows of ribbon being attached to conceal the fastening. The basket may be further beautified by painting the bottom and margins.

The *Lavender Basket* is made somewhat in the same way as the preceding, from lavender stalks, and possesses the further advantage of emitting an agreeable perfume.

The *Clove and Bead Basket.*—Take whole cloves, and soak them either in hot water, brandy-and-water, or brandy alone; with a fine shoemaker's awl, called a "closing awl," or with a large needle having a cork fixed at the end to protect the hand, perforate each clove, and string them on twelve pieces of fine wire six inches in length passing two wires through each clove. When you have put two cloves on to each double wire, put on a bead of any colour to fancy; then a single clove on a single wire, as it passes out from the bead; then pass each wire through a bead with the wire coming upon the left or right hand side next to it; then another clove and a bead at the end, unite the two wires by twisting a little loop in them, so that they fasten in the manner of hook and eye. The smaller these fastenings are, the neater the basket will be; and for the purpose of cutting, and turning the wires, it will be found convenient to have little cutting nippers, with a sharp point on one side, and a round one on the other, such as watchmakers use. The bottom of the basket is similarly formed, with the exception that only *four* wires are required. When the stand is made, it is attached to the basket in the same manner as the wires are joined at the ends.

The *Paper Ball Basket.*—The frame is made of cardboard; little rolls of paper about the thickness of a quill, and the length of the nail, are fastened on in every direction, with gum or paste, in the same manner as shells. The papers, in order to be effective, should be differently coloured.

The *Berlin Wool Basket* may be made of any pattern or shape according to fancy: a very pretty one, adapted for the library or work-table, is as follows:—Draw four separate branches of roses on a wicker basket, and embroider them alternately with three shades of rose colour, and three shades of crimson berlin wool; except that in the respective flowers the brightest shades should be of floss-silk. The foliage in green. The ground of white wool or silk. The basket should be lined with green or cherry colour sarsanet, the top trimmed, and the handles covered with white chenille to correspond.—See BEAD WORK, WAX, &c.

BASKET, WASTE.—This is a convenient article to have in a room where writing, needlework, or other employments are being carried on, for the purpose of receiving all the scraps and remnants that are considered as useless; by this means the apartment is not only kept tidy, but anything that has been hurriedly or accidentally thrown aside may be easily recovered.

BASSET.—A game with cards in which the players are a dealer or banker; his assistant, who supervises the losing cards; and the punter, or any one who plays against the banker. The rules of the game of basset are as follows: 1. The banker holds a pack of fifty-two cards, and having shuffled them, he turns the whole pack at once, so as to discover the last card; after which he lays down all the cards by couples. 2. The punter has his book of thirteen cards in his hand, from the king to the ace, and out of these he takes one card or more at pleasure, upon which he lays a stake. 3. The punter may, at his choice, either lay down his stake before the pack is turned, or immediately after it is turned, or after any number of couples are down. 4. Supposing the punter to lay down his stake after the pack is turned, and calling 1, 2, 3, 4, 5, &c., the places of those cards which follow the card in view, either immediately after the pack is turned or after any number of couples are drawn; then, 5. If the card upon which the punter has laid a stake come out in any even place except the first, he wins a stake equal to his own. 6. If the card upon which the punter has laid a stake come out in any even place except the second he loses his stake. 7. If the card of the punter come out in the first place, he neither wins nor loses, but takes his own stake again. 8. If the card of the punter come out in the second place, he does not lose his own stake, but only one half; and this is the case in which the punter is said to be *faced*. 9. When the punter chooses to come in after any number of couples are down,

if his card happen to be but once in the pack, and is the last of all, it forms an exception to the general rule; for, although it comes out in an odd place, which should entitle him to win a stake equal to his own, yet he neither wins nor loses from that circumstance, but takes back his own stake.

BASSINET.—The cradle into which an infant is usually put immediately after it is born. It is simply a basket with a hood to it which may be made to fall backward, if required. It is generally lined with glazed calico, with a soft mattress, and a small soft

pillow. It is very convenient for carrying about a child without awaking it, and is much warmer than a large cradle or a bed. The position of the bassinet should be regulated according to the prevailing temperature; in winter it should be protected from draughts of cold air, and in summer it should not be too closely covered up.

BAST MAT.—A material woven from the inner bark of trees, generally of the lime. It is used in horticulture, for a great variety of purposes: for protecting wall trees by being hung before them; for sheltering espaliers and standards by being thrown over them; for protecting more delicate shrubs by covering an envelope of hay or straw; and for fostering tender plants coming through the ground, by being spread on the surface, or supported on hooped framing. It is used to cover hot-beds, hot-houses, handglasses, &c., to shield plants from the wind or shade them from the sun.

BASTING ROAST MEATS, &c.—A well known culinary operation, and one that forms an important feature in the roasting of meats. As the natural juices become dried by the action of the fire, they require to be replaced by artificial ones; were it not for this, the meat would be rendered dry and comparatively tasteless: on the other hand, meat should not be too much basted, or it becomes sodden and loses its firmness. A certain degree of intelligence is required to be exercised in this particular. As a general rule, mutton should be basted sparingly, beef moderately, and veal continuously. Basting may be made simply of a mixture of butter, salt, and water; but a more savory kind is made from minced sweet-herbs, butter, and claret mixed together.

BAT, CRICKET—Is generally made of willow. Its whole length should not exceed thirty-eight inches. The blade should be about twenty-eight inches long, commencing at the shoulder with a width of four inches, and gradually increasing downwards to four inches and a quarter. The face of the bat should be perfectly smooth and slightly convex. The back should be more acutely rounded than the face. The handle should be thickest near the shoulder, but not thicker at any part than the hand can grasp perfectly. A bat, when put away, should be rubbed with linseed or sweet oil, to preserve it from splitting: it should also be kept in a place that is neither too damp nor too dry; for, when exposed to a different temperature, it is liable to crack.—See CRICKET.

BAT-FOWLING.—See BIRD-CATCHING.

BATH BRICK is formed from a mixture of sand and clay deposited on the banks of the river Parret, at Bridgewater. It is employed in almost every English household for the purpose of cleaning knives and forks, &c. For the more precious metals, such as silver and gold, Bath brick should never be used, as its particles scratch the surface.

BATH BUNS.—Beat together in a bowl a quarter of pound of flour, four yolks, and three whites of eggs, with four spoonsfuls of solid fresh yeast, set before the fire to rise; then rub into a pound of flour, ten ounces of butter; add half a pound of sugar, and two ounces of carraway comfits; mix them well in, roll out into the required shape, strew with carraway comfits, and bake on tins.

☞ Flour, ½lb; eggs, 4 yolks, 3 whites; yeast, 4 spoonfuls; flour, 1lb.; butter, 10ozs.; sugar, ½lb.; caraway comfits, 2ozs.

BATH CAKES.—Take two pounds of moist sugar, a quarter of a pound of butter, four pounds of flour, and a pint of water; mix thoroughly, and roll into a paste; divide with tin cutters; wash over the tops with milk, and insert a few currants; set aside for a quarter of an hour, then bake in a brisk oven.

☞ Sugar, 2lbs.; butter, ½lb.; flour, 4lbs.; milk and currants, as required.

BATH CHAIR—A species of small carriage drawn by the hand, especially adapted for invalids, cripples, and aged persons. The peculiar construction of the bath chair admits of its being brought into the hall or even the room, so that a person may be placed comfortably in it, without being exposed to the cold. It may also be drawn round a garden-walk, or on a lawn, enabling a person to have the advantage of carriage exercise within sight of his own home. It should also be remembered that bath chairs are privileged to enter on any public parks and gardens from which carriages drawn by horses are excluded. Bath chairs, together with men to draw them, are generally let out on hire at livery stables.—See INVALID CHAIR.

BATHING.—The great importance of bathing must be obvious, when it is considered that the well-being of the whole frame depends in a great measure on the healthy condition of the skin. It is, therefore, absolutely necessary, in order to ensure perfect health, that the entire surface of the body should be at frequent intervals subjected to the action of water. Bathing may be divided

into various temperatures, cold, hot tepid, &c., and be applied in a variety of forms.

THE COLD BATH.—The temperature of the blood and interior parts of the body is about 98 degrees, while that of such parts of the surface as are usually clothed is about 90 degrees. If, therefore, the body be immersed in water below 90 degrees, there is a sensation of cold, a shrinking and paleness of the skin, a hurried respiration, and a violent beating of the heart. Provided the bather be in good health, these symptoms are almost immediately succeeded by a universal sensation of warmth, which rapidly increases to a certain point, so as to cause the surrounding water to feel comfortably warm. This is called the reaction of the system, and results from the increased activity which the various organs of the body exercise to counteract the first shock produced by the cold water. The cold bath, when used by persons in health, increases the tone of the stomach, strengthens the digestive organs, and by diminishing the sensibility of the whole system, particularly of the skin, renders the body less susceptible to atmospheric impressions from cold, wet, and sudden changes of temperature. If, after coming from a cold bath, no glow or pleasurable sensation is experienced, but, on the contrary, the bather feels dull and chilly, sick at the stomach, oppressed with headache, languid, drowsy, and averse to food and exercise during the remainder of the day, it is certain that cold bathing does not agree, and it should be immediately discontinued. It should also be studiously avoided in all those cases where the heat of the body is below the natural standard, where profuse perspiration exists, where there is any considerable degree of fulness of the blood-vessels, or a determination of blood to the head, or where there is a predisposition to inflammatory affections of the lungs. *The interval for a person to remain in a cold bath*, should not at any time, and in the most robust health, exceed ten minutes, or a quarter of an hour; and in winter not more than five minutes. The *best period of the day for taking the cold bath* is about two hours after breakfast. There are exceptional cases where persons bathe before breakfast, but as a general rule it should be avoided. *Out-door bathing* may be best indulged in from June to September. *In-door bathing* may be continued throughout the year, with the precaution that the thermometer in the apartment stand at from 50 to to 60 degrees of Fahrenheit, and that the water be exposed to this atmospheric temperature at least six hours (when that is possible), or be raised to from 45 to 55 degrees, if below it. In almost all cases the use of *the cold bath for new born, or very young infants, is objectionable.*

THE TEPID BATH is more important for the purpose of cleanliness, and the general preservation of health, than as a remedy for disease; although in the latter case it is occasionally very valuable. The range of temperature extends from 85 to 92 degrees; and it is sometimes employed previously to the cold bath, the bather lowering the degree of heat gradually each time, until he arrives at that of the cold bath. For the mere purposes of ablution the tepid bath is the best, choosing the particular degree that is most desirable. It is very refreshing after fatigue and travelling, and is equally serviceable occasionally to persons of sedentary habits.

THE WARM BATH has a temperature ranging from 92 to 98 degrees; when the heat is 92 degrees, though the first effect is slightly stimulating, yet, when time is allowed for that influence to subside, it is gradually succeeded by soothed and tranquillized sensations throughout the whole nervous system. At a higher temperature, but under 98 degrees, it raises the spirits, increases the pulse, and invigorates the whole frame. The warm bath modifies the texture of the skin; excites the pores to increased action, and equalizes the circulation of the blood. It is especially grateful after excessive muscular action, fatigue, or travelling. It is also useful after long mental excitement, and in a variety of nervous and spasmodic disorders. For infants during teething, it constitutes an admirable remedy; and in cramp, measles, and other complaints incidental to infancy, it is of the greatest benefit. The temperature of a warm bath for children should not exceed 96 degrees: generally from 92 to 94 degrees will be found the safest range. A child should not remain in the warm bath longer than five minutes, and as a general rule two or three minutes will be sufficient. On removing the child, it should be carefully dried and wrapped in a blanket warmed to equal heat.

THE HOT BATH is exceedingly valuable in relieving certain diseases, chiefly by producing perspiration, and thus acting on the circulating medium. It has a remarkably tranquillizing effect upon the nervous system, producing a strong tendency to quietude and sleep. It also acts as a powerful anti-spasmodic, and by determining the blood to the surface of the body, tends to relieve inflammation and congestion. In chronic affections arising from the action of cold and damp, and from exhausted energy; in stiff joints, rheumatism, neuralgia, diarrhœa, and numerous other affections, its effects are invariably beneficial. The temperature of the hot bath ranges from 98 to 112 degrees. It is a powerful stimulant, and should never be used by a person in perfect health. The *period of immersion* should not exceed ten or fifteen minutes.

THE DOUCHE BATH consists of throwing a stream of water with more or less force on any desired point. It is frequently used in sprains, chronic rheumatism, stiffness of the joints, &c.; the advantages derived from it depend upon the amount of percussion upon the part affected. This form of bath possesses the merit of great simplicity, as it may be applied from the mouth of a pump, the spout of a tea-kettle, or any other domestic contrivance, by which the rapid and uniform descent of a body of water can be effected.

THE SHOWER BATH, independently of its general invigorating effects, is frequently employed with advantage where there is a tendency of blood to the head, giddiness,

apoplexy, &c.; in cases of debility and nervousness also, it will, when taken with proper precautions, often be found highly beneficial. The morning, immediately after rising, is the time best adapted for its use; but it may be employed at any time excepting the first hour after a repast. The water may be either cold or tepid, and an addition of salt is sometimes an improvement. When necessary the feet may be immersed in warm water, and if it is desired to keep the head dry while the body is submitted to the action of the water, an oil skin cap may be put on. This bath should never be resorted to by weak and delicate persons without previous medical advice.

THE VAPOUR BATH is of two kinds; the steam chamber, as employed in the East; and the solitary bath for one person, as used in this country. This bath is found to be efficacious in many chronic diseases, in rigidity or insensibility of the skin, and in such cases it is preferable to the ordinary warm bath.

MEDICATED BATHS are of many kinds, almost every substance which acts upon the body internally, being capable of introduction to it through the instrumentality of the skin. Usually they are confined to three or four in number. 1. The *Chalybeate Bath*, an artificial production of the natural springs found on the continent. It is made from the scoriæ of iron, either by throwing them into hot water as they come from the furnace, or by heating them anew, and exposing the body to the action of either the fluid or its vapour. 2. The *Sulphur Bath*, formed by confining the body, save the face and head, in a chamber heated to 96 or 97 degrees, and exposing it to a stream of sulphuric acid gas from beneath. 3. The *Nitro-muriatic Acid Bath*, made either like the preceding, or simply by mixing nitro-muriatic acid with water, and applying the solution with a sponge. It has been found useful in affections of the liver, but great caution must be observed in its application, as its fumes are most deleterious to the lungs. 4. The *Ammoniacal Bath*, made by the addition of a pound of carbonate of ammonia to an ordinary warm water bath. In many diseases of the skin, particularly those of a scorbutic order, it will be found extremely beneficial, the properties of ammonia being in a high degree purificative.

SEA BATHING.—The most natural and beneficial mode of cold bathing is that afforded by the ocean, its waters possessing a peculiarly bracing influence, which imparts a tone and vigour to the system. Some precautions however are necessary. No infants or children of tender years should be immersed in the sea; as the shock occasioned by the cold temperature, as well as the terror imparted, both act prejudicially. Children above six years of age may be bathed with less precaution; but even then they should not enter the water when their bodies are either cold or hot. A warm glow on the skin, produced by a gentle walk, is a test of the condition most advantageous for entering the water. For children two or three plunges will suffice; and those of more advanced years, should never remain above ten minutes or a quarter of an hour in the water. An hour or two about noon will usually be found *the most advantageous time* for sea-bathing; as the sun's rays then exert a sufficient influence upon the temperature of the water, without producing any injurious effect upon the head of the bather, especially if it be kept cool by frequent submersion. Sea bathing at the commencement should be practised twice or thrice a week. Afterwards it may be used daily with advantage: but not oftener. It may be continued for one, two, or three months, but seldom with advantage beyond the latter period. A flowing instead of a receding tide is to be preferred as more agreeable, salubrious, and less dangerous; the water being purer before it has commingled with the refuse of the beach, and the person in less danger from the reflux of the wave. Persons of consumptive and scrofulous tendency should resort to sea bathing with extreme caution, and not without medical advice. Adults upon entering the sea, should immerse the head immediately, on account of the apoplectic tendency that might otherwise be induced. Persons in more advanced life should not attempt sea bathing without medical advice; and even then the period of immersion should never exceed five minutes.

The following are *general precautions to be observed in bathing*. Do not bathe the lower extremities first. The immersion should be complete at once. Never leap into deep water feet foremost and in an erect position. The best method is to drop into the water, the body and limbs being bent together. Do not stand still or remain motionless in the water. Do not remain long enough in the water to become chilled. Leave the water on the first indication of cramp. Apply a brisk towel all over the body as soon as you leave the water; and dry yourself thoroughly and as expeditiously as possible. Dress yourself as soon as you are thoroughly dry. Do not indulge in violent exercise immediately after a bath, but take a brisk walk, just sufficient to heat you.

BATH PUDDING.—Boil six ounces of ground rice in a pint and a half of cream till tender, and set it to cool. Add to it six yolks and two whites of eggs well beaten, with half a pound of powdered sugar, half a pound of butter, forty sweet almonds blanched and pounded, and two tablespoonfuls of brandy. Mix all the ingredients thoroughly together, and bake for twenty minutes.

☞ Ground rice, 6ozs.; cream, 1½ pints; eggs, 6 yolks, 2 whites; sugar, ½lb.; butter, ½lb.; sweet almonds, 40; brandy, 2 tablespoonfuls.

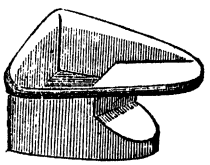
BATHS, CONSTRUCTION OF.—*The Cold Bath* may be introduced into any apartment of the house, but it is preferable that the room should be light and airy; and as a matter of convenience that it should be situated near both the sleeping apartment and the dressing-room. It should also be fitted with two pipes, one by which the water is supplied from the main source, and the other admitting of the waste water being

carried off. The size of the bath should be sufficiently large to allow of a free exercise of the limbs, and in order to ensure perfect cleanliness it should be lined with white enamel. *The Warm Bath* may be most advantageously introduced into ordinary establishments by having them fitted up in some room on a level with the kitchen or scullery floor, so that when the bath is wanted, the water heated in the copper of the kitchen or scullery may be readily conveyed to the bath by pipes or otherwise. Warm baths generally should be of a large size and with a wide opening, so that the body may not be constrained to one position, which is especially irritating and irksome to invalids.

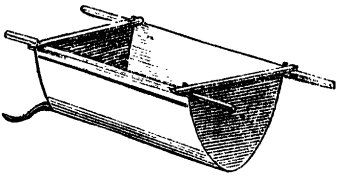
The Hip Bath is fitted to receive the hips only, and is sloped in such a manner as to afford support to the back. It is frequently recommended to weak and delicate persons, for daily use immediately after rising, and is at all times refreshing and invigorating. It has the advantage of requiring very little water, as the bulk of the part immersed raises the water on each side so as to cover the hips; it is also easily removed from place to place, or from room to room, and by means of a ring attached to it may be hung up when not in use.

The Leg Bath is extremely well adapted for immersing the legs and feet especially when the lower limbs are affected with any rheumatic or chronic complaint, for this bath not only concentrates the heat near the parts immersed, but alsoprotects them from the action of the cold air. The leg bath is usually made as high as the knee, with a projection at the bottom to allow room for the feet.

The Foot Bath is generally a tin or earthenware vessel of an oval form and sufficiently large to admit of the feet with ease. An improved kind, with a rest for the foot for drying it, as shown in the annexed engraving. The bathing of the feet in hot water is a domestic remedy for many ailments, and may generally be resorted to with safety. In cases of cold, inflammatory diseases of the and head throat, determination of blood to the head, &c., it will generally afford relief; and when the symptoms are aggravated, the operation of the hot water will be materially assisted by the addition of mustard. It is a bad practice however to bathe the feet in hot water too often under ordinary circumstances, as a tenderness of the feet is frequently induced, so that even moderate exercise with the usual pressure of the boot is attended with blisters and sores.

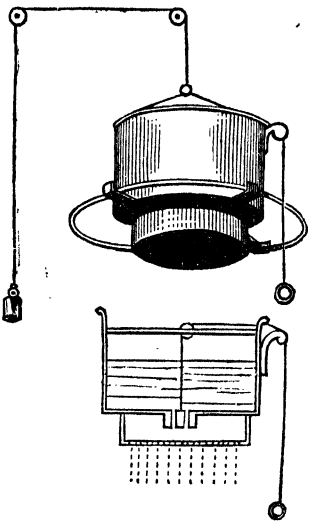


The Portable Bath for either cold or warm water consists of a piece of waterproof cloth made up into the form of a sailor's hammock; it is kept extended by two poles passed through a broad hem on each side, and further secured by two cross pieces of wood at the ends. The apparatus may be supported by tressels, chairs, or any other contrivance as circumstances admit. It is fitted with a flexible tube beneath, by which the water may be easily drawn off. The advantages of this bath, in addition to its simple and ready mode of application, are, that it may be packed up and carried about in a small compass. Also, that owing to its peculiar construction, it does not require so much water as an ordinary bath.

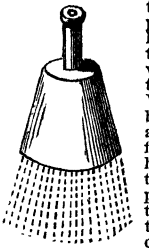


The Sponge Bath usually consists of a round, shallow vessel, in which a person may stand upright and apply the sponge, without fear of wetting the carpet. Sponging the whole surface of the body, both in winter and summer, should form a part of the toilet of every person in a moderate state of health; and for this purpose cold or tepid water may be used according to the season.

The Shower Bath affords one of the most convenient methods of cold bathing; the apparatus occupies only a small space, and may be placed in any corner or recess of the bed-room or dressing-room. The form of shower bath in general use is well known. But an improvement has been lately introduced much cheaper, and answering the purpose nearly as well. The cistern of this



apparatus is suspended from the ceiling by a line, and balanced by a weight. The valve in the interior is similarly regulated as in the upright shower-bath. An iron ring is attached to the cistern from which the curtains hang, and another ring, but larger, keeps out the bottom of the curtain. This apparatus may be had for a few shillings. *A shower bath for children* has been invented, which consists of a bell-shaped tin vessel, the bottom of which is pierced full of holes, a hollow tube rising from the top, the aperture of which can be closed by the pressure of the finger. When used, the bell must be sunk in a pail of water, and when it is full, the forefinger must be pressed hard upon the top of the tube so as to close it perfectly. The bell may then be withdrawn from the water, and by means of the pressure of the atmosphere it will continue full until it is raised over the head of the child; when by withdrawing the finger from the tube the water is discharged in a sudden shower through the numerous holes in the bottom of the bell.



Baths of every kind are let out on hire by furnishing ironmongers, by the week, month, or year. There is also a Portable Bath Company established, who send out not only the baths, but the hot water. These are conveyed into the chamber where the bath is to be used, and are removed when done with. The men sent with the baths are provided with slippers, so that their footsteps may not be heard; and their whole operations are conducted noiselessly, in order that a sleeping person, or an invalid, may not be awakened or disturbed by those noisy preparations which ordinarily create a sensation of dread.—See HYDROPATHY.

BATTER CAKES.—Put into a pan two pounds of sifted flour, a tablespoonful of lard, and a teaspoonful of bi-carbonate of soda, dissolved in a little warm water. Make the whole into a soft dough with half a pint of cold water, then thin to the consistence of cream by adding gradually a pint of warm water; continue to stir it for about half an hour; have ready a pan heated over the fire, and bake the batter on it, in cakes, turning them when brown. They may be served either hot or cold, and eaten with butter, treacle, or jam.

☞ Flour, 2 pounds; lard, 1 tablespoonful; bi-carbonate of soda, 1 teaspoonful; water, cold, half pint; water, warm, 1 pint.

BATTER, ENGLISH.—Put half a pound of sifted flour into a dish with a pinch of salt, two tablespoonfuls of melted butter, and the yolk of two eggs. Moisten and work up this with milk or water till it is of a proper consistence. Just before it is used have the whites of two eggs well whipped, and work them into the paste.

☞ Flour, ½lb.; salt, a pinch; butter, melted, 2 tablespoonfuls; eggs, 2 yolks and 2 whites; milk or water to moisten.

BATTER, FRENCH, FOR FRYING FRUIT, VEGETABLES, &c.—Cut four ounces of fresh butter into small pieces, pour on it half a pint of barley water, and when dissolved, add a pint of cold water; mix by degrees with a pound of fine dry flour, and a small pinch of salt. Just before it is used, stir into it the whites of two eggs beaten to a solid froth; use quickly, that the batter may be light.

☞ Butter, 4ozs.; water, ½ pint boiling, 1 pint cold: flour, 1lb.; salt, small pinch.

BATTER PUDDING.—Beat well together with a little milk, six ounces of fine flour, a pinch of salt, and three eggs; when this is the consistence of cream, pour into a buttered dish. It may be either baked or boiled. If baked, three quarters of an hour will suffice; if boiled, it should be put into a buttered and floured basin, tied over with a cloth, and boiled for an hour and three quarters.

☞ Flour, 6ozs.; salt, a pinch; eggs, 3; milk, sufficient.

BATTER PUDDING, WITH MEAT.—Make some English batter, and pour a little into the bottom of a pudding dish; then put meat of any kind into it, and a small onion, shred; pour the remainder of the batter over, and bake in a slow oven.

BATTER PUDDING, WITHOUT EGGS.—Mix six tablespoonfuls of flour with a little milk, and when quite smooth, add a quart of milk, a teaspoonful of salt, two teaspoonfuls of grated ginger, and two of tincture of saffron; stir together well, and boil it for an hour.

☞ Flour, 6 tablespoonfuls; milk, 1 quart; salt, 1 teaspoonful; ginger, grated, 2 teaspoonfuls; tincture of saffron, 2 teaspoonfuls.

BATTERY.—An injury inflicted by beating either with the hand or an instrument; throwing water on a person is battery. It is immaterial whether the act be wilful or not. Hence an action lies against a soldier who hurts his comrade while they are exercising unless he can make it appear that the injury done was inevitable and that he was not chargeable with any negligence. An action lies not only against him who commits the injury but against him also at whose command it is done. If A command B to beat another and B does it he is guilty as well as B. If a party has been indicted for a felonious assault and acquitted the party injured may notwithstanding sue him for damages in a civil action. Two justices may fine a party for an assault £5 but if they shall deem the assault justified and dismiss the complaint a certificate should at the time be obtained from them as a bar to any other proceeding, civil or criminal.—See ASSAULT.

BATTLEDOOR AND SHUTTLECOCK.—This well-known game, which may be played in or out of doors, affords an excellent recreation for children of both sexes, and is particularly beneficial in assisting the development of the muscles, and encouraging the full play of the organs of the chest. Children may play at this game until they

become thoroughly tired without injury, but *excessive fatigue* should be avoided.—See EXERCISE, PHYSICAL TRAINING, TOYS, &c.

BAY LEAVES have an aromatic, bitter, astringent taste, and a fragrant smell. They are said to be beneficial in nervous complaints and paralysis: in large doses they prove emetic. They should be dried, pounded, and kept in glass bottles ready for use. The green leaves applied to bee-stings tend to allay the pain and inflammation. Bay leaves are also used for giving a flavour to soups, gravies, pickles, &c.

BAY SALT.—The salt made naturally on the sea shore at St. Ubes and other bays, in the natural hollows of the sea shore, which are only overflowed at spring tides. The salt thus made at a low temperature, by the action of the sun and wind, is the strongest and best for butter, and for agricultural purposes.—See SALT and SALTING.

BAY-TREE.—This plant seldom exceeds fifteen or twenty feet in height. The bark is greenish, smooth, and aromatic; the leaves lanceolate, sharp pointed, wavy on the edge, and leathery and smooth on both sides; the flowers are four or six in a cluster, of a yellowish white, glandular and dotted; the fruit is about the size of a large pea, black and succulent. The *best situation* for this tree is one sheltered from the north and north-east winds, and it thrives remarkably well under the shelter of larger trees, where it is difficult to make other shrubs prosper—a fact that should be remembered in the laying out of plantations. A warm, dry, sandy, or gravelly *soil* is suitable for the bay, as is also a rich dark loam. To *propagate* this tree, the fruit should be gathered when quite ripe, which is not before January or February. The berries must then be preserved in dry sand until the middle of March, when they may be sown in a shady border of rich, loose, undunged earth. The berries should be dropped in, in rows, and covered with fine rich mould, about an inch thick. The young plants will require frequent but gentle watering for the first two years. The bay-tree may also be raised by cuttings, which should be planted in a moderate hot-bed, kept moist, and covered from the heat of the sun during summer, and from the frost in winter. April is the proper time to plant cuttings, but layers may be set either in March or August, which, by the second spring, will make good plants. The variegated bay is increased by budding it on the common sort. Neither the broad nor the narrow-leaved varieties are so hardy as the common bay.

BEAD-WORK.—This beautiful and fashionable work is perhaps the most simple of any of the accomplishments for ladies, yet the choice and arrangement of the colours and patterns demand both taste and judgment. A variety of articles at once ornamental and useful may be formed from beads.

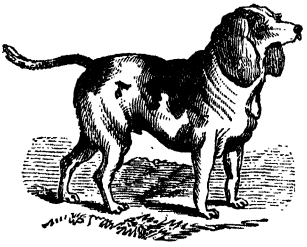
The *Bead Mat* for vases of flowers is one of the most suitable forms for this kind of work. The beads used are known at the shops as *mat beads*. There are two kinds commonly in use; one transparent, the other lined with one colour, and covered on the outside with clear glass—these are the best. For working, the materials required are two long needles and some very strong linen thread or crochet cotton. The process is as follows:—Select your colours and arrange them in a shallow saucer before you; then commence the centre of the mat by taking a long piece of thread and threading a needle at each end; then pass both needles through one bead, then one on each needle again, and so repeat until you have the required number; after which, work with one needle only, by taking a bead and passing your needle through each alternate or projecting bead, which will bring the fresh bead constantly into the opening, and so working from end to end until you get to the side. This will form one half; then, with the other needle, work the second half in the same way. In piercing your thread, be very careful to tie your knots firmly, otherwise the work will come undone. Let your ends be hidden in one of the beads, for if seen, they will appear very untidy. The fringes are always worked after the mat is done, by passing the needle through the outer beads. In this, as in all bead work, be careful not to draw the thread too tight in the first two or three rows, and, to make the work more lasting, use the thread double. Books: *The Ladies' Book of Fancy Work*; *Madlle. Diego de la Branchardiere's Bead Crochet Book*; *Mrs. Child's Girl's Own Book*.

The *Bead Bag* is made on canvas, similar to that used for marking. The flowers or other ornaments intended to be worked are drawn, and strings of beads are then sewn on, of such colours or shades as are most suitable to the pattern chosen. The spaces between the figures must all be filled up with beads of the same colour, to form a ground. The toilsome process of stringing the beads may be avoided in the following manner:—When purchased, they are strung on grass, and tied together in bunches; untie them carefully, wax a length of silk, pass the end of it through the finger nails till it is worn down fine and soft, then wax it, and twist it round the end of the grass firmly; then let the beads slip down from the grass to the silk. If care be taken, a whole string can thus be transferred in a minute.

The *Bead Basket* is made upon somewhat the same general principles as those described in the bead mat. Other materials are, however, used, such as wire, twine, and cardboard, according to the kind of basket that is to be made. The form of basket may either be pendant, as is usually seen hanging between window curtains, or as a handbasket to stand on drawing-room or work tables. The latter, as seen in the accompanying engraving, is the most useful form of the two, and costs less trouble and expense to make. They may be made with or without handles, according to the purposes to which they are to be applied.

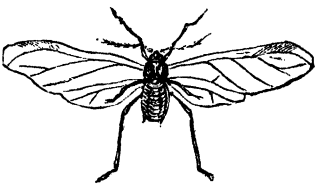
BEAGLE.—A small, well-proportioned hound, slow but sure, having an excellent scent and most enduring diligence. It is generally considered that beagles are best adapted for an enclosed country, as they are good at trailing or default, and for hedge-

rows. There are several varieties of beagles, divided chiefly into the wire-haired and the smooth-haired. The former are generally preferred, having good shoulders, and being well filleted. Smooth-haired beagles are commonly deep hung, thick lipped, with large nostrils, but often so soft and bad quartered as to be shoulder-shook and crippled the first season they hunt. Beagles are extremely difficult of management, and require a clever huntsman to keep the couples well together. In point of height the beagle should be regulated by the country he is to hunt in; but he ought at any rate to be very slow. In a dry country free from walls he cannot be too slow; but when impediments exist, he should be larger, to prevent being stopped by fences; as also when the waters are out, the larger he is the better calculated he will be for swimming. The beagle is nimble and vigorous, and is so swift of foot that horses are frequently greatly distressed, and sometimes even killed in following them. This hound pursues the hare with impetuosity; gives her no time to double, and will easily run down two brace in as many hours. The form of the head of the beagle



should be large, round, and thick rather than long; there will then be more room for the expansion of the nasal membrane —that of smell—and for the reverberation of the sound, so peculiarly the characteristic of this dog.

BEAN, FIELD—CULTURE OF.—The sorts usually cultivated in the fields are the tick bean, the horn bean, and the small Dutch, Heligoland, or prolific bean. Beans are *propagated* by seed, which may be sown broadcast, drilled, or dibbled. If sown broadcast, three or four bushels of seed per acre will be required, which should be ploughed or harrowed in; if drilled, two and a half or three bushels per acre will be sufficient. They should be sown at the end of February or the beginning of March. When the season is remarkably mild, early sowing is a great advantage. There are two modes of drilling beans. In one of these, the ridges are divided by the plough into ridgelets, at intervals of two feet or two feet and a half. Many farmers have long and advantageously adopted the practice of dibbling in their beans, by which a great saving of seed is effected; neither are they required to be planted so early. Both drilling and dibbling have advantages over the broadcast system, as by the latter method the land cannot be kept clean. The diseases to which beans are subject are the rust mildew that grows on the stems of leaves, and is caused by cold fogs and frequent sudden transitions of weather, and the black dolphin, or fly, called the *collier*, an



insect of the aphis tribe. For the mildew no remedy has yet been found. The most ready means of destroying the fly is to cut off the affected tops, put them in a bag, and throw them into the fire. It is useless to cut off the tops and leave them on the ground; the flies will soon re-ascend the plants and regain their former station.

BEAN, GARDEN—CULTURE OF.—The following varieties are those principally cultivated:—the mazagan, dwarf-fan, long-pod, green China, dwarf red, and Windsor. For the earliest crop, mazagans should be planted in October, November, or December, in a warm border, under an exposure to the full sun. Set them in rows, two feet or two feet and a half asunder, about an inch and a half deep. The *most successful plan for nurturing a crop over the winter* is to sow the beans thickly together in a bed of light earth, under a warm aspect. At the approach of frost, protect the rising plants with a frame, hand glasses, or the half-shelter of an awning of matting. In February or March, as soon as the weather is mild, transplant them into a warm south border; ease them out of the seed-bed with their full roots, and with as much mould as will adhere; plant them at proper distances, and close the earth well about their stems. Some of the long-pod, and green Windsor beans, may also be planted in fuller crops in February, if the weather permit, both for succession and principal supplies. For early crops, the *quantity of seed* required is one pint for every eighty feet of row; for main crops, two quarts for every two hundred and forty feet of row.

The *method of sowing* is either by dibbling or drilling. As the plants come up, and advance from two inches to four and six, hoe up some earth to the stems on both sides of each row, cutting down all weeds. Repeat the hoeing as future weeds arise, both to keep the ground about the plants clean, and to encourage their growth by loosening the earth. In earthing up, great care must be taken that the earth does not fall on the centre of the plant so as to bury it, for this occasions it to rot or fail. As the different crops come into full blossom, pinch

off the tops in order to promote their fruiting earlier.

BEAN, KIDNEY—CULTURE OF.—Of this vegetable there are two species, the dwarf and the runner. The soil for them, should be a light mellow loam, even inclining to sand. For the early and late crops a sheltered border must always be allotted, or in a single row a few inches from a south fence, otherwise the situation cannot be too open. *Dwarfs* should be sown about the beginning of April. *Runners* towards the latter end of the same month or the beginning of May. The pods should be gathered while they are young, fleshy, brittle, and tender, being then in the highest perfection for the table.

BEAN PUDDING.—Boil and skin the beans. Pound them with pepper and salt, and a small piece of butter or suet. Put them in a buttered tin basin. Tie a pudding cloth round, and boil with pork for forty minutes.

BEAN TANSY.—Take two quarts of beans, blanch and beat them very fine in a mortar; season with pepper, salt, and mace; then put in the yolks of six eggs, a quarter of a pound of butter, a pint of cream, half a pint of white wine, and sugar to taste. Soak four Naples biscuits in half a pint of milk, mix with other ingredients; add two or three sprigs of tansy, and beat all well together. Pour into a buttered pan; bake it till of a light brown colour, turn on to a dish, and garnish with lemon and orange peel.

☞ Beans, 2 quarts; seasoning, sufficient; eggs, 6 yolks; butter, ¼lb.; cream, 1 pint; white-wine, ½ pint; sugar, to taste; Naples biscuits, 4; milk, ½ pint; tansy-sprigs, 2 or 3.

BEANS—PROPERTIES AND USES OF.—The common field and garden bean are coarse articles of food, only fit for persons who labour hard in the open air, and whose stomachs are accustomed to them. They are especially to be avoided by persons having delicate stomachs, and of sedentary habits, as they are in such cases extremely difficult of digestion, and create flatulency, heartburn, &c. Kidney beans, when young and well boiled, are easy of digestion, delicately flavoured, and less liable to produce flatulence than peas. The *uses of the bean* are various. The seeds when ripe, and deprived of the pod, are farinacious, and very nutritive, and form excellent puddings. The kidney bean, in its young state, is preserved in salt for winter use; they are also preserved as a pickle by themselves, and form an ingredient in mixed pickles. When ground they yield a meal from which bread may be made.—See HARICOT.

BEANS, A LA MACEDOINE.—Put some parsley, green onions, and mushrooms, all shred fine, with a piece of butter rolled in flour, into a stewpan; moisten with stock and white wine, adding a bunch of parsley, green onions, and savory; let this boil over a slow fire; then put in three artichoke bottoms, blanched for a quarter of an hour in boiling water, and cut in small squares, with a quartern of young garden beans; stew them, seasoning with salt and pepper; then take out the herbs, and serve the beans with the sauce thick.

BEANS, FRENCH, AS SALAD.—Boil the beans in salt and water, drain them, season with pepper, oil, and vinegar; cover them, and let them stand for three or four hours. Then having drained them again, mix them with salad of any kind, seasoning in the usual way.

BEANS, FRENCH, BOILED. — String, and cut them into four or eight. Lay them in salt and water, and when the saucepan boils, put them in with some salt. As soon as they are done, serve them immediately, to preserve the green colour. Or when half-done, drain the water off, put to them two spoonfuls of broth strained; and add a little cream, butter, and flour, to finish cooking them.

BEANS, FRENCH, FRICASSEED.—Boil the beans as for eating, and having strained off the water, put them into a pan, with half a pint of cream, dredge in, a little flour and grated nutmeg; serve hot.

BEANS, FRENCH, PICKLED.—Lay them in salt and water for nine days, then add a little vinegar, and boil them in the liquor; when they become green, drain, wipe dry, and put them into jars. Boil some vinegar, ginger, mace, cloves, pepper, and mustard-seed, all bruised, and while hot pour it over the beans. Cover close when cold.

BEANS, FRENCH, PRESERVED.—String them, and let them boil in water mixed with a sufficient quantity of salt, for ten minutes. Take them out and place them in cold water. When cold, drain them thoroughly, and put them into bottles, adding fresh brine. Pour over them clarified butter to the thickness of an inch, tie them down with parchment, and put by, in a cool dry place. They will thus keep for twelve months.

BEANS, FRENCH, RAGOUT, WITH POTATOES.—Boil two pounds of potatoes thoroughly; peel, and put them into a saucepan, with half a pint of milk, a teaspoonful of salt, and a quarter of a pound of butter; stir it constantly; when it becomes so thick that the spoon will hardly move, put it into a buttered-dish: flour, and add melted butter and bread crumbs; bake in the oven till brown, and serve with the ragout of beans round it.

☞ Potatoes, 2lbs.; milk, ½-pint; salt, 1 teaspoonful; butter, ¼lb.; melted butter, bread crumbs, sufficient; beans, as required.

BEANS, FRENCH, RAGOUT OF.—Cut the beans in two, fry, and drain them; shake over them a little flour. Put to them stock gravy, an onion, and a seasoning of cloves, cayenne, salt, and ketchup; boil them together, stirring in the meantime. Take out the onion, and serve the remainder hot.

BEANS, FRENCH, A LA POULETTE.—Boil the beans, drain them, and put them into a stew-pan with some butter, parsley, green onions, and a little savory; stir them over the fire, add a little flour and stock gravy. When done, put in the yolks of three eggs, and beat up with a little milk, warm again, and serve.

BEANS, FRENCH, MAIGRE.—Cut the beans, and put them into boiling water with salt; when done sufficiently, take them off, throw them into cold water, and drain after a few minutes. Then put them into a stew-pan with a piece of butter, a spoonful of flour, some chives and parsley chopped fine, some salt, and a glass of milk; let them boil for a quarter of an hour, and serve them with a mixture of eggs slightly dashed with lemon-juice.

BEANS, WINDSOR, BOILED.—Put them into plenty of salt and water, and boil for twenty minutes; serve with parsley and butter.

BEANS, WINDSOR, FRICASSEED.—When large, but not mealy, boil, blanch, and lay them in a white sauce ready hot; just heat them through in it, and serve.

BEARD.—The propriety and utility of wearing the beard has long been a vexed question in England. And such was the influence of opinion on this point formerly, that until the last few years, it was the universal custom to shave the chin scrupulously every day, and if any person neglected to do so, he was considered uncleanly and eccentric. Now, however, the wearing of the beard has resolved itself into a matter of personal convenience and comfort, and as many Englishmen are seen with the facial ornament as without. The only argument that could ever be adduced against the wearing of the beard was, that it gave a man a dirty and slovenly appearance; this, however, is easily overruled by the fact, that it is always easy to keep the beard trimmed and clean in the same manner as the hair of the head is attended to. The reasons why *beards should should be worn* are—1. That the Creator made the beard for a wise purpose. 2. That it is inconsistent to shave the chin and not the head. 3. That shaving is an irksome and sometimes painful operation. 4. That shaving entails a waste of time. And, lastly, that the beard acts as protection to the organs of the throat and mouth, and prevents the visitation of many bronchial and rheumatic affections, which otherwise affect persons who shave the beard. The reasons why *beards should not be worn* are—1. That unless they are carefully attended to, they present a disagreeable appearance, and therefore demand more time than the operation of shaving. 2. That long established custom has rendered the wearing of beards objectionable to the taste of English society. 3. That beards cannot be necessary for the health of man, any more than for that of woman.—See MOUSTACHE, WHISKERS, &c.

BEAR'S FOOT.—An evergreen, growing on chalky soils and the borders of woods and thickets. It produces flowers in March and April, and seed in June and July. The fresh plant has a fetid odour and bitter taste, and is so extremely acrid as to blister and excoriate the mouth and fauces. The root is used in veterinary surgery as a seton. A decoction of it administered chiefly in the form of an enema will destroy worms in the body: the proportions are, a drachm of leaves to a half-pint of water. It is of a poisonous nature, and therefore dangerous to be taken as a medicine.—See HELLEBORE.

BEAR'S GREASE.—See POMATUM.

BECHAMEL SAUCE.—Cut two pounds of the lean of a breast or knuckle of veal, and a quarter of a pound of lean bacon into small pieces. Melt some butter in a deep saucepan, and put in the meat to draw a little, and to *whiten*, not to *brown*. Mix two spoonfuls of fine rice flour very smooth, with pure water, and then put in a quart of clear stock made of veal, or as much water or milk. Let this stew very gently with the meat, over a chafing-dish, or by the side of the fire, for an hour and a half; having first seasoned it with a teaspoonful of white peppercorns, an onion, a few sprigs of parsley and lemon-thyme, and a bit of lemon-peel. Let the sauce settle, strain it, and stir in a cupful of hot cream. Boil it, and strain once more. This sauce is fit for adding to white ragouts, fricassees, and hashes of veal. It also forms the basis for all savory white sauces, and for dressings of vegetables.

BECOMING.—See APPAREL, DRESS, &c.

BED.—When it is considered, that, from a third to one-half the sum of human life is passed in bed, the necessity of regulating it in such a manner as shall best conduce to health and comfort cannot be too strongly insisted on. The *position of the bed* should be with the head to the wall and the feet to the window, as the sleeper will thereby escape any drafts, and yet have a free current of fresh air communicated to him. Beds should not be placed too near the floor, as the air of a sleeping apartment within one or two feet of the floor is charged with a pernicious gas, which is very unwholesome to breathe. *Curtains* are, generally speaking, both unnecessary and unhealthy, especially when they

are drawn all round the bed, and are made to cover the top. *Feather beds*, for ordinary use, are extremely injurious; for they imbibe the perspired vapours thrown out of the body, which are again taken into the system when the body becomes warm. This is especially the case when there is nothing but a thin sheet between the body and the tick; and it is therefore always necessary to interpose a stout blanket and thick cotton sheet. Except for the aged, feather beds should be used only in winter. *Mattresses* made of cotton and hair are both to be recommended: but care should be taken to procure them from respectable dealers, as cotton and hair of inferior qualities are subject to impurities. Spring mattresses are also comfortable and salubrious; they allow the perspiration of the sleeper to escape freely, and do not harbour insects, or stagnate the air. *Bedclothes* should not be too heavy, as they over-heat the body, and produce perspirations which are enervating, and ultimately productive of disease. Children, especially, should sleep under as few clothes as possible, consistent with the maintenance of a mild equable temperature. Aged persons, however, require warm bedclothing, in order to preserve and increase heat: many cases having occurred, of old persons being found dead in their beds in the morning, apparently from no other cause than the stoppage of circulation by the coldness of the night. A lath bottom to a bedstead is preferable to one of sacking; as the air does not circulate so freely through sacking as through laths, and sacking also harbours dust which encourages insects to collect and propagate. Beds should not be made until some hours after persons have left them; in the meantime, the clothes should be stripped off, the bed shaken, and the windows opened so that the air may blow upon them freely, and freshen them. Mattresses also should be turned at frequent intervals; for when left unturned, the side nearest the floor absorbs the damp and communicates it to the other side, whilst the side nearest the sleeper absorbs the perspiration from the body, which, from continual contact and want of ventilation, it is unable to pass off. A very high pillow, and very soft bed are frequently the causes of malformation; for the attitude into which the body falls during sleep is that of the loins sinking in the bed, the upper shoulder pushed out of its natural place, the back twisted, and the neck turned awry. The sheets of a bed, should be washed once a week; it is considered unwholesome to wash them either seldomer, or oftener. The blankets should be scoured periodically, as required. The tick of the bed should be renewed or washed from time to time, and the interior part cleaned once or twice a year. There are various modes of performing this operation, but the most economical method is to empty the contents of the bed into a bag of coarse hemp, or thin linen, which is to be beaten with rods for some time, when much of the dust accumulated will escape through the openings of the bag. The practice of *warming beds* is generally considered unhealthy, but this depends on the system. Getting into a cold bed is invigorating, where the system is sufficiently active, for after a few minutes the blood begins to circulate quickly, and a genial glow follows. With weak and sickly persons, however, bed warming is to be recommended, for the shock of a cold bed after leaving a warm apartment, is sometimes more than the system can bear without injury; with such persons equability of temperature is highly advisable. *Damp beds* are most dangerous to sleep in; not only from the fact of the body being at rest, and therefore unable to warm the surface by exercise, but also because when we are asleep, the body is more susceptible to any malign influence from cold or other causes. It is almost impossible to estimate correctly the serious consequences that may ensue from sleeping in a damp bed; many persons have lost the use of their limbs, or their voice, for life; while consumption, asthma, paralysis, and rheumatism, are commonly induced. Damp beds are generally met with at strange houses, and persons who travel much should be very cautious in this respect. When a person doubts whether the bed he is about to sleep in is well aired, or rather when he does not know for a certainty that it is so, he had better remove the sheets and sleep between the blankets; and if a sensation of chilliness is then experienced, it would be wiser to pass the night on a chair, or on the hearth-rug, rather than tempt the impending danger. In order *to detect dampness in a bed*, a person should have it well warmed, and immediately after the warming-pan is taken out, introduce a glass tumbler between the sheets in an inverted position; after it has remained there for a few minutes, it should be withdrawn and examined; if found dry and not tarnished with vapour, the bed is safe; but if the glass has vapour hanging about it, the bed is not fit to sleep in. Many persons who are in the habit of travelling take the precaution of carrying their own sheets about with them, but this only affords a partial immunity. The best insurance of any, against a damp bed, is always to sleep at the best and most frequented hotels, where, as a consequence, the beds are kept continually aired. — See BLANKET, COUNTERPANE, MATTRESS, PALLIASSE, PILLOW, &c.

BED BUG.—See BUG.

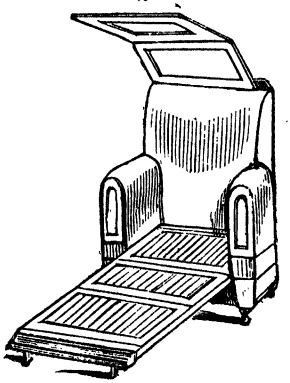
BED-ROOM.—This apartment should be large and lofty, situated in the upper part of the house, with the windows facing the east. It should be provided with a fireplace and chimney, and be thoroughly ventilated, in order that the sleeper may have a continuous supply of fresh air. Next to the regular admission of air, the furniture deserves attention. The free circulation of air should never be impeded by large sofas, easy chairs, or heavy draperies composed of absorbent materials, with which bed-rooms are so often encumbered. The curtains should not be of thick material, nor gathered up in elaborate festoons and folds, but should rather be thin, and loosely hung. Conveniences of every description there

should be, as a matter course; particularly a large wash-stand with plenty of water. The floor should be covered with a drugget of light, cheerful, and warm design; not nailed down, but simply fastened in such a manner that it may be readily removed. The walls of a bedroom should be covered with a paper of a light and airy pattern, such as designs of sprigs, flowers, &c. A bed-room should not have a fire lighted in it just before going to bed, if considered necessary at all, it should be lighted in the early part of the day and suffered to die out before the hour of going to rest. Flowers are unwholesome in a bedroom during the night; as they absorb *oxygen* which is necessary to human life, and emit *carbonic acid gas* which is noxious. Cleanliness cannot be practised too scrupulously in connection with bed-rooms; no impure water or soiled linen should be suffered to remain in them; they should be dusted every day, and thoroughly scrubbed with soap and water at least once a week. Book: *Housewife's Reason Why.* See SICK-CHAMBER, SLEEP, &c.

BED-SORES are occasioned by long pressure on the skin covering the prominent parts of the body, either in those who are confined to their beds, or those who cannot lie down at all. The best remedy is an application of spirits of wine or brandy mixing one part of the spirits with two parts of pure water. With this solution a linen pad must be saturated and kept next to the parts.

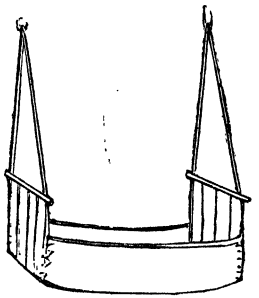
BEDSTEAD.—There are a variety of forms of this article of domestic furniture. The *four-post bedstead* is considered the most elegant and commodious, but it is adapted only for large rooms; in small rooms, by monopolising too great a space, and obstructing the air and light, they are both inconvenient and unhealthy. *French bed-*

Fig. 1.



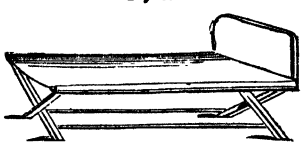
steads are of a convenient form, particularl on account of the curtains, which are made to fall at the head and feet, by being thrown over a short pole, fastened in the wall above the centre of the bed. The curtains may thus be put up or taken down in a moment without interfering with the bedstead. French bedsteads possess the further advantage of being constructed either on a plain or elaborate scale, so that they may be purchased from ten shillings upwards. *Tent bedsteads* are in very general use in England. They have four upright posts, into which a framework fits for the top. They possess nearly all the advantages of the four-post bedstead, without being so cumbrous or expensive. *Half-tester* and *press bedsteads*, are contrived so as to close up during the day, and resemble some piece of furniture of the sitting-room; although convenient they are not healthy, as the peculiarity of their construction deprives them of the necessary supply of air. Of this class the *Chair bedstead* (*Fig.* 1) is the most available, occupying less space, and more easily converted into use on any emergency. The *Cot bedstead* or *hammock* (*Fig.* 2) is an ingenious contrivance, and by some persons, especially those who have led a seafaring life, preferred to the ordinary bedstead. It consists of a wooden frame with canvass strained across,

Fig. 2.



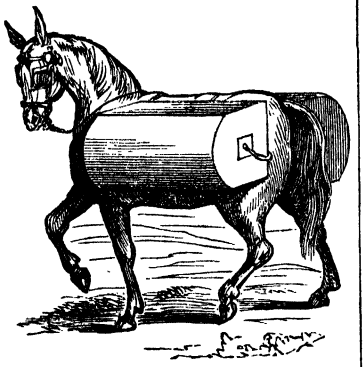
to the side of which two poles are attached; to these poles cords are fastened, and the whole is suspended from the ceiling by means of two strong hooks. The portable nature of the cot, and the small compass into which it may be packed, render it especially available to travellers. *The camp bedstead* (*Fig.* 3) chiefly used by military officers

Fig. 3.



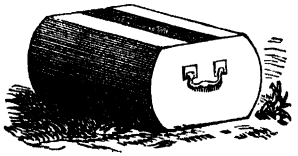
when on service, is both cheap and covenient It is formed simply by two frames connected by the sacking. When extended, it is kept open by the head-board, which has two pins that drop into holes in the side-rails. A foot-board, and curtain may be added if required.

This bedstead may be readily moved, and easily kept clean. Those made of wood cost only a few shillings, but there are others made of iron and brass, and as a matter of course are more expensive. *The portable military bedstead* possesses the advantages of commodiousness, economy of space, convenience of shape and ease of transport. In its whole, or partially distended form, it may be slung over a bullock or mule, it may

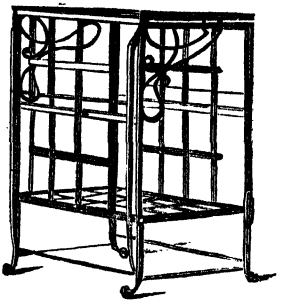


also be closed entirely and carried as an ordinary trunk or portmanteau, *Fig.* 5. The construction of this bedstead is very simple; between the two ends are moveable brass rods which close up and distend somewhat on the same principle as the telescope; over these brass rods a sacking is stretched, and a bolster is placed at the head; at each corner holes are left for the admission of curtain-rods, curtains being a matter of necessity where the mosquito and other troublesome insects exist. This bedstead may also be made available for the reception of clothes, books, &c., and may be

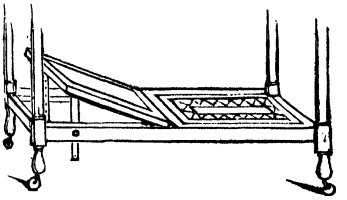
Fig. 5.



used during the daytime as a seat. *Iron bedsteads* are now introduced in many households; they may be obtained in a great variety of forms, and degrees of costliness, at proportionate prices. They are to be recommended on account of the greater facilities they afford to ventilation; they also encourage and harbour vermin less than wooden bedsteads, and may be easily examined and cleaned. *The folding iron bedstead* is less cumbersome and more portable than folding bedsteads generally; it is made to run on four castors: from its square and compact shape it is well adapted for standing in the recesses and corners of rooms, but with a covering, can be made a useful and ornamental piece of furniture. There



is a variety of *invalid bedsteads*, adapted to alleviate the bodily suffering of the sick and wounded; one of the simplest and most available forms of construction is that shewn below. It consists of an ordinary bed-



stead with a part of the sacking made to rise at the head, so as to support the back of the invalid; this may be elevated to any angle by two upright pieces, with holes and pins through the bedframe. Bedsteads should be kept scrupulously clean, and periodically examined. They should be dusted daily, especially the top part which is frequently neglected, dust suffered to collect, and vermin are thus bred. Every month during the summer season, and every two months during the winter, the bedstead should be taken to pieces, removed into the garden or yard, and there thoroughly washed with hot water and soft soap. If the bedstead is infested with vermin, from age and long use, the eradication of the evil is almost hopeless; and the best and wisest plan is to get rid of the bedstead altogether.—See COUCH, SOFA, OTTOMAN, &c.

BEECH.—A native forest tree, growing most commonly in the chalky districts of England. The wood of this tree is connected with many kinds of domesticarticles, and a great variety of tools. The beech is readily raised by sowing the nuts, or mast, which should be gathered about the middle of September, when they are ripe, and begin to fall; previously to being sown, however,

they should be spread out on a mat in an airy place to dry. The most advisable method is to keep them dry in sand until the spring, as there is less danger of their being then destroyed by field mice or other vermin. When sown, they should be covered with loose soil about an inch thick. When they are five or six inches high, they should be sowed out on fresh ground, till large enough to be transferred to their final stations. Two or three bushels of seed are sufficient for an acre. The beech will grow in almost any soil, so as there is some portion of calcareous matter present; but it thrives best on clayey loams incumbent on sand or limestone. When the soil is tolerably good, beech will be fit to be felled in twenty-five years. The *leaves* of the beech, gathered in the autumn before they are much injured by the frost, are said to make better mattresses than straw or chaff, and are well adapted for beds for poor persons; they have a grateful smell, will not harbour vermin, and remain both sweet and elastic for years. The *nuts* or *mast* of this tree are used for fattening hogs, and are especially relished by deer. An oil is also obtained from them, equal in flavour to the best olive oil, with the advantage of keeping longer without becoming rancid. The cakes which remain from the pressure, after the oil is made, are given to fatten swine, oxen, or poultry. A bushel of mast will produce a gallon of clean oil; but a full crop of mast is not produced oftener than once in three years. This nut is palatable to the taste, but unwholesome when eaten in large quantities: when dried it is ground into meal, and may be used occasionally as a substitute for coffee, and wheaten bread.

BEEF, AITCHBONE OF, BOILED.—Place it in cold water, and suffer it to boil gently, allowing a quarter of an hour to every pound. Skim the pot three or four times. Pour half a pint of the liquor it was boiled in over it, and serve garnished with carrots.

BEEF, ALAMODE.—Cut four pounds of lean beef into pieces, with some rashers of fat bacon into long strips, have a seasoning ready, made of equal quantities of beaten mace, nutmeg, and pepper, and twice as much salt; dip the bacon into vinegar and then into the seasoning. Put the meat over the fire in a large pot, with a pint of stock gravy, two large onions, a bunch of sweet herbs, a gill of port wine, and some lemon-peel. Cover it down very close, and put a wet cloth round the edge of the lid, to prevent the steam escaping. When it is half done, turn it, and cover it up again. It will require four or five hours to do thoroughly. When done, if there is not sufficient gravy, add a little stock gravy. Serve with potatoes, or mixed salad.

BEEF AU MIROTON.—Cut some onions into slices, and fry them in butter; when nearly done, add a pinch of flour, and stir it till a deep brown; then moisten it with stock, and some white wine; add salt and pepper, and continue to stew till the onions are well done. Then put in a piece of beef that has been stewed, either whole or in slices; let it warm in the sauce a short time to take the flavour of the onion; stir in a spoonful of vinegar, and serve.

BEEF BOUILLI.—Have a shin-bone of beef sawed across in three different places without cutting the fleshy side. Place skewers in the stew-pot, and lay the meat on them, with as much water as will nearly cover it. When this is skimmed put in a bundle of herbs, a large head of celery cut, four onions, and a dessert-spoonful of black and Jamaica peppercorns in a spice-bag; cover the pot close, and let the meat stew slowly for three hours; then add carrots and turnips cut with a dozen small onions; stew for another hour. Make a sauce for the *bouilli*, by thickening a pint of the soup with flour and seasoning it with ketchup, spices, and a little made mustard.

BEEF BRAINS.—Put the brains into tepid water to cleanse them from the blood, and to remove the thin skin which covers them; take them out, and put them into more tepid water; afterwards put them into boiling water to blanch them; when they have lain five minutes, take them out, and put them into fresh water; boil them in a sufficient quantity of water, with the juice of a lemon, an onion cut in slices, a few sprigs of parsley, and some bay leaves.

BEEF BRAISED.—Cut away from two or three ribs of beef the fleshy part that is next the chine, and take away all the fat, lard it with fat bacon, season with spices, sweet herbs, parsley, young onions, a small quantity of mushrooms and truffles, shred very small. Then tie into a neat form with packthread. Have ready a stew-pan, lined with thin slices of fat bacon, with pieces of lean beef lying over them about an inch thick, the whole seasoned with spice, sweet herbs, onions, lemon-peel, bay leaves, pepper and salt. Lay the beef on this, with the fleshy part downwards, then season the upper part in the same manner as the lower; lay over it slices of beef, and over them slices of bacon; cover the stew-pan and close the edges with paste; then apply fire to the lid of the stew-pan, as well as underneath. When it is sufficiently stewed, take it up, and let it drain, then lay it in a dish and pour over it a ragout, as follows:—Veal, sweetbreads, livers of capons, mushrooms, truffles, tops of asparagus, and bottoms of artichokes, toss these up in a pan, with some melted bacon, and moisten with good gravy.

BEEF, BRISKET OF, STEWED.—Stew eight pounds of the brisket of beef until quite tender, in as much water as will just steam the meat. Take out the bones, and carefully skim off the fat. Take a pint of the liquor, put to it the third of a pint of port wine, a little ketchup, and some salt. Tie up in a piece of muslin some whole white pepper and mace, stew these together for a short time. Have ready three carrots and turnips boiled tender, and cut into the form of dice; strew a portion hot upon the beef, and put the remainder into a dish.

BEEF BROILED. Cut cold beef into slices, broil them over a very clear fire, and serve them with fried eggs, gravy, and any piquant sauce.

BEEF BROSE.—After any large piece of beef has been taken out of the water it was boiled in, skim off the fat with part of the liquor, and boil it. Have ready in a bowl, oatmeal that has been baked brown before the fire; pour in the boiling liquor, and stir it a little; if too thick, add more liquor, and serve quite hot.

BEEF BROTH.—Break a leg of beef in two or three places, and put to it a gallon of water, add three or four blades of mace, a little parsley, and a crust of bread; boil the beef till very tender, strain the broth, and pour it into a tureen; if agreeable, the meat may be put in with it; toast some bread and cut it into squares; serve in soup plates.

BEEF BROTH, WITH MUTTON.—Take part of a leg of beef, and the scrag end of a neck of mutton, break the bones in pieces, and put to it as much water as will cover it; add salt, an onion stuck with cloves, a bunch of sweet herbs, a nutmeg quartered, and some pepper. Let the whole boil together till the meat falls to pieces, and parts with all its nourishment, strain it off into jars, tie down closely, and keep for use.

BEEF, BUBBLE AND SQUEAK.—Cut into pieces of convenient size for frying cold roast or boiled beef; fry them with pepper and salt; when done, lay them on a hot drainer, and while the meat is draining from the fat used in frying them, have in readiness a cabbage already boiled in two waters; chop it small, and put it in the frying-pan with some butter, add a little pepper, and keep stirring it, that all of it may be equally done. When taken from the fire, sprinkle over the cabbage just sufficient vinegar to impart a slight acid taste. Place the cabbage in the centre of the dish, and arrange the slices of meat around it.

BEEF CAKES.—Pound beef that is underdone, with a little fat bacon or ham, season with pepper, salt, and a small quantity of onion; mix the whole together, and divide into small cakes. Fry to a light brown, and serve in rich thick gravy.

BEEF CECILS.—Mince some beef with crumbs of bread, a large proportion of onions, some anchovies, lemon-peel, salt, nutmeg, chopped parsley, and a bit of butter; mix these over the fire for a few minutes: when cool enough, add an egg, and make them up into balls; strew over them fine crumbs, fry them to a light brown, and serve with gravy.

BEEF, COLD, TO WARM UP.—Cut the meat in long and narrow slices of an inch thick, leaving a little of the firm fat upon each. Season with salt, pepper, and mixed spices, dredge them with flour, and heat them (without in any way approaching to frying) in the gravy saved from the cold joint. Season with a shred onion, and a little vinegar. Garnish with sippets, and serve.

BEEF COLLARED.—Lay the thin end of the flank of beef into a dish with salt and saltpetre; turn and rub it every day for a week, keeping it in a cool place in the meantime. Take out all bone and gristle, remove the skin of the inside part, and cover the meat with the following seasoning, cut small: a handful of parsley and sage, a few sprigs of thyme and marjoram, salt, pepper, and allspice. Roll the meat up as tight as possible, tie it round with broad tape, and boil it gently for seven or eight hours. Place the beef under a heavy weight while hot, and it will then assume an oval form.

BEEF COLLOPS, AU NATUREL.—Mince a pound of lean rump steak, season with pepper and salt, and stir it over a gentle fire until thoroughly heated. Simmer it in its own gravy for ten minutes, and if required, add more gravy or boiling water; stew for two minutes longer and serve.

BEEF COLLOPS, SCOTCH.—Mince lean beef, season it with pepper and salt, put it into small jars, and pour over it clarified butter, about an inch in depth. When required for use, put the clarified butter into a frying-pan with some shred onions, fry them; add a little water, and put in the minced meat. Stew for five minutes, and serve.

BEEF CULLIS.—Roast a piece of buttock of beef very brown; cut off the brown part, and while hot, beat it in a mortar, with some flesh of a fowl and crusts of bread; put it into a stew-pan with some rich gravy; season with salt, pepper, cloves, thyme, sweet basil, and lemon-peel; give the whole four or five boilings; strain, and put by in pots for use.

BEEF, EXTRACT OF.—Remove from a pound of good juicy beef all the skin and fat; mince it small, put a pint of cold water to it, and place it by the side of the fire to heat very slowly. Let it stand until it begins to simmer; then add salt, and boil it gently for a quarter of an hour. Strain into a basin, and let it remain until every particle of fat is skimmed off, and the sediment has subsided and left the soup quite clear; then pour it off gently into a clean saucepan, make it hot, and serve.

BEEF FILLET, ROASTED.—The fillet is the underneath part of the sirloin. Tie it up and trim it ready for dressing. Lard it well, and let it soak for twelve hours in a mixture of oil, salt, pepper, bay leaves, and sliced onions; after which roast it by a quick fire. It should not be too much done, and may be served with a sauce consisting of its own gravy, with a dash of vinegar, a shalot, salt, and pepper.

BEEF FRICASSEE.—Cut some thin slices of cold roast beef, shred a handful of parsley very small, cut an onion into quarters, and put them all together into a stew-pan, with a piece of butter, and some strong broth. Season with salt and pepper, and simmer very gently for a quarter of an hour. Mix into it the yolks of two eggs, a glass of port wine, and a spoonful of vinegar: stir it quickly, rub the dish with a shalot, and turn the fricassee into it.

BEEF FRIED.—Cut lean beef into steaks, and put them into the frying-pan with a piece of butter; set the pan over a moderate fire, turn the beef frequently, and pour off the gravy that runs from it; fry the fat by itself, then lay it on the lean; add to the gravy, onion, nutmeg, pepper, and claret; stew it slightly, pour it over the meat, and serve.

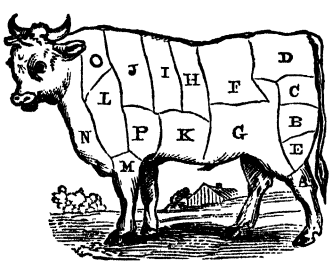
BEEF GRAVY.—Cover the bottom of a stew-pan with a slice of ham or lean bacon, four or five pounds of gravy beef cut into small pieces, an onion, a carrot, two cloves, and a head of celery. Add a pint of water, cover it close, and simmer it till the liquor is nearly exhausted. Turn it about, and let it brown slightly and equally all over. Put in three quarts of hot water, and when it boils up, skim it carefully, and wipe off with a clean cloth the scum round the edges and inside the stew-pan, in order that the gravy may be delicately pure and clear. Let it stew gently by the side of the fire for about four hours, till reduced to two quarts. Skim it well, strain it through muslin, and put by in pots. This gravy is almost indispensable for a variety of culinary purposes, more especially for made dishes. When required for immediate use add bread raspings, and serve in a butter-boat.

BEEF HAMS.—Select a fat leg of beef, and rub it thoroughly with saltpetre and salt; then make a pickle of an ounce of bay salt, an ounce of saltpetre, a pound of coarse sugar, and a pound of common salt. Rub this well in every day for a month; then roll it in bran or sawdust, and hang it in wood-smoke for ten days or a fortnight. Hang it in a dry place near the chimney for a week, and then keep it covered over with bran.

BEEF HASH.—Cut some thin slices of underdone beef with fat; put it into a small stew-pan with a little water, an onion, pepper, and salt. Add gravy, a spoonful of vinegar, and of ketchup. Simmer it till hot through, and serve with fried parsley.

BEEF HASHED, A LA FRANCAISE.—Put a piece of butter the size of a walnut, and a tablespoonful of flour, into a stew-pan, simmer them over the fire for a minute, and stir into them a finely-chopped onion and a dessert-spoonful of minced parsley; when thoroughly browned, add a seasoning of pepper, salt, and nutmeg, and put to it half a pint of water. Place in the beef, cut it into small but thick slices; let it stand by the fire and heat gradually; and when near boiling point, thicken the sauce with the yolk of three eggs, mixed with a tapblespoonful of lemon-juice. Serve with sippets.

BEEF, JOINTS OF—NAMES, SITUATIONS, AND QUALITIES.—By the aid of the



accompanying engraving, the names and situations of the various joints of beef, will become familarised to the eye. A is the leg. B the buttock or round. C the aitchbone. D the rump. E the thick flank. F the sirloin. G the thin flank. H the wing or fore-ribs. I the middle ribs. J the chuck-ribs. K the brisket. L the chuck and leg of mutton piece. M the shin. N the clod. O the sticking-piece or neck. The ribs, the sirloin, and the rump, are the proper joints for *roasting*. The round, and the aitchbone, for boiling; the shin, the brisket, and the leg of mutton piece may be boiled or stewed. The neck is generally used for gravy, and the thin flank for collaring. The best steaks are cut from the middle of the rump, the next best from the chuck-rib.

BEEF, LEG OF, STEWED.—Cut a leg of beef into pieces, and put it into an earthen pipkin, add two onions, one carrot, one turnip, a head of celery, four or five cloves, pepper, and salt; stew the whole for seven hours. Cut into square pieces a second quantity of vegetables; then take the meat out, strain the liquor through a seive; lay the meat in the middle of a dish, the cut vegetables round it, pour over the gravy, and serve.

BEEF, LIKE GAME.—Cut some slices of beef into square pieces, put on each a strip of bacon, dredge flour over, bind each with twine, or skewer them into a rolled shape; fry them in butter: when brown, add shalots, a slice of lemon-peel, a spoonful of capers, two bay-leaves, salt, spice, a glassful of wine, half a glassful of vinegar, and a little water; stew till done.

BEEF, MINCED.—Chop lean cold roasted beef as fine as possible, put it into a rich gravy, warm up with a small piece of butter; and serve with soft-boiled eggs round it.

BEEF OLIVES.—Cut slices half an inch thick, and four inches square; lay on them a force-meat of crumbs of bread, shalot, a little suet, pepper and salt. Roll them, and fasten with a small skewer: put them into a stew-pan with some gravy made of beef bones, or the gravy of the meat; stew till tender.

BEEF PASTY.—Bone a small rump or part of a sirloin of beef, after it has hung several days. Beat it well with a rolling-pin; then rub in sugar, and pour over it a glassful of port wine and a glassful of vinegar; let it lie five days and nights: wash the meat and wipe it very dry, and season it with pepper and salt. Lay it in a dish, and to every ten pounds of meat add one pound of butter, spreading it uniformly over the surface. Put a light crust round the edges, and cover with a thick one; bake in a slow oven. Set the bones in a pan in the oven, with water sufficient to cover them, a glassful of port wine, a little pepper and salt; bake to a light brown, and serve the gravy with the pasty.

BEEF PATTIES.—Cut underdone beef into small pieces, season with pepper, salt, and an onion. Make a plain paste, and roll it out thin; fill it with the mince, close up, and fry to a moderate brown.

BEEF, POTTED.—Salt three pounds of lean beef, for two or three days with common lt; divide it into pieces of a pound each, and put it into an earthen pan just sufficient

to contain it. Pour in half a pint of water. Cover it close with paste, and set in a very slow oven for four hours: when taken from the oven, pour the gravy from it into a basin, shred the meat fine, moisten it with the gravy poured from the meat, and pound it thoroughly in a mortar with fresh butter. When it has become a fine paste, season with pepper and allspice; put it into pots, press it down as closely as possible; when cold, cover it with clarified butter, a quarter of an inch thick, and tie down.

BEEF, PROPERTIES OF.—The flesh of the ox is one of the best and most nourishing aliments; there is no meat that furnishes so much nutritious juice, and consequently none so well calculated to recruit the body when exhausted and fatigued from violent exertion. Beef, although not so easy of digestion as mutton, is considered to be next in the scale of flesh meat, in point of digestibility. When it is well cooked, and has been kept a sufficient time before dressing to become tender, it rarely disagrees with those who take it in moderate quantities.

BEEF, QUALITIES OF.—Oxen are generally considered to make better beef than cows, or even heifers. In some counties, however, ox-beef is not valued. Much depends upon the breed, the ox in some cases being harder and tougher than in others; much also depends upon the labours to which the animal is generally put. Thus, in the dairy districts, cow-beef is only killed when no longer of an age to be serviceable in the dairy, and as a consequence, the flesh is tough, stringy, and generally devoid of fat. On the other hand, the Hereford cow is often killed because she feeds so fast as to be a bad milker. The same remarks apply to bull-beef, which is commonly in its prime at two years old, at which age the bull is often killed in some districts; but if a five or six year old bull is slaughtered, he is only fit for soup. Small Scotch cattle rank the highest in the London market. The Hereford and Durham oxen are also prized, but their beef is large, and not so well suited for small families as the Scotch. A great deal of foreign beef is imported into this country, but it is not so good as the English, the mottled fat interlarded with the lean, which is so highly prized, is almost entirely wanting; the bone is larger, and the flesh generally coarser.

BEEF RAGOÛT.—Take the bone from a rump of beef, cut the flesh into slices, dredge it with flour, and fry it; pour over it a quarter of a pint of boiling water, and a pint of small beer; add a carrot, an onion stuck with cloves, pepper, salt, lemon-peel, and a bunch of sweet herbs. Let it stew for an hour, then add some rich gravy. When the meat is tender take it out, strain the sauce, thicken it with a little flour, add a head of celery ready boiled, and a little ketchup; put the meat in this, and let it simmer up, and serve.

BEEF, ROUND OF, BOILED.—This may be boiled whole, or may be divided into two or three pieces, according to the size of the joint, and the number of the guests or family. Wash the meat, and if too salt, soak it in one or more waters till it be sufficiently freshened. Skewer it up tightly, and as round and even as possible, wrapping the flap or tongue-piece very firmly round; then bind it with strong broad tape. The pot should be roomy, and the water just sufficient to cover the meat. Heat gradually; take off the scum, till no more rises, throw in cold water to refine the liquor further, and skim again. Cover the pot close, and boil slowly, at an equal temperature, allowing a quarter of an hour to each pound, if the meat be under 12 pounds; and from seventeen to twenty minutes for each pound if it be above that weight. Turn the meat once or twice in the pot during the process. Put in carrots and turnips about two hours after the meat. Greens may be boiled in the same pot, or suet pudding. When the meat is dished, ladle up some of the liquor to wash it, and with a clean cloth moistened in the pot liquor, take off any scum or film that may be hanging about the meat; replace the skewer that holds the flap with a silver or plated one; garnish with large sliced carrots, and serve greens in a separate dish.

BEEF, RUMP OF, BAKED.—Bone and lard a rump of beef, as for *alamode*, put it into a stew-pan just large enough to contain it, together with half a pint of white wine, some green onions, mushrooms, pepper salt, and cloves. Close the edges of the pan with a strong paste, and let the meat stew in an oven for five or six hours, then serve with its own sauce strained.

BEEF, RUMP OF, ROASTED.—Cut from the rump, chump-end, a handsome roast of from seven to ten or twelve pounds. Bone and roll it up neatly. It will take from three to five hours to roast, according to its weight and thickness.

BEEF, SALTED.—Sprinkle the beef with salt, and a few hours afterwards hang it to drain This cleanses the meat from the blood, and preserves its flavour, then rub salt well in, and put it into a tub with a close cover; it should be turned every day, and if wanted soon should be rubbed daily also.

BEEF, SALTED, FOR IMMEDIATE USE.—The piece should not weigh more than five or six pounds. Salt it thoroughly just before it is put into the pot. Flour a coarse cloth and fold the meat up in it closely, put it into a pot of boiling water, and boil it as long as other salt beef. It will eat as though it had been salted for four or five days.

BEEF, SALTED RED.—Choose a piece of beef without bone, sprinkle it with salt, and let it drain for a day; then rub it thoroughly with a mixture of common salt and bay-salt in equal proportions, and a small quantity of saltpetre, rub the pickle into the meat every day for a week; after that, only turn it. In sixteen days, drain it from the pickle, and smoke it at the oven's mouth when heated with wood; a few days will smoke it.

BEEF, SANDERS.- Mince cold roast beef small, with onion, pepper, and salt; put it into saucers, so that they be three

parts full, and fill them up with potatoes mashed with a little cream; lay a piece of butter on the top, and brown them in the oven or before the fire.

BEEF, SIRLOIN OF, ROASTED.—Wipe away any moisture that there may be on the surface of the meat. Free the fat from kernels, and remove the marrow that runs along the backbone. Spit it evenly, that it may not be heavier on one side than the other; tie a piece of paper on it to preserve the fat, put a little clean dripping into the frying-pan. Set the joint at first some distance from the fire, and draw it gradually nearer as it becomes warmed through. Baste the meat well as soon as it is put down, and every quarter of an hour during the whole time it is roasting, except the last half hour; then take off the paper, and brown the meat with a basting of butter, and flour and salt mixed in equal quantities; let it roast thus until quite brown. Dish it up, garnish it with horseradish, and serve. The time required for roasting is a quarter of an hour for every pound, but in hot weather twelve minutes will be sufficient.

BEEF, SIRLOIN OF, STEWED.—Tie it up tightly with tape; place it in a stew-pan, and partly cover it with stock gravy. Add three large onions, and a bunch of savory herbs; stew it gently for four hours. When done, dry it before the fire, and serve with rich gravy and stewed onions.

BEEF, SMOKED.—Cut the beef into large pieces and cover it with salt. At the expiration of two or three days, press it and hang it in a chimney where only wood is burnt, at a sufficient distance for the fat not to be melted by the heat. Let it remain until it is dry, when it may be eaten either in stew, slices, or grated.

BEEF, SMOKED, A LA HAMBOURG.—Rub the beef with saltpetre and brown sugar, let it lie for three days, strewing common salt over it from time to time, then press it, and hang it in the chimney, burning with green wood, a little juniper wood. This will give it a fine aromatic flavour.

BEEF SOUP.—Cut a shin or leg of beef into pieces, with six onions, two carrots, a head of celery, two turnips, a bunch of sweet herbs, pepper, salt, and allspice. Put the whole into a stew-pan together, and set it over a slow fire for an hour, then pour over it two quarts of boiling water; let it stew till the meat is tender. Then take out the best parts of the meat, and let the rest stew with the herbs until all the juices are extracted. Put in the best pieces again, simmer altogether, to near boiling-point, skim thoroughly, and serve.

BEEF SOUP, FRENCH.—Put into eight pints of water, six pounds of beef, cut into two or three pieces, bone included; one pound of mixed green vegetables, four teaspoonfuls of salt, one teaspoonful of pepper, one of sugar, and three cloves. Boil gently for three hours, and serve with a pound and a half of bread, cut into slices.

BEEF STEAK, or RUMP STEAK A LA FRANCAISE.—Season the steaks with salt and pepper, and spread a little butter lightly over them, and boil them over a clear brisk fire. Mix a teaspoonful of parsley minced as fine as possible, a slice of fresh butter, a little cayenne, and a small quantity of salt. When the steaks are done, put the mixture into the dish intended for them, lay them upon it, and garnish them plentifully with fried potatoes.

BEEF STEAK, BROILED.—Cut the steaks half an inch thick, beat them with a rolling-pin; season them with pepper and salt and put them over a clear fire; turn them often, and when done, rub a little butter over them, and add a little warm ketchup. Oyster sauce is frequently served with the dish. Also fried onions.

BEEF STEAK, FRIED.—Fry the steaks in butter for twelve or fifteen minutes, until they are of a fine brown. When done, place them in a hot dish before the fire; add to the gravy in the pan a wineglassful of port wine, pepper, salt, and a minced shalot. Give it a boil up, pour it over the steaks, and serve very hot.

BEEF STEAK, ITALIAN.—Score the steak transversely with a sharp knife, without dividing the meat. Lay it in a stew-pan, with a small piece of butter, season with pepper and salt, and strew over it a shalot, and a green onion chopped fine. Let it stew in its own gravy for three quarters of an hour, and serve.

BEEF STEAK PIE.—Select steaks that are not too fat. Mix some black pepper and salt together, season each steak well with it, and lay them in a pie-dish, put a teacupful of water into the dish. Cover with a crust, and bake it in a rather slow oven. When to be eaten hot, the crust is best made with suet; but if cold, butter should be used.

BEEF STEAK PUDDING.—Prepare and season the meat as for a pie, and put into a pudding basin previously lined with a moderately thick suet crust. Then close the crust over the top, and tie up in a cloth. It will require slow boiling for four or five hours, keeping the vessel filled up with boiling water as it wastes. When done, open a round hole in the upper part, and put in a bit of butter and a little boiling water. A small bullock's kidney is a great improvement to the beef with those who like the flavour.

BEEF STEAK PUDDING, BAKED.—Beat the steaks well, cut them into middling sized pieces, and season with pepper and salt. Make a batter of milk, eggs, and flour, lay a little of it at the bottom of the dish; then put in the steaks, pour the remainder of the batter over them, and bake to a fine brown.

BEEF STEAK, STEWED.—Fry the steak with a piece of butter till browned; then dredge with flour, and put in a little more water than will cover it. When it boils, season it with salt, take off the scum, and add one onion, two carrots, half a turnip, and a bunch of sweet herbs, chopped up; stew the steak gently for two hours and a half or three hours. A quarter of an hour before it is served, stir well with the gravy, three teaspoonfuls of rice flour, mixed with a little cayenne, two tablespoonfuls of ketchup, and a little spice.

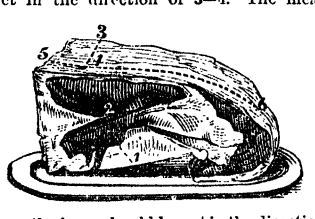
BEEF STEAK, WITH CUCUMBERS.—Pare and slice three large cucumbers, and two large onions. Fry them in water, and when browned add half a pint of gravy, and simmer. Beat rump steaks, season with pepper and salt, and fry them. Put them into a hot dish, and pour the cucumber sauce over them.—See ONIONS, OYSTERS, &c.

BEEF STEAK, WITH POTATOES.—Cut the steaks into thin slices, beat and season them with pepper and salt, dip them into a little melted butter and broil them. When done, put them into a dish before the fire, and fry potatoes to a fine brown colour, serve with the following mixture laid underneath: parsley chopped fine, a small piece of butter, pepper and salt.

BEEF STOCK.—Cut the chuck of beef into pieces, and set over the fire, in a saucepan with just enough water to cover it. While boiling, skim it thoroughly; add a bunch of parsley and thyme, carrot, onion, turnip, celery, and a little salt; boil till the meat is tender, and strain it through a hair sieve.

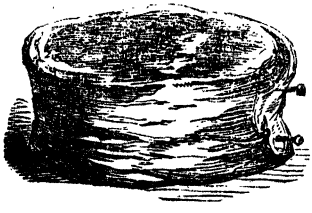
BEEF TEA.—Put one pound of the chuck of beef into a pint and a half of water; let it simmer gently by the side of the fire for an hour, add a teaspoonful of salt, and the same quantity of allspice and pepper.

BEEF, TO CARVE.—*The sirloin.* A very tender part of this joint lies underneath, and is called the fillet. The sirloin should be turned over, and slices cut from the fillet in the direction of 3—4. The meat



above the bone should be cut in the direction 5—6. The carver should ask the guests whether they prefer the upper or under cut. Slices of the thin end, 6, should be served with the other parts; and pieces of the rich fat 1, distributed with the lean.

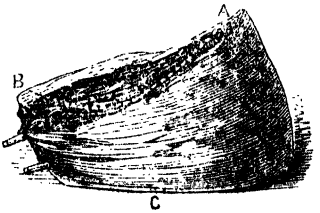
Chuck ribs, boned and rolled.—If the outside cut is preferred by any one, cut it thin off



the top of the joint; if it is not required, cut a thick slice off; by so doing you will come to the under-done part at once. Cut the slices thin, and do not give too much gravy, unless asked for. Be sure to put the guard upon your fork, for if the knife slips you will be almost sure to cut your hand.

Round.—To carve this well, a very sharp-edged and thin-bladed knife is required. A thick slice should first be taken entirely off the top of the joint and laid on one side, leaving it very smooth; it should then be cut as thin and as evenly as possible, and delicate slices of fat served with it.

Aitchbone.—Cut a slice of at least half an inch thick from A to B; then cut the slices



rather thin. Fat will be found to the right of A, and the soft fat on the other side of the joint. If he is required well dressed, turn the joint over and cut from C.

Brisket—Is cut down to the bone crosswise, in rather thin slices, and the fat and lean served equally.

BEEF—TO CHOOSE.—The grain of ox beef, when good, is loose, the lean red, and the fat inclining to yellow. Cow beef, on the contrary, has a closer grain, a whiter fat, and the lean of a paler red than ox beef. Inferior beef, whether obtained from ill-fed animals or from those which have become too old for food, may be known by a hard, skinny fat, a dark red lean, and a line of horny texture running through the meat of the ribs. When beef pressed by the finger rises up quickly it may be considered good, but when the dent made by pressure is filled up slowly, or remains, the meat is of inferior quality.

BEE HIVE.—See APIARY.

BEER—ADULTERATION OF.—This article, of such extensive consumption in England, is adulterated in a variety of ways, the following ingredients, with many others, being more or less used. Cocculus indicus, copperas, opium, strychnine, quassia, liquorice, grains of paradise, honey, hartshorn shavings, sugar, ginger, salt, orange-powder, mixed drugs, and water. Other practices are also had recourse to, such as mixing strong beer with table beer, converting mild beer into old by adding sulphuric acid or oil of vitriol; and, on the other hand, of turning old beer into mild by the addition of carbonate of soda, potash, or oyster-shell powder. Many of the articles enumerated are nearly harmless, while others, as cocculus indicus, copperas, opium, and strychnine, are highly deleterious. Cocculus indicus is one of the most injurious substances employed. Its detection in beer, and especially in porter, is attended with very great difficulty, and in

many cases, when employed in small quantities, it cannot be discovered by any known means.

Salt, is generally found in beer in considerable and unwarrantable quantities; it *may be detected*, and its proportion estimated, by means of a solution of nitrate of silver which in that case produces a precipitate, which is insoluble in water and in nitric acid. The precipitate may then be washed, dried, fused in a small porcelain crucible, and weighed. 134 grains of chloride of silver equal 60 grains of common salt. *Copperas may be detected* by filtering the beer through animal charcoal, the filtrate being tested by hydro-sulphuret of ammonia, will then produce a black precipitate; by ferricyanide of potassium a blue precipitate. On the other hand, if a solution of chloride of barium be added to another portion of the filtrate, a white precipitate of baryta will be produced, which may be filtered, washed, dried, ignited, and weighed. 117 grains of sulphate of baryta represent 139 grains of crystallised proto-sulphate of iron. The presence of *opium is detected* as follows:—The suspected beer is first to be decolourised as much as possible by animal charcoal; a portion of the filtrate is then poured into a conical glass, and a few drops of acetate of lead are poured in. In the course of about twelve hours, or sooner, a precipitate will be produced, which is separated from the supernatant liquor by careful decantation, and thirty or forty drops of sulphuric acid, and a like quantity of proto-sulphate of iron are then poured on the meconate of lead at the bottom of the test-glass. By this process the meconate of lead is decomposed and converted into sulphate of lead, whilst the liberated meconic acid, reacting on the proto-sulphate of iron, produces a beautiful red colour.

The three most common and principal adulterations of beer, however, are water—by which its strength is reduced and its bulk increased—and sugar and salt, whereby its colour and flavour are in a great measure restored. It has been proved by reliable tests, that beer is adulterated by almost every London publican, and the truth is all the more obvious from the acknowledged fact that the price which the publican pays the brewer for his beer would not leave a sufficient profit unless adulteration were had recourse to. From these particulars it may be easily understood why beer so frequently disagrees with persons, causing acidity of the stomach, heart-burn, &c., and this is especially the case with persons whose organs are already weakened by illness. Doctors frequently recommend porter or stout to patients recovering from illness, and to the naturally delicate. In such cases it is of the utmost importance to procure the porter or stout as genuine as possible. There is but one way to do this, and that is, to obtain the supply direct from one of the most celebrated breweries; for Dr. Hassall says, when treating of this subject, "it is interesting and important to notice, that *no case of adulteration has ever been proved against any of our great London brewers.*"

BEER, BOTTLING AND FINING.—Casks should be sound, clean, and sweet. Beer and porter should be allowed to stand in the bottles a day or two before corked. If for speedy use, wiring is not necessary. Laying the bottles on their sides will assist the refining of the beer. Those that are to be kept should be wired, and set upright in sawdust. When not fine enough, draw off a jugful, and dissolve isinglass in it, in the proportion of half an ounce to ten gallons, and pour back through the bung-hole. Let it stand a few weeks longer. Tap the cask above the lees. When the isinglass is put into the cask, stir it around with a stick, taking great care not to disturb the lees at the bottom. Bung the cask up, and in a few days the beer will be fine.

BEER CELLAR.—The cellar should be situated to the north, as the temperature is much less variable in that than in any other position. It should be deep, and the temperature kept as equable as possible. It should be slightly damp, but never in excess, and where there is this tendency, openings should be made in the doors and walls to admit the air. The light should be moderate; total darkness is very injurious, as it contributes to decay. The cellar should be as much as possible in such a position as not to be affected by the circulation of carriage traffic, or any other shocks, as they are likely to turn the liquor. All green wood, vinegar, and other articles liable to ferment, should be excluded from it. Particular care should be taken not to construct cellars on marshy ground, or any other spot where mephitic vapours are likely to arise.

BEER FROM PEA-SHELLS.—The shells of green peas contain a considerable portion of saccharine matter; and a strong decoction may be made from them, very nearly resembling in odour and taste the infusion of malt known as wort. This decoction is capable of yielding an excellent beverage as follows:—Fill a boiler with the green shells of peas, pour on water till it rises half an inch above the shells, and simmer for three hours. Strain off the liquor, and add a strong decoction of wood-sage, or hop, so as to render it pleasantly bitter; then ferment in the usual manner.

BEER FROM SUGAR.—Put six pounds of coarse brown sugar, and four ounces of hops, into fourteen gallons of water; let the whole boil for three quarters of an hour, and work it as usual. It should be kept for ten days or a fortnight before it is broached.

BEER FROM TREACLE.—Put two pounds of treacle to four gallons of boiling water, add half a dozen bay-leaves and half an ounce of ground ginger. Boil the whole for half an hour, and ferment with yeast.

BEER, PROPERTIES OF.—This name is applied generally to any preparation from malt and hops. The properties of beer as an ordinary beverage, if it be not too strong so as to disturb the brain or create over-excitement of the nerves of the stomach, are quite equal, if not superior to those of wine: and when the proportion of hop is sufficient to give a good bitter, beer is at once a tonic

and a stimulant. The objections, which apply in common to all fermented liquors, have their weight as regards this beverage; but they apply more to the abuse than the use of the liquid. Beer, to be wholesome, must be well fermented, particularly if it be bottled; otherwise, the quantity of fixed air which in a subdued state would produce wholesome excitement, will, in excess, produce great injury. New beer also is unwholesome, from the saccharine matter which it contains in a comparatively raw state. The component parts of beer are water, saccharine matter, gluten, dissolved starch, carbonic acid, alcohol, and a volatile oil arising from the hop. Amongst these elements, those which check the fermentation are the alcohol, the carbonic acid, and the oil; and to these agents is principally owing the preservation of the beer. The saccharine matter chiefly promotes fermentation. The gluten and dissolved starch have a tendency to vitiate the beer, and the water favours the decomposition. Beer may undergo various changes. By its contact with the air it loses its carbonic acid: heat deprives it of its alcohol by evaporation, and consequently reduces its strength; the beer becomes insipid and vitiated, and has a tendency to corrupt and become sour; when beer thus weakened and inodorous, is exposed to the action of the air and heat, the acetous fermentation is hastened by the gluten and starch.—See ALE BREWING, PORTER, STOUT, &c.

BEER, TO PRESERVE.—When it is intended to keep beer a long time, it should be very carefully racked off; for nothing advances the decomposition so soon, after a certain time has elapsed, as the lees. *The clarification of beer* is very important for its preservation. This is done in various ways; such as with hartshorn-shavings, white of egg, or isinglass. Many things are used either when beer is first put in casks, to prevent its turning sour, or when it has already began to turn; few things however can be introduced for this purpose without rendering the beer vapid. One of the best means for preventing the turning of beer, intended for a voyage, or which may be liable from other circumstances to agitation or change of temperature, is to put stale eggs into the cask, in the proportion of one egg to four gallons of beer. The shell dissolves first, then the pellicle and the white, leaving the yolk intact. The albumen of the egg is said to act as an alkali, but without creating any effervescence which has a tendency to render beer vapid. For weak beer, oatmeal, burnt sugar, or a portion of very strong beer, may be added in the summer; and in brewing beer of all kinds, it will be found beneficial to suspend in the cask, at the commencement of fermentation, a linen bag containing raisins in the proportion of a pound to one hundred and seventy-four gallons of beer. Leave it thus for twenty-four hours, and then having withdrawn it, allow the beer to ferment in the regular course.

BEER, TO RESTORE WHEN MUSTY, SOUR, FLAT, &c.—When *musty*, rack the beer through some hops that have been boiled in strong wort, and afterwards work it with double the quantity of new malt liquor. But if the fault arise from the cask, draw off the beer into a sweet cask, and having boiled half a pound of brown sugar in a quart of water, add a spoonful or two of yeast before it is quite cold, and when this mixture ferments, pour it into the cask. When *sour*, take four or five gallons out of a hogshead, boil with it four or five pounds of honey, skim it well when cold, and put it into the cask again, then stop it up close, and by occasioning a slight renewal of fermentation, the liquor will be made to drink sweet and pleasant. When *flat*, rack the beer into two empty casks, and fill them up with new beer; or take a fine net and put in the proportion of one pound of hops to a butt of beer, with a stone or something heavy in it to sink it to the bottom. Tap in six months, but if wanted sooner, use hops that have been slightly boiled in wort.

BEES, SELECTION AND MANAGEMENT OF.—The person who intends keeping bees should purchase a proper number of hives either at the early or latter part of the year. The hives should be full of combs and well stored with bees. The purchaser should examine the combs, in order to know the age of the hives. The combs of the current season are white, those of the former year are of a darkish yellow; the latter should be rejected, because old hives are most liable to vermin and other accidents. The summer is an improper time for buying bees, because the heat of the weather softens the wax, and thereby renders the combs liable to break, if they are not very well secured. The honey, too, being then thinner than at other times, is more apt to run out of the cells; which is attended with the double disadvantage of the loss of the honey and the daubing of the bees, whereby many of them may be destroyed.

The management of bees, according to the exigencies of the season, may be gleaned from the following *Monthly Manual*. *October*.—Examine and weigh the hives; and after cleaning the stools, fasten them down for the winter. See that the coverings are clean and weather-tight; and finally remove what combs can be spared. *November*.—Inspect the hives and clean the stools, contract the entrance, and see that the coverings are clean, and the hives so secured as not to be blown off by the wind. *December*.—In very cold and snowy weather close the mouths of the hives as much as possible, and clear away any snow that falls upon the table. *January*.—Towards the latter end give the bees more air. *February*.—Enlarge the entrance of the hive, and in mild weather inspect the hive and clean the stools. This is a good month for purchasing hives. *March*.—Remove all incumbrances from the mouth of the hive, and make every part thoroughly clean. Supply the bees with fresh water. Make an addition to such hives as are strong and heavy, and extract such combs as are old and discoloured. Feed weak hives. *April*.—Destroy moths and butterflies. Watch for the signs of swarming; and towards the latter end make artificial swarms,

where desirable. Destroy wasps, especially the queens. *May.*—Frequently inspect the hives, and clean away everything offensive. Make preparations for hiving swarms, and keep a good look-out in fine weather. *June.*—Feed new swarms in rainy weather, and enlarge such hives as are numerous and active. *July.*—Remove part of the produce of the bees. Destroy wasps' nests and inspect the hives for vermin. *August.*—Examine and weigh the hives, and take combs from such as exceed 30lbs. *September.*—Transport hives to more abundant pastures. Assist in killing drones. Furnish new coverings when necessary. Inspect the hives, clean the stools, and destroy vermin. —See APIARY.

BEE STING.—The sting of a bee, unless on the throat or in the mouth, though very painful—especially where the skin is delicate—is never dangerous; unless indeed several should settle on one part at the same time. The pain inflicted from a sting, is the result of a subtle poison injected into the wound, and no time need be lost in removing the sting when left behind, as that can be taken out when the inflammation and pain subsides. Wet the part stung immediately with extract of lead (the liquor plumbi of the shops) and keep a rag soaked in the extract for a few minutes on the puncture, when all pain will have been removed. Hartshorn is sometimes used for the same purpose, spirits of wine, or a solution of sal ammoniac; but no application will be found so certain or efficacious as the extract of lead.

Should faintness follow the sting, a little spirits of lavender and salvolatile may be given in water, but in all ordinary cases if the pain is speedily subdued, nothing beyond the application to the part will be needed.—See BITES OF INSECTS.

BEES' WAX.—This useful substance is obtained from the honey-comb after the honey has been removed. The best sort is of a bright yellow colour, having the flavour of honey when new; with age it loses its colour, and in a great measure its smell. Its constituents are carbon, hydrogen, and oxygen. Its chief use is as a principal ingredient in cerates and ointments.

BEETLE.—The generic name given to a class of insects, of which there are a great many species, all of them having elytra or sheaths over their wings, evidently designed to defend them from hard bodies which they may meet with in making their houses or nests. These insects are extremely destructive to many sorts of crops, and to vegetation generally.—See CABBAGE-FLY, TURNIP-FLY, WEEVIL, WIRE-WORM, &c.

BEETLE, HOUSE.—There are several methods of exterminating these domestic pests. 1. Place a few lumps of unslacked lime where they frequent. 2. Set a dish or trap containing a little beer or syrup at the bottom, and place a few sticks slanting against it sides, so as to form a sort of gangway for the beetles to clim up by, when they will go headlong into the bait set for them. 3. Mix equal weights of red-lead, sugar, and flour, and place it nightly near their haunts. This mixture, made into sheets, forms the beetle wafers sold at the shops.

BEET ROOT, BAKED.—Wash and wipe it dry, but neither cut nor break any part of it; then lay it into a coarse earthern dish, and bake it in a gentle oven for four or five hours, until it is tender quite through. Pare it quickly if it be served hot, but leave it to cool first, when it is to be sent to table cold.

BEET ROOT, BOILED.—Wash the roots very clean, but neither scrape nor peel them or their colour will be impaired. Throw them into boiling water, and according to the size which varies considerably, boil them from one hour and a half to two and a half, or longer if requisite. Pare and serve them whole, or cut into thick slices and tastefully dished send melted butter to table with them.

BEET ROOT, CULTURE OF.—Of this root there are two kinds, the red and white. *Red beet root* requires a light but rich soil, of considerable depth, that has not recently been manured. The ground should be trenched or deeply dug, and broken small with a spade. The seed is sown in April, in drills an inch deep and fifteen inches asunder. In lifting it, great care must be taken not to injure or break the roots, and the leaves should not be cut off within an inch of the top of the root. The *white beet* is chiefly cultivated in England for its leaves, which are used as spinach. The seeds are sown in the beginning of March, in an open spot of ground. When the plants have put out four leaves, they are hoed and thinned out to at least four inches asunder. A month afterwards a second hoeing is given, leaving the plants about eight inches apart. The outer leaves are first picked off in August or September, and a succession is afforded for the whole season.

BEET ROOT, PICKLED.—Wash it perfectly clean, but do not cut away any of the fibres; boil in a large quantity of boiling water with a little salt, for half an hour; if the skin will come off easily it is done enough. Lay it upon a cloth, and with a coarse one rub off the skin. Cut it into slices, put it into a jar, and pour over it a hot pickle of white vinegar, a little ginger, pepper, and horseradish sliced. Cover close.

BEET ROOT, PRESERVED.—When taken from the ground, do not remove the mould about the root. Keep it in layers of dry sand for winter use.

BEET ROOT, PROPERTIES AND USES OF.—The red beet root is more nutritive than any other esculent except the potatoe; but it extricates so much gas in the bowels as to prevent it being much used as an article of diet. Beet root contains a large proportion of sugar, and for this purpose large quantities of it are used on the continent. For edible purposes beet root is chiefly used for salads, having an agreeable and cooling taste. It may however be cooked in a variety of ways the same as any other esculent. The juice of red beet root is frequently used for colouring soups and sauces.

BEET ROOT SOUP.—Boil till tender two roots of beet, and rub off the skin with a coarse towel, mince them finely with two or three onions; add this to five pints of rich gravy soup, then stir in three or four tablespoonfuls of vinegar and one of brown sugar; let it boil, and throw in some fricandellas about the fourth of the size of a cork, then serve.

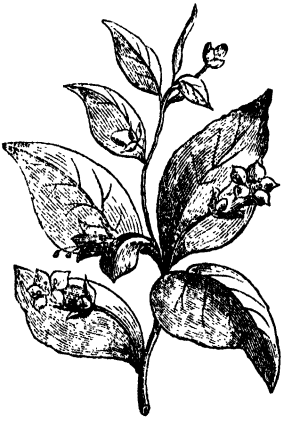
BEET ROOT, STEWED.—Boil them tender with the skin on; slice them into a stewpan with some small onions, and add a spoonful of vinegar; simmer till the gravy is tinged with the colour. Take off the skin just before it is served.

BEGGARS.—Under this head are included several classes of vagrants who subsist by levying contributions on the public. It has been estimated that one out of every hundred of the population of England live by begging, and although among these there may occasionally be meritorious cases, the majority are idle, worthless, and dissolute characters, who would rather live by soliciting alms under a variety of pretexts than by honest labour. The total amount given to beggars has been estimated at £1,375,000 annually, each begging family receiving on an average £55. Begging is resorted to as a profession, and in the practice of it an infinity of disreputable schemes are employed, in order to extract money from the tender-hearted. Some go about with their arms or legs tied up, said to be injured by lightning or by some other deplorable accident. Others affect fits, and in order to favour the deception have small pieces of soap in their mouths, the lather from which is intended to resemble frothing at the mouth. Another mode of deception is the applying blistering ointment to the arms, causing them to have the appearance of having been badly scalded. Others pretend to have bad wounds, and beg for linen rags and small bottles to contain medicine necessary for their cure. In this way a beggar will collect as many as twenty pounds of rags in a day and six dozen bottles, both of which sell well. Then there are blind beggars, deaf and dumb beggars, and a variety of others, who simulate every infliction that it is possible to conceive. Children are also extensively made use of in this disreputable mode of obtaining alms, babies are let out to beggars at sixpence or a shilling per day, and the usual custom is for a woman to sit on the step of a certain door with one, two, or even three infants in her lap. Children who are older are sent out in different directions to beg, each receiving particular instructions as to what he shall say and how he shall say it; nor dare the child return until he has succeeded in obtaining a specified amount. But the begging-letter department is the most successful of any. This is done through the medium of professed begging-letter writers, who have regular offices established for the transaction of business, and whose charges are regulated by a certain scale. At these places an interleaved copy of the *Court Guide* is also kept, with annotations indicating ready victims, and useful hints of various sorts, for consulting which a fee is cheerfully paid. The sums earnt by means of begging-letters is enormous, some gaining as much as two or three pounds per day, and few less than five or ten shillings. In addition to the letters, the beggars are also supplied with documents, pretended to be signed by magistrates, clergymen, or other gentlemen of position; they are also provided with subscription books, in which well-known names are entered, with liberal amounts opposite to them. The characters assumed include burnt-out tradesmen, shipwrecked sailors, distressed foreigners, servants out of place, maimed colliers, unemployed weavers, reduced gentlemen, &c. Nor is systematic begging confined to London alone; at certain periods of the year the beggars regularly visit provincial towns and watering places. Generally speaking, they start with good clothes, and travel in them from town to town if there are not many houses in the way. Before they enter the town they take them off, as well as their shoes and stockings, put on their Guernsey jackets or ragged shirts, send the bundle forward to the lodging-house they intend to pass the night at, and commence begging at the first house they come to. Lodging-houses for the express accommodation of beggars are established in London and in almost every country town; the keepers of these houses are always ready to purchase every description of property begged or stolen, and also furnish the beggars with matches, songs, laces, and many other petty articles, which are hawked about as an excuse for vagrancy, thereby avoiding direct begging; this also gives them opportunities of going down areas, and creeping in at back doors, by which they have every chance of pilfering any article that may be inadvertently exposed, and, what is of greater consequence, observing the fastenings, and noting other circumstances that may lead to robbery, for the professional beggar is also a thief. At the provincial lodging-houses books are kept, in which the various roads are indicated, and the houses marked as *bad* or *good*, according as the occupants are liberal or not to beggars. Saturday night is regarded as the most profitable of any time during the week. On these occasions may frequently be seen a man with a child in his arms, and with a woman who passes for his wife, leading two or three other children near him, accosting the solitary passenger in a lamentable voice, to the effect that they have "Neither money nor food for to-morrow." Begging is more successful at such a time on account of many of the middle and lower classes, especially females, going to market. When the beggars have done their labours for the day they resort to low houses of entertainment, where they spend the proceeds of the day in eating and drinking, and pass half the night in riot and debauchery, occasionally amusing each other with an account of the day's adventures, and jeering and mocking at those who have assisted them. Nine beggars out of every ten answer to the description here given; persons, therefore, who give indiscriminately to every beggar who importunes them do three un-

wise things:—1. Bringing down future annoyance upon themselves and families. 2. Offending against society at large by fostering beggars as a public nuisance. 3. Encouraging idleness and crime by assisting to render the beggar's earnings considerably larger than that which is gained by many labouring families by honest industry.

Some sort of check upon this vagrant fraternity is afforded by the Mendicity Society, which has a regular staff of officers attached to it, who make it their business to inquire into the circumstances and character of beggars generally, and who are thus enabled to detect imposition, and spare many intended victims. If any person therefore feels disposed to respond to the appeal of those who are utter strangers to him, he should take down the name and address of the person asking for charity, and forward it to the Mendicity Society with a request for the necessary information. Enquiries will at once be instituted, and an immediate report forwarded, by which the charity asked may be dispensed or withheld accordingly. Beggars are liable to be imprisoned and kept to hard labour for three months, as rogues and vagabonds, but owing to the laxity of the police the act is almost inoperative.

BELLADONNA, OR DEADLY NIGHTSHADE, is a small flowering plant indigenous in this country and Europe generally. The shrub, though, growing wild in lanes and chalky banks, is sometimes cultivated in our gardens, though from the extremely tempting appearance of the ripe fruit or berries, the practice is a very reprehensible one, especially where children or persons unacquainted with the deadly nature of the



plant, have access. There are several varieties of the nightshade, as the common, the woody or dulcamara or bitter-sweet, and the deadly or the atropa belladonna; which, like every species of plant belonging the order "solanacea," is strongly narcotic and virulently poisonous.

As a medicinal agent, belladonna possesses powerful narcotic and sedative properties, but it is now only retained in the pharmacopeia as an external remedy, being a valuable application in diseases of the eye, such as inflammation of the iris, amaurosis, and certain conditions of cataract. In cases of imperfect vision, from contracted pupil, or immobility of the iris, the result of close study, or advanced age, the extract of belladonna applied to the eyebrow, or rubbed over the upper lid, exerts a certain and beneficial effect.

The atropa belladonna grows to the height of three feet, and flowers in June and July. The fruit, at first scarlet, becomes, when ripe, purple, and in size and appearance resembles a small black cherry.

The symptoms evinced by poisoning from belladonna are extremely rapid, and commence with a dry pricking feeling in the mouth and gullet, difficulty of swallowing, attended with considerable dilatation of the pupil, indistinct or double vision, the tongue becomes tremulous, and the speech difficult. These premonitory symptoms quickly give place to giddiness, stupor, drowsiness, insensibility, and coma. The pulse sinks to a small feeble thread, the breathing is low and hardly perceptible; the face is pale and shrunk, and the countenance cadaverous; the limbs become relaxed and the muscles flaccid; a few convulsions, like sudden spasms, vibrate through the extremities, and the sufferer expires.

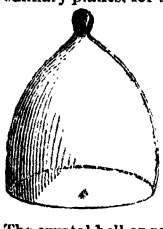
Treatment.—Emetics, in all cases of poisoning, are the first and most important means of relief, and should be given as early as possible, though in cases of poisoning by belladonna their efficacy is less signal than in other virulent drugs. Still, though not exclusively to be depended upon, they are to be given; and the best emetic for the purpose is the white vitriol or sulphate of zinc. To a child up to 12 years of age, the dose is from 10 to 15 grains dissolved in half a cupful of warm water, while for an adult from 30 to 40 grains, in the same vehicle, will be the due proportion. The chief dependence, however, must be placed on the use of the stomach pump, after which the patient should be given frequent draughts of vinegar and water, and the juice of lemons or oranges, to neutralize the poison; mucilaginous drinks, honey or treacle. At the same time he must be kept in constant motion by walking, the nervous system roused by dashing cold water over the face and head, and in the absence of electricity, the spine rubbed vigorously with an embrocation made of equal parts of hot turpentine and brandy. To accelerate the action of the heart and rouse the sinking powers, occasional doses of ether, ammonia, and brandy, must be given in the following proportions:—Salvolatile, 30 drops; brandy, 2 drachms or a desert spoonful; hot water, 1 ounce or two tablespoonfuls; and ether, 10 drops, added last, and the whole drank the moment it is mixed.

These means must be persisted in with energy and perseverance, or death will anticipate every exertion.

BELL-FLOWER.—Of this little wild herb or flower there are ten varieties. The annuals should be sown in the borders in March and April, the seed being very slightly covered on account of its small size.

The perennial hardy kinds are increased by seeds or divisions, and require no peculiar treatment. The biennials are sown in May or June, for blooming the following year. Good garden soil suits them all.—See CAMPANULA and CANTERBURY BELL.

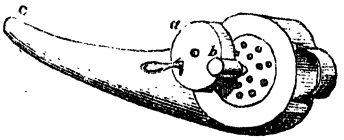
BELL GLASS.—An instrument used in horticulture for shading and protecting culinary plants, for striking cuttings, or for retaining a moist atmosphere about seed. A glass of a peculiar shape is used expressly for the culture of the cauliflower, by the London market gardeners. These hand-glasses are usually blown of green coarse glass 18 inches in diameter and 20 in height, with a glass knob at top, answering the purpose of a handle.



The crystal bell or receiver is employed in striking tender cuttings in the exotic departments, especially heaths; they are generally from three to eight inches in diameter, and from four inches to one foot in height.—See HAND-GLASS.

BELL METAL.—A compound of copper and tin, which becomes not only more sonorous, but heavier than either of the ingredients apart. The proportions differ; ordinarily, however, 23 pounds of tin are mixed with 100 pounds of copper: the latter being somewhat increased when the bells are larger. Brass, spelter, and even lead are sometimes added; and, more rarely, silver, which is considered much to improve the tone of the metal.

BELLOWS.—A well-known domestic contrivance, which, by circulating gusts of air among half-kindled embers encourages them into a blaze. It should be borne in mind, however, that in proportion to the artificial vitality thus excited, so does the fire become deadened when the application is withdrawn. Bellows, therefore, should only be used on an emergency. When the bellows is employed to revive a fire, it should be held from four to six inches from the fireplace, and be worked gently. For if too strong a current of cold air be driven upon a dull fire, it will extinguish it by bearing away the heat. On the other hand, too strong a wind directed upon a fire of moderate briskness, drives away the gases of the fuel in an unconsumed state, and occasions a waste of fuel. Clarke's patent blowers are a great improvement upon the old-fashioned bellows, as they revive the fire by a gentle and continuous current of air, and are free from the unpleasant clacking noise of the bellows. They consist of a tin tube, having attached to it a barrel, in which is contained a circular fan, and which is driven round by a wheel, *a*, rubbing against a smaller one, *b*, fixed on the axis of the fan. The air enters at the holes on the sides of



the barrel; and the leaves of the fan reaching close to the interior circumference of the barrel, the air is expelled in a continued stream through the tube, *c*. Book: *Housewife's Reason Why*.—See BLOWER.

BELLS.—Without these domestic conveniences a house can be scarcely said to be complete; and indeed, for the maintenance of comfort, order, and regularity, they are absolutely necessary. Bedrooms especially should always have a bell communicating both with the servants' sleeping-room, and with the kitchen, with the handle conveniently placed that a person may ring it without getting out of or disturbing himself in bed. Many accidents and deaths have doubtless been owing to the inability which the person afflicted has experienced in communicating his situation to others. Each room should have a separate bell corresponding with it, and each bell should possess a distinct sound, so that the servant may not be in doubt as to the room where attendance is required. Bells, by careful management will last many years, but if used roughly they are soon broken and disordered. When the bell is rung, the handle should not be jerked too violently, nor allowed to fly back suddenly. It should be pulled with moderate force, and accompanied back to its starting point with the hand still resting on it. Young children should never be told to ring a bell, as they become accustomed to regard it as a plaything, and by that means

it is frequently broken; for this reason, it would be better if bell-handles were placed in such a position that they could be reached only by grown-up persons. Substitutes for bells hung in the ordinary way, are provided in instruments rung or pressed by the hand; these, however, seldom answer the end satisfactorily, for, generally speaking, the summons has to be repeated several times before it can be heard.

BELT.—A portion of wearing apparel generally fastening round the waist. Care should be taken that it does not fit tightly as it is thus liable to derange the stomach, and interfere with the digestive organs. Belts are sometimes worn under the dress by way of support, but their habitual use, except in cases of deformity and confirmed weakness, is to be condemned; as by compressing the parts they come in contact with, and keeping up an undue heat, their prejudicial effects on the system generally far outweigh any local benefit which may be derived from them.—See SWIMMING BELT.

BENCH.—See GARDEN SEATS.

BENEFIT SOCIETIES are associations of persons, chiefly in the humbler classes, for the purpose of making provision, by mutual contribution, against those contingencies in human life, the occurrence of which can be calculated by way of average. The principal objects contemplated by such societies are the following:—The insuring of a sum of money to be paid on the birth of a member's child, or on the death of a member or any of his family; the maintenance of members in old age and widowhood; the administration of relief to members incapacitated for labour by sickness or accident, and the endowment of members or their nominees. Benefit societies are therefore associations for mutual assurance, but are distinguished from assurance societies—properly so called—by the circumstance that the sums of money which they insure are comparatively small, the Act of Parliament providing that no society of this nature shall assure the payment of an annuity exceeding £50 per annum, nor a sum payable on the death of any person, or any other contingency exceeding £200. The importance of these associations is obvious. A labouring man with a family to provide for, is, as a general rule, unable, even with his utmost industry and frugality, to make a sufficient provision against a time of necessity; but as a member of a friendly society, he can, with comparative facility, accomplish this desirable object, and without subjecting himself, or those who are dear to him, to any severe privations, he is enabled to look forward to adequate and substantial aid in the event of sickness or other unavoidable evils of a natural kind. Benefit societies are required to be enrolled by Act of Parliament, and to submit their rules for the approval of an officer appointed for that purpose.

Persons who intend joining a benefit society should, previously to doing so, take care to ascertain that such society is enrolled, for if not, he will have no guarantee for its stability, good faith, and proper conduct, which, in regularly enrolled societies, the Act of Parliament specially enforces.

The *rules* adopted by the different benefit societies vary in many particulars of minor importance; but the following abstract comprises most of the practical points aimed at by such institutions. *Rule* 1. The object of this society is to assure to persons between the ages of twenty-one and fifty-five, who may become members thereof, firstly, an allowance not exceeding 20s. per week during sickness until the age of 70, secondly, an allowance not exceeding, in the whole, £2 per month, from and after the ages of 55, 60, 65, or 70, as may be previously agreed on, to continue during life; thirdly, a payment at death not exceeding £20. *Rule* 2. The contributions for these assurances shall be paid monthly, and shall be regulated by the ages of the members at the time of admission, conformably to tables inserted at the end of the rules. Each member assuring an allowance during sickness to pay an additional contribution of 2s. per annum to entitle himself to medical attendance and medicine when needed. *Rule* 3. A single contribution may be paid on admission, or at any subsequent times, which contribution shall redeem the whole of the monthly contributions which would otherwise have been payable. *Rule* 4. Provides, for ascertaining through the examination of the surgeon, the state of health of persons applying to become members, and further provides for the periodical visits of the same officer to every member while receiving an allowance in sickness, for the purpose of ascertaining the state of his health. *Rule* 5, Relates to the admission of members. All candidates must be recommended by two members, and upon admission must produce a register of baptism, or other satisfactory proof of age; together with a certificate signed by the surgeon of the society, stating his opinion as to the health of the candidate. He must also sign a declaration of the kind and amount of insurance for which he intends to provide by his monthly contributions, and also his acquiescence in, and adherence to, the rules of the society. *Rule* 5, disqualifies members from claiming any allowance in sickness until one year after admission to the society, or until all contributions that may be due shall have been paid up; and provides for withholding the allowance where the disease or infirmity has been contracted through profligacy, quarrelling, or drunkenness, or if the member should be imprisoned under any criminal conviction. *Rule* 6, suspends the allowance in sickness if the claimant refuses to be seen by the medical or other officers of the society; or if by any wilful act or misconduct, such as drinking in a public house, he shall delay the recovery of his health. *Rule* 7, provides that the sum assured at death shall be forfeited if the member die by his own hand, or by the hand of justice. *Rule* 8, provides that, if any member shall be convicted of felony, or shall by any false or fraudulent representation, or demand, obtain or attempt to obtain, any allowance from the funds of the society,

if he shall enter the army or navy, or go abroad, he shall be excluded from the society, and all his interest and monies therein shall be forfeited; but those members who have been excluded because of their joining the army or navy may be re-admitted on the cause of exclusion ceasing, provided their health is good, and the contributions for the time of exclusion be paid, with interest. *Rule* 9 facilitates the transfer of insurances from one benefit society to another, in the event of any member removing beyond the limits of the original society. *Rule* 10 enables the trustees of the society to pay the relatives of persons dying intestate, and for whose effects no letters of administration shall be taken out, the amount which may have been insured, in such manner as they shall think most beneficial.

The tables containing the rates of monthly contributions are not applicable to the circumstances of all benefit societies, but will be found very near to the average rates generally adopted.

TABLE showing the sum to be contributed monthly, by persons of the following ages when admitted, *to entitle them to receive 20s. weekly during sickness*, at any time after one year from the time of admission to the age of seventy.

Age next Birthday.	Monthly Payment.	Age next Birthday.	Monthly Payment.	Age next Birthday.	Monthly Payment.
	s. d.		s. d.		s. d.
20	2 1	32	2 9¾	44	4 2¾
21	2 1½	33	2 10½	45	4 5
22	2 2	34	2 11¼	46	4 7
23	2 2⅝	35	3 1	47	4 9½
24	2 3½	36	3 2¼	48	4 11¾
25	2 4	37	3 3⅛	49	5 2½
26	2 4½	38	3 4¾	50	5 5½
27	2 5¼	39	3 6¼	51	5 8¾
28	2 6	40	3 7⅝	52	5 11⅝
29	2 7	41	3 9½	53	6 3
30	2 7¾	42	3 11¼	54	6 6¾
31	2 8¾	43	4 1	55	6 10⅝

If it be desired to insure for less than 20s. per week during sickness, the contributions must be made in proportion. To entitle the member to receive 15s. per week, the payment must be three fourths of the above rate. For 10s. per week one half, and so on. This rule is likewise applicable to the two following tables.

TABLE showing the sum to be contributed monthly by persons of the following ages when admitted, *to secure the payment to them of a monthly annuity of* £2, to commence from their attaining the respective ages of either 55, 60, 65, or 70, as agreed at the time of joining the society; the contributions to cease when the annuity commences.

Age next Birthday at the time of admission.	To begin at the age of 55.	To begin at the age of 60.	To begin at the age of 65.	To begin at the age of 70.
	s. d.	s. d.	s. d.	s. d.
18	3 8½	2 2⅞	1 3	7¾
19	3 11	2 4½	1 3¾	8
20	4 2	2 5⅞	1 4⅝	8¼
21	4 5½	2 7½	1 5⅞	9
22	4 8½	2 9½	1 6⅞	9½
23	5 0	2 11½	1 7⅞	10
24	5 4	3 1⅝	1 9	10⅝
25	5 8	3 4	1 10¼	11¼
26	6 0¾	3 6½	1 11½	1 0
27	6 5½	3 9¼	2 1	1 0⅝
28	6 11	4 0½	2 2⅞	1 1⅛
29	7 5	4 3½	2 4½	1 2½
30	7 11½	4 7	2 6½	1 3½
31	8 6½	4 10¾	2 8¼	1 4¾
32	9 2½	5 3	2 10¼	1 5½
33	9 11	5 7½	3 0½	1 6⅝
34	10 8½	6 0½	3 3½	1 7⅞
35	11 7½	6 5¾	3 6	1 9
36	12 7½	6 11¾	3 9	1 10½
37	13 9	7 6½	4 0½	2 0
38	15 0½	8 1⅝	4 3½	2 1½
39	16 5¾	8 9¼	4 7⅝	2 3⅛
40	18 1⅛	9 7	5 0	2 5⅛
41		10 5¼	5 5	2 7⅝
42		11 4⅞	5 10½	2 10
43		12 5⅞	6 4⅛	3 0¾
44		13 8⅛	6 10⅞	3 3¾
45		15 1⅛	7 6¼	3 7
46			8 2⅛	3 10⅛
47			8 11¾	4 2½
48			9 10⅛	4 7
49			10 10¾	5 0
50			12 0¾	5 5½
51				6 0
52				6 7½
53				7 3⅝
54				8 1½
55				9 0¼

TABLE showing the sum to be contributed monthly by persons of the following ages when admitted, *to insure the payment of the sum of £20 at the time of death.*

Age next birthday at the time of Admission	Monthly Contribution.	Age next Birthday at the time of Admission.	Monthly Contribution.
	s. d.		s. d.
16	0 6½	36	1 0¾
17	0 7	37	1 1¼
18	0 7½	38	1 1¾
19	0 7¾	39	1 2¼
20	0 7¾	40	1 2¾
21	0 8¼	41	1 3¼
22	0 8¼	42	1 3¾
23	0 8½	43	1 4¼
24	0 8¾	44	1 5
25	0 9	45	1 5¾
26	0 9¼	46	1 6½
27	0 9½	47	1 7¼
28	0 9¾	48	1 8¼
29	0 10¼	49	1 9¼
30	0 10½	50	1 10½
31	0 10¾	51	1 11½
32	0 11¼	52	2 0½
33	0 11¾	53	2 2
34	1 0	54	2 3½
35	1 0¼	55	2 5¼

By these tables it will be seen that for a comparatively small monthly payment, which nearly every working-man in full employment might conveniently spare, provision is made for sickness, old age, and death. — See ANNUITY; BOOKS: *Becher's Constitution of Friendly Societies; Ansell's Treatise; Becher's Tables.*

BENZOIN.—A resin or balsam obtained chiefly from Sumatra. Benzoin has a pleasant aromatic odour, and is used both as a perfume and a medicine.

BERLIN WOOL WORK. — A well-known species of fancy needlework, chiefly practised by ladies as a pastime. The foundation for this work is termed Berlin canvas, it may be obtained of most colours; white, black, claret, and primrose, are those generally employed, but there is very little durability in any except white. The light colours quickly fade, and the dark colours soon become shabby, on account of the small quantity of silk that covers the cotton threads which compose the canvas. Berlin canvas being an article of expensive manufacture, is frequently made of an inferior quality; great care and judgment are therefore required in its selection; that which is clearest and freest from knots, and of a firm and uniform texture is to be preferred. Needlework on Berlin canvas requires greater neatness in finishing the stitches at the back than that intended to be grounded; the wools or silks must not be carried across from one part to another, but cut off as closely as possible; otherwise, when the work is mounted they will show through the meshes of the canvas, and greatly detract from the general appearance. German, or *Berlin wool*, is adapted for working all kinds of Berlin patterns. The manner in which it is skeined, or knotted, in small quantities, renders it the most convenient, and, comparatively speaking, the least expensive description of wool for this purpose; the brilliancy and variety of the shades are also further recommendations in its favour. The wool may be split and worked on the finest canvas, and doubled and trebled on the coarsest. For working on canvas, a needle sufficiently large should be employed to form a passage, through which the wool may pass without dragging. Berlin wool should not be wound on a card, or winder, as it is partially deprived of its elasticity by pressure.

Books: *Miss Lambert's Practical Hints on Decorative Needlework; Mrs. Warren's Berlin Wool Work Instructions; Brook's Ladies Berlin Work; Cassell's Ladies' Work Book; Clarke's Work Table; Tribner's Berlin Wool Treatise; The Ladies' Companion;* also the *Lady's Newspaper.*

BERRIES. — See BILBERRY, BLACKBERRY, CRANBERRY, GOOSEBERRY, RASPBERRY, STRAWBERRY, &c.

BEVERAGES. — See BARLEY WATER, BISHOP, EGG-NOT, GINGER BEER, LEMONADE, PUNCH, SODA WATER, WHEY, &c.

BIBLE—from Biblia, meaning *books*—is the name which was given in the fifth century by Chrysostom to the collection of sixty-six writings, which are recognised by Christians as divine. To these sixty-six are sometimes added about fourteen apocryphal writings, so that the total number amounts to about eighty, of which thirty-nine are in the Old, and twenty-seven in the New Testament. The Old Testament was divided by the Jews into three classes, the *Law*, the *Prophets*, and the *Hagiographa* or *Holy Writings*, which last division includes more particularly the *poetical* parts. The Law comprehends Genesis, Exodus, Leviticus, Numbers, and Deuteronomy. The Prophets, Joshua, Judges, Ruth, Samuel, Kings, Isaiah, Jeremiah, Ezekiel, and the twelve Lesser Prophets. The Hagiographa, or Holy Writings, are nine, namely, Job, Psalms, Proverbs, Ecclesiastes, Song of Songs, Daniel, Chronicles, Ezra with Nehemiah, and Esther.

The New Testament, like the Old, is a compilation of books written by different inspired individuals, and put together in such a manner as to exhibit a regular account of the birth, actions, and death of Christ. The historical books are the four *Gospels* and the *Acts of the Apostles*; the doctrinal are the Epistles of Paul, and some others; and the prophets, the *Book of Revelations.*

The Apocrypha consists of the following books:—*First and Second Esdras, Tobit, Judith,* the rest of the chapters of the Book of *Esther,* the *Wisdom of Solomon, Ecclesiasticus, Baruch,* the *Song of the Three Holy Children,* the *History of Susannah,* the *Story of Bel and the Dragon,* the *Prayer of Manasses,* and the *First and Second Book of Maccabees.* The term Apocrypha is Greek, signifying *hidden* or *con-*

cealed, and is applied to these books by the compilers of the English bible because their origin is regarded by them as obscure, and their authenticity doubtful.

The Bible in England originally existed in manuscript only. The New Testament was first printed in 1526, and the whole Bible in 1537. Since that time the Bible has continued to be printed in all languages and all parts of the world; and some indication of its widely spread and universal operation will be furnished by the fact that the British and Foreign Bible Society, alone, has been the means of distributing nearly fifty million copies of the Scriptures, printed in a hundred and seventy different tongues.

BILBERRIES, TO PRESERVE.—Put the berries into a bottle, cork and seal it, place it in a kettle of cold water, and gradually let it boil. As soon as it boils, take it off and let it cool; then take the bottles out, and put them away for winter use.

BILBERRY.—A small shrubby plant, frequently found in woods and upon heaths. There are several species of this shrub, all of which are worth cultivating; some for the sake of the fruit, and others for ornament.

The bilberry succeeds well in peat soil or very sandy loam. It may be raised from root suckers, creeping roots, trailing rooting stems, or from seeds. The bilberry resembles the red currant, both in size and colour; it is cooling and astringent and used medicinally and for culinary purposes.

BILE is one of the most important secretions in the animal economy; for on its due strength and quantity depends the separation of the aliment that supports life from the inert refuse, and it also furnishes the blood with the chyle, which may be called the very principle of life. At the same time by its stimulating properties, it promotes that unceasing action by which the alimentary canal is enabled to expel from the system the egesta that remains after the digestion of the nutrient matters received into the body for its support. The secretion of bile from the refuse of blood, and the power it exercises over the economy of animal life, are remarkable and strange. The organs subservient to the formation of bile are the liver and gall bladder; and the following is the mode in which the function of the secretion of bile is effected:—Running from every part of the bowels, and the membranes that surround them, are innumerable small veins which converge into branches, and finally, as they approach the liver, into one large trunk, called the *portal vein*, entering the substance of the liver; this vessel immediately divides and subdivides till it diffuses itself in the finest filaments over its entire surface. From the minute terminations of this vein, which carries the darkest and most impure blood in the body, arise a set of equally small vessels called *biliary tubes*, whose office it is to secrete from the blood brought from the bowels, bile, which tubes uniting into one large vessel, called the *hepatic duct*, convey the secretion to the elongated neck of the gall bladder, from which it passes into the small intestines, near the junction with the stomach.

The food having been digested by the stomach, is passed into the small intestines in a soft pulpy mass called *chyme*. Upon this digested food the bile is suddenly emitted, when, like the effect of rennet on milk, the bile separates the food into two parts; a solid mass which is thrown down, and a fluid creamy substance called *chyle*, which is immediately taken up by proper vessels, and carried to the heart to become blood, while the grosser matter is propelled along the intestines. Bile is of a greenish-yellow colour, thick and viscid; it has a rank heavy smell, and a bitter acid taste: and analysis shows its organic elements to consist of a portion of free soda, water, albumen, resin, picromel, yellow matter, salts of potass and soda, phosphate of lime, and oxide of iron.

BILIOUS COMPLAINTS.—Persons are said to be bilious, when bile finds its way from the small intestines into the stomach, and there, mixing with the digesting food and irritating the coats of the stomach, becomes absorbed into the blood, on which it acts like a species of poison, producing a constitutional disturbance of more or less severity. The symptoms that prognosticate this kind of malady are intense pains in the head, weight and tenderness of the stomach, nausea and sickness, fœtid breath, a bitter or coppery taste in the mouth and throat, a coated tongue, and a quick, sharp pulse. The skin is dry, there is considerable thirst, and also occasional shiverings.

Treatment.—The effect of bile on the stomach should be considered in the light of a chain of symptoms excited by the presence of some foreign or unhealthy substance; and the rational view of the treatment of such symptoms consists in expelling the intruding mischief as quickly as possible; and, as it is always better to make the bile take its natural course of exit—downwards—than urge it out of the system in an opposite direction, the treatment should commence by taking such aperients as will excite the whole alimentary canal, and carry it out of the stomach through the bowels, at the same time avoiding by every means its expulsion by vomiting. To carry off the bile by aperients, and allay the sickness, is,

in fact, all that has to be done, for when these objects are achieved, every other symptom will, as a natural consequence, subside. As the nausea and headache are the most urgent and distressing symptoms, they are the first to demand relief. A small blister, the size of the round of a wineglass, should be laid on the pit of the stomach, and a dose of the subjoined effervescing mixture given every half hour; taking advantage of the first lull in the retching to give two of the aperient pills, which are to be repeated every six hours, till their action on the bowels shows that the object for which they were taken has been obtained. For females and persons of delicate constitution, one pill instead of two should be taken as a dose. If the patient is in bed, bottles of hot water should be kept at the feet; and as an after corrective, the tonic mixture, prescribed below, is to be taken twice a day for about a week; at the same time the convalescence will be facilitated, and the tone of the stomach improved, if a little toasted bacon is eaten for breakfast, and a dry biscuit and glass of stout taken for lunch.

EFFERVESCING MIXTURES. — Take two twelve-ounce bottles, labelled No. 1 and No. 2. Fill No. 1 with water, and in it dissolve 2 drachms of tartaric acid. Half fill No. 2 with water, and dissolve in it 1 drachm of carbonate of ammonia, or volatile salts, and 1½ drachm of carbonate of soda; then add ½oz. of syrup of orange peel, and 1 drachm of laudanum; and fill the bottle up with water. Measure into a tumbler two tablespoonfuls of No. 2, and in a wineglass, the same quantity of No. 1; then pour the last on the first; stir, and let the patient drink instantly while effervescing. This is to be repeated every half hour, or as it may be necessary; should the draught be frequently rejected, let the mixtures be drunk once or twice, separately—the acid, or No. 1, first, and the saline, or No. 2, after it, allowing the effervescence to take place in the stomach.

APERIENT PILLS.—Take of the compound extract of colocynth, 2 scruples; blue pill, 1 scruple; extract of hyoscyamus, 12 grains; mix well, and divide into twelve pills. Two to be taken as soon as the stomach is quiet, and two every six hours till the bowels have been sufficiently relieved.

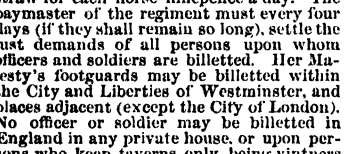
TONIC MIXTURE. — Take half a dozen dandelion roots, wash, and cut into chips, and boil, with a small piece of soda, in three pints of water, slowly down to two pints, adding, about a quarter of an hour before removing from the fire, one drachm of bruised ginger, and the same of gentian-root cut small; strain the liquor, and when cold, take a wineglassful three times a day.

Bilious complaints assume a variety of forms, and give rise to a multiplicity of symptoms; but as a general rule, those already described are the chief and most regular, though circumstances and habit of body may partially modify or exasperate all or particular ones; the severe, splitting headache, coated tongue, unpleasant metallic taste in the mouth, sickness, and dimness of sight, being, however, the most general and characteristic. Some persons are so constituted, that the slightest exertion or change of air and food will at once cause an undue action of the biliary organs, creating such an abundant secretion of that fluid that it forces an entrance into the stomach, giving rise to the chain of symptoms just described. For persons so predisposed, it is useless to fly always to medicine as a means of relief; medicine too often, by relaxing the tone of the system, and weakening particular organs, only increasing the tendency to other attacks; the better plan is to resort to a system of diet and regimen, and by a course of healthy and natural stimulants, endeavour to brace and invigorate the digestive organs. Regularity in the hours of eating is the first consideration, and the breakfast should be regarded as the most important meal of the day. At this meal let the patient eat dry toast with tea, and a rasher of bacon—for stomachs that cannot endure butter, can take the fattest bacon with ease and impunity. The great advantage of taking bacon is, that it stimulates a languid appetite, and compels the eating of a large quantity of bread or toast; and as *bulk* is the natural stimulant of the stomach, too much can hardly be taken. For lunch, a dry biscuit, with or without cheese, and a glass of the best bitter ale, or a little stout, should follow, four hours after breakfast, and for dinner, three hours afterwards, any light boiled or roasted food, beginning and concluding the meal with one dish, whatever that may be; but carefully avoiding both broths and pastry, or at least till the stomach is of sufficient strength to digest either without flatulence. It will be better to avoid all vegetables, and eat only bread with the dinner; the beverage can consist either of bitter ale, or sherry and water, or a little brandy and water; but when malt liquor is taken, it should be the strongest and the best; at the same time the bilious person should shun soda-water, as the gas it contains is more apt to disorder than benefit the stomach. Where the digestion is still weak, about ten grains of soda in a wineglass of water, with a teaspoonful of tincture of hops, may very advantageously be taken half an hour before dinner, or even after, if any inconvenience is felt. The evening repast should consist of dry toast, or very thinly buttered crusts, which, demanding much more mastication, ensures a favourable condition for digestion, and never more than two small cups of tea—in fact, as little liquid as possible at every meal.

BILLETING—is the quartering of soldiers in inns, livery stables, ale houses, and victualling houses throughout the kingdom. In a licensed victualler's beer license is the the following clause: "And all provisions for billeting officers and soldiers in victualling houses contained in any act for punishing mutiny and desertion, and for the better pay of the army and their quarters, are to extend and apply to the house and premises mentioned in this license." An Act of Parliament is passed annually for the maintenance of the regular forces, without which the army would be disbanded at the expira-

tion of every year. It authorizes all constables of parishes to billet the officers and soldiers in Her Majesty's army, and their horses when on their march, in a just and equal proportion, upon the keepers of all victualling houses within one mile of the place mentioned in the route, although some of such houses may be in the adjoining county, and every such licensed victualler is to furnish them with proper accommodation; and if he has not room in his own house, then in some sufficient quarters to be provided by him in the immediate neighbourhood. If a licensed victualler shall have an undue proportion of soldiers billetted at his house, a justice, upon complaint being made, has power to order such soldiers to be removed; and if he has horses billetted upon him, and has no stables, two justices may order him to pay a proper allowance to the person furnishing the requisite accommodation. He is bound to furnish a soldier billetted upon him for every day on the march, and for a period not exceeding two days when halted at an intermediate place; and for the day of the arrival at the place of final destination one hot meal in each day, to consist of one pound and a quarter of meat previous to being dressed, one pound of bread, one pound of potatoes, or other vegetables, and two pints of small beer, also vinegar, salt, and pepper, for which he is to be paid tenpence a day, and except when on the march and entitled to the hot meal, he must furnish such soldier with candles, vinegar, and salt, and allow him the use of fire, and the necessary utensils for dressing and eating his meat, for which he is to be paid one halfpenny a day, and for hay and straw for each horse ninepence a day. The paymaster of the regiment must every four days (if they shall remain so long), settle the just demands of all persons upon whom officers and soldiers are billetted. Her Majesty's footguards may be billetted within the City and Liberties of Westminster, and places adjacent (except the City of London). No officer or soldier may be billetted in England in any private house, or upon persons who keep taverns only, being vintners of the City of London, admitted to the freedom of the Vintners Company in right of patrimony or apprenticeship.

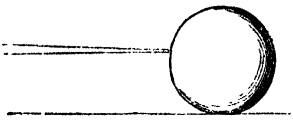
BILLIARDS.—A game played upon a table with balls propelled by a long round stick, termed a cue, and occasionally assisted in long or difficult strokes by a jigger or rest. In learning this game the first thing to be attended to is the *Bridge*, or support



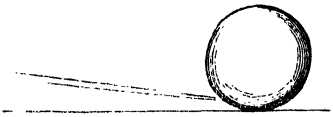
upon which the cue is to act. This is formed by the left hand of the player being placed firmly upon the table, at a distance of from six to nine inches from the ball that is to be struck, and drawn up until the hand rests only on the wrist and the points of the fingers; the latter being bent up to such an angle as to leave the palm considerably hollowed, at the same time that the thumb is elevated above the level of the knuckles, so as to form a furrow between it and the forefinger for the cue to slide in. The next matter of importance is to handle and adapt the cue in such a manner as to render it perfectly free and easy in its motion. This consists in grasping it about four or five inches from the broad extremity with the right hand, with sufficient force to enable the striker to use an adequate strength in his stroke, and yet free enough to allow of a considerable extent of motion. The bridge being made and the cue adapted, the next point to be attained is *how to strike the opposing ball* in a full, fair, and even manner. To accomplish this, the point of the cue (which should be rubbed over with a little chalk) ought, in the first place, to be made accurately to approach the centre of the ball. The cue should then be drawn four or more inches backwards, according to the strength required, slightly depressed towards the cloth, then gradually elevated till perfectly horizontal, and lastly forced against the ball, so as to drive it onwards, with more or less velocity, as occasion may require. The stroke should be made freely from the shoulder, and not in a cramped manner from the elbow, and the arm should be parallel to the side, not at an angle. Before making the stroke the learner should not only know where the balls will strike, but he should endeavour to calculate where they will be left. In order to accomplish certain strokes the position of the cue must be regulated accordingly, as seen in the engravings.

Attention to various circumstances is necessary, in order to play the game of billiards with delicacy and correctness; namely, the particular modification of the action of the instrument, with which the impulse is given to the ball, the proper regulation of the eye of the striker, the position he assumes in striking, and the mode in which he accommodates the instrument to his hand; the precise point of the distant or object ball, or of the cushion which is made to receive the stroke; and lastly, the degree of strength necessary to be employed in order to obtain the desired end. The accuracy of every stroke will very materially depend upon the proper regulation of the eye of the striker; and this requires a great degree of nicety. There are two objects to be attentively regarded nearly in the same instant; namely, the cue ball, or that to be struck with the instrument, and the object ball, or that to be struck at, in order to effect the desired hazard or canon. The position of the object ball should first be attentively marked, the cue is then to be adapted to the bridge formed by the hand, as before directed, and upon this the eye should be suffered to rest until the moment of striking: previous to the act of which it should be again carried to the object ball, and remain intently fixed on it until the stroke is com-

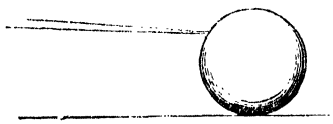
pleted. *The position in which the striker stands*, while in the act of playing, is also of essential importance; he should stand firmly on the right leg with the left slightly in advance and a little bent, the body nearly erect, or



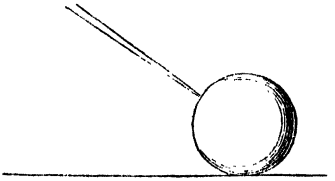
CENTRAL STROKE.



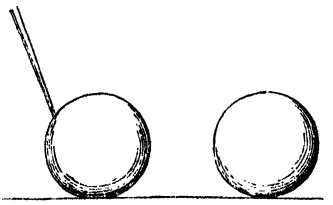
CUE FOR THE TWIST.



CUE FOLLOWING BALL.



POSITION OF CUE FOR JUMPING THE BALL.



PERPENDICULAR POSITION OF THE CUE FOR A TWIST WHEN ONE BALL IS NEAR ANOTHER.

not more inclined forward than may be necessary for the left hand to rest with ease upon the table. This position should be steadily preserved until the stroke has been completed, and the arm be the only part moved during the act of striking. Particular attention should be paid by the novice to what are termed *the angles of the table*, or, in other words, the course which the balls describe by reverberation from the elastic cushion. A little practice with a single ball will soon bring the student into acquaintance with these principles. A very good plan to proceed upon is to make a chalk spot on the side or top cushion, and strike at it repeatedly with various degrees of strength, first from one and then from the other side of the angle. In this way the truth of the stroke will be proved, and it will soon be discovered how the different strengths and sides given to the ball affect the angles produced. Two or three hours' practice in this way will be sufficient to acquire the requisite knowledge. Then take two other balls, the white and red, and, placing them in the line of the angles observed, endeavour to produce the various canons that lie within those angles. As soon as you have acquired a little intimacy with the more common canons, you can increase or decrease the distance between the balls, and so vary the practice in an infinity of ways. After the learner has mastered the angles of the table, his next preparatory step should be to make himself master of the several common winning and losing hazards. For this purpose he will find it expedient to begin with the *winning*, which may be considered as a key to billiards, generally speaking, for whoever can make a good winning hazard will find little difficulty in effecting every other which the table may present to him. The full or (straight) winning hazard should first be practised; beginning by placing the two balls near to each other, precisely in a line, and in the direction of a pocket, and upon that precise point directing the stroke of the ball. After a little practice has enabled him to strike this with ease at a short distance, he is to remove the balls farther asunder, and in the end make the extent of his stroke the whole length of the table. The learner should then proceed to practise the other winning hazards, namely, the three quarter ball, half ball, third ball, quarter ball, and eighth ball. *Losing hazards* must occur more or less frequently in every game; and after the different degrees of strength and fulness requisite for each stroke have been once acquired, they are, of all other hazards, the most easily played, requiring only a little practice and attention to enable the striker in every instance to ensure success. It must be borne in mind, with respect to losing hazards, that the farther the pocket in which the hazard is to be made, and the two balls recede from the parallel, the more full and strong will it be necessary to strike; and, on the contrary, the nearer they approach to the straight line, the more fine and softly must they be played.

There are several games of billiards, but that known as the winning and losing carambole game is the established and recognised one in England. This game is played with three balls, white, spot white.

and red; and the following are the principal rules. 1. On commencing the game the red is placed on the spot, and the players string from the baulk circle. The ball that stops nearest to the cushion wins the lead, and gives the choice of balls. 2. The usual game is fifty up; but it may be played at any greater or less number of points. 3. A miss must in all cases be played with the point of the cue. 4. In reckoning the points a white winning or losing hazard scores two; a red winning or losing hazard three; a miss one; a coup three; pocketing the two white balls four; pocketing a white and a red ball five; a white hazard and canon four; a red hazard and canon five; pocketing your own and the red ball six; your own, the white, and a canon, when the white is first struck, six; your own, the white, and a canon off the red, seven; the red, your own and a canon; all the balls, when the white is first struck, seven; all the balls, when the red is first struck, eight; all the balls and a canon, when the white is first struck, nine; and when the red is first struck, ten. 5. No ball must be struck till it has done rolling. 6. All strokes are fair with the point of the cue. In pushing strokes, if your cue leaves the ball and touches it again, it is a foul stroke. 7. When your own ball touches the object ball you cannot score; you therefore run into a pocket or canon, when the red is again placed on the spot, and the next player goes on from baulk, your ball being in hand. The object ball and the red touching are playable. 8. Foul strokes are made in the following ways:—Touching a ball when rolling; moving a ball when in the act of striking; playing with the wrong ball, or when the red is off the table, or with both feet off the ground; touching both balls with the cue; wilfully knocking a ball off the table; when in hand, playing at a ball in baulk; blowing upon a ball; shaking the table or floor; touching any other ball than your own with hand or cue, or wilfully altering its course. *Exceptions.*—Accidentally touching a ball when taking aim; knocking a ball off the table by accident or through fault of the table; when with a wrong ball, when told it is your own by the marker or your adversary; if impeded in your stroke by the player, marker, or bystander. 9. Penalties for foul strokes are taken by the striker losing his stroke; by the non-striker calling a foul stroke, and breaking the balls; or the non-striker may let the balls remain, or compel the striker to remake the stroke. In the case of a changed ball, the non-striker may either have the balls changed again, so that each player has his own ball; or he may insist on the game going on as the balls then stand, the striker losing any score he has made with the last stroke; or he may play with which ball he pleases; or he may claim for foul, and insist on the striker breaking the balls. If, however, the change of balls be not discovered before a second stroke has been made, the game must go on as the balls then stand, and any score made must be counted. 10. A line ball cannot be played at. 11. Knocking the object ball off the table does not score; forcing your own ball off the table, after having struck another, involves no penalty; knocking your own ball off the table, without striking another, is a coup, and scores three against you. 12. The player who throws up his cue, or refuses to play, loses the game. 13. All disputes to be decided by the marker, and, in case he is unable to decide, by the majority of the company. 14. If a ball be accidentally moved, it must be replaced as nearly as possible. The following items of caution and advice are also worthy of attention:—Be attentive to your game, and lose no fair opportunity of scoring. Do not stand over the pocket or ball your adversary is playing at, nor put your hand or cue near the pocket a ball is likely to run into, pretending to guide it, neither indulge in boasting or loud talking; or make wry faces when taking aim; these antics, with many others, are excessively vulgar and ungentlemanly. Do not canon from a white ball, unless the stroke be nearly certain, as your own is likely to be left in danger. Do not pocket your adversary, except the red be in baulk, or a two-stroke ends the game; as, besides leaving only one ball to play at, it is not considered the high game. When the white is safe under the cushion, it is not good policy to disturb it. Never strike the balls at random, but always have some direct object in view; many points are lost from inconsiderate play; while, on the contrary, many an inferior player wins a game by sheer force of careful play. If there be really no score on the balls, then play for safety, by leaving your own and the red as far apart as possible, or giving a miss; when your adversary's ball is off the table play for baulk rather than risk a doubtful stroke; when near the end of the game do not disturb the red, if it be safe, without there is a good chance to score off it. Do not vary your strength, or play high or low, without there be an obvious necessity for so doing. When under a cushion, and your adversary and the red be safe, it is better to give a miss than to risk an unlikely stroke. Never play the losing hazard at the white in baulk, when the red is also in baulk, without you are certain of bringing the white out; nothing tends to the success of a game so much as a careful consideration of the ultimate position of the balls after the stroke. In playing the red winning hazard use sufficient strength to bring it away from the cushion, so as to leave another stroke off it; on the contrary, it is generally best so to play the white winning hazard as to leave it under the cushion after your stroke. Do not attempt canons round the table without careful consideration as to the strength of your stroke and the angles of the table. And, lastly, never forget that common strokes with careful play stand a better chance than the most brilliant hazards without it. Books: *Captain Crawley's Billiards, its Theory and Practice; Bohn's Handbook of Games; Kentfield's Billiards Explained; Mingaud's Treatise; Roy's Science; Mardon's Treatise; Handbook of Billiards.*

BILL OF COSTS—is a bill of fees, charges, and disbursements for business done by an attorney or solicitor. To prevent the possibility of an overcharge against a client, an attorney is obliged to send by post, or leave for him at his counting-house or dwelling-house, a detailed statement of the particulars of the business done for him, with dates and items. This is called the attorney's bill of costs, and must be either subscribed by himself, or be accompanied by letter so subscribed, one month at least (unless the party to be charged therewith is about to quit England) before he can maintain an action for the recovery thereof, to enable the party to tax the same before the proper officer, called the taxing master of the court to which he belongs; but if the party shall not make an application for an order to tax such bill of costs until after the expiration of one month, then the judge may impose terms upon him—that is to say, that he do pay the amount of the bill into court to abide the event of the taxation.

No order can be made to tax an attorney's bill of costs after a verdict has been obtained in an action for the recovery of it, nor after the expiration of twelve months after such bill shall have been delivered, except under very special circumstances, such as fraud or very gross overcharge. In the absence of fraud or misconduct, no bill of costs which has been paid will be referred for taxation unless it appears that it has been paid under pressure, and the bill contains overcharges also. The costs of taxing an attorney's bill of costs frequently amount to a large sum; it is therefore provided that where less than one-sixth part of an attorney's bill of costs is disallowed, the party chargeable therewith shall pay the costs of taxation, but where more than one-sixth is disallowed, the attorney himself shall pay the costs of taxation.

BILL OF EXCHANGE.—A writing on paper previously stamped, whereby one party, who is called the drawer, requires another party, who is called the acceptor, at a certain future day, to pay to his order or bearer a sum of money named in the bill, and such bill becomes negotiable by the drawer writing his name on the back (whereby he becomes indorser as well as drawer), and may be afterwards transferred by delivery only, but it is usual in practice to require the party passing it to indorse it, whereby he renders himself liable to pay it when it becomes due; and every new indorser is, in effect, a fresh drawer of the bill. The holder giving time to the acceptor, without the consent of the other parties, discharges them from their liability upon the bill. It is always presumed to have been given for a valuable consideration. Any person having ability to contract may be a party to a bill of exchange. It may be dated on a Sunday, and if undated, it dates from the day it was made, and the date may be inferred from circumstances. Any attempt to evade the Stamp Laws in the making a bill, renders the party liable to a penalty of £100, and the bill itself is incapable of being used as evidence of a debt between the parties. The amount of the stamp is not increased by interest, though reserved from a day prior to the date of the note. It must be for the payment of money alone; an order to pay "in cash or Bank of England notes" is insufficient; and if there is a difference in the amount between the words and figures, the words must be attended to. If the name of any person is inserted without the words "or bearer," or "or order," it will not be be transferable; if to bearer, it may be transferred by mere delivery; if to order, it will require indorsement. If no time for payment is mentioned, it is payable on demand. If payable at a certain time after sight, it must be presented, that such time may begin to run. If payable at an uncertain time, or out of an uncertain fund, or to an uncertain person (as to the secretary "for the time being of a company"), it is no bill or note, and is not negotiable; but if it be made payable at ever so distant a day, yet if it be a day that must come, it is no objection. An indorsement cannot be for a portion of the amount of a bill, unless it be for the residue remaining unpaid. An indorsement rendering it payable on certain conditions will deprive it of the character of negotiability, but an indorsement merely referring to an agreement has not such an effect. All negotiable bills or notes made in England for less than twenty shillings are void, and if any person negotiates one upon which a less sum than twenty shillings remains due, he is liable to a penalty not exceeding £20 nor less than £5, recoverable before a justice of the peace for twenty days after the offence is committed. Bills or notes for more than twenty shillings or less than five pounds (except drafts by a man on his banker) are also void, unless they specify the name and abode of the payee, are attested by one subscribing witness, bear date at or before the time of issue, and are made payable within twenty-one days after date, but not to bearer on demand, and they are not negotiable after the time of payment. The utterer of a note not complying with the above requisition is liable to a penalty of £20. In case of an action upon a lost bill of exchange, the judge may order the plaintiff to give an indemnity against the claims of any other person. A bill or note becoming due on a day appointed by proclamation for fast or thanksgiving, or any public holiday, is payable on the day preceding. A summary remedy has lately been passed by the Legislature for the recovery of money due upon a bill of exchange where the action is commenced within six months after the bill becomes due.

Foreign bills are drawn in *sets*, at so many days or months after sight; and these bills must be dated when accepted, as the term of payment commences from the date of acceptance. *A set of exchange* consists of two or three bills all drawn at the same time, and of the same tenor and date, to be transmitted by different conveyances or posts; and when any one comes to hand, and is accepted or paid, the others are null and void. When a bill is presented for acceptance in

London, it is generally left till next day, and if acceptance be refused, it is given to a Notary Public, and noted for non-acceptance. If an accepted bill be refused payment, it is noted or protested accordingly, and returned to the drawer, by which he or any of the indorsers are liable to pay the bill with all costs; but if the holder made any unnecessary delay in returning it, he can sue the acceptor only. Inland bills must not be kept longer than fourteen days; and foreign bills should be returned, with the protest, in course of post, or at latest within three posts. After a bill has been protested for non-payment, it is sometimes accepted by a third party, to save the credit of the drawer or of an indorser, and such an acceptance is termed an acceptance *supra protest*. If the party on whom a bill is drawn have doubts about the drawer, he may protest it, and afterwards accept it for the honour of one of the indorsers. In this case the protest must be sent without delay to the indorser for whose honour it was accepted. When a bill is drawn at so many months, *calendar* months are understood. Three days grace are allowed on all bills payable in Great Britain and Ireland, except on bills payable at sight, which must be paid or protested when first presented. No bill is valid unless written upon stamped paper, of such value as is required by law; a stamp of *less* value affects its validity, but one of *higher* value will not. An erasure in the date, term, or sum of a bill, unless by the consent of the parties and authenticated by their initials, completely destroys the validity of it. Although the words "value received" are essential for obtaining the benefit of the statute, giving interest, damages, and costs, yet the want of them does not otherwise affect the bill. In writing out a bill the stamp should be completely written through, the sum expressed in words as well as figures, and no space left either at the beginning or the end of the lines; serious consequences have resulted to the acceptor from inattention to these things.—See ACCEPTANCE, ACCEPTOR, DISHONOUR, DRAWER, INDORSER, PROMISSORY NOTE.

BILL OF FARE.—At large dinner parties, where there are several courses, it is well to have the bill of fare neatly inscribed upon small tablets, and distributed about the table, that the diners may regulate their appetite and determine their choice accordingly.—See DINNER.

BILL OF LADING.—When a merchant puts sundry goods on board a ship, the owner or master of the ship gives a written receipt for them, whereby he acknowledges the receipt of the goods on board, and contracts to carry them on the voyage, and deliver them to the consignee in good order, upon the consignee paying freight for the carriage. This receipt is termed a bill of lading. It should be made out in three parts: one, after signature, to be remitted by post to the consignee; the second on a stamp to remain with the shipper of the goods; and a third for the master of the vessel. Bills of lading are transferable or negotiable by the custom of merchants, so as to vest the property in the goods in the assignee by mere delivery, without any indorsement, and such transfer will be good against all the world except an indorsee of a bill of lading for a valuable consideration. The delivery of a cargo to a shipowner, like goods to a carrier, vests them in the person to whom they are to be conveyed.

BILL OF SALE.—A deed by which the ownership or property in household furniture, or other personal chattels, is transferred from one person to another. It may either be an absolute sale or by way of mortgage; that is to say, the party selling may be at liberty to buy them back again. A bill of sale is looked upon with great suspicion of fraud, as it enables persons to keep up the appearance of good circumstances and the possession of property after they have executed a bill of sale. A sale for good consideration is not void merely because it is made with the intention to defeat an expected execution; but if the writ were in the hands of the sheriff before the bill of sale was executed the bill of sale would be void, or if it were made *fraudulently* for the purpose of delaying, hindering, or defrauding creditors, it would be void as against them. It is valid as to marriage settlement, under which the party takes an interest for life; or if the sale be notorious, as by a sheriff, under an execution, or by public auction.

BINDING.—Various kinds of needlework have binding set on them in preference to hemming, or stitching. Flannel is generally bound with tape or sarsanet ribbon. The binding is so put on as to show but little over the edge on the right side, where it is hemmed down neatly; on the other side it is run on with small stitches. In putting on binding care should also be taken to work the whole uniformly, or if there is any irregularity, it will pucker and curl up, and have a very awkward appearance.

BIOGRAPHY.—A term formed from the Greek (*bios*) "life" and (*graphe*) "writing." It is that department of literature which treats of the actions and fortunes of individuals. Various collections of individual lives within one compass have been from time to time published under the title of "Biographical Dictionaries." The first of these in the English language, was published in 11 vols. 8vo in 1762, as the "English General Biographical Dictionary;" this work has appeared in successive editions, being gradually enlarged in its progress, and the latest edition was published in 32 vols. 8vo in 1817, under the name of "Chalmers' Biographical Dictionary." A second work consists of 10 vols. 4to, begun in 1799, and finished in 1815, entitled the "General Biographical Dictionary." The most modern biographical work is "Rose's Dictionary," in 12 vols. 8vo, published in 1857. Of the smaller works of this description, that by Gorton, in 2 vols. 8vo, is the best. The following list also comprises a number of miscellaneous works of this kind: — *Cox's Biography and History; Anderson's Biography for the Young; Dod's Annual Biography; Taylor's*

Beginnings of Biography; Farr's Bible Biography; Cyclopædia of Bible Biography; Mrs. Child's Biography of Good Wives; Mrs. Sigourney's Biography of the Great and Good; Lodge's British Biography; Maunder's Select British Biography; Smith's Dictionary of Classical Biography; Malcolme's Curiosities of Biography; Rich's Cyclopædia of Biography; Allison's Guide to English Biography; Taylor's European Biography; Kendrick's Biography for Young Ladies; Parker's Readings in Biography. Among the works devoted to the Biography of Individuals, the most interesting are Boswell's Life of Dr. Johnson; Southey's Life of Lord Nelson; Lockhart's Life of Sir Walter Scott; Margaret Roper's Life of Sir Thomas More.

BIOSCOPE.—A term composed of two Greek words—*Bios*, life, and *Skopeo*, I observe or survey. The bioscope, as suggested by Granville Penn, consisted of a dial or scale marked in such a manner as to indicate the general measure and progress of human life. This dial, comprising seven-eighths of a circle, was divided into seventy degrees, answering to the allotted number of the years of human life. The seven decimal divisions of the scale, representing the seven decimal divisions of life, were characterized by certain qualities belonging properly to some part of each of those seven divisions or periods, in their order or progress, thus:—1, *Childhood*; 2, *Youth*; 3, *Manhood*; 4, *Vigour*; 5, *Maturity*; 6, *Decline*; 7, *Decay*. The space between the two extremities of the scale was marked by *Eternity*. Lastly, a moveable index or hand was affixed, which might be directed to any degree marked upon the scale. The aspect of this alone presented to a mind capable of any serious reflection, tended to awaken new and unexpected sensations. But when from this general survey the index was directed to that particular degree upon the scale answering to the actual year of a person's own age, a new and livelier interest was calculated to be awakened. The bioscope was divided into two parts, answering to the time past and the time future of life; which parts are always varying their proportions, because they are only divided by the moveable and constantly advancing index; whilst the moveable index itself represents that constantly fleeting impression which we call NOW, in which alone consists the time that can properly be called present.

With the same general object in view, but upon a more concentrated plan, a diagram illustrative of the proper division and distribution of time, is shown in the accompanying engraving.

The circle represents a day of twenty-four hours; one third of which, or eight hours, is allotted to represent night and sleep; leaving sixteen hours for the duties of life, and for food and relaxation. The diagram is divided into four equal sections of three hours each, each hour being numbered in accordance with the arrangements and divisions of the day. The four hours that are devoted in the diagram to "food" must not be understood to be wholly occupied with eating and drinking, but by the pursuit of food for the mind, as well as for the body. The advantage of this diagram is that, from its simplicity, it is always as it were present to the eye, and as it represents a day, those who adopt it should determine what they will do through the day, and *associate each duty resolved upon with one of the numbered sections; when therefore the mind reverts to the diagram, and to any particular number thereon, a person is at once reminded of the duty he has resolved upon to perform.*

This diagram, though exceedingly simple, is capable of a very varied application. For instance:—Suppose it is resolved to pass the hours 1, 2, 3, in a uniform business application, it will be remembered that during those hours there is nothing on the diagram but business; the whole and sole attention is, therefore, naturally applied to the one pursuit, and will not be diverted therefrom by a number of unsettled resolutions. Then follows an hour's relaxation, during which food is to be taken, with perhaps half an hour's reading. With this section of the diagram, a person could scarcely fail to identify the book he might be in the course of reading at the time, and when that hour arrives, the mental perception of the diagram would as readily remind a person of the book, as of the food or rest he is about to take. Supposing, during the next hours, numbered 4, 5, and 6, a person had a series of duties to perform, he would identify them with those particular hours or numbers thus:—4. Call at A— B—'s and purchase ——— for stock.—Point out error in previous account.—On to Fenning's Wharf, and ascertain the cause of delay in delivery of goods. The mere words "A— B—'s," "error," and "Fenning's," associated with that section, would be a sufficient reminder of the matters to be attended to within that time. The same method may be applied to any hour and every hour throughout the day. As although a person may write down upon a memorandum-book the things he has to do, and refer to that, he has not the assistance, in that case, of a perfect DIAGRAM OF THE DAY being before him, reminding him of all his duties, and warning him of the waning hours. Such a diagram,

engraved upon the mind, and frequently referred to, exercises a strong *moral influence*, which no memoranda, even though aided by frequent references to a watch, would supply. At night, when the hour arrives to review the duties and actions of the day, reference to the diagram will at once bring before the mind what has been done, what omitted, and will present at the proper time an effective impression of a day well spent, or, a day partially lost. The stimulus afforded to the mind by the constant action of this mental monitor will have the certain effect of excluding those idle and unprofitable thoughts which constantly press around us when our ideas are undisciplined, and to the relaxing effects of which we may attribute the loss, for any useful and ennobling purposes, of the better half of our time.

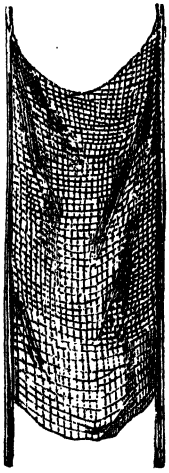
The diagram need not be adopted exactly as represented in the engraving, but may be framed upon that principle adapted to a person's peculiar pursuits. It will be very easy to draw a circle, and to divide it into certain sections, numbering those sections according to the hours of the day, as may be most suitable. After looking upon that diagram a few times, it will become impressed upon the memory, and frequent reference to it, mentally, will make the perception of it quite as tangible as reference to the drawing itself. Book: *Life Doubled by the Economy of Time.*

BIRCH.—Of this tree there are several species, but that best known and most commonly cultivated is the common birch. It will grow in any soil, and thrive upon land where other timbers fail. The birch is propagated by seed, which are easily taken from bearing trees, by cutting the branches in August, before they are quite ripe. The seed may be threshed out like corn, as soon as the branches dry a little; they should then be kept in dry cool sand until they are sown, either in the autumn or spring. A great deal of care and attention is required in rearing the birch from seed; they must be sown in the shade, and covered very lightly with soil made as fine as possible, and watered according to the wetness or dryness of the season. The planting out of this tree is performed in the same manner as in the ash. If planted for underwood it should be felled before March, to prevent its bleeding. The tree bears removing with safety after it has attained the height of six or seven feet; and is ready to plash as hedges in four years after planting. Birch timber is used for a variety of purposes, more especially for the manufacture of casks, tubs, barrels, hoops, &c. It is also used for turners'-ware, agricultural implements, and carriage-wheels. The shoots are converted into brooms and hurdles.

BIRCH WINE.—The season for procuring the liquor from the birch tree is in the beginning of March, while the sap is rising, and before the leaves shoot out; for where the sap has come forward and the leaves appear, the juice, by being long absorbed by the bark, grows thick and discoloured. The method of procuring juice is by boring holes in the middle of the tree and inserting fossets, which are made from the branches of the elder, the pith being taken out. The tree, if large, may be tapped in four or five places at one time, and by that means save from a number of trees several gallons every day; if sufficient juice is not drawn off in one day, the bottles into which it drops must be corked close and sealed until the next occasion of drawing off. To prepare the wine, put to every gallon of liquor four pounds of sugar and the peel of a lemon, boil it as long as any scum arises, skimming all the time; then put it into a clean tub, and when it is nearly cold set it to work with yeast, spread upon a crust; let it stand for five or six days, stirring it often; then take a cask of a suitable size, set light to a large match dipped in brimstone, and throw it into the cask, stop it close until the match is extinguished, turn the wine, lay the bung on lightly till it has finished working; stop it close, keep it three months, and then bottle off.

BIRD CAGE. See AVIARY.

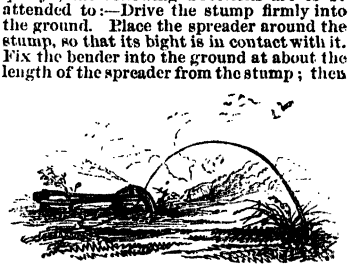
BIRD-CATCHING.—There are many excellent and ingenious methods invented for bird-catching, the greater part of which are practised by day, but a few require the assistance of night. Among the latter the principal are by bat-fowling, and by the use of a species of net called a trammel net. The *net used for bat-fowling* should be made of the strongest and finest twine, and is to be extended between two poles of ten feet long. The person who takes the management of the net keeps it extended opposite the hedge in which the birds are supposed to be, by stretching out his arms to the utmost. Another of the party carries a lantern, which by means of a pole he holds up at a short distance behind the centre of the net. One or two others place themselves on the opposite side of the hedge, and by beating it with sticks disturb the birds; they, being alarmed, fly towards the light, but are intercepted in their flight by the net, which is immediately folded upon them. Fifteen or twenty small birds, such as sparrows, linnets, goldfinches, &c., are not unfrequently caught in this way by a single fold. This sport cannot be followed with much success, except when the nights are very dark, nor until very late in the autumn, when the trees having lost their leaves, the birds are driven for shelter to the hedges. *Trammel nets* are generally between thirty and forty yards long, and above five or six wide, and



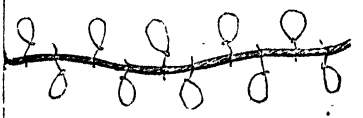
a light pole of the same length as the width o the net is fixed to each end in order to keep it extended. The net is then drawn by two men over the stubble, heaths, &c., the bottom being suffered to drag lightly on the ground; this rouses the birds and causes them to flutter up against the net, which motion being felt by the men, the net is immediately dropped and the birds are secured. This is the most destructive method of catching birds, and one which is seldom adopted, except by poachers, as it not only takes larks, fieldfare, &c., but also all other birds that roost on the ground, such as snipes, woodcocks, quails, partridges, and grouse, the two last of which are taken in great numbers by poachers, during the months of August and September. Sometimes a setter is used with a very small lantern fixed to its neck, by which means instead of dragging the whole field, the poachers are enabled to walk directly to the spot where the birds lie, and then by drawing the centre of the net over the dog's back, and dropping it a few yards before him, they often take the whole covey.

In the day-time birds are taken principally by means of nets, springes, traps and bird-lime. The method adopted in the suburbs of London is most ingenious. The nets used are generally twelve yards and a half long, and two yards and a half wide. The bird-catcher provides himself with *call-birds*, usually consisting of five or six linnets, two goldfinches, two greenfinches, a woodlark, a redpole, a yellow-hammer, titlark, and perhaps a bullfinch. These are placed at short distances from the nets in little cages. He has besides what are called *flur-birds*, which are placed within the nets and are raised upon a moveable perch, which the bird-catcher can raise at pleasure by means of a long string fastened to it, and gently let down at the time the wild bird approaches. The flur-birds generally consist of a linnet, a goldfinch, and a greenfinch, secured to the flur by a contrivance called a brace, which secures the birds without doing any injury to their plumage. When the bird-catcher has laid his nets, he disposes of his call-birds at proper intervals. The instant that the wild birds are perceived, notice is given by one to the rest of the call-birds, and they all raise their voices in a loud and cheerful chorus, which arrests the wild birds in their flight and attracts them down to the spot near which the nets are placed; and the bird-catcher watching his opportunity closes his nets upon them.

The *Springle* is a somewhat complicated apparatus, but very effective as a bird-catcher, it consists of five parts, as follows.—1. The *Stump:* a small stout stake of wood about five inches in length, which is fixed firmly in the ground, with its head about an inch above the surface. 2. The *Spreader:* a small bent switch, having a notch at its thicker end; it is kept in its bent position by a piece of small cord whipped over its smaller and larger end, and united just above the notch. 3. The *Bender:* a piece of pliant withy or hazel, of about eighteen inches long; both ends of it are fixed into the ground so as to form a kind of arch. 4. The *Springer:* a hazel rod of about four feet in length, thick at one end and tapering at the other; to the tapering end is fixed a piece of string. 5. The *Catch:* a sound piece of wood fixed at the end of the string of the springer; it is above half an inch long, a quarter broad, and the eighth of an inch thick. It is slightly bevelled off at one end, so as to adapt it to the notch of the spreader. 6. The *Noose:* a knot formed of horsehair, fastened below the catch. In *setting the springle*, the following directions are to be attended to:—Drive the stump firmly into the ground. Place the spreader around the stump, so that its bight is in contact with it. Fix the bender into the ground at about the length of the spreader from the stump; then

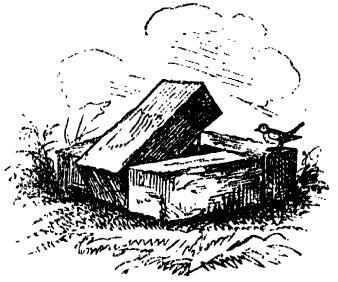


fix the thick end of the springer in the ground at a little distance from the bender, and the small end of it bent down till one end of the catch is placed upwards and on the outside of the bender. Raise the spreader about an inch from the ground, and put the small end of the catch into the notch. Finally, arrange the horschair slip-knot loosely around the bender, and the trap is set. Scatter a little seed within, and for some distance around the spreader, and watch at a short distance to seize the bird as soon as it is ensnared, otherwise it will flutter itself to death or be strangled. Birds may also be caught by means of *horsehair-loops*. To accomplish this, tie a large number

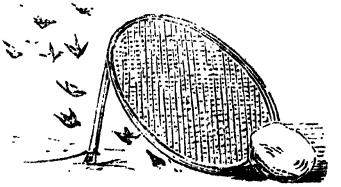


of loops upon a long string, the longer the better, and lay this string in a series of rings winding outward from the centre, so that the ground will be completely covered with them; then lay the trap, with the loops properly opened, on a spot resorted to by birds. When a bird gets its feet into a loop, it is almost certain to draw the loop tightly about its legs, and is thus caught. The common brick trap is well known; it consists of four bricks arranged as in the engraving, two lengthways, upon their edges or narrow sides, one in front, and the fourth between the two side bricks; this is so placed that it will fall and lie easily upon the front brick. Within the trap a stout peg is driven into the ground, upon which a forked twig is

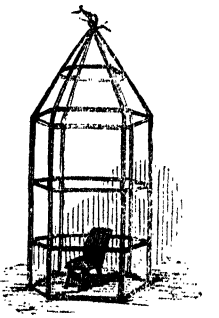
placed horizontally; above this a stick is placed, one end being on the twig and the other end supporting the brick in a slanting position. The end of the twig that rests upon the peg is cut flat to give it a better hold. The bait is strewn upon the ground



inside of the trap. When the bird flies to the trap he generally perches for a moment on the forked twig and causes it to give way by reason of its weight, the brick that has been propped up then falls upon the front brick, enclosing and securing the bird. In preparing this trap caution should be used in setting the upper brick, so that it does not fall between the two side bricks unsupported by the front brick, as in such a case the bird would be crushed to death. The *Down-fall* is an effective trap for taking fieldfares, thrushes, redwings, blackbirds, larks, sparrows, starlings, and all birds that congregate upon the ground. It is most effective when snow lies upon the ground, for then the birds being hungry, are less shy than is their wont in the pursuit of food. The trap consists of an iron or wooden hoop covered with a net, formed of meshes of about one inch. The lighter the net the better. The hoop is put to stand at an angle, as in the engraving,

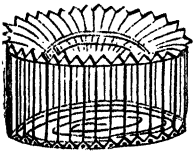


and is propped up by a piece of stick about two feet in length. At the bottom of the net, and lying upon that part of the hoop which rests upon the ground, is placed a heavy stone, in such a manner that directly the stick is withdrawn the net will drop down suddenly upon the birds. A long string is tied to the stick, and is held by the person, who keeps as far away from the trap as is compatible with his being enabled to see when the birds are under it. It is better not to drop the trap when a single bird enters, as it will serve as a decoy, and a little patience will be rewarded by the capture of a number of birds instead of one. The kind of bait employed depends upon the description of birds you desire to catch. Fieldfares feed upon hips, haws, the fruit of the white thorn and the wild rose, various kinds of worms, snails, and insects. They are fond of blackbeetles, cockroaches, &c., which being caught in the house may be used to bait the trap, after being scalded to death in boiling water. Thrushes, redwings, and blackbirds, are also attracted by the same bait. Starlings relish the same bait, but exhibit also a strong liking for eggs, cherries, and various kinds of grain. Larks are attracted by the seed grasses and by small insects. The down-fall is an excellent method of capturing birds required for the cage, as it does them no injury. It may moreover be used at any time of the year, though with less effect than in winter as regards the number caught. But any one knowing the harbour of a thrush or blackbird which has been heard to give forth superior notes, may be sure of securing it with the aid of the down-fall and the exercise of a little patience. In some parts of France a curious mode is practised of taking birds; a frame is constructed of the stripped branches of the slender straight-growing poplar, in the centre of which a seat is placed for the bird-catcher to sit upon. The frame so constructed is afterwards covered with boughs and evergreen shrubs among which are openings for the entrance of the birds, and also for the hands of the bird-catcher to come out, who is seated within. When the birds alight on or about the sides of the holes, the bird-catcher nimbly seizes them by the hand or by means of a small



flap trap which he thrusts out at one of the holes, and upon which the birds alight. Woodcocks, partridges, and other land birds are said to be easily caught by what is called *low-belling*. In this method a strong light is employed and two persons carry nets, one on either side of him who bears the light. The light-bearer carries a large bell, which he rings incessantly and with a regular jingle. The birds after a while become so alarmed by the combined effects of the light and the bell, that while some fly against the nets, others fall upon their backs on the ground and will not move, and so are captured. Larks may be taken in the day time by means of a net, which should not exceed twelve yards in length nor three and a half in width, and which is to be held by two persons. Larks, however, seldom lie so close as partridges, and in order to prevent them from rising too soon, the following

stratagem is adopted:—one of the sportsmen carries in his hand a live or stuffed hawk fixed to the end of a long stick, which as he runs with the net towards the larks he holds up in the air before him as high as he can; at the sight of this the larks are so terrified that they dare not move for fear of attracting the notice of their supposed enemy, and then there is little or no difficulty in throwing the net over and securing them. In addition to these there is a *bird-trap cage* used in gardens, orchards, &c., for catching young sparrows. It is a wicker utensil with a funnel, through which the bird, having descended in quest of the bait placed within, cannot ascend, and is thus caught.



For catching birds by means of bird-lime, the following is the most successful method:—Take a large branch or bough of a tree, and after having trimmed it of all the leaves and superfluous shoots, cover it all over with bird-lime, taking great care to lay it on properly, for if it be too thick the birds will see it and will not settle on the bough, and if it be too thin it will not hold them when they do. When the bough is well limed it must be fixed on a low dead hedge near a rickyard, hemp or flax field, or in some other place which is a favourite resort for small birds, and the sportsman, having concealed himself as near to the bough as he can, must imitate with his mouth or with a bird-call the notes which birds make when they attack or call one another; but if he should not be expert at this, there is another mode of attraction, called a *stale*. A hawk of any species or a bat make very good stales, but an owl makes the best of any, for this bird never shows himself at daylight without being followed by all the small birds that see it; so that if an owl be fastened in some conspicuous place at a short distance from the limed bough, the birds will collect around it in great numbers, and will be sure sooner or later to settle on the bough and be taken. When one bird is thus enticed and stuck fast, it must not be disengaged, but suffered to remain and attract others by its fluttering, so that many may be taken at once. If a live owl is not to be obtained a stuffed one will do nearly as well. Sometimes the representation of an owl carved in wood is used, and being painted in the natural colours of the bird, is found to succeed very well.—See MOLE-TRAP, RABBIT-SNARE, &c.

BIRD-LIME.—Put half a pint of linseed oil into an old pot or pipkin, and in which it will not be more than one-third full, put it on a slow fire, stir it occasionally until it thickens as much as required, which will be known by cooling the stick in water and testing it with the fingers. It is best made rather hard; then pour it into cold water. It can be brought back to the consistence required by the admixture of a little Archangel tar.

BIRD-STUFFING AND PRESERVING.—See TAXIDERMY.

BIRD-TAMING.—See AVIARY, BLACKBIRD, BULLFINCH, CANARY, &c.

BIRDS, DIETETIC PROPERTIES OF.—Those which serve as food may be divided into such as are domesticated, as the common fowl, turkey, duck, and goose; wild birds, usually termed game, as the pheasant, partridge, grouse, and woodcock, and some other wild birds that are not considered as game, such as the lark, pigeon, &c. The fattening and flavour of birds is very much influenced by the nature of their food. Those which feed upon grains and vegetables, as the common fowl, turkey, and pheasant, are the most delicate and have the whitest flesh. Those which live partly on animal and partly on vegetable food, as ducks and geese, are brown-fleshed and higher flavoured; and those which, being aquatic, live wholly on fish, have a taste savouring of the creatures they feed upon. Different parts of the same bird differ very much in flavour and tenderness, chiefly depending upon the amount of exercise which the surrounding muscles have undergone; thus it will be found that in *birds that walk* the wing is tender and the leg tough; while in *birds that fly*, these indications are diametrically opposite. The breast is generally considered the most tender part of the bird, but in the snipe and the woodcock the leg is preferred. The flesh of birds, particularly poultry, is extremely nutritious and easy of digestion.

BIRDS, DISEASES OF CAGE.—See AVIARY.

BIRDS' EGGS FOR CABINETS.—In selecting eggs for a cabinet, always choose those that are newly laid; make a medium sized hole at the sharp end with a pointed instrument; and make another hole at the blunt end with a needle or pin. If the yolk will not come out freely, run a pin or thin wire into the egg, and stir the yolk well about; this done, get a cupful of water, and immerse the pointed end of the egg in it, apply your mouth to the blunt end, and suck up some of the water into the shell; then stop the two holes with the finger and thumb, shake the water thoroughly within, and after this blow it out. The water will clear the egg of any remains of yolk, or of white, which may stay in after blowing. If this process performed once does not suffice, repeat it a second or third time. An egg, immediately after it is produced is very clear and fine; but by lying in the nest, and coming in contact with the feet of the bird, it soon assumes a dirty appearance. To remedy this, wash it well in soap and water, and apply a nail brush to remove the dirt. Nothing now remains but to prevent the thin white membrane which is still inside the shell from corrupting it; for this purpose fill a wineglass with the corrosive sublimate in alcohol, then immerse the sharp end of the egg shell in it, keeping your finger and thumb as you hold it, just clear of the solution; apply your mouth to the hole at the blunt end, and suck up some of the solution into the

shell; no fear need be entertained of drawing the solution into the mouth, for as soon as it rises in the shell, the cold will strike the finger and thumb, and it is then time to cease sucking; shake the solution in the shell thoroughly and then blow it back into the glass. The shell will now be beyond the reach of corruption, and will for ever retain its pristine whiteness. If it is desired to impart to the egg an extremely brilliant appearance, give it a coat of mastic varnish, put on very sparingly with a camel-hair pencil; green or blue eggs must be brushed with gum arabic.

BIRDS, SINGING,—include the nightingale, canary, thrush, linnet, lark, throstle, starling, bullfinch, goldfinch, &c. The first sound they produce is called a *chirp*, which is a single sound repeated at short intervals; the next sound is the *call*, which is a repetition of one and the same note; and the third sound is termed *recording*, which a young bird continues to do for ten or eleven months, till he is able to execute every part of his song.

BIRTH, REGISTRATION OF.—A registrar of births, deaths, and marriages is required to inform himself of every birth within his district, and to register the same as soon after the event as conveniently may be. Within forty-two days after birth, the father or mother, or in case of their illness or absence, the occupier of a house in which a child shall have been born, is bound to give information of the particulars thereof to the registrar upon request, and upon refusal is liable to indictment. They may exercise their discretion as to volunteering the information where it has not been required by the registrar; but every registrar who refuses or omits to register a birth of which he has had notice is liable to a penalty of £50. After forty-two days and within six months of a birth, if any person present, or the father or guardian make a solemn declaration of the particulars of such birth, the registrar, in the presence of the superintendent registrar, may register it and receive, over and above the usual fee, the respective fees of 2s. 6d. and 5s. Any person procuring the registration of a birth after forty-two days, and within six months without the presence of the registrar and superintendent registrar, is liable to a penalty of £50. If six months have elapsed since the birth, the child cannot be registered. The particulars required to be furnished to the registrar are the day and the month of the birth; the name (if any) of the child; the sex; the name and surname of the father; the name and maiden surname of the mother; the rank or profession of the father; to which the informant must sign his or her name, description, and place of abode in the register. There is no fee charged for registration.

BIRTHDAY CEREMONIES.—In England the anniversary of a person's birthday is usually observed as a sort of festival. On these occasions dinners or evening parties are given, with the accompaniments of dancing, singing, &c. The person whose birthday it is becomes the hero or heroine of the day; the guests immediately upon their arrival wish him or her "many happy returns of the day," the health of the person is also proposed by one of the company, and received as the toast of the evening. It is customary on these occasions to present some token to the person whose birthday it is, as a mark of friendship on the part of the donor, and in commemoration of the event.

BISCUIT CAKE.—Mix one pound of flour, five eggs well beaten and strained, eight ounces of sugar, a little rose or orange-flower water. Boil the whole thoroughly together, and bake for one hour.

☞ Flour, 1lb; eggs, 5; sugar, ¾lb; rose or orange-flower water, few drops.

BISCUIT CRUST.—Put half a pound of flour on the paste-board, add to it the yolks of two eggs, and thoroughly mix until the egg is lost sight of: then add a dessert-spoonful of fine sifted sugar, and two ounces of butter, work these well in, and mix a little water or milk sufficient to make a stiff paste. Beat and roll it out until quite smooth, and work it into the thickness of a quarter of an inch, then cover your fruit with it.

☞ Flour, ¼lb.; eggs, 2 yolks; sugar, 1 dessertspoonful; butter, 2ozs.; water or milk, sufficient.

BISCUIT CUSTARD.—Break two dozen macaroons into small pieces, and the same number of small ratafia biscuits, pour over them a hot custard, and stir well until the whole is thoroughly mixed; turn it into a trifle dish, and pour over it the whites of two eggs well whisked for an hour with red currant jelly; grate nutmeg over the top, and serve.

☞ Macaroons, 24; ratafia biscuits, 24; custard, sufficient; eggs, 2 whites, with red currant jelly.

BISCUIT DEVILLED.—Dip a captain's biscuit into boiling water, butter it well, spread over it ready-made mustard, cayenne pepper, a good deal of black pepper and salt; put it into the oven, or on the gridiron and let it bake or grill till brown. This is considered as a relish with wine.

BISCUIT DROPS.—Beat up the whites of six eggs and the yolks of ten with a spoonful of rose-water, to which add ten ounces of pounded sugar. Beat the whole well up, and add one ounce of bruised carraway seeds, and six ounces of flour. Drop them on wafer paper, and bake in a moderate oven.

☞ Eggs 6 whites, 10 yolks; rose-water, 1 teaspoonful; sugar, 10ozs.; carraway seeds, 1oz.; flour, 6ozs.

BISCUIT ICE CREAM.—Break six eggs into a stewpan, and beat them with a wooden spoon; add a pint of cream, the peel of one lemon, two gills of syrup, and a little spice; boil it till it begins to thicken, stirring constantly; crumble some Naples and ratafia biscuits into it, and pass the whole through a sieve; turn into a mould, and place in ice.

☞ Eggs, 6; cream, 1 pint; lemon, 1 peel; syrup, 2 gills; spice, to taste; Naples and ratafia biscuits, sufficient.

BISCUIT PUDDING.—Pour a pint of boiling milk over three Naples biscuits grated; cover it close, and when cold add the yolks of four eggs, the whites of two, a wineglassful of brandy, a dessertspoonful of flour, nutmeg, and sugar to taste. Boil it in a basin for an hour.

☞ Milk, 1 pint; Naples biscuits, 3; eggs, 4 yolks, 2 whites; brandy, 1 wineglassful; flour, 1 dessertspoonful; nutmeg and sugar, to taste.

BISCUITS A LA FRANCAISE.—Beat up the yolks of eight eggs in two pounds of sugar for half an hour; whip the whites separately, and when they are well frothed, mix them with the yolks and sugar, and stir in one pound of flour lightly, and by degrees; have ready some tin or paper moulds, buttered within; put in the biscuit paste, filling the moulds but little more than half; throw some powdered sugar over them, and bake them in an oven for half an hour; when of a light brown colour and half cold take them out of the moulds.

☞ Eggs, 8; sugar, 2lbs.; flour, 1lb.

BISCUITS, TO PRESERVE.—For ordinary use biscuits will keep best in tin canisters. But if required to be kept for a long time, such as during a sea voyage, no other art is necessary to preserve them sweet and good than packing them up in casks well caulked and carefully lined with tin, so as to exclude the air. The biscuits should lie as closely as possible together; and when it is necessary to open the cask, it must be closed again with all speed, and as securely as it was before. Biscuits may also be preserved from the weevil and other injurious insects by being kept in a bag which has been previously soaked in nitre and dried.

BISCUITS TO USE WITH LIQUEURS. Put a pound and a quarter of sugar into a pan, with the peel of a lemon grated fine, a spoonful of orange-flower water, and the yolks of five eggs; beat them together till thoroughly incorporated; then stir in a pound and a quarter of flour, and beat the whole together; next whip the whites of the eggs till they rise in froth, and mix them with the sugar and the flour: have ready some white paper made into the form of little trenches, each about the depth and length of a finger; put two spoonfuls of Naples biscuit into each trench, powder them with sugar, and place them in a moderate oven; when done of a good colour, take them out of the papers, and put them upon a sieve in a dry place, till there is occasion to use them. These biscuits are excellent when dipped in liqueurs.

☞ Sugar, 1¼lb.; lemon peel, 1; orange-flower water, 1 teaspoonful; eggs, 5; flour, 1¼lb.; Naples biscuit, sufficient.

BISCUITS, VARIOUS.—1. HARD BISCUITS: warm two ounces of butter in as much skim milk as will convert a pound of flour into a very stiff paste. Beat it with a rolling-pin and work it very smooth. Roll it out thin and cut it into round biscuits. Prick them full of holes with a fork, and bake them for about six minutes. 2. PLAIN AND CRISP BISCUITS: mix a pound of flour, the yolk of an egg, and some milk, into a very stiff paste. Beat it well and knead it quite smooth; roll the paste very thin, and cut it into biscuits. Bake them in a slow oven till quite dry and crisp. 3. SWEET BISCUITS: beat eight eggs into a froth; add a pound of powdered sugar, and the peel of one lemon grated fine; whisk the whole well together till it becomes light, then add to it a pound of flour, and a teaspoonful of rose-water. Divide into biscuits, sugar them over, and bake them in papers or tins. 4. BRIGHTON BISCUITS: mix together, two pounds of flour, three drachms of carbonate of ammonia in fine powder, four ounces of powdered sugar, one ounce of arrowroot, four ounces of butter, and one egg; incorporate the whole well together with new milk into a stiff paste; then beat it with a rolling-pin for half an hour, roll out thin and divide into biscuits, bake in a quick oven for fifteen minutes. — See also ALMOND, APRICOT, CHOCOLATE, FILBERT BISCUITS, &c.

☞ No. 1. Butter, 2ozs.; milk, sufficient; flour, 1lb. No. 2. Flour, 1lb.; egg, 1 yolk; milk, sufficient. No. 3. Eggs, 8; sugar, 1lb.; lemon peel, 1; flour, 1lb.; rose-water, 1 teaspoonful. No. 4. Flour, 2lbs.; carbonate of ammonia, 3 drachms; sugar 4ozs.; arrowroot, 1oz.; butter, 4ozs.; egg, 1.

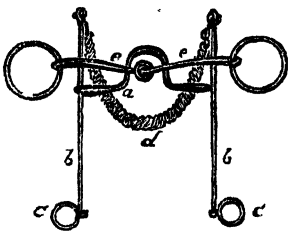
BISHOP.—A beverage compounded as follows: roast four good sized bitter oranges till they are of a pale brown colour; lay them in a tureen, and put over them half a pound of powdered loaf sugar, and three glasses of claret; place the cover on the tureen, and let it stand till the next day. When required for use, put the tureen into a pan of boiling water, press the oranges with a spoon, and run the juice through a sieve; then boil the remainder of a bottle of claret, taking care that it does not burn, add this to the strained juice, and serve it warm in glasses.

☞ Oranges, bitter, 4; sugar, ½lb.; claret, 1 bottle.

BISMUTH, MEDICAL USES OF.—Bismuth taken into the stomach in the state of a metal produces no effect upon the human system. It is therefore generally employed in the form of subnitrate. This is a white powder, sometimes in lumps resembling chalk, inodorous, and tasteless. It is insoluble in water, and but slightly soluble in the juices of the stomach, a circumstance which accounts for its limited sphere of action; hence its employment is almost entirely confined to affections of the stomach itself. In large doses it is poisonous, and produces vomiting, faintings, and even death. Its external application, as a cosmetic, in the well known form of pearl white, is not free from danger, and when applied for a lengthened period, to the face, causes nervous twitches, and finally induces paralysis. Subnitrate of bismuth is considered a tonic, and in nervous pains and cramps of the stomach it is decidedly antispasmodic. Bismuth being insoluble in water can never be administered in that vehicle, but may be given in extract of hops, in jelly, honey, or simply placed upon the tongue, and so swallowed.

BISTRE.—A brown colour which is used in water colours. It is prepared from soot, that of beech being preferred. It is not used in oil-painting, but has the same effect in water colours as brown pink has in oil.

BIT FOR HORSES.—The compound bit is composed of five principal pieces, viz.: *a*, the mouth-piece; *b b*, the branches; *c c*, the rings; *d*, the curb; *e e*, the cross-bar. A



compound bit, however, is not always requisite. many ponies and horses being ridden with a simple snaffle, which should be in the corners of the horse's mouth without pressing against it. The curb bit powerfully controls the horse, but with the snaffle he can take a natural position and act with more freedom. The snaffle is preferable for common use in every way; but if the rider cannot control his horse, he must resort to the curb bit, which should be knotted underneath the snaffle. Care should be taken that the bit does not press unnecessarily hard upon the horse's mouth, nor that it is so sharp as to wound it. It may be necessary to have a sharp bit for the headstrong and obstinate beast; yet, if it is severely and unjustifiably called into exercise, the animal will in all probability plunge and rear, and endanger both himself and his rider. The torments which the trappings of the mouth often inflict upon a docile and willing horse are useless and cruel, and instead of any benefit being derived from such a mode of treatment, it only serves to render the mouth hard, thereby destroying all the pleasure of riding, as well as causing the horse to become fretful and vicious.

BITES, strictly speaking, mean only such injuries as are inflicted by the teeth and jaws of animals, and merely imply another variety of punctured wound; but punctures with the fangs of reptiles are denominated bites also.

BITES OF ANIMALS generally result from the teeth of dogs and cats; and, as long as these proceed from a hurt the consequence of a sudden anger in the animal, need provoke no alarm, and the treatment is simple and easy. But when an animal has been excited into passion and kept in a state of irritation for some time, a poison is engendered and mixed with the saliva, that imparts to a wound then inflicted much inflammation, and sometimes considerable danger; especially so if the constitution of the person bitten, at the time should chance to be in a diseased or unhealthy state. In general, however, the bite is harmless enough; but as all such accidents produce a most depressing effect on the mind, and the terror excited by a harmless bite, in some instances, gives rise to the most exaggerated fear, it is always more satisfactory to adopt the same precautions as would have been demanded had the animal been really dangerous.

Treatment.—In cases of trifling abrasion from the teeth of dogs or cats, where it is the return snap for an accidental stamp or kick at the animal, and where there can be no reasonable doubt of the health of the animal, all that is really necessary either for precaution or cure, is to wash the part with warm water, apply the nitrate of silver, or lunar caustic, and tie on a hot bran poultice. Where the case is more serious, and the animal has been enraged, tie a garter or piece of tape directly round the limb, above the puncture or wound and between it and the heart, so as to avoid as far as possible all absorption into the system; the part is then to be washed quickly with a sponge and warm water, changing both water and sponge: if cupping glasses are at hand apply one directly over the bites, allow it to remain three or four minutes; remove it and wash away carefully the blood that may have exuded, or whatever moisture may have been forced to the surface, and apply the glass again, and if necessary a third time. When the cupping apparatus cannot be had, take a wineglass, put a few drops of spirits of wine, spirits of camphor, tincture of myrrh, Friar's Balsam, or sulphuric ether, or brandy if it is pure; light it with a match, and before the flame has burnt out apply it to the part. If the air has been well exhausted the flesh will rise in the glass, and a few drops of blood exude from the orifices. While these measures are being adopted — and they should not occupy more than ten or fifteen minutes—some lunar caustic may have been sent for, which is to be held between a piece of folded rag by one end, while the other dipped in water is rubbed freely over the part, and worked into the punctures; a hot bran or linseed meal poultice is then laid on the cauterised surface, the patient's mind tranquilised, and the limb and body kept in perfect rest. If a glass cannot be made to adhere by the use of the spirits named above, or by exhausting the air by the flame of a taper, let the caustic be applied at once, and the poultice continued till the eschar or blackened cuticle dies and is thrown off. If the wound heals slowly, with an irritable appearance, and small pustules form round it, apply the caustic again, give an occasional aperient of equal parts of blue and colocynth pill, and take as a corrective, in doses of half a tumblerful, four times a day, a decoction of dulcamara, or sarsaparilla. Two ounces of the former, cut small, and boiled from three pints of water to two, and one ounce of the latter, prepared in the same way.

BITES OR STINGS OF REPTILES.—Of these the rattlesnake, the cobra di capello, the whipcord snake, and the viper of our own country are the most dangerous;

and though the potency of the venom ejected from each varies according to the species, it exerts the same characteristic chain of symptoms only more or less intense, the difference being merely in degree and time, as the *virus* of one is more subtle and deadly than that of another. In all cases the infliction of the wound is followed by instant and acute pain; discoloration and swelling of the part, sickness, fainting, pain in the back, difficulty of breathing, spasms, extreme drowsiness, coma and death—in the worst cases—within two hours. Hitherto no antidote has been discovered to this quick killing venom, and all that medical aid can do to avert a fatal termination, lies in the speed with which it employs precautionary measures. These consist in, 1st, preventing absorption of the virus into the blood; 2d, in removing as much of the poison as possible rom the wound; and 3d, by counteracting with antispasmodics and stimulants, the symptoms that supervene.

The treatment is the same from whatever variety of reptile the injury has been received, only modified according to the amount of danger to be apprehended. It is necessary to state, in order to overcome the natural repugnance of most persons to suck a venomed wound, that the most deadly animal poison is perfectly innocuous unless brought in contact with a cracked or abraded surface, and that it might be dissolved and drunk with impunity, if in its passage to the stomach there were no decayed teeth or excoriation on the lips or gullet. Directly after receiving the injury a string or ribbon must be tied tightly round the limb, above the wound, the part washed well and quickly with warm water, at the same time forcing out with the fingers any blood or exudation that may appear; if proper cupping glasses are not ready, instantly apply the lips and suck the wound with a steady exhaustion, spitting out and washing the mouth before again repeating the process, which should be continued for quite ten minutes. When the cupping glasses are used, the mode advised in the beginning of this article is to be adopted. The punctures are then to be treated with lunar caustic as already described, and a hot poultice applied. The fainting, difficulty of breathing, and symptoms of collapse that supervene, are to be met by doses of ether, brandy, and ammonia, or valerian, lavender and musk, repeated every ten or fifteen minutes, alternated every half hour, for four times, with thirty drops of Fowler's solution of arsenic, taken in a tablespoonful of water. Electricity should be applied to the spine, or, if not at hand, substitute friction with mustard along the spinal column. For the drowsiness and coma, the patient must be kept constantly walking, and cold water occasionally dashed in the face. Should much constitutional disturbance manifest itself subsequently; the system is to be strengthened and the morbid action corrected by a course of sarsaparilla—compound decoction—alternated with five drops of Fowler's solution of arsenic every six hours, or a compound Plummer's pill twice a day; at the same time a liberal diet, and such wines and tonics as the case may demand.

BITTERS.—The following recipes will all be found excellent:—1. Take two ounces of juniper-berries, one ounce and a half of gentian-root, a quarter of an ounce of coriander seeds, a quarter of an ounce of orange-peel, a quarter of an ounce of calamus aromaticus, a drachm of snake-root, and half a drachm of cardamom seeds. Cut the gentian-root into small pieces, pound the other ingredients in a mortar, and put the whole into a large bottle or jar with five bottles of the best brandy, gin, or whisky. Shake the bottle a little when the ingredients are first put in, but not afterwards. Let it macerate for twelve days, carefully corked, then strain it off, and bottle for use. Sherry may be substituted for spirits. 2. Put into a quartern of sherry an ounce each of the best pounded aloes, rhubarb, and liquorice root, and a teaspoonful of powdered ginger; keep it in the sun or by the fire for eight or ten days, shaking it frequently; let it settle for four and twenty hours, and strain it through flannel previously to using it. 3. Bruise an ounce of gentian-root and two drachms of cardamom seeds together: add an ounce of lemon-peel and three drachms of orange-peel. Pour on the ingredients a pint and a half of boiling water, let it stand for an hour closely covered; then pour off the liquor, and bottle for use.

BITTERS, Uses and Properties of.—Bitters act beneficially upon the system by imparting a *tone* to the stomach, and bracing the organs of digestion to a sufficient degree to enable them to take food with greater avidity. It must be borne in mind, however, that an habitual indulgence in bitters as provocatives of the appetite is a bad one, and often results in serious consequences. Bitters therefore should only be taken medicinally, and with care, for although they are in themselves wholesome, when a judicious use is made of them, they frequently produce fever in delicate constitutions, and check the insensible perspiration which is necessary to health. Bitters should be taken in the morning about half an hour before breakfast, and the dose should not exceed a wineglassful.

BLACKBERRIES, Properties and Uses of.—This is the most common of our native berries, and is found in almost every hedge. It has cooling and astringent properties, and is thus serviceable as a domestic remedy for various inflammatory complaints. The juice, mixed with raisin wine before it is fermented, will impart the colour and much of the flavour of claret. This fruit is only occasionally used for puddings, tarts, &c., and is then usually mixed with mulberries or other fruit.

BLACKBERRY, Culture of. — This well-known plant is to be met with in the hedges and on the commons in all parts of England. It is extremely prolific and will grow on the most barren soil. It flowers in the months of July and August, and the fruit is ripe in September or October according to the fineness of the season. Hitherto this fruit has been little cultivated, except by way of experi-

ment, and in these cases it has been clearly shown, that with ordinary care and attention, it would be greatly improved both in appearance and flavour, and ultimately become as agreeable to the eye and to the palate as other more favoured fruits now are.

BLACKBERRY JAM.—Put blackberries that are not quite ripe into a jar, and cover it up closely. Set the jar in a kettle or deep stew-pan of water over the fire, and when it has simmered for five or six hours, force the juice through a sieve. To every pint of juice add two pounds of powdered loaf sugar, boiling and scumming it in the customary manner. Put into jars and tie down with bladder. This jam is sometimes used medicinally as a remedy for the stone, gravel, and dropsy, also for sore throats. The proper quantity to take for this purpose is a teaspoonful every night, and repeated in the morning if necessary.

BLACKBERRY JELLY.—Put the fruit into an earthen pan, squeeze it well with a new wooden spoon; add to it sugar half the weight of the juice, and let it infuse for an hour, then pour on a little water. Turn it into a jelly-bag nearly new; mix some melted isinglass with the juice, the proportion of the isinglass being one ounce to four pounds of fruit; put by in jars for use.

BLACKBERRY WINE.—Gather the fruit when ripe, on a dry day. Put it into an uncovered vessel, having a tap fitted near the bottom; pour in boiling water just enough to cover the fruit. Bruise the fruit thoroughly, and then let it stand covered till the pulp rises to the top and forms a crust, which it will do in three or four days. Then draw off the fluid into another vessel, and to every gallon add one pound of sugar; mix well and turn it into a cask to work for a week or ten days, keeping the cask well filled in the meantime, especially at the commencement. When the working ceases bung the wine down, and bottle in six or nine months. This wine with the addition of a little port wine, in the proportion of about a gill to every bottle, will be greatly improved, and if kept for four or five years, it will drink very much like genuine port.

BLACKBIRD.—This bird is one of the most docile of all the thrush birds. The male is black all over the body; the female blackish brown, tinged on the breast with rust-colour, and on the belly with gray. In confinement it is advisable to put the blackbird in a large cage. In choosing a blackbird from a bird-fancier, it is always advisable to deal with a person of known honesty, as it is very common to palm off birds of inferior song, and of a sickly habit, for superior songsters. This precaution applies with equal force to all dealings in connection with cage birds. Its food chiefly consists of the ordinary bird-paste, but it will also eat bread and meat. It is somewhat tender and delicate, but if treated with care and attention will live in confinement from ten to fifteen years. The blackbird pairs early in the year, so that the young birds may often be found in the nest as early as the end of March. The nest is built in some thick bush, generally near to the ground. The female lays twice or thrice a year five or six eggs, of a grayish green colour, covered with light brown and liver-coloured spots and stripes. The young males are always rather darker than the females, and can by this means be distinguished from them even in the nest. They may be taken as soon as the tail feathers show themselves, and reared on bread and milk. By this mode of treatment they become sooner accustomed to the food of the aviary. The song of the male blackbird is melodious, and consists of deep sonorous passages, like those of the nightingale, though intermixed with others which are rather harsh. It will sing throughout the year, except in the moulting season, and may be taught to whistle several airs without confounding them together.

BLACK-CAP PUDDING.—Make a thin light batter, and just before it is poured into the cloth stir to it half a pound of currants, well cleaned and dried; these will sink to the lower part of the pudding and blacken the surface. Boil it the usual time, and dish it with the dark side uppermost; send it to table with a sweet sauce.

BLACK COCK.—In the shooting of this bird the sport is pursued much after the same manner as the red grouse. The black cock is generally considered to seek his habitation among woody tracts; he is an uncertain bird, sometimes approaching very near to the sportsman, and at others altogether as shy. When black grouse become wild, which they do in October and Novem-

ber, they may be followed a whole day without yielding one successful shot. The best way then is, in order to bag a few, if you know of any birch woods where they frequent, to get a small pony accustomed to the gun. If on the ground, they will allow you to get within shot, and one or two may thus be secured. No dog is required. Early in the morning, just at daybreak, they may be seen sitting on the tops of the birch trees, feeding on the catkins, and they will then

allow a horse rider to approach within a few yards of them. The shooting of black cock *in England* is limited by Act of Parliament from the 1st of September to the 1st of December.

BLACK COCK, TO DRESS.—These birds require to hang for some days before they are dressed, otherwise they are comparatively flavourless. Pick and draw them with exceeding care, as the skin is easily broken, truss them, and lay them at a moderate distance from a clear brisk fire; baste them plentifully and constantly with butter, and serve them on a thick toast which has been laid under them in the dripping-pan for the last ten minutes of their roasting. From three quarters of an hour to an hour is sufficient time to dress them in. Serve with brown gravy and bread sauce.

BLACK CURRANT, CULTURE OF.—This distinct species of currant is a native of most parts of Northern Europe, and is found growing wild in woods, wet hedges, and other moist situations; it is chiefly *propagated by cuttings*, placed in a moist soil and shady situations, such as are afforded by borders of north exposure. The fruit bears chiefly on the shoots of the preceding year, and also from snags and spurs. The bushes require a *regulating pruning* twice a year. In summer, when any bushes are crowded with cross and water shoots of the same year, shading the fruit from the sun and preventing the access of air, thin the heart of the plant and other tufted parts moderately, pinching off or cutting out close what spray is removed; but do not touch the summer shoots in general. Winter pruning may be proceeded with any time from November until the end of February, or until the buds are so swelled that further delay would endanger their being rubbed off in the operation. Cut out the cross shoots and water shoots of the preceding summer, and the superfluous ones on the crowded branches. Prune long ramblers and low stragglers to some well placed lateral or eye. Of last year's shoots retain a sufficiency of the best well placed laterals and terminals, in vacant parts, to form successional bearers. Retain generally a leading shoot at the end of a principal branch; of the supply reserved for new bearers, a small number will probably require shortening. leave these from 8 to 12 inches in length. Between the bearing branches keep a regulated distance of at least six inches at the extremities, which will render them fertile bearers of good fruit. The ripening fruit comes in for partial gathering in June, advances to maturity in July, and continues in perfection till the end of August. Or if the bushes in a full exposure are timely defended from the birds and shaded from the sun with garden nets, or protected with nets when they grow against north walls, the fruit may be continued good till September or October.

BLACK CURRANT JAM.—Put the fruit in a preserving pan and place it over the fire, bruise and mash it well, and add an equal weight of pounded loaf sugar, stir the whole frequently; when it boils, skim and boil it again for ten minutes.

BLACK CURRANT JELLY.—Put eight pounds of fruit into a preserving pan with one pint of water; bruise the currants, and when nearly boiling press them through a hair sieve, then strain the juice through a piece of muslin, and to each pint allow one pound of loaf sugar; break it small, and with the juice put it into a preserving pan; stir it till it boils, let it boil for three minutes, skim it, and when cool put by in pots.

BLACK CURRANT LOZENGES.—Put six quarts of clean picked black currants into a preserving pan, and bruise them with the hand as long as the heat will admit; squeeze them through a sieve, and to every pint of juice add four ounces of brown sugar; boil and stir it for three-quarters of an hour, and then pour it thinly over saucers or small plates, and dry it for three successive days before the fire; cut it into small dice or lozenges, and lay them upon white paper in a box.

BLACK CURRANT PIE.—Put a paste round a dish, fill it with fruit and good moist sugar, add a little water and cover it with paste. In order to prevent the juice from boiling over, a teacup should be placed in the centre of the dish bottom upwards.

BLACK CURRANT PRESERVE.—To every pound of fruit allow half a pint of red currant juice and a pound and a half of powdered loaf sugar. Put them into a preserving pan; stir frequently until it boils; carefully remove the fruit from the sides of the pan, and take off the scum as it rises; let it boil for 10 or 15 minutes.

BLACK CURRANT PUDDING.—Make a paste; lay into a basin a well-floured cloth which has been dipped into hot water, wrung dry, and shaken out; roll the paste thin, press it evenly into the basin upon the cloth; put in the fruit, and cover with paste. Then gather up the ends of the cloth, tie it firmly to the pudding, and put it into plenty of fast boiling water. When it is done, take it out by twisting a strong fork into a corner of the cloth, turn it gently into the dish in which it is to be served, and cut immediately a small round or square from the top, or the pudding will become heavy.

BLACK CURRANT WATER ICE.—Put a dessertspoonful of black currant jelly into a basin, add the juice of two lemons, a gill of syrup, and half a pint of water; strain it and freeze it rich.

BLACK CURRANT WINE.—Take four gallons of fine ripe currants and put them into a large earthen jar with a cover to it. Boil two gallons and a half of water with six pounds of loaf sugar; carefully remove the scum as it rises from the liquid upon the currants in a boiling state, and let it stand for forty-eight hours. Next, strain the whole through a flannel bag into another vessel, return it thence into the jar, let it stand a fortnight to settle, and then bottle off.

☞ Currants, 4 or 5 gallons; water, 2½ gallons; sugar, 6lbs.

BLACK CURRANTS, PROPERTIES AND USES OF.—This fruit has a peculiar flavour which is disliked by some, and therefore it is seldom introduced to the dessert. It is, however, extensively employed in the form of jelly, jam, and preserve, in puddings and

tarts, and the juice fermented yields an excellent wine. The berries have a slightly laxative and diuretic tendency, and the recent juice possesses this latter quality in no ordinary degree. The leaves are extremely fragrant, and have been recommended for their medicinal qualities. Gathered when the flowers are beginning to open and carefully dried, the infusion either alone or with equal parts of black tea, furnishes a pleasant and effectual diuretic. This infusion has the taste and flavour of a mixture of black and green tea. The jelly and jam are convenient vehicles for administering powders and pills, and are also excellent remedies for coughs, hoarseness, &c.

BLACK DRAUGHT.—The common aperient medicine known under this name is made as follows:—

Senna leaves	6 drachms.
Bruised ginger . . .	½ drachm.
Liquorice root sliced .	4 drachms.

Put into half a pint of water; keep this standing by the side of the fire for three hours, then strain, and after allowing it to grow cool, add,

Sal volatile	1½ drachms.
Tincture of senna . . .	½ ounce.
Tincture of cardamoms .	½ ounce.

Cork close in a bottle and put by in a cool place. *Dose*, a wineglassful for an adult; two tablespoonfuls for young persons above fifteen. It is not a suitable medicine for children.

BLACK DYE.—The basis of all black dyes is iron precipitated by some astringent mordant, particularly by those which contain tannin; such as oak, bark, sumach, catechu, galls, &c. The iron is usually in the state of a sulphate, commonly known by the name of copperas, vitriol, or green vitriol. The iron and astringent mordants have so close a chemical affinity for each other, that the colour produced by their mutual action is not destroyed or injured by the contact of air or light. Logwood is usually employed as an auxiliary, because it communicates lustre and adds considerably to the fulness of the black. To *dye wool*, boil the goods for two hours in a decoction of nut-galls, and afterwards keep them for two hours more in a bath composed of logwood and sulphate of iron, kept during the whole time at a scalding heat, but not boiling. During the operation they must be frequently exposed to the air. The common proportions are, 5 parts of galls, 5 of sulphate of iron, and 30 of logwood, for every 100 of cloth. *Silk* is dyed in the same manner as wool, except that as it imbibes a large quantity of tannin, the quantity of galls must be increased to twice as much, and the silk must remain longer in the solution.

BLACK EYE.—A black eye is nothing more than a contusion. Leeches, beneficial in other parts, here only add to the mischief; the best remedies are lotions that absorb the effused blood, such as weak solutions of hartshorn and water, or lotions of sal ammoniac and spirits of camphor. The succulent root called Solomon's Seal, if applied within an hour of the accident, will not only remove all pain and stiffness, but cause complete absorption of the effused blood. It should be scraped like horse-radish, damped with vinegar and applied in quantity to the eye, and kept in close contact for a few hours; but as this is not always to be procured, the following remedy can always be obtained wherever there is a chemist's shop:—First soften the cuticle with warm water, then wet a piece of folded lint in the *pure* extract of lead, and tie it over the eye, re-wetting the pledget every ten minutes, or when it becomes dry. In a couple of hours the discolouration and swelling will have entirely disappeared. When the discolouration remains, after the swelling has been reduced, the appearance of the eye may be improved by spreading over the discoloured parts a little white wax, and dusting thereon very lightly some violet powder, either coloured or otherwise, according to the complexion.

BLACKING BALLS.—Mix one pound of ivory-black, one pound of lamp-black, a quarter of a pound of gum arabic dissolved in water, six ounces of brown sugar, half an ounce of melted glue, and a quart of water; make into balls. This mixture may be either used for boots and shoes, or for restoring the black leathern seats and backs of chairs, &c.

BLACKING FOR HARNESS. — Melt two ounces of mutton-suet with six ounces of beeswax, add six ounces of sugar-candy, two ounces of soft soap dissolved in water, and one ounce of indigo, finely powdered; when melted and well mixed, add a gill of turpentine; lay it on the harness with a sponge, and polish off with a brush.

BLACKING, LIQUID.—Ivory black, four ounces; molasses, three ounces—mix them well together, and then add two tablespoonfuls of milk and two of strong vinegar, mixing well, and put to this one ounce of oil of vitriol.

BLACKING, PASTE.—Half a pound of ivory black, half a pound of treacle, half an ounce of powdered alum, one drachm of turpentine, one ounce of sulphuric acid, and two ounces of raw linseed oil. Mix the ivory black and treacle first together until thoroughly incorporated, then add the rest of the ingredients. It may be cut into square cakes, and should be enveloped in bladder.

BLACK LEAD.—A carburet of iron, consisting of ninety-two parts of iron and eight of charcoal. It is used for polishing grates, stoves, &c., and should be employed in the following manner:—Put some of the black lead into a small pan or saucer and add a little water or small beer, but not sufficient to make it very wet, a portion of this should then be applied to a part of the stove by means of a little round brush; before this gets quite dry a polishing-brush should be used briskly until the surface shines; proceed in the same manner with each remaining part of the stove, till the whole is finished. Sometimes a little gin or egg is mixed with the black lead instead of beer, for the purpose of producing a greater degree of brightness.

BLACK PUDDING.—Cut some onions small, and boil them with a little water and some hog's lard; when well done and there remains nothing but fat, take the flare, cut it

into dice, and put into a stew-pan, with the onions, some pig's blood, and a quart of cream; season with salt and spices; mix all well together, and then fill the pieces of gut, which should have been previously cleansed and cut according to the desired length of the puddings; take care that they are not too full, lest they burst in boiling; tie the ends of each pudding, put them in boiling water, and boil them for a quarter of an hour; then prick them with a pin, and if neither the blood nor the fat come out, they are sufficiently done; let them cool, and broil on a gridiron just before serving.

BLACK PUDDING, IRISH. — Blanch and pound to a paste a quarter of a pound of sweet almonds with a wineglassful of rose-water; grate half a pound of the crumb of bread; mince one pound of fresh suet, add half a pound of clean currants, a teaspoonful of pounded cinnamon, nutmeg, and cloves, a pint of cream, the yolks of four eggs well beaten, the whites of two, a glass of brandy, and a quarter of an ounce of candied lemon peel. Mix all the ingredients thoroughly together; sweeten with pounded loaf sugar and boil it in a cloth. When cold, cut it into thick slices; heat it in a Dutch oven or broil it on a gridiron, and serve.

☞ Almonds, ½lb.; rose-water, 1 wineglassful; bread crumb, ½lb.; suet, 1lb.; currants, ½lb.; cinnamon, nutmeg, and cloves, 1 teaspoonful (mixed); cream, 1 pint; eggs, 4 yolks, 2 whites; brandy, 1 wineglassful; lemon-peel, ½oz.; sugar, to taste.

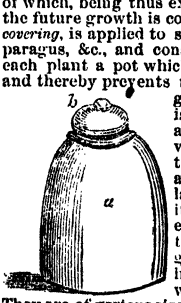
BLACK PUDDING, SCOTCH. — Salt hog's blood when drawn; strain it; mix with it a little sweet milk or stock; stir into it shred suet and dried oatmeal, with plenty of pepper, salt, and chopped onions, till pretty thick; fill the skins and fasten them at the ends. Boil the puddings for an hour, pricking them as they swell with a needle, to let out the air. Then broil on the gridiron and serve hot.

BLACK REVIVER.—Take bruised galls, one pound; logwood, two pounds; green vitriol, half a pound; water, five quarts; boil for two hours and strain. This is used to restore the colour of *black cloth*. It should be applied lightly and evenly over the surface with a piece of sponge, and the clothes should then be hung out in the air to dry. The following is an excellent *black silk* reviver. Boil logwood in water for half an hour, then simmer the silk in it for half an hour, take it out and put into the dye a little blue vitriol or green copperas; cool it, and simmer the silk for half an hour. Or, boil a handful of fig-leaves in two quarts of water until it be reduced to one pint; squeeze the leaves, and bottle the liquor for use. In cases where the silk has not faded to any considerable extent, cold tea will answer every purpose.

BLADDER.—This well known substance is a species of animal cuticle, and is prepared by cutting off the fat and loose membranes attached to it, and by washing it first in a weak solution of chloride of lime, and afterwards in clean water. This material possesses the property of being perfectly dry and air tight; and is consequently used for a number of domestic purposes, such as covering preserves, pickles, potted meats, &c., which would be destroyed by the action of the air and the contact of damp. Bladders in the shape of a belt round the waist, or in a globular form under each arm, are sometimes used as aids for swimming. But, as they are apt to collapse from being punctured, or on receiving any other external injury, they cannot be relied upon with much security.

BLANCHING, IN COOKERY.—An operation performed by putting meat, tongues, palates, &c., into cold water, when the article is gradually brought to boil, taken out and plunged into cold water, where it is left until quite cold. Blanching is intended to impart whiteness, plumpness, and softness. The operation, while rendering the meat whiter and more sightly, at the same time lessens its nutritive qualities, by abstracting a portion of the soluble saline matter which it contains, and thus deprives it of one of the principal features which distinguish fresh meat from salted meat.

BLANCHING, IN HORTICULTURE.—An operation performed by earthing the stems of plants, by tying up their leaves, or by covering them from the light. *Blanching by earthing* is performed on the celery, cardoon, asparagus, &c. In the case of annuals, the earth is generally drawn up so as to press on the leaves of the plant as it advances in growth; in the case of perennials, a covering of loose earth is generally placed over them before the growing season, through which the stalks shoot up and are blanched. *Blanching, by tying the leaves together*, is sometimes performed on lettuce, cabbage, endive, &c. The plant being nearly in its most leafy state, the head or fasciculus of the leaves is gathered together and tied up with bast ribbons. By this operation two effects are produced; the inner leaves as they grow being excluded from the light, are blanched, and being compressed in proportion to the growth, which takes place after tying up the head, the fasciculus becomes both tender and solid. *Blanching, by overlaying*, is merely the laying down of tiles, slates, pieces of board, &c., on endive and other salading, when nearly full grown; and of which, being thus excluded from the sun, the future growth is colourless. *Blanching, by covering*, is applied to sea kali, rhubarb, asparagus, &c., and consists in placing over each plant a pot which excludes the light, and thereby prevents the formation of the green colour. This pot is represented in the accompanying engraving; it consists of two parts—the body *a*, and the top *b*, which latter is necessary, as it can be taken off to examine the state of the crop, and also to gather it without having to remove the whole of the material. They are of various sizes, from 10 to 14 inches in diameter, and from 12 to 20 inches high.



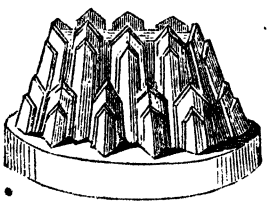
BLANC-MANGE A LA FRANCAISE.—Blanch one pound of sweet and a score of bitter almonds, drain them on a sieve, and afterwards dry them by rubbing them in a napkin; pound them in a mortar, moistening them from time to time with half a teaspoonful of water, to prevent their oiling. When they are pounded as fine as possible take them out of the mortar, and put them into a pan, then with a silver spoon beat up the almonds gradually with a half pint of filtered water; after this spread a napkin over an oval dish, and put the almonds upon it, then gather up the corners of the napkin and wring it very tight, to press out all the milk from the almonds; put into this milk twelve ounces of crystalized sugar, broken into small pieces. When the sugar is dissolved pass the whole through a napkin, and add to it one ounce of clarified isinglass, made rather warm; when the whole is well incorporated pour into the mould, which should be previously iced. The blanc-mange will be ready to serve in two hours.

☞ Almonds sweet, 1lb.; almonds bitter, 2o; water, ½ pint; sugar, ¾lb.; isinglass, 1oz.

BLANC-MANGE, AMERICAN.—Mix half a pint of cold water with two ounces of arrowroot, let it settle for a quarter of an hour, pour off the water, and add a tablespoonful of laurel water, and two ounces of sugar; sweeten a quart of new milk, boil it with a stick of cinnamon, and half the peel of a lemon; pick out the cinnamon and lemon, and pour the boiling milk upon the arrowroot, stirring all the time; put it into a mould, and turn it out the following day.

☞ Water, ½ pint; arrowroot, 2ozs.; laurel water, 1 tablespoonful; sugar, 2ozs.; milk, 1 quart; cinnamon, 1 stick; lemon peel, ½ of one.

BLANC MANGE, COMMON.—Infuse for an hour in a pint and a half of new milk the thin rind of a small lemon, and four or five bitter almonds blanched and bruised; then add three ounces of sugar, and an ounce and a half of isinglass, boil them gently over a clear fire, stirring until the isinglass is dissolved; take off the scum, stir in half a pint or rather more of rich cream, and strain the blanc-mange into a bowl; then



move it gently with a spoon until nearly cold, to prevent the cream from settling on the surface. Mix with it by degrees a wineglassful of brandy, and turn into moulds.

☞ Milk, 1½ pint; lemon rind, 1; almonds bitter, 4 or 5; sugar, 3ozs.; isinglass, 1½oz.; cream, ½ pint; brandy, 1 wineglassful.

BLANC-MANGE, DUTCH.—Put an ounce of isinglass into half a pint of boiling water, and boil it till dissolved, with the peel of a small lemon. Beat up the yolks of three eggs in half a pint of sherry, and when thoroughly mixed, put it to the isinglass with three ounces of sugar. Mix the whole well together, and boil it for a few minutes; then strain it through a hair sieve, stir till nearly cold, and turn it into shapes.

☞ Isinglass, 1 oz.; water, ½ pint; lemon peel, 1; eggs, 3 yolks; sherry, ½ pint; sugar 3 ozs.

BLANC-MANGE EGGS.—Make a small hole at the end of four or five large eggs, and let all the egg out carefully; wash and drain the shells, and fill them with blanc-mange; place them in a deep dish filled with rice to keep them steady, and when quite cold gently break and peel off the shell. Cut the peel of a lemon into fine shreds, lay them in a glass dish, and put in the eggs.

BLANC-MANGE, HOT.—Put into a saucepan a pound of sweet and a dozen bitter almonds, blanched and pounded. In another saucepan boil, with some sugar, a quart of new milk; pour this by degrees, boiling, on the almonds, and pass the whole through a very fine sieve, pressing the almonds at the same time. A quarter of an hour before serving, put this mixture on the fire, and keep stirring it until it adheres to the spoon.

☞ Almonds sweet, 1lb.; almonds bitter, 12; milk sweetened, 1 quart.

BLANC-MANGE FRITTERS.—Put into a stew-pan half a pound of ground rice, four eggs, a quart of milk, and a quarter of a pound of sugar; let it boil three hours, stirring frequently; when it has become thick take it off and add to it half a lemon-peel grated and a saltspoonful of salt. Mix the whole well together and spread it upon a floured dish; dredge some flour over it, and when cold divide the mass into bits, and fry in boiling lard until of a good brown colour; put sugar over them, and serve hot.

☞ Ground rice, ½lb.; eggs, 4; milk, 1 quart; sugar, ½lb.; lemon-peel, half of one; salt, 1 saltspoonful; flour, sugar, and lard, sufficient.

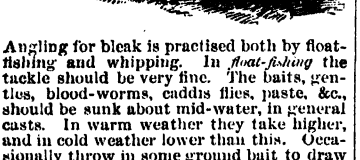
BLANKETS.—To be durable blankets must have a certain weight, a closeness of fabric, and sufficient quantity of wool in them. It is necessary, therefore, in choosing blankets, to look not merely at the rich appearance of the pile, but also the weight and texture. If not in constant use they are liable to be moth-eaten. To prevent this they should be folded and laid under feather beds that are in use, and occasionally taken out in the air and shaken. When soiled they should be washed, not scoured, and well dried before they are laid by. Blankets well chosen in the first instance and kept with ordinary care afterwards, will last a lifetime.

BLAZE.—See FLAME.

BLEACHING.—The best method of bleaching or restoring whiteness to discoloured *linen* is to let it lie on the grass, day and night, so long as is necessary, exposed to the dews and winds. There may occur cases, however, when this will be difficult to

accomplish, and where a quicker process may be desirable. In these cases the linen must first be steeped for twelve hours in a ley, formed of one pound of soda to a gallon of boiling soft water; it must then be boiled for half an hour in the same liquid. A mixture must then be made of chloride of lime with eight times its quantity of water, which must be well shaken in a stone jar for three days, then allowed to settle; and being drawn off clear, the linen must be steeped in it for thirty-six hours, and then washed out in the ordinary manner. To expedite the *whitening of linen in ordinary cases*, a little of the same solution of chloride of lime may be put into the water in which the clothes are steeped; but in the employment of this powerful agent great caution must be exercised, otherwise the linen will be injured. *Silk* is bleached by boiling it in white soap and water, after which it is subjected to repeated rinsings in pure water. *Gloves, stockings, straw bonnets*, &c., are submitted to the action of sulphuric acid, or to the fumes of sulphur, and sometimes by oxalic acid or chloride of lime. *Printed books, engravings*, &c., may be whitened by first subjecting them to the action of weak chloride of lime water.

BLEAK.—A fish of the carp genus; abundant in most of our rivers, particularly in the Thames and the Lea. Its length is about five or six inches; slender in shape, colour bright silvery, with the back olive green. Its tail is forked, and, from its continual motion, it has been called the river swallow.



Angling for bleak is practised both by float-fishing and whipping. In *float-fishing* the tackle should be very fine. The baits, gentles, blood-worms, caddis flies, paste, &c., should be sunk about mid-water, in general casts. In warm weather they take higher, and in cold weather lower than this. Occasionally throw in some ground bait to draw them together, such as chewed bread, dried crumbs, &c., followed by a handful of gravel or sand. *Whipping for bleak* is excellent practice for a young angler. Use a very fine hair line with a black gnat at the end, or otherwise mount one with a very minute ginger-palmer as a stretcher, and two droppers, one of which should be a black gnat, the other a blue. The common house-fly also forms an excellent bait. Bleak is not valued highly as a table fish, and is chiefly taken for the sake of its beautiful silvery scales, which are extensively used in the manufacture of artificial pearl.

BLEEDING AT THE NOSE is the most common and most harmless of all discharges of blood from the body; and in childhood and youth is as often the consequence of sudden heat, exercise, or the merest accident, as it is a natural means to cure a plethoric state of the arterial vessels of the head. It is only when excessive, and it continues for any length of time, that it requires to be checked. As no part of the body is so prone to bleed from the slightest accident as the nose, and as the discharge in hot weather and in full-bodied persons is often abundant and troublesome, the face, nose, and forehead should be freely sponged with cold water; and if the bleeding is obstinate, a wet towel must be laid suddenly over the shoulders, or on the spine, between the neck and shoulders. Sometimes the mere dropping a cold key down the back will produce an immediate suppression of the discharge; all these remedies act by the contracting power of cold, constringing the relaxed vessels. In cases where these means fail, and the patient has been laid on his back without effect, it may become necessary in severe cases and in young persons to extract a few ounces of blood from the arm, or plug the nostril, and so apply pressure immediately to the part affected. For this purpose tie a piece of strong thread round a small compress of lint, and having moistened it well with the extract of lead insert it by the handle of a pen up the nostril from which the blood is exuding. When the cavity is sufficiently distended the patient is to grasp the nose firmly between his thumb and finger, and thus establish for some time a steady pressure on the mouth of the bleeding vessel. After a sufficient time the compress is to be pulled down by means of the string that has been left to hang down. Sometimes this hæmorrhage from the nose is the result of a suddenly checked discharge: in such cases the bleeding is symptomatic, and is on no account to be immediately appeased, or, unless productive of much prostration, to be hastily stopped.

BLEEDING FROM THE STOMACH may proceed, and very often does, from blows, falls, severe pressure, or accidents, though it not unfrequently arises in persons of relaxed and delicate fibre, as a self-created disease. Blood may be effused from the vessels on the surface of the internal coat of the stomach, and remain there for some time before ejected by vomiting; or it may be discharged almost directly after its effusion.

The symptoms that usually characterize the presence of blood in the stomach, are a dry skin, fever, restlessness, and headache; at first a full quick pulse, soon becoming small and wiry, tickling in the throat, and uneasiness at the pit of the stomach, cold extremities, loss of sleep and appetite, nausea, and after a time vomiting, when the amount thrown up is sometimes excessive, and would appear almost beyond the retaining capacity of the organ from which it has been ejected. When the stomach has been relieved the patient feels easier, though the dry skin, furred tongue, thirst and other febrile symptoms continue till, after a remission of a few hours, or sometimes days, the vomiting returns, and a certain portion of blood, of perhaps different colours, with the contents of the stomach, is again ejected. Vomiting of blood is a very dangerous disease, especially in thin, emaciated, and diseased subjects, the patient sinking from exhaustion under the repetition and magni-

tude of the attack. *Treatment.*—If the patient is not advanced in years and the system not prostrated, six or eight ounces of blood may be taken from the arm, the utmost repose and silence enjoined, and the patient placed in a recumbent posture; bottles of hot water placed to the thighs and feet, and a mustard poultice, made of equal parts of flour and mustard, and spread on flannel, is to be applied hot to the region of the stomach.

Having adopted these applications, one of the following pills may be taken every two hours:—

1. Sugar of lead . . . . 12 grains.
   Rhubarb, powdered . 6 grains.
   Opium, powdered . . 2 grains.
   Quinine . . . . . 3 grains.
   Crumbs of bread . . 10 grains.

Mix well and add extract of hyoscyamus enough to make into a mass, which divide into twelve pills. These pills should be followed by frequent draughts of buttermilk or vinegar and water, so as to prevent the lead being decomposed by the acids in the stomach.

2. Mint water . . . . . 6 ounces.
   Hydrocyanic acid (schiel) 1 drachm—Mix.

One tablespoonful to be taken every hour. This mixture may be taken in conjunction with the pills, though more efficaciously employed on alternate days.

3. Infusion of roses . . 12 ounces.
   Elixir of vitriol . . 1 drachm.
   Syrup . . . . . half an ounce—Mix.

Two tablespoonfuls to be taken every three hours, sucked through a quill.

4. Tincture of muriate of iron 2 drachms.
   Infusion of quassia . . . 8 ounces, or half a pint—mix.

One tablespoonful to be taken every hour, sucked through a quill.

5. Powdered alum . . . . 1 drachm.
   Peppermint water . . . 1 pint.

Dissolve, and add compound tincture of catechu, 3 drachms—mix. One tablespoonful to be taken every hour.

Beside these means, lemonade may be drunk freely; lime juice taken in frequent doses of a tablespoonful, either alone, with ice, or mixed in water. Or effervescing draughts may be administered every hour, allowing the effervescence to take place in the stomach.

The diet must be light and of a farinaceous nature, and every precaution is to be adopted to keep the system as low and in as anti-inflammatory a state as possible.

BLIGHT.—A term in common use for supposed atmospherical injuries received by plants. Before effects were traced to their causes with the same care that they are at present, the sudden discolouration of the leaves of plants, their death, or their being covered with minute insects or small excrescences, was called by the general name of blight; and this blight was attributed to some mysterious influence in the air, to the east wind, or to thunder, because these states of the atmosphere commonly accompanied the phenomena alluded to. It is now found that what is called blight is in some cases the effect of insects, to the progress of which the dry state of the atmosphere produced by east wind is peculiarly favourable, while in other cases it is caused by parasitical fungi. The sudden death of plants and also the withering and drying up of part of their leaves and branches, to which appearance the term blight should perhaps be restricted, are produced by the transpiration of water from the leaves taking place with greater rapidity than it can be supplied by the absorption of the roots. In very hot weather, branches of fruit-trees, trained against walls, are sometimes withered up in a few minutes from this cause. What is called the blight on fruit trees is commonly nothing more than the injuries done to the leaves and buds by the caterpillars of certain moths.—See MILDEW, RUST, SMUT, &c.

BLIND—ASYLUMS AND CHARITIES FOR THE.—1. *Hetherington's Charity.* Established for the purpose of paying annuities of £10 to blind persons. The leading qualifications are—birth and residence in England, to the exclusion of Wales and Berwick-upon-Tweed; age, 61 years and upwards; residence, three years in the present abode; and total blindness during that period; income, if any, under £20 per annum. Those who have ever begged, received alms, or are deemed objects of parish relief, day-labourers of every denomination, soldiers and sailors, servants and journeymen in any handicrafts, or persons living by turning a mangle, are excluded from the benefit of this charity, which is intended "for those who have been respectably brought up, and who need some addition to what they have, to make life more comfortable under the misfortune of blindness." Forms of application may be obtained by personal request, or that of a friend (not by post), at the counting-house of Christ's Hospital, London.

2. *The Blind Man's Friend.* Endowed by Mr. Charles Day, of the well-known firm of Day & Martin, who left £100,000 for the benefit of distressed blind persons, of whom 270 are at present receiving pensions from £12 to £20 a year each. The election of pensioners rests exclusively with the three trustees, who meet quarterly to consider petitions, and select the most deserving objects. Applicants must be wholly blind, and residents in England, Wales, or Scotland; the petition must state in full the particular details of the case—name, residence, age, employment, amount of income, length of blindness, &c.; and be signed by the clergyman and churchwarden of the parish, as certifying their general belief in the representations made; also by at least two housekeepers to whom the petitioner is personally known. Trustees, William Underwood, William Croft, and William Simpson, Esqrs. Clerk and Treasurer, John Simpson, Esq. Office, 29, Savile Row, London.

3. *Painters' Charity*; consisting of pensions of £10, distributed by the Painters' Company. The number of pensioners is 173, whose ages vary from 61 to 100 years. Blank forms of petition are issued from the office between the hours of 11 and 3, from the 25th

of October until the 30th of November. Office, Painter's Hall, Queenhithe London.

4. *Came's Charity*, arises from a fund invested with the Cordwainers' Company, for granting pensions to blind men of 40 years of age, and to blind women of 40 years of age. Applications to be made by petition, before the 10th of November. Office, Cordwainers' Hall, 43, Cannon Street West, London.

5. *School for the Indigent Blind*, which, in addition to imparting a moral and religious education to the indigent blind, also instructs them in a trade by which they may be able to provide, either wholly or in part, for their future subsistence. The benefits are extended to both sexes, who, when admitted, are clothed, boarded, lodged, and instructed. All applicants under 10 or above 25 years of age, or who have a greater degree of sight than will enable to distinguish light from darkness, cannot be placed on the list of candidates. Persons desirous of admission may obtain printed papers of questions and engagements at the school, to which answers in writing will be required, attested in the manner therein specified. Office, at the School, St. George's Fields, London. In addition to these charities there is also a Society for Visiting the Blind, Office, 27, Red Lion Square, London; and the London Society for Teaching the Blind to Read, Office, 1, Avenue Road, London.

BLINDNESS.—See EYE, DISEASES OF

BLINDNESS IN HORSES.—The dilation or contraction of the pupil of the eye of the horse furnishes a useful method of ascertainmg the existence of blindness in one eye or both. Thus, the pupil is oblong, and variable in size; it differs with the intensity or degree of light that falls upon the eye. In a dark stable the pupil is expanded, to admit a greater proportion of the light that falls upon the cornea; but when the horse is brought towards the door of the stable and more light is thrown upon the eye, the pupil contracts, in order to keep out that extra quantity which would be painful to the animal, and injurious to vision. When opposed directly to the sun the aperture will almost close. In cases of suspected blindness, therefore, let the size of both pupils be carefully noticed before the horse is removed from the stable, and as he is led to the door, observe whether both the pupils contract, and equally so, with the increase of light. If the horse should be first seen in the open air, let it be observed whether the pupils are of exactly the same size; then let the hand be placed over each eye alternately, and held there for a little while, and let it be observed whether the pupil dilates with the obstruction of light, and equally in each eye. According as these indications are absent or present, so is the vision perfect or imperfect. Blindness in both eyes will usually be betrayed by a horse moving his ears in a constant and rapid motion, directing them in quick succession to every quarter. He will likewise hang back in his halter in a peculiar way, and will lift his feet high, as if he were stepping over some obstacle when there is actually nothing to obstruct his passage, and there will also be an evident uncertainty in the putting down of his feet.

BLIND MAN'S BUFF.—A lively game very well known, and adapted as a healthy in-door sport for children of both sexes. One of the company is blindfolded; and must then endeavour to catch another of the company, who is then to be blindfolded; and so on in turn. The blindfolded person is usually led to the centre of the room, and some one addressing him, while the rest of the company stand round him, asks—

"How many horses has your father got?"

He answers, "Three!"

"What colour are they?"

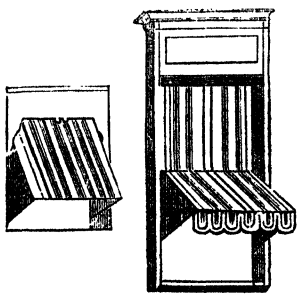
He replies, "Black, white, and gray!"

"Then turn round three times, and catch whom you may."

The fun then begins, and everybody must look out for himself. When any one is caught, all the company keep immediate silence, and the blindfolded person is to call out the name of his prisoner. If he makes a mistake the prisoner must be liberated, and the sport recommenced. In playing this game there should be no unpleasant tricks practised on the blind man, and everybody should share the risk of being caught. It should be observed that this game is best played in a large room, where there is but little furniture and no ornaments or other fragile articles.

BLINDS, FOR WINDOWS. — The blinds generally used for the inside of windows are the Venetian and Holland, both of which are well known. Outside blinds are very useful, and have a picturesque appearance. They have not only the effect of shading the curtains, carpets, and other furniture in a room from the direct rays of the sun, and so preserving their colours; but, by reflecting back the sun's rays they keep the rooms cooler during summer, and also darker, which last circumstance lessens the inducement for flies and other winged insects to intrude themselves. The latest improved blinds of this description are known as the bonnet blinds: *Fig.* 1, represents them as

Fig 2. *Fig.* 1.



adapted for sitting-rooms; *Fig.* 2, the manner in which they are made for bedchambers. They are usually made of striped cloth, fixed to an iron framing at the bottom; and are

made to rise, by cords and pulleys, into a case of wood at the top of the window, which is generally made ornamental.

BLISTER.—The term blister is applied to any substance that has the power to raise the outer skin into bladders or pustules. There are several varieties of blisters—animal, vegetable, and mineral, the principal being the cantharides or Spanish fly, mustard, euphorbium, mezereon, savine, antimony, silver, vinegar, potass, and ammonia.

Blistering and counter irritation is a mode of treatment by which it is sought to cure one disease by establishing another of the same type, but less severe than the first; bearing this in mind, the general utility of all external stimulants, especially those of blisters, will be better understood and more fully appreciated.

Blisters are used in medicine as a means of depletion, either to carry off from the body a certain amount of blood in the form of serum, and thus act as a local bleeding, or in addition to this effect, to cause, by the inflammation they produce on the surface, a larger amount of blood to circulate through the adjacent cuticle, and thus relieve some deeper organ or part from the excess of blood that disease causes to be attracted to it. With this view only, and when no depletion is required, medical men are in the habit of using a milder form of blistering than that effected by raising the epidermis in bladders, and to this they give the name of rubificients, or, in simple English, substances that "make red."

From the benefit they afford, the ease of application, and the safety of their employment, blisters have become of universal use, and may be considered as an established domestic remedy. Yet there are certain points in connection with them that require explaining, both for protection and guidance. When the blister has sufficiently risen, remove the plaster, and nipping the blister where it bags most, gently press out the water, taking great care not to break the skin as it collapses; immediately place over the whole a warm bread poultice, the bread confined within a fold of muslin, and allow it to remain for one or two hours; then carefully remove the poultice, and sprinkle the blistered part with a thick layer of violet powder, cover this with a piece of linen, and by a bandage or handkerchief keep the whole in its place: every four hours add more violet powder, especially over the moist part, taking care not to remove the cake or crust that forms till the cuticle is sufficiently healed to permit of its being taken away, when the place is to be lightly dusted with the powder from time to time, to avoid cracking the new cuticle. It is seldom if ever necessary to interpose gauze or tissue paper between the blister and the skin, and, except in very rare and singular cases, should never be done, nor is there any time that can be fixed as the duration a blister should remain on; this must depend on the rising, which will take from eight to sixteen hours to effect; though in infancy and childhood, from the extreme delicacy of the cuticle, the time required is infinitely shorter. But this is a point that every nurse provides for by frequent inspection. When a blister is not at hand steep a pewter plate or piece of flat metal in boiling water, and place it at once on the skin, pressing it down for a moment, and then allowing it to rise, and as it cools remove it; or in cases of still greater emergency, a blister may be obtained by wetting a part of the cuticle and rubbing on it for a few minutes, lunar caustic; or cut a circular hole out of a piece of adhesive plaster, which having adhered to the skin, tie some lint to the end of a stick, dip the padded end in nitric acid or aquafortis, and brush lightly and rapidly the skin exposed within the hole in the plaster, when a vesicle will be immediately produced. In this country it is seldom that any blister is used but that of cantharides or Spanish flies, except, in extreme cases, that of mustard, as given above. The blister plaster as sold in the shops is a species of tough ointment, and is made of wax, suet, rosin, and lard, all melted over a slow fire, and while cooling the powdered flies stirred in, till the whole, when cold, becomes a smooth, firm, and tenacious mass. The mode of making a blister is to cut out a shape from a piece of adhesive plaster, either round, oval, oblong, or according to the part on which it has to be applied, and taking a piece of the blister plaster, and softening in the fingers with the right thumb wetted in water, extend it over the shape, leaving a margin of half an inch all round; the plaster is to be spread about the thickness of a shilling, and all over of an equal smoothness. This is then to be warmed for a moment before the fire, and applied evenly over the part, the edges of the plaster being nicked, where necessary, to make it lie flat. For the ears the shape of the blister resembles the figure 6, the O part coming under the lobe of the ear, and the tail sweeping behind it; each ear, however, requires a different position of the figure, that of the left needing the 6 as it naturally stands, the right must have it reversed, as thus, 9.

BLISTERED FEET.—The best remedy for this is to rub the feet, when going to bed, with spirits mixed with tallow, dropped from a lighted candle into the palm of the hand.

BLOATERS—are herrings cured in a peculiar manner, as at Yarmouth, where they are first salted, and then smoked with wood smoke, and are known as "Yarmouth Bloaters."—See HERRING.

BLOOD is not only a vital fluid, the source of animal heat and moisture, and the fountain from which every secretion is eliminated, but it is the food and nourishment of the body, and contains in itself all the elements from which the bones, muscles, and every organ of the frame are constructed. The temperature of the blood differs in different animals; in man it is ninety-eight degrees, lowest in fishes, and highest in birds. When drawn from the body and collected in a basin, it directly separates into two parts—the clot or coagulum, which being the heaviest falls to the bottom; and the serum, or whey, a thin straw-coloured fluid,

in which the crassamentum or clot floats. Blood consists of water, albumen, fibrine, hydrochlorate of potass and soda, lactate of soda, carbonate and phosphate of soda, colouring matter and peroxide of iron.

Two kinds of blood, alike in their main characters but very different in their properties, circulate at the same time in the body, these are called the *arterial* and the *venous*, the one a bright scarlet, the other a dark purple. *Arterial* blood, or that contained in arteries or pulsating tubes, is specifically lighter than venous blood, of a bright scarlet colour, and of a higher temperature. It comes directly from the left side of the heart and the lungs, where having received fresh oxygen from the air and obtained its heightened colour, it is diffused to the remotest part of the body. *Venous blood*, or the blood of veins, is heavier than arterial blood, thicker, less warm and of a dark purple colour. As arterial blood is loaded with the elements of reproduction, so venous blood is charged with all the waste of the body, the worn down particles and general refuse of the system, which is brought back from the points where the arteries terminate, to the *right* side of the heart, from whence it is sent to the lungs to be purified and converted again into arterial blood. The amount of blood circulating in an adult's body, is estimated at from twenty-eight to thirty pints or pounds of this quantity; three-fourths are supposed to circulate in the veins, and one-fourth in the arteries.

BLOOD, DETERMINATION OF, TO THE HEAD.—See CONGESTION.

BLOODHOUND.—This dog is not unlike the deer hound, but is taller and better formed. It has large and deep ears, the forehead broad, and the muzzle narrow. The expression of the face is mild and pleasing when not excited, but when following his prey his ferocity becomes truly alarming. The bloodhound is trained to

hunt the human being instead of the quadruped. If once put on the track of a supposed robber or murderer he would unerringly follow him to his retreat at the distance of many miles. Such a breed was necessary when neither private individuals nor the government had other means to detect offenders. Now, however, when readier means of detecting culprits exist, this dangerous breed of hounds has fallen into disuse. It, nevertheless, at the present day, is often bred by the rangers in large forests or parks to track the deer-stealer, but oftener to find the wounded deer.

BLOOD LETTING OR BLEEDING.—The operation by which blood is taken from the system, for the prevention and cure of disease, for the purpose of reducing dislocations and rupture, and also for promoting the absorption of medicine more easily into the system. Blood letting is either general or local; general, when abstracted in sufficient quantity to lessen the entire mass of the circulating fluid; local, when performed over or near the disease, for the purpose of diminishing blood in a part.

GENERAL BLOOD LETTING is either performed by opening a vein with a lancet, or by opening the temporal artery or one of its branches.

LOCAL BLOOD LETTING is effected by cutting the part with a scarificator, an instrument armed with from 9 to 18 lancets, and applying the cupping glasses over them; by the application of leeches; or by dividing the most distended vessels with a lancet or bistoury.

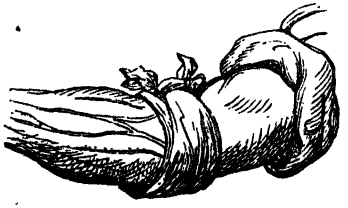
In blood letting from a vein, in whatever part the operation is performed, if the vein is in the foot, ancle, back of the hand, or arm, it is first necessary to tie a string or fillet above the part to be operated upon, and between it and the heart. By this means the return of blood to that organ is arrested at the fillet, and all the veins below it gradually become distended, and rising up show themselves beneath the cuticle; or in fat patients, where the cellular tissue is too thick to allow the veins to appear through the skin, they can be felt beneath by the fingers, like round cords. In every part of the body up to the neck, the bandage is placed *above* where the puncture is to be made; but in the head and neck the compression must be *below* the intended opening. Where the vein is small that has been opened, and the blood consequently flows in a weak and imperfect stream; before opening another, the hand should be placed in a basin of hot water, and the whole arm up to the bandage fomented by wrapping it in flannel dipped in the water; by this means the vein is not only expanded, but the blood from the collateral vessels forced with momentum into the larger tube, and a full and steady stream may in this manner be often obtained. The water is then to be removed, and a staff or the handle of a broom placed in the patient's hand; not only as a support to the arm, but in order to propel the blood steadily through the fingers, by the muscular exertion of grasping it. The proper requisites for bleeding are a clean, sharp lancet, two pledgets or small folds of linen, the smallest about an inch square, and four or six times doubled, the next about twice the dimensions of the first, a fillet, or strip of broad tape, a yard and a half long, a basin to receive the blood, and when the patient is sitting to be bled, a pole or staff for the hand.

General bleeding is ordinarily performed

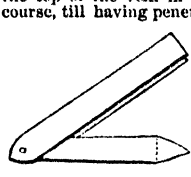
in the arm; it is immaterial in which arm the bleeding is effected, only that it is necessary to accustom both hands to perform the operation; for, if the patient is bled in the left arm, the lancet must be held in the *left* hand, or else the operator is certain to receive the first leap of the blood over his face and person.

Running along each arm from the wrist till lost in the muscles above the elbow, are two well-defined veins, one on the inner, the other on the outer side of the limb. While proceeding up the arm, equidistant between both is a third, called the median. Just before reaching the bend of the arm the centre vein divides into two short branches, diverging obliquely, the outer branch to unite with the external or basilic vein, and the inner in like manner joining the internal or cephalic vein; it is either in one or the other of these two short veins that the operation of bleeding is almost always performed. The outer or median basilic on the thumb side of the arm is the vein generally selected by the surgeon for bleeding, as being larger than the other, and yielding a fuller supply, but it has the danger of lying directly over *the brachial artery*; and should it be punctured by an inexperienced operator, would lead to an aneurism, and the serious operation of tying the main artery. The other vein, therefore, the one crossing obliquely inwards, the median cephalic, is the best and safest vessel in every respect for the non-medical practitioner to open for the purpose of bleeding. The operator must bear in mind that it is necessary before tying up the arm, to place his finger on the vein he purposes opening, and if he feels any pulsation beneath it, on no account to bleed in that vein, but select one more removed from arterial branches.

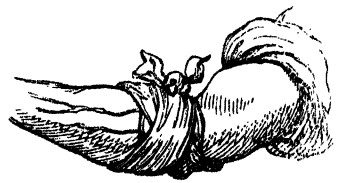
Having selected the vein to be opened, in which the operator will be guided by the size and distinctness of the vessel, first grasping the arm tightly for a few seconds with both hands above the elbow, and allowing the checked blood to distend the veins, when he will be able to decide upon the best one for his purpose, he will then pass the fillet or bandage two or three times round the arm above the elbow, and tie it in a bow beneath the limb; taking care not to make the pressure too tight, as in that case the arterial circulation will be checked and the blood after the first leap will cease to flow; the compression must only be sufficient to



impede the superficial circulation. The lancet is then to be opened at a right angle with the handle, and the blade grasped firmly between the thumb and finger of the right hand, allowing little more than the mere shoulders of the instrument to project. Standing in front of the patient the operator next extends the arm, and letting the elbow rest in his hand, places his thumb over the vein he purposes opening, to keep it steady, then holding the lancet like a pen, with a gentle but steady pressure he should insert the point of the instrument obliquely into the top of the vein in the direction of its course, till having penetrated as far as the shoulders of the lancet, or where the point merges in the sides—as indicated by the dotted line in the annexed engraving—it is to be brought out by cutting upwards, so that the wound in the vein and cuticle shall be of the same size; the operator then lays down his lancet, and taking up the basin, and lifting his thumb from off the vein, allows the blood to flow till he has obtained the quantity desired. It is always necessary to keep



the arm in the same position in which the opening was made, or the skin may get over the orifice and abruptly stop the bleeding. When a sufficient amount has been withdrawn the thumb is again to be placed on



the vein, the bandage untied, the arm washed, and taking up the smallest pledget with the right hand, press with it the divided cuticle together, and closing the orifice the pledget should be placed on the opening, and then the larger one upon that, using the thumb of the left hand, while the palm and fingers support the elbow, to keep them in their position; the centre of the bandage is then to be placed on the compresses or pledgets, and each end passed obliquely round the arm like the figure 8,

tying the two ends over the compress in a small bow, and the arm kept in an unbent and as a quiet a position as possible for 20 or 30 hours.

BLOTCHES.—Blotches or pimples on the face and neck, are, when not the result of a scrofulous state of the system, the consequence of some functional derangement of the liver or stomach; and any external application that would suddenly drive them from the skin, might be attended with troublesome consequences; therefore care must be observed in the employment of lotions. The cause must be in the first instance discovered, and if found to proceed from the *liver*, three grains of blue bill are to be taken twice a day, for three or four days, followed every second morning by a tablespoonful of Epsom salts dissolved in half a pint of water. If from the *stomach*, a powder of fifteen grains of carbonate of soda, with five grains of rhubarb and two of ginger, is to be taken in a wineglassful of water twice a day, and a compound colocynth pill every second morning. If the blotches have been of long standing these means must be persisted in for some time, and the patient should take the decoction of sarsaparilla, or a mixture made by boiling equal quantities of dulcamara and dandelion in four pints of water till reduced to three, and when cold, take a small tumblerful three times a day. At the same time, the face may be washed with elder flower water, in which a small quantity of corrosive sublimate has been dissolved, in the proportion of two grains to a pint; or a lotion may be made of a pint of rose water and one drachm of extract of lead; in both cases the face is to be washed or well wetted two or three times a day. It is sometimes necessary to substitute an infusion of penny-royal for the sarsaparilla, in which case the compound assafœtida pill should be taken instead of the colocynth and salts; and in obstinate cases exercise and sea-bathing must be resorted to as an adjunct to the treatment.

BLOW PIPE.—An instrument by means of which the flame of a candle or lamp is directed upon any substance placed to receive it, which is thus subjected to an intense heat. The blow pipe is to the artist and experimentalist, what the wind furnace is to the artisan; but it is proportionately more powerful, convenient, and economical. Beginners are usually unable to maintain a continuous stream of air from the jet, which is, however, very simple to accomplish. The operation depends upon a little artifice in blowing through the pipe, in order to produce a continued stream of air for many minutes, if necessary, without ceasing. This is done by applying the tongue to the roof of the mouth, so as to interrupt the communication between the mouth and the passage of the nostrils; by which means the operator is at liberty to breathe through the nostrils, at the same time that by the muscles of the lips he forces a continual stream of air from the anterior part of the mouth through the blow-pipe. When the mouth begins to be empty, it is replenished by the lungs in an instant, while the tongue is withdrawn from the roof of the mouth and replaced again in the same manner as in pronouncing the monosyllable *tut*; in this way the stream may be continued for a long time without any fatigue, if the flame be not urged too impetuously.

BLOWS.—The consequences to be apprehended from blows, depend upon the force with which they are given, and the nature of the part injured. Blows are more serious when inflicted on the head and over joints, than over well covered parts, and, like bruises, when the force has been considerable, are immediately followed by the rupture of several small vessels and the effusion of blood, with swelling and discoloration. When the blow is received on a thinly covered part, such as the shin or elbow, the consequences are generally severe, and the parts above the bone frequently slough. There are three objects to be observed in the treatment of blows and all varieties of contusion: to subdue the inflammation that follows the injury; to promote absorption of the effused blood; and restore the tone or strength of the injured part. For the first of these it is customary to apply leeches immediately around the seat of pain, and when by their bleeding the inflammatory state has been subdued, to employ cold lotions of sugar of lead or zinc, to disperse the swelling; but the best application that can be used to effect this purpose, after the use of leeches, is the following:—Sal ammoniac, ½ an ounce; camphor water, 1 pint; vinegar, 4 ounces—powder; and dissolve the ammoniac in the camphor water, and add the vinegar; lastly, mix; and keep rags constantly wetted with this lotion to the swelling; or a little sulphuric ether may be poured occasionally on the part and then allowed to evaporate. To effect the restoration of tone or power to the part, friction is to be frequently employed, either by the use of simple lard and the hand, or by the employment of opodeldoc. When the skin has been lacerated by the blow, the wound is to be treated like an incised wound, and the edges closed with adhesive plaster. But all these objects can be obtained in a much shorter time and a more efficacious, and infinitely less troublesome manner, by applying extract of lead a few times freely to the part in the same way as a lotion. When the skin is

broken, the only precaution necessary is to lay the abraded part as smooth as possible; should there be any bleeding this will check it; it will subdue the inflammation, dispel the swelling, and, while preventing the chance of sloughing, restore vigour to the part injured.

BLUE-BELL.—The common name given to a bulbous-rooted plant of the hyacinth kind, frequently met with in woods and other places. Its bulb is globular, white, and coated; its leaves linear, channelled, shining, and drooping in their upper half; they are blue, pendulous, nearly an inch long, and scented.

BLUE DYE.—There are several methods for dyeing cotton, linen, silk, and wool of a blue colour, among which are the following:—1. Give the goods a mordant of alum, then rinse them well, and boil them in a bath of logwood, to which a small quantity of blue vitriol has been added. 2. Boil the goods for a short time in a bath of logwood, then add to the liquor tartar and verdigris, in the proportion of one ounce each to every pound of logwood employed. 3. Bilberries, elder-berries, mulberries, and several other blue vegetable substances, may be used to dye blue as above, instead of logwood.

BLUEING.—One of the operations of the laundry, which consists in colouring the last rinsing water very slightly with blue, so that the otherwise yellow colour of the linen is got rid of. Care should be taken to avoid using so much as to make the shade too deep, since a decided blue is just as objectionable as a decided yellow. The blue is tied in a small flannel bag, which is dipped in the water and squeezed, so as at once to stain the liquor as it comes out, and also to graduate its shade with greater delicacy.

BLUE PILL.—One of the most useful, safe, and convenient preparations of mercury. Its use for general purposes has almost superseded calomel, and has this great advantage over all other forms of mercury, that it may be taken with comparative impunity, and employed by the non-professional person with almost absolute safety; an overdose having only the effect of a purgative, passing out of the system by the excessive action it superinduces.

Blue pill exerts three distinct actions on the system, according to the dose and manner in which it is given—as an alterative, an aperient, and a sialagogue (or medicine that acts on the salivary glands, and excites an increased flow of saliva). As *an alterative*, it may either be given alone, in doses of three grain pills twice a day; in conjunction with quinine, sarsaparilla, or a tonic mixture; or it may be taken in combination with powdered rhubarb and colombo; in which case it is customary to make them into powders, as in the following prescription for an alterative medicine:

Blue pill	2 scruples.
Powdered rhubarb . .	1 drachm.
Powdered colombo . .	1 drachm.
Powdered ginger .	1 scruple.

Rub the blue pill with the rhubarb till incorporated, then add the colombo, mix that well with the other, and lastly put in the ginger; when the whole has been made into a well-mixed powder, divide into twelve papers, taking one in a little jelly or honey, or any conserve, two, or if necessary, three times a day.

As an aperient.—The blue pill is to be taken in doses of from six to twelve grains, either as a bolus or divided into two pills. But where a more general action is required, it is best to combine the blue pill with another form of aperient, such for instance as the compound colocynth pill or extract, with either of which it may be judiciously combined in the proportions of equal parts, or one of blue pill and two of colocynth; as in the following very excellent and useful combinations.

Aperient pill, No. 1:

Compound colocynth pill	2 scruples.
Blue pill	1 scruple.

Mix, and divide into twelve pills; one to be taken three times a day, or two at bed time and one in the morning, when the effect is required quickly, and repeated as occasion demands.

Aperient pill, No. 2:

Compound extract of colocynth Blue pill	} of each. ½ drachm.

Mix and divide into twelve pills; to be taken as the above.

Aperient pill, No. 3:

Assafœtida pill . . Blue pill . . . . Extract of henbane	} of each one scruple.

Mix, and divide into twelve pills, two to be taken three times a day.

When blue pill is taken alone as an aperient it should never be used at bed time for that purpose, as it will then act on the skin, and materially mitigate its aperient powers.

As a sialagogue.—When employed to act on the salivary glands, to produce a more perfect digestion by yielding a larger solvent for the food and increasing the powers of the gastric juice, it is necessary that the mercury should be kept in the body, so as to enable it to affect the organs that secrete the saliva; it therefore becomes necessary to destroy its aperient and alterative action, and retain it in the system sufficiently long to react on these particular organs or glands. To effect this object the blue pill must be combined with some astringent, such as kino or catechu, so as to prevent its passage out of the body. For this purpose the following combination will be found calculated to meet the requirements necessary:

Blue pill	2 scruples.
Powdered kino . .	1 scruple.

Make a mass, and divide into twelve pills; one to be taken every four hours, till the mouth becomes tender, or the extra flow of saliva shows that the effect wished for has been obtained, when a black draught or two or three compound colocynth pills will be sufficient to carry off the salivating effects of the medicine. A second dose of aperient

medicine may be taken if required; but as a general rule the black draught, or two pills and a draught will suffice for all necessary purposes.

The dose of blue pill as an alterative is from one to three grains, two or three time a day. As an aperient, from five to twelve grains, repeated if necessary; and as a sialagogue from three to five grains in combination with kino or catechu, every four hours.

BLUE STONE—Is used in a solution of from four to fifteen grains to an ounce of water, and applied to foul and indolent ulcers, by means of a wetted rag; it is also rubbed in substance, on fungous growths, warts, &c., to destroy them. *Caution.*—It is a poison.

BLUNDERS. — See PRONUNCIATION, SPEAKING, WRITING, &c.

BLUSHING.—This unpleasant indication in nervousness, trepidation, and other mental emotions, is caused by the sudden disturbance of the blood-vessels, which under these circumstances eject the blood with unusual velocity and in undue quantities towards the surface; and thereby heighten the natural hue of the skin. Blushing, especially in the male sex, is generally regarded as a betrayal of weakness of character and a want of moral courage, and seldom fails to inspire derision and contempt. To remedy this painful demonstration, persons who are subject to it should mingle with society and accustom themselves to speak before company. Previously to entering or leaving a room where many persons are assembled they should determine within their own minds how they shall act; so as not to be flurried or taken off their guard by the unusual attraction which their entrance or exit may occasion. In short, on every occasion when they begin to feel timid, they should whisper courage to themselves, and endeavour to overcome the painful weakness by an effort of the will.

BOARDING HOUSE — A species of hotel, where persons may lodge, and have all, or a portion of their meals, at a fixed rate. Each person is provided with a bedroom, and has the privilege of using a sitting-room which is common to all. The meals are partaken of at one table at certain hours, which have been fixed with a view to the convenience of the boarders generally. Persons are not compelled to remain a specified time, or to give an equivalent warning as in lodgings, but may remain as short or long a term as they please, and pay accordingly. Boarding houses are excellent establishments for those who have otherwise no "home" and few acquaintances, as the advantages of society are offered in every respect the same as though it were a private family, and a person has all his wants provided for, without any trouble to himself, at a reasonable rate. Many travellers, and other persons who are in the habit of moving from place to place, prefer boarding houses to hotels, because they are not expected as a matter of course to drink or pay for wine, spirits, and beer, and also because the terms are much more reasonable. The charges at boarding houses vary according to locality, style, &c., but a person may be domiciled at a very comfortable establishment, at the rate of two guineas per week, including every item of expense.

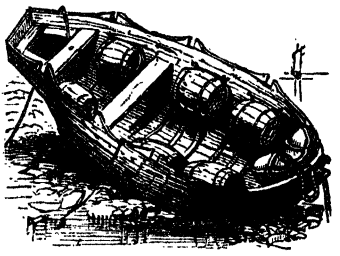
BOARDING SCHOOLS are establishments where young ladies and young gentlemen are taught, housed, and fed, at a certain rate per annum. The terms range from £20 a year upwards; and extras are usually charged for, such as washing, books, music, pew-rent, &c. In most schools each pupil is expected to be furnished with a silver fork and spoon, towels, and other requisites for the toilet. Payments are made quarterly, and it is usual to give a quarter's notice before removing a pupil from a school. Holidays are given twice a year, at Midsummer and Christmas, generally of a month or six weeks' duration, and these intervals are charged for just as though the pupils were actually at school. At some establishments arrangements may be made for keeping a pupil at school during the holidays on payment of a stipulated weekly rate. Before a parent sends his child to a boarding-school he should ascertain by references and otherwise, whether the conductor of the establishment is a properly qualified person; whether he or she exercises the required amount of moral influence over the pupils; whether the treatment is humane, without being unreasonably severe on the one hand, or lax on the other; also as to the quality and quantity of food, the opportunity for exercise, the practice of cleanliness, &c.—See EDUCATION.

BOARDS, TO REMOVE STAINS FROM.—To take out *grease spots:* dissolve some fuller's earth in a little hot water, to the consistency of thick paste, and let it get quite cold. Cover the grease spots with it thickly; and after it has remained all night, or for several hours, until thoroughly dry, scour it off with cold water. Should the grease not disappear with the first application, the operation must be repeated two or three times, or as often as may be necessary for its removal. *To take ink out:* apply strong muriatic acid, or spirits of salts, to the stains with a piece of cloth; afterwards, well wash the parts with water.

BOARDS, TO SCOUR. — Mix lime, one part; sand, three parts; soft soap, two parts. Lay a little on the boards with a scrubbing brush, and rub thoroughly. Be careful to clean straight up and down—not crossing from board to board; then dry with clean cloths, rubbing hard up and down the same way. Floors should not often be wetted, but very thoroughly when done; and once a week they may be dry-rubbed with hot sand and a heavy brush—the right way of the boards.

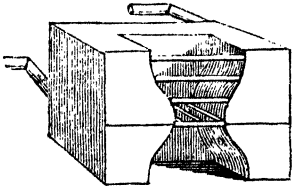
BOAT.—A term used in a general sense to denote any small ship or vessel, whether open or decked, and which may be propelled by oars, sails, or by steam; they are consequently of very different forms and constructions, according to the specific purposes they are intended to serve. One of the most important of this class of vessels is the Life Boat, for the purpose of preserving the lives of persons shipwrecked, or otherwise

left to the mercy of the waves. Several kinds of life-boats have been constructed from time to time, each possessing peculiar features and distinct advantages. On the score of simplicity of construction and of efficiency, the form of life-boat deserving of the highest recommendation, is that shown in the engraving, which consists



merely of the ordinary ship's boat with empty casks fixed in it, by which it is rendered buoyant and incapable of sinking, even when filled with water.

BOILER.—A receptacle for hot water, usually forming a part of the kitchen range. It is supplied with water by an oval aperture at the top, which is closed by a heavy piece of cast iron, fitting it exactly, and having a projection on the other side that runs into a groove. This groove is always full of water from the condensed steam, and the water prevents any steam escaping from the boiler, for before any can come out it must make its way through the water in the groove, and also be strong enough to lift up the cover, which therefore acts as a safety valve. To prevent the trouble of supplying the boiler every day with water by hand, some of them are made self-filling, and are supplied from a small cistern in the kitchen

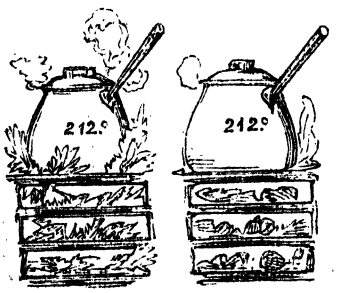


with a ball-tap. Boilers are apt to get out of repair from constant use; they are also liable to crack when suffered to remain empty for any lengthened period. It frequently happens also, that in the course of time a stony deposition is formed in boilers, somewhat similar to the fur of a common tea-kettle, and this incrustation, when it arrives at a considerable thickness, impedes the boiling of the water by its being a bad conductor of heat. When this happens, the top of the boiler must be taken off and the hard incrustation cut out with a chisel. If suffered to remain, not only would the water boil slowly, but the boiler, by getting red-hot, would soon be burned out. The best way is, every three or six months to clean off the incrustation by scraping, while it is thin enough to scale off.

Independent of their domestic uses, boilers may be made to assist horticultural operations. A boiler, similar to that in the engraving, may be connected with the ordinary kitchen range, and fitted with a flow-pipe and a return pipe, both communicating with a greenhouse, conservatory, or ash-pit. It must, however, be carefully borne in mind, that no part of the flow pipe should dip to a lower level than that of the point from whence it started; nor the return pipe dip deeper than the part where it enters the boiler. An air tap, about the size of an ordinary quill, should be fixed in the flow pipe at its highest point for the escape of air, which, if allowed to exist in the pipes, would completely arrest the circulation of the water; such a contrivance as this will in no way interfere with domestic arrangements, as a stopcock can be placed on both the flow and return pipes, rather close to the boiler within, or close to the wall without, as may be most convenient.

BOILING.—This most simple of culinary processes is not often properly performed, from the mere want of attention to the commonest rules. The following are the principal directions to be followed:—Let the saucepan be as nearly as possible the size to hold the joint or piece of meat that is to be boiled, so that no unnecessary quantity of water may be required to cover the meat, and yet that every part of the meat may be covered by water. Should any part be left uncovered, it will be hard and discoloured, and injure the quality of the whole. When the meat itself is required for solid food, and not for soups, its nutritious juices must be prevented from escaping as much as possible, which is done by plunging it into fast boiling water for a few minutes, and adding immediately afterwards as much cold water as will reduce it to a moderate temperature, at the same time taking away a part of the water, so that there is not more than is required. Previously to being placed in the saucepan, meat should be washed extremely clean; sometimes milk is put in the water, or the meat wrapped in a floured cloth, to give it a white appearance, but these devices are unnecessary if due diligence be exercised by the cook. The water must be kept gradually but continually boiling, if it boils too fast the meat will be hard, and if in boiling slowly it is allowed to stop boiling, the meat will be underdone. When the water is beginning to boil a scum will invariably arise, which must be narrowly watched for and removed the moment it appears. After the first scumming, put in a little cold water, which will throw up the rest of the scum. The oftener it is scummed, and the clearer the top of the water is kept, the cleaner and better flavoured the meat will be, but if this be neglected, the scum will boil down and impregnate the meat, thereby deteriorating both its colour and quality. Do not allow

the meat to remain in the water after it is done, as it will become soddened and tasteless; dish it up immediately. The *proportion of water* is a quart for every pound of meat, that is to say supposing the meat should be fresh. The *time required* depends upon the size of the joint; the general rule is to allow twenty minutes for every pound of meat; but salt meat requires longer, and so does a particularly thick joint, such as a leg of pork or of lamb, which will require about twenty minutes in the whole above this allowance. The weather also influences the length of time for boiling, meat requiring comparatively less time in summer than in winter. In *boiling vegetables* they should be washed previously, and have all the old, coarse, and dead leaves carefully picked off and thrown away. An hour before they are cooked they should be put into a pan of clean water with a little salt in it; this will free the vegetables from both insects and dirt. But before putting the vegetables into the saucepan, this salt water must be drained off, or the boiling will be too long kept back, and they will be deprived of their fresh green colour. Remember, also, to boil vegetables in plenty of water; let the water boil fast when they are put in; and let it continue to boil fast till they begin to sink and are quite tender, which are the signs of their being done. To assist in preserving their greenness, throw one or two tablespoonfuls of salt into the saucepan with them. Do not let them be overdone, or their colour will be spoiled. When done, strain them carefully; do not let them remain in the water a minute after they are off the fire, or they will lose their colour and flavour. For the boiling of vegetables al-



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ways use soft water; hard water spoils their colour and interferes with their taste; but if none but hard water can be obtained, throw in a little soda, or a teaspoonful of salt of wormwood. With the exception of carrots and parsnips, which may be boiled with salt beef or pork, vegetables should never be dressed with the meat. In the process of boiling, due regard should be had to the *economy of fuel*, which is often wasted for the want of the commonest knowledge in this branch of cookery. If, for instance, a vessel containing water be placed over a steady fire, as seen in *fig.* 1, the water will grow continually hotter till it reaches the limit of boiling, after which the regular accessions of heat are wholly spent in converting it into steam; the water remains at the same degree of temperature, however fiercely it boils. The explanation of this is, that the heat of boiling water *never rises above* 212 *degrees*; when, therefore, a fierce fire and an equally fierce ebullition, are kept up, as shown in *fig.* 2, the heat above 212 degrees, —as fast as it is evolved, is carried away by the volumes of steam that rise from the surface of the water; consequently, the heat kept up beyond a certain point is a waste of fuel.

In making soup, gravy, or savoury jelly of any kind, the principal object is to abstract from the meat used for the preparation all the nutriment and savour which it can be made to yield; this is effected by putting it into cold water and heating it very slowly indeed, and then keeping it for a specified time at the point of boiling, or letting it simmer in the gentlest manner.

As meat cannot be cooked in water without a certain portion of its nutrient matter being extracted, the water in which meat has been boiled should never be thrown away; as, with the addition of vegetables, it may be made use of for making soups and stews, and thus effect a considerable saving in large families.

BOILS are hard swellings of an inflammatory character, extremely sensitive and painful. They are the result of some gastric or other functional disturbance of the digestive organs, and must always be looked upon as symptoms of an internal derangement, most frequently situated in the stomach. Boils are most prevalent in youth —in persons of a plethoric or full habit of body, and in those of a scrofulous disposition. During unhealthy seasons, and in persons of weak or relaxed fibre, boils are sometimes attended with fever and considerable constitutional disturbance; but, as a general rule, they are purely local annoyances, causing more pain and inconvenience than alarm or danger.

Treatment.—The swelling should be poulticed frequently, either with hot bread or linseed meal; but, as the suppuration is very tedious, the poulticing is to be continued till the skin becomes thin and yields to pressure, when the top of the boil is to be laid freely open with a lancet, the blood and exudation carefully pressed out, and the poulticing resumed, not only till the pus becomes healthy—that is, thick and yellow —but till the core is removed, when the abscess is to be washed with a weak solution of caustic or sulphate of zinc, or if nothing else is at hand, a little rum or brandy and water, strong enough to stimulate the healing process by a little smarting. At the same time that the poulticing is commenced, the following mixture must be taken in doses of *two tablespoonfuls* three times a day, and one of the alterative pills night and morning:—

Raspings of quassia one scruple.
Boiling water . . . half a pint.
Infuse till cold, strain and add—liquor of potass, 3 drachms—mix.

Alterative pills.—Take of
Compound rhubarb pill
Blue pill . . . . . } of each one scruple.
Extract of hyoscyamus
Mix, and divide into twelve pills.

Or one of the following powders may be taken in a cupful of water three times a day, instead of the mixture; or, as a change, substitute for it—

Carbonate of soda . . 6 drachms.
Powdered colombo . 1 scruple.
Powdered ginger . . ½ drachm.
Mix, and divide into twelve powders.

A change of food and a full and liberal diet is also necessary; at the same time quick and active exercise must be adopted, and, where practicable, sea bathing and the use of the flesh-brush added to the other means employed.

BONA FIDE *(Latin)*.—With good faith; without fraud or deception. In law, an act done *bond fide*, is one done with good faith, without fraud, knowledge, or notice of any deceit or impropriety, and in contradistinction to an act done colourably, deceitfully, with bad faith, fraudulently, with knowledge of previous facts rendering the act to be set up invalid.

BONBONS.—Have some little tin moulds—oil them neatly; take a quantity of brown sugar syrup, in the state called a blow, which may be known by dipping the skimmer into it and blowing through the holes, when parts of light may be seen; add a few drops of lemon essence. If the bonbons are prepared white, when the sugar is cooled a little, stir it round the pan till it grains and shines on the surface, then pour it in a funnel; fill the little moulds; when they are hard and cold, take them out and put them in papers. If they are to be coloured, the colouring should be added while hot.

BONE, CULINARY USES OF.—The bones of good meat form most excellent materials for making soups and gravies. The best mode of extracting the nutritious parts from bone, is as follows:—Crush the bones small, and boil them for fifteen minutes in water; when cold, skim off all the fat from the liquor. Then grind the bones and boil them in eight or ten times their weight of water (of which that already used must form a part), until half of it is wasted, when a very nutritious jelly will be obtained. Iron vessels should alone be used in this process, as the jelly and soup act upon copper and brass. The bones of fresh meat are most productive; those of boiled meat rank next; whilst those of roasted meat scarcely afford any jelly.

BONE MANURE. — Bones ground to powder are extensively used in stimulating the first efforts of vegetable life being placed in the ground immediately before, or along with, the seed. In a crushed state they are employed in the formation of fine borders, as they are slow in decomposing, and, in their decay afford food to the plants long after all other manures applied at the same time have become exhausted. Bone-dust, in combination with sulphuric acid, has of late years been greatly recommended, and in this state it has been found to have greater effect in raising crops on strong land than bone-dust alone. The manner of preparing the sulphurated bones, is to mix a given quantity of sulphuric acid with twice its bulk of water, and to place twice the weight of bone-dust as of the acid, in a tub or trough, and pour over the bones the prepared liquid, gradually and at short intervals; the bones will become entirely dissolved and form a mass with the acid and water. One hundredweight of bones with fifty-six pounds of sulphuric acid, will be sufficient bone manure for an acre of strong garden ground, previously manured with stable-dung; for bone should always be regarded as an auxiliary, and not as a general manure. Bones are often broken down by fermentation with sifted coal-ashes, and even with pure sand, and their value considerably increased, probably on account of their being disintegrated to the smallest possible degree, and thereby mixing more readily with the soil. The following will be found the best method of fermenting bone-dust:—Mix four cartloads of bones with as many of sand, or mould, or sawdust, in a flat-topped heap. The bones should be thoroughly drenched with water, and the other materials moistened. In a few days such a heat will be generated in the heap as to render it unbearable to the hand. As the wet side of the heap will not be heated so much, it should be covered with sand; a large heap makes better manure than a small one; and so do unboiled bones and fresh ones, than boiled and stale ones. The heap should be turned over at the end of a fortnight, and at the expiration of a month the bones will be dissolved. The great difficulty has hitherto been in making the fertilizing properties of bones easily and cheaply available. A discovery, however, has recently been made by which bones may be converted into manure on the most economical principles. It has been ascertained that if bones are suffered to mingle with the ordinary stable refuse for a few months, they will during that time become converted into a perfectly pulpy state, and in a fit condition to dress the soil without any other preparation; it should therefore be a rule with all persons engaged in agricultural pursuits, to have all the bones from the kitchen thrown upon the manure-heap day by day; the refuse of the stable accumulating simultaneously with the bones, and the whole thus forming an excellent manure. Bone manure is not beneficial on wet retentive soils, as continued moisture prevents decomposition; but in every description of dry soil it never fails to succeed.

BONES OF THE HUMAN BODY.—The structure of the bones consists of a fine gauze-like membrane, called cellular tissue, into the cells or meshes of which the bony particles are deposited; the bone taking its shape according to the duty it has to perform. All bones are hollow, and consist of two plates, the centre being filled up with a

kind of honeycomb arrangement, the cells of which are filled with a fine oil, to give them lightness, and avoid the danger of fracture, which, if solid, would occur on the slightest accident. Bones are divided into the round and flat; the round bones, such as those of the leg and arm, are long cylindrical hollow tubes, filled with an opaque semifluid oil called the marrow, which, while adding to the nutrition, imparts strength and lightness to the bone. The flat bones, such as the breast and blade bone, consist of two plates with a cancellated intermediate structure, and form cages or receptacles for the vital organs of the body, as the bones of the skull for the protection of the brain; the ribs and breast bone for the lungs and heart; and the hip bones and sacrum for the bladder, uterus, and large intestines. On the other hand, the long or round bones answer the purpose of levers, and are moved by the power of the muscles inserted into, or taking their origin from them.

The skeleton of the human body consists of 246 bones, divided into two equal sets, with the exception of the spinal column, which is composed of 26 separate bones, one piled on the other like the course of stones on a pillar.

Bones in their first formation are little more than gristle, and can be bent and twisted without fear of fracture; but as the embryo increases, bony particles are gradually deposited till the bone acquires sufficient hardness for the duty it has to perform. In youth, and up to the period when development ceases, the cartilaginous and earthy particles are in nearly equal proportions; but as life advances, the bony elements predominate, and the bones, as in old people, become more brittle, and more easily broken.

BONNET.—This article of female attire is one of the most important, for, according as it offends against, or conforms with, certain principles of taste, so it is rendered what is called "becoming" or "unbecoming," and materially influences, not only the appearance of the face of the wearer, but the whole person. The following are the general principles which should guide females in their choice of bonnets:—When the face is round, it should come so far forward as to cover part of the cheeks; and should the lower part of the face be broad, this defect may be entirely concealed by bringing the corner of the bonnet in a sloping direction towards the point of the chin. When, on the contrary, the face is thin, the bonnet should be so worn as to display as much of the cheeks as possible. Generally speaking, the bonnet, in order to adapt itself to the contour of the face, should be worn slightly off the head, because, when the oval of the face and the oval of the bonnet occupy the same lines of sight, the result is an inartistic formality. But when the two ovals intersect each other, an harmonious combination of lines is produced. Tall females should be careful not to increase their height by the adoption of elevated trimmings; while ladies of low stature may, on the contrary, take advantage of such accessaries.

The following principles with regard to the *colour of the bonnet contrasting with the complexion*, should also be borne in mind:—Pink, yellow, or violet bonnets are unfavourable to fair complexions, because the shades they reflect are of a sickly and greenish cast. On the other hand, blue and green are favourable to fair complexions, on account of the lively and roseate tinge they impart. Again, black bonnets are becoming to fair persons but not to dark, whereas white bonnets are more fitting for brunettes than for blondes.

A bonnet and its trimmings will *last much longer* if dusted immediately after a walk, and then placed in a bonnet-box; for this purpose there is nothing better than a handful of large feathers of fowls tied together. *Straw bonnets* may be greatly improved in appearance by washing them with soap and water, applied with a sponge or flannel; after washing, rinse them well in cold water, and dry them quickly in the air; when dry, beat the white of an egg well and wash the bonnet with it. The wire should be removed previous to the operation, and fastened on afterwards. *Old straw bonnets* may be easily reduced into bonnets or hats for children. The back parts should be cut out, and the better parts worked up into a smaller size. *Chip and straw bonnets* may be dyed black by boiling them three or four hours in a strong decoction of logwood, adding a little green copperas; the bonnets may be allowed to remain in the dye all night, and dried the day following in the open air. The inside and outside should afterwards be well rubbed with a sponge moistened with sweet oil; and, finally, the bonnet should be blocked to the shape required.

The *making of bonnets* may be achieved by any person possessing taste and intelligence after a few instructions, thereby effecting a great saving in expenditure. The materials may be easily procured, and the fashion decided on by the aid of the styles exhibited in the West End shops, and also by consulting the book of fashions.

BOOKCASE.—In order to ensure convenience, cleanliness, and order, every house should be provided with a suitable receptacle for books. On the score of economy, also, this provision is to be recommended; for books that are left carelessly lying about, are apt to meet with rough usage from servants or children, and otherwise liable to a variety of accidents, which carefully placing them away prevents. The most economical bookcases are simple shelves, filling up a side of a room or a recess in it. When they are detached pieces of furniture and large, they are usually made with the lower part deeper, for folios and other large books, and this part may be shut up with close doors, one part containing drawers for prints or portfolios, or shelves for folio books. The projection of this lower part serves as a shelf

to rest books upon. The upper part is usually fitted up with shelves, to contain books of the quarto, octavo, and smaller sizes. In the country, bookcases may do very well without glazed doors, or with doors having wirework only to secure the books; but in the large cities of England, close doors are indispensable to preserve the books from smoke and dust, which prove extremely destructive to them in the course of a few years.

BOOK-CLUBS are associations formed for the purpose of affording extensive reading at a moderate cost. The method adopted is, for a number of persons jointly to subscribe a certain sum annually or otherwise, for the purpose of creating a common fund for the purchase of books. Each person has the privilege of proposing such works from time to time as he is desirous of having in the collection, and the books so procured, are bespoke by the readers, and passed from hand to hand according to priority of claim; by this means each member is enabled to become a sharer in a number of books for the same sum that, under other circumstances, it would have cost him to secure one.

BOOK-KEEPING is the art of recording in a regular, concise, and systematic manner the transactions of merchants, traders, and other persons engaged in pursuits connected with money. There are two modes of keeping books of account; the one by what is termed *Single* and the other by *Double Entry*. The system of Single Entry is chiefly confined to the business of retail dealers; when transactions being limited to the detail of sales and purchases, for cash or credit, a single entry of the account in the ledger is sufficient for the purposes of a record. This, however, is but an imperfect and unsatisfactory mode of book-keeping; and, therefore, in the case of wholesale and mercantile business recourse is had to the system of double entry. By this system each account is entered twice; first on the Dr. or Cr. side of one account, and afterwards on the contrary side of some other account. It has the advantage of keeping the merchant informed, not only of the goods sold, but of what remains on hand, without the trouble and inconvenience of frequently "taking stock;" and it also supplies a check by which errors may be detected, which, by the system of single entry, would probably escape notice.

In the form of book-keeping by *single entry* three books only are necessary — a Cash Book, Day Book, and Ledger. In the *Cash Book* all monies received and paid away should be entered. When money is paid into a bank it is entered on the Cr. side, "Union Bank, as per receipt;" and when money is drawn out the entry is on the Dr. side, "Union Bank, as per order." When goods are purchased for cash, the money being paid away, the entry is on the Cr. side, "By goods, per Day Book." The cash should be balanced every month as soon after the last day of the month as possible. The following example is a record of the cash transactions for a month, in the form that they should be entered.

CASH BOOK.

(1.) Dr.	Cash.		£	s.	d		Cash.		£	s.	d. Cr.
1858.						1858.					
Apr. 1	To Stock for Capital in Trade	1	1000	0	0	Apr. 1	By Union Bank, per receipt	1	950	0	0
7	Union Bank, per order	1	85	0	0	4	Warehouse Furniture	1	30	0	0
11	Do. do.	1	60	0	0	7	Gas Fittings	1	12	6	10
13	Do. do.	1	15	0	0	10	Waters & Co., Liverpool	1	109	17	4
,,	James Mason, in full	3	74	4	4	12	Jobson & Co., Manchester	2	25	15	0
15	Union Bank, per order	1	135	0	0	13	Thos. Forbes, Leeds	1	37	7	0
16	Jasper Saunders	3	18	16	10	14	Edward Stuart, Norwich	2	13	12	6
17	R. Young, in part	2	5	0	0	17	Union Bank, per receipt	1	10	0	0
19	Robert Preston, in part	3	3	6	8	19	John Thompson, Hull	2	151	13	8
,,	John Bell, in full	3	14	3	7	20	Union Bank, per receipt	1	25	0	0
20	Henry White, in part	2	4	0	0	21	Brown & Co., Paisley	2	79	16	0
22	Union Bank, per order	1	45	0	0	30	Goods per Day Book	D	57	0	0
24	James Hope, in full	3	3	3	0	,,	Private acc., personal exp.	11	7	8	11
26	Union Bank, per order	1	35	0	0	,,	Goods, Changes, petty cash		6	18	7
30	Samuel Wright, in full	4	4	4	0						
,,	Goods, Cash, Sales, this month		88	7	6				1576	18	10
							Balance to next month		13	10	1
			1590	5	11				1590	5	11

The *Day Book* contains a record of the transactions of each day in the order in which they take place. The party concerned in the transaction, or customer, is named in full, with the term Dr. or Cr. annexed, according to the circumstances of the case; Dr. when you sell goods *to* him, and Cr. when you buy or receive goods *from* him, thus:—

DAY BOOK.

(Fol. 1.)

		£	s.	d.
	London, April 13, 1858. Cr.			
	Harvey & Co., Thames St.			
1	By 5 hhds. Sugar, 448. 4d.	11	1	8
	2 chests Black Tea, 160lbs. 2s. 6d. . .	20	0	0
	1 cask Muscatel Raisins, 120lbs. 4d. .	2	0	0
	1 cask Valencia do. 180lbs. 3d. . . .	2	5	0
		35	6	8
	14. Dr.			
	Jas. Robinson, Queen St.			
3	To 8¼ yds. Welsh Flannel, 3s. 2d. . . .	1	6	11
	12 yds. Cambric, 4s.	2	8	0
	15 „ Muslin, 3s.	2	5	0
		5	19	11
	15. Cash. Cr.			
C	By 50 yds. Poplin, 2s. 9d.	6	17	6
	60 „ Black Satin, 3s. 2d.	9	10	0
	30 yds. Brussels Lace, 15s. . . .	22	10	0
	25 yds. French Cambric, 14s. 6d. . .	18	2	6
		57	0	0
	Private Account. Dr.			
4	To 2⅝ yds. Cloth, Blue, 16s. 6d.	1	19	2
	3½ yds. super., 8s. 6d.	1	9	9
	25 „ Cotton, No. 1, 1s. 4d.	1	6	0
	3¼ yds. Black Silk, No. 1, 3s. 4d. . .	0	11	8
		5	0	7

In addition to the foregoing specimens of daily entries, the following instructions will serve as a general guidance for the keeping of a Day Book. The date of each entry must be inserted in the margin, the names and addresses of customers written in full. When goods are received or purchased on credit enter under the term of Cr., and distinguish it with the word *By*. When goods are sold on credit add Dr. to the person's name and residence, and commence the entry with the word *To*. When abatement for short measure and discount are allowed by you, enter the person *Dr.*, and when similar allowances are made to you, enter the person *Cr.*

The *Ledger* is a book into which every transaction is entered from all other books, with certain references, indicating the sources from which the items are derived. In this book each customer's name has a certain space allotted to it, in which the goods sold appear on the Dr. side, and the cash and other considerations received, on the Cr. side, thus:—

LEDGER.

(4.) Dr.	John Rose	Fo.	£	s.	d.		Cr.	Fo.	£	s.	d.
1858.						1858.					
Jan. 26.	To Goods .	5	10	1	0	Jan. 29.	By Cash .	1	4	4	0
Feb. 8.	„ „	9	23	0	0	Feb. 24.	„ „	1	27	11	0
„ 24.	„ „	12	13	12	0	Mar. 31.	„ Discount	12	1	14	1
Mar. 12.	„ „	17	20	9	5		„ Balance.		34	1	4
			67	10	5				67	10	5
Apr. 1.	To Balance.		34	1	4						

The principal books used for *double entry* are the Day Book, Cash Book, Journal, and Ledger. The *Day Book* ought to contain the main transactions that occur in the several stages of business. All entries in this book should be fully intelligible, as it contains the major part of the materials from which other books are formed. The *Cash Book* contains a record of every transaction that takes place in which cash bears a part; the

entries are made roughly and at the time that they actually transpire in the same manner as other transactions are entered in the Day Book. The *Journal* is a book in which the scattered items of the Day Book and Cash Book are fairly entered and methodically arranged: The *Ledger* is the final depository into which the entries from the Journal are again transferred under their several heads. In double entry, however, it must be remembered that each item is entered *twice*, to facilitate which, general accounts are treated in precisely the same manner as personal accounts are treated in the single entry ledger. Thus accounts are opened with *Cash, Goods, Bills Receivable, Bills Payable, Interest, Commission, Profit and Loss, Trade Expenses, &c.*, just as though they were John Rose, Jasper Saunders, or Robert Preston; every item received or disbursed on their behalf being duly debited and credited to their account.

In order to simplify the apparent difficulties of this system, and to show its working from first to last, the following are presumed extracts, in connexion with one particular set of transactions, traced through the various stages they are supposed to run.

DAY BOOK.

April 2, 1858.

Fo.
Jour.
Bought by William Richards, Boro'.
330 yds. Merino, 2s. 1d. . . £34 7 6

2.

Fo.
Jour.
Bought by Robert Green, Bute St..
147 yds. Velvet, 11s. . . . £80 17 0

2.

Fo.
Jour.
Bought by Samuel Paine, Walworth,
72½ yds. Damask, 3s. 8d. . . £13 5 10

It will be seen that the above are three separate entries of distinct transactions which took place upon the same day. The next example shows how they are introduced into the Journal, where they are entered under the collective heads of Sundries. *Sundries* standing for the names of the parties generally, which in this part of the process it is unnecessary to repeat. The words "To Goods" expresses that Goods having parted with property amounting to a certain total, to the three persons named, or Sundries, it must be credited to that amount, as follows:—

JOURNAL.

April 2, 1858.

Sundries to Goods.

Fo.		
D. R.		
William Richards .	£34 7 6	
Fo.		
D. R.		
Robert Green . .	80 17 0	
Fo.		
D. R.		
Samuel Paine .	13 5 10	
		£128 10 4

The final record of these transactions, is then transferred to the Ledger, where "Goods" is credited, agreeably with the entry in the Journal, to the amount of £128 10s. 4d.; whilst, on the other side, William Richards, Robert Green, and Samuel Paine, are severally charged with the items entered in their names. The result is that the same amount will stand on the Debit side as on the Credit side; the only difference being, that in the one case it appears under a collective head, and in the other it is distributed into three; thus:—

LEDGER.

(fol. 50.)

1858. Goods. Cr.

	£	s.	d.
April 2. By Sundries . . .	128	10	4

(fol. 375.)

Dr. William Richards.

	£	s.	d.
1858.			
April 2. To Goods . . .	34	7	6

(fol. 202.)

Dr. Robert Green.

	£	s.	d.
1858.			
April 2. To Goods . . .	80	17	0

(fol. 486.)

Dr. Samuel Paine.

	£	s.	d.
1858.			
April 2. To Goods . . .	13	5	10

Thus far, the *sale of the goods*. For the *payment*, it will only be necessary to take one of the above examples, namely, that of Robert Green.

It is surmised, that when the goods, which have been here traced through their several entries, are paid for, the settlement of the account will not be confined to cash only, but will include other considerations, such as Bills, Allowances, Discount or Interest, and odd pence. For each of these items, there is an account, which must be *debited* with the respective sums, which they have received from, or allowed to, Robert Green. The first record of this transaction is made in the Cash Book, as follows:—

CASH BOOK.

Fo. Jour. June 1, 1858.

Sundries to Robert Green.

	£	s.	d.
Cash	20	5	0
Bills receivable	55	10	0
Goods (allowance for damages) .	4	11	0
Interest on £20 5s. 2½ per cent. . . .	0	10	2
Profit and Loss (odd pence) .	0	0	10
	80	17	0

This entry will appear precisely the same in the Journal, and therefore needs not be repeated here; but may be at once traced to the Ledger. In the Ledger, accordingly, Robert Green is credited with the total amount of £80 17s., by sundries; *sundries* representing, as before, the various items which do not in this particular entry require to be specified. The account of Robert Green, therefore, will now be the same both on the Debit and Credit side, and may be

accordingly *ruled off*. That done, the general accounts to which the items in the settlement of Robert Green's account appertain, must be severally *debited* in the amounts with which they are chargeable. The result of these entries of the payment of the goods will be similar to that recording their purchase; that is to say, the same total will appear on the debit and on the credit side of the ledger, thus:—

LEDGER.

(fol. 202.)

Robert Green.

1858.	Cr.	£	s.	d.
June 1.	By Sundries . . .	80	17	0

(fol. 8.)

1858.	Dr. Cash.	£	s.	d.
June 1.	To Robert Green . .	20	5	0

(fol. 46.)

1858.	Dr. Bills Receivable.	£	s.	d.
June 1.	To Robert Green . .	55	10	0

(fol. 22.)

1858.	Dr. Goods.	£	s.	d.
June 1.	To Robert Green . .	4	11	0

(fol. 70.)

1858.	Dr. Interest.	£	s.	d.
June 1.	To Robert Green . .	0	10	2

(fol. 101.)

1858.	Dr. Profit and Loss.	£	s.	d.
June 1.	To Robert Green .	0	0	10

By the foregoing examples, therefore, it will be perceived, that everything received, as well as everything parted with, is entered twice, and unless these entries agree with each other, the two sides of the ledger, when finally added up, will not balance; and whether the discrepancy be a deficiency or an excess, there is positive proof of an error existing somewhere.

Amongst merchants and traders, it is usual to have a periodical adjustment of the account books; and before taking a general balance, it is necessary to prove the posting of the ledger, by making out a trial-balance. This is done by adding all the Dr. sides into one sum, and all the Cr. sides into another; these sums will be equal when the ledger has been correctly posted, but if any difference exists, there is certainly an error somewhere that requires investigation. If, however, any sum has been entered to a different account than the one to which it belongs, but on the same side, the two sums will still agree; and the only method to detect an error of this kind, is to have the journal and ledger compared by two persons, the one reading off the journal, and the other turning up the accounts in the ledger, and marking them, when correct, as he proceeds. When a journal entry is either wholly omitted, or twice entered in the ledger, the summing up of the Dr. and Cr. sides of the ledger will not detect the error; but if the cash received, cash paid, bills receivable, bills payable, and day-book entries, are added together, the sum will always agree with that side of the ledger which is correct, and lead to the detection of the error. Double entry would appear, at first sight, to be involved in inextricable confusion, but it is not so in reality, all transactions being governed by the following simple rule:—Anything *received*, the *receiver*, or the account on which anything is *received*, is Dr. Anything *delivered*, the *deliverer*, or the account on which anything is *delivered*, is Cr.

In journalizing the subsidiary books, and in posting the ledger, errors frequently occur; such as debiting or crediting one person or account instead of another; entering the sum too large or too small; omitting entries altogether; posting them twice, &c. Where errors of this kind are discovered they must be immediately corrected. And this must not be done by any erasure or interlineation, but by an entry explanatory of the mistake in the Day Book. This entry is then to be journalized like a regular transaction and posted into the Ledger: for instance, in the Ledger, John Rose is on the 8th of February debited to bills payable, but on the 31st of March it is discovered that this entry should have been posted to Henry Smart's account; Henry Smart is therefore debited to John Rose in the Day Book, and the mistake is thereby explained. If any account has been overposted, it must either be debited or credited for the excess; and if it has been underposted, a new entry must be made upon the same side for the deficiency. When an entry has been entirely omitted, it must be made whenever it is discovered, mentioning *when* omitted; and when an entry has been posted twice, it may be corrected by entering the amount on the other side, noting the fact of its being twice posted.

The most dangerous of all errors are those which may be made in the original entries, and they should therefore be strictly guarded against. The balancing of books should not be delayed beyond a certain time, as too wide an interval renders the correction of any error a work of greater difficulty. It may also happen in the case where an account has been underpaid a year or two previously that the person has subsequently died, failed, retired from business, or have otherwise become inaccessible from any accidental circumstance that is likely to occur with the lapse of time. In these instances a positive loss is sustained which might otherwise have been avoided.

In addition to the books already enumerated, other subsidiary books are generally used. The *Petty Cash Book* has a record of the various charges incurred in trade, which are too trifling to be entered separately in the cash-book; such, for instance, as postage stamps, string, bill stamps, carriage of goods, &c.; this book is balanced once a month, and the total amount of expenditure transferred to the cash-book, under the head of petty cash. *Bills Receivable.*—When a bill is received, it should be immediately entered under this head, and duly numbered; and when a bill is accepted or paid away, it should be entered as *Bills Payable;* for each of these a separate book should be kept, and the bills entered in the form following:—

BILLS RECEIVABLE.

Fo.	No.	When received.	On whose account.	Drawn by	Upon whom.	Payable to	Place.	Date.	Time.	Payable at.	When due.	Amount. £ s. d.	When and how disposed of.	Fo.
42	176	Jan. 1.	R. Sale.	Self.	R. Sale.	Order.	Leeds.	Jan. 1.	3 Mos.	Glyn's.	Apr. 4.	51 10 2		
43	177	Jan. 2.	J. Wood.	Self.	J. Wood.	,,	Preston.	Dec. 20.	2 Mos.	Barnett's.	Feb. 23.	91 8 6		

BILLS PAYABLE.

Fo.	No.	When accepted.	On whose account.	Payable to whom.	Place.	Date.	Time.	Due.	Payable at.	Advised.	Amount. £ s. d.	To whom paid, and when.	Fo.
30	219	Nov. 20.	Jackson & Co.	Order.	London.	Nov. 15.	2 Mos.	Jan. 21, 1863.	Hoare's.		25 0 0		

Books: *Huntington's Art of Book-keeping; Tate's Commercial Book-keeping; Kelly's Elements; Foster's Book-keeping Elucidated; Jones's Book-keeping Exemplified; Barnes's Guide to Book-keeping; Taylor's Hints on Book-keeping Tuck's Manual of Book-keeping; Morrison's Mercantile Book-keeping; Mair's Book-keeping Methodized; Hutton's Practical Book-keeping.* Also various systems by the following: *Booth, Lambert, Brewer, McDougal, Dell, Matheson.*

BOOK-STAND. A useful article of furniture, tending to prevent the injuries which books are liable to receive if laid loose on tables. They may be made in a great variety of forms and sizes, according to the particular views and wants of individuals. The most convenient form for professional men, authors, and others having occasion to consult a number of works at the same time, is that shown in the engraving. The

books are placed upon a low conical wheel, and kept open by little brass fasteners, as in music stands; and as this wheel may be turned round upon its stand with the least touch, it is easy to refer to the several books without lifting them from their places.

BOOKS, CHOICE OF. — See ANGLING, ARITHMETIC, ASTRONOMY, BIOGRAPHY, BOTANY, CHEMISTRY, COMPOSITION, COOKERY, DOMESTIC ECONOMY, FARMING, GARDENING, GEOGRAPHY, GRAMMAR, HERALDRY, HISTORY, NATURAL HISTORY, NOVELS, ROMANCES, TALES, &c.; also ARCHITECT, ARTIST, ATTORNEY, &c.

BOOKS, PRESERVATION OF.—Books require a certain degree of warmth and ventilation to preserve both their bindings and their leaves. They should also be removed from their shelves from time to time and dusted, the shelves themselves undergoing a thorough cleaning at the same time. Books are liable to be destroyed by worms and insects, especially in the leaves nearest the cover. Where this danger is apprehended the books, the covers, and the shelves on which they stand should (if necessary) be dusted with a mixture of powdered alum and white pepper; and in addition to this precaution, in the months of March, July, and September, the books should be rubbed with a piece of woollen cloth steeped in a solution of powdered alum, and dried. But all these remedies

would be uncalled for, if a portion of alum and vitriol were mixed with the paste used in the binding. This would act as a certain preventative, as all insects have an aversion to mineral salts.

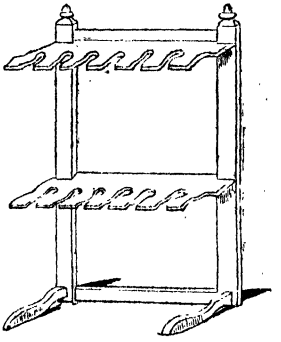
BOOKS, TO REMOVE STAINS FROM.—When the paper is disfigured with *stains of iron* it may be perfectly restored by applying a solution of sulphate of potash, and afterwards one of oxalic acid. The sulphurate extracts from the iron part of its oxygen, and renders it soluble in the diluted acids. The most simple, but at the same time very effectual method of erasing *spots of grease*, wax, oil, or any other fat substance, is by washing the part with ether, and placing it between white blotting-paper; then with a hot iron press above the parts stained, and the defect will be speedily removed. In many cases where other stains are not bad, rectified spirits of wine will be found to answer the purpose. To remove *spots of ink* and even *writing*, spirits of salts, diluted in five or six times the quantity of water, may be applied with success upon the part, and after a minute or two, washing it off with clear water.

BOOMERANG.—This instrument is a curved piece of wood, flat on one side, and slightly rounded on the other; and if skilfully thrown it may be made to go in almost any direction the thrower pleases. It should be held horizontally in throwing it, and cast by bringing the arm backwards, when, after making a variety of curves, the instrument will come back again to the person who sent it. This missile was used by the Australian Aborigines, with which they were very dexterous in hitting birds. The principle of the boomerang has also been attempted to be applied to the propulsion of ships.

BOOT-HOOKS—are instruments intended to be inserted into the loops fastened to each side of Wellington boots, when they are being pulled on. These supply a hold or purchase which cannot be obtained with the hands only, and accordingly increase the power of force applied.

BOOT-JACK.—A well-known contrivance for assisting in removing boots from the feet. Ordinarily they consist of a narrow strip of wood with a space hollowed out at the extremity of the shape of a heel, and having a small block of wood fastened underneath to elevate it a sufficient distance from the ground. These conveniences are also made to open and close with little brass hinges to render them portable and more convenient for being packed in portmanteaus, travelling bags, &c. The best description of boot-jack of all, however, is one which admits of the whole foot being inserted, and is further supplied with an upright rest upon which to place the hands, so that the boot may be withdrawn with the greatest ease, and without a strain upon any particular part of the boot. Where a boot-jack is not at hand, a person should remove his boots by gently easing the heel and the toe alternately. It is always better, however, to use a boot-jack, as kicking boots off injures them.

BOOT-STAND. — This article of bedchamber or dressing-room furniture is very handy, and tends to preserve the orderly



appearance of the room. It is also better for the boots and shoes, which, instead of being allowed to lie about in the dust, are preserved with their original polish, and always in a fit state to put on. Some persons have as many pairs of boots as the stand will accommodate, and wear them on consecutive days of the week as they follow in order; the first pair on Monday, the second on Tuesday, and so on.

BOOT-TOPS, TO CLEAN.—Mix half a pint of boiled milk with a quarter of an ounce of vitriol, and a quarter of an ounce of spirits of salts; shake these well together; then add a quarter of an ounce of red lavender, and apply the liquid with a sponge.

BOOT-TREE. — A mechanical arrangement of several sections of wood, so that they resemble, in the whole, the counterpart of the human leg and foot. These, when inserted into boots, assist in cleaning them; they are also excellently adapted for keeping boots in shape when not in use; and by thus preparing them for the wearer, yield an amount of comfort and ease unattainable without them.

BOOTS. — In choosing these articles of attire, care should be taken that they are strongly made, and of good materials. Low-priced boots are invariably the dearest, as they are constantly needing repair, and wear out in an incredibly short space of time, beyond all mending. The best plan is to employ some respectable bootmaker regularly, who will take care for his own sake, as well as yours, to supply you with a good and well-fitting article. Under these circumstances, it is usual to have a *last* or model of the feet; and the boots always being made

by this, a perfect fit is invariably ensured. Boots should neither be too loose nor too tight; in the one case, they chafe the skin, and produce blisters, and in the other, they cause corns, bunions, and other painful disorders of the feet, by violently pressing upon the surface and impeding the circulation. The soles of boots should not be too thick, because they interfere with the natural bend of the foot, and prevent the muscles of the leg from exercising the amount of action necessary for its perfect development. Neither should the soles be so thin as to expose the feet to the influence of cold and damp; a medium thickness of sole is the best, and will be found the most comfortable wear, even in summer. The heels of boots should not be of an inordinate height, as by that means the foot is unnaturally forced into the fore part of the boot; so that it is impossible to walk any distance without experiencing the greatest pain. The toes of boots should not be too narrow, as the toes of the feet are driven one upon another; and in addition to corns and bunions being induced, that part of the foot becomes permanently deformed, and partially disabled. Boots may be *preserved much longer than they ordinarily are* by a little care and attention. In the first place, they should not be worn immediately after they are made, but left to be seasoned for one, two, or three months. A person should be provided with two or more pairs, putting those by to-day that were worn yesterday, and thus relieving, as it were, the constant stress upon them: by this means, they will also preserve their shape better. When boots are damp, they should be taken off as soon as possible, and placed with the soles towards the fire, at a moderate distance from it. The *creaking* of boots may be remedied by soaking the soles for a few minutes in cold water. The upper leathers of boots are apt to crack, especially at the bend of the foot, the best preventitive for this is to lubricate the leather well with melted mutton fat, suffering it to soak in undisturbed for a week or ten days; the greatest objection to this is, that it prevents the leather from yielding a polish, and it therefore remains a matter of taste with the wearer which alternative he chooses to adopt. When boots are tight, they may be eased by being placed before the fire just previously to putting on; and when they are loose, a little wool or wadding should be put in at the toe part.

BOOTS, TO CLEAN.—In performing this, the first thing is to scrape off the dirt; this should never be done with a knife, but with a piece of wood, fashioned into a similar shape; the remainder of the dirt should then be brushed off as well between the upper leather and the sole, as from every other part. A very little blacking should then be put on, just sufficient to moisten the leather without wetting it; while this is yet damp, the shining brush should be applied briskly and lightly, until a brilliant polish is produced. In order to do this effectively, a portion only of the boot should be done at one time; proceeding in the same manner with the remaining part, until the whole is done.

Patent Leather Boots, when very dirty, should be carefully wiped at the edges of the soles, and also the upper leathers, with a damp cloth, finishing with a dry one; a few drops of sweet oil should then be rubbed over the surface with a piece of soft linen, or an old silk pockethandkerchief.—See SHOES.

BOOTS, TO MAKE WATERPROOF.—Boots that have undergone the process of waterproofing, are useful for occasional shooting and fishing, or for extraordinary inclement weather; but for common wear they are unwholesome, on account of confining the insensible perspiration. Various preparations have been made to brush over leather and render it waterproof; these are generally composed of mixtures of oil, turpentine, rosin, and wax. The following is an excellent recipe:—Melt in an earthen vessel, over a slow fire, half a pint of linseed oil, one ounce of beeswax, one ounce of oil of turpentine, and half an ounce of rosin. If new boots are saturated with this composition, they will be impervious to the wet, and likewise soft and pliable. To obviate the objection urged against the waterproof mixture, cork soles may be worn, which will be found to absorb the moisture without impeding the perspiration.—See CLOGS, GOLOSHES, &c.

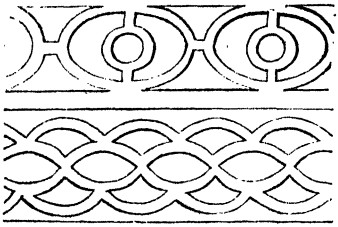
BORAX.—Commercial borax is obtained either by purifying native borate of soda, or by saturating pure boracic acid with the alkali. It is extensively employed as a flux for metals, for soldering; and in medicine. Internally it is diuretic, sedative, and refrigerant, in doses of from 15 to 40 grains; externally, as a gargle for sore throat, and in powder, as a detergent in aphthæ, and ulcerations of the mouth. Dissolved in rosewater, it is used as a cosmetic; mixed with eight times its weight of lard, it forms a useful ointment for piles and sore nipples.

BORDEAUX CAKE. — Roll paste to rather less than a quarter of an inch thick, and cut it into six or seven portions of equal size; lay these on lightly floured or buttered tins, and bake them in a slow oven until they are firm and crisp, and equally coloured of a pale brown. When they are cold, spread upon each a different kind of choice preserve, and pile the whole evenly into the form of an entire cake. The top may be iced, and decorated according to fancy.

BORDEAUX WINE, IMITATION.—Mix a quart of fine Devonshire cider and an equal quantity of port together; shake them well, and put the mixed liquor into bottles, cork them securely and lay them on their sides; in a month it will drink as a very close imitation of Bordeaux wine.

BORDERS FOR GARDENS. — These adjuncts, which are both useful and ornamental, may be either natural or artificial. When flowers are used for this purpose, they should be of the simplest kind, so as to set off to greater advantage the richer bloom

of the other portions of the bed. Among the most suitable border-flowers may be mentioned the daisy, London pride, primrose, violet, gentian, periwinkle, and thrift. The well-known evergreen plant, the box, is more generally employed than any other for borders; it is easily kept in order with occasional clipping, and always looks neat. Stone, slate, or tile borders, are also extensively used, and if designed with taste, are to be preferred to any other bordering, in cases where the possessor of a garden has but little time to bestow upon it. The accompanying engravings represent two de-



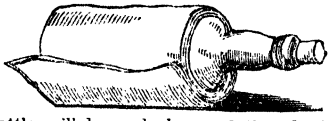
signs for borders, either of which is calculated to produce a chaste and picturesque effect.

BOTANICAL SPECIMENS, TO PRESERVE.—The plants intended to be preserved should be gathered when the weather is dry, and after placing the extremities in water, suffer them to remain in a cool place till the following day. When about to be submitted to the process of drying, place each plant between several sheets of blotting paper, and iron it with a large smooth heater till all the moisture is dissipated. Colours may thus be fixed, which otherwise become pale and blanched. Some plants require a more moderate heat than others, so that some nicety is required in the operation; but if the iron be not too hot, and is passed rapidly over the blotting paper, it will answer the purpose sufficiently well with plants of almost every variety of hue and substance. In compound flowers, where the form is solid and resisting, as the centaurea, some little art is required in cutting away the under part, so that the profile and forms of the flowers may be the more clearly exhibited; to accomplish this successfully, the flowers and fructification should be fixed upon the paper with gum, previous to ironing, by which means they become nearly incorporated with the surface. While this process is going on, blotting paper should be laid under every part except the blossoms, in order to prevent the white paper from being stained.

BOTANY.—A science including everything relating to the vegetable kingdom, whether in a living or in a fossil state. It embraces a consideration of the external forms of plants; of their anatomical structure, however minute; of the functions which they perform; of their arrangement and classification; of their distribution over the globe at the present and at former epochs, and of the uses to which they are subservient. It examines the plant in its earliest state of development, when it appears as a simple cell, and follows it through all its stages of progress until it attains maturity. It takes a comprehensive view of all the parts which cover the earth, from the minutest lichen or moss, only visible by the aid of the microscope, to the most gigantic productions of the tropics. And it marks the relations which subsist between all members of the vegetable world, and traces the mode in which the most despised weeds contribute to the growth of the denizens of the forest. Books: *Lindley's Introduction; Ralph's Elements; Drummond's First Steps; Francis's Grammar; Paxton's Dictionary; Balfour's Manual; Graham's Outlines; Henslow's Principles; Henfrey's Rudiments; Guinness's Views; Fennell's Drawing Room; Archer's Economic Popular; Steele's Botany of the British Isles; Smith's English Botany; Mrs. Loudon's Botany for Ladies; Graham's Botany for Schools; Willshire's Botany for Medical Students; Smith's Systematic and Structural Botany; Encyclopædia Britannica*—article, *Botany*.

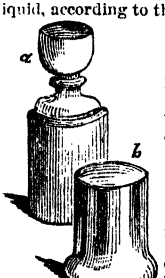
BOTTLE CEMENT.—Melt half a pound of black rosin, half a pound of coarse red sealing-wax, and a quarter of an ounce of beeswax, in a pipkin; when it froths up, before all is melted, stir it with a tallow candle, which will settle the froth and prevent the composition from boiling over. When required for use, dip the head of the corked bottle into the hot mixture.

BOTTLE FOR THE FEET.—In many cases where it is desirable to keep the feet warm, it cannot be better performed than through the medium of bottles filled with hot water; for this purpose common stone



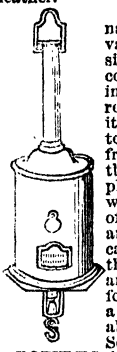
bottles will do; and when used, they should be wrapped round with three or four rolls of flannel.

BOTTLE FOR TRAVELLERS.—A contrivance made to hold a gill or more of liquid, according to the size, and which may be securely and commodiously carried in the coat pocket. *Fig. a* represents the bottle with the glass in it, which is constructed to be put in and taken out as an ordinary stopper. The whole is fixed in an outer case of leather, which protects it from being broken; and when not in use is covered by the upper part of the case, *fig. b*, which keeps the glass in its place, and renders the whole secure and compact. Although this little



contrivance is especially adapted for travellers, it will, as a matter of course, always be found handy on emergencies when refreshment is needed and cannot be procured elsewhere.

BOTTLE-HOLDER. — A new invention, chiefly designed to prevent soiling the hands or heating the wine; at the same time it forms an elegant ornament to the table. Is suitable for any black bottle, and may be applied without any trouble; the case in which the bottle stands may be made of wicker work, or any other material, according to fancy; the handle of metal, glass, or leather.



BOTTLE-JACK. — A culinary instrument almost invariably used where small sized joints are cooked. It consists of a spring enclosed in a brass cylinder, and requires winding up every time it is used. The joint is fastened to a hook suspended from the cylinder containing the spring, and is usually placed within a tin screen, which assists in the process of roasting. When bottle-jacks are not in use they should be carefully placed away, so that they may not be thrown down and injured. It will also be found advantageous to apply a little oil to them occasionally to keep them in order.— See MEAT SCREEN.

BOTTLES, CHOICE AND CARE OF.—When it is intended to keep liquors for any length of time, the bottles in which they are put should be selected with care. They should be of good manufacture and of equal diameter throughout, or they will be liable to break in the bins when piled very high. Just previously to being used they should be examined in the open air, the person examining them facing the strongest light, and applying his eye closely to the mouth of the bottle, at the same time turning it slowly round, by which means it will be readily ascertained whether there is any crack or other flaw in the bottle, and also whether it is clean or not. Bottles are best when quite new, but if thoroughly cleaned will answer the purpose sufficiently well.

BOTTLES, TO WASH AND CLEAN.—Bottles should be washed immediately they are emptied, and drained with their necks downwards. If they should have contracted a musty smell, they may be fumigated by a lighted brimstone match put under—first washing them; after which they should be washed again; for this purpose a piece of charcoal left in a bottle for a little time is an excellent remedy. Lead shot is commonly used for cleaning bottles, but when this is done, great care should be observed that none of the shot are left in the bottles, as one or two grains of shot, when dissolved by the wine, are sufficient to communicate to it a poisonous quality and to be productive of fatal results. Small round pebbles of the size of shot answer the purpose much better; but the best method of all, is to put in fine coal, either with hot or cold water, and shaking it according to the substance that fouls the bottle.

BOTTLING CIDER.—This should be performed in the month of April, as the liquor is then in its highest state of perfection. Fill the bottles, and let them remain uncorked until the following morning; then cork very tightly, secure with small string or wire, and cover the top of the cork with melted rosin or wax.

BOTTLING FRUITS.—Burn a match in the bottle, to exhaust all the air, then place in the fruit to be preserved, quite dry, and without a blemish; sprinkle sugar between each layer, put in the bung and tie the bladder over; set by the bottles, bung downwards, in a large stewpan of cold water, with hay laid between, to prevent breaking. When the skin is just cracking take them out.

BOTTLING MALT LIQUORS.—Before proceeding to bottle ale or porter, it is necessary to ascertain whether the liquor is in a proper state for that purpose; if it is but slightly saccharine, and has but little briskness, it is in a fit state for bottling; but if, on drawing out the vent peg, it spirts up with force, it is a sign that the liquor is still too active to be bottled with safety. Should the beer appear a little too brisk and frothy while bottling, the bottles may be left open for a few hours, and filled up as the froth works out, but they should be filled only to within an inch of the cork. It must be observed, that if the corks are driven in while the liquor is working much, there is always a danger of the bottles bursting. Great care should be taken to bottle at the proper time. When a cask of beer is to be bottled, the bung may be loosened, and the beer left exposed to the air for a few hours to flatten it, to prevent the bottles bursting. The *corks* used should be of the best quality; previously to inserting them they should be soaked in a little beer; and when the bottles are corked they should be laid on their sides, that the beer, by swelling the corks, may make them quite tight. The bins should be constantly inspected, to ascertain the state of the liquor, and as soon as the bursting of one bottle is discovered, the remainder should all be set upright to prevent further loss. If the beer is a little too flat when bottled, or if it is wanted to *be up*, as it is termed, very soon, a lump of sugar may be put into each bottle, or four or five raisins, or a teaspoonful of rice; these, by giving rise to a new fermentation, will make the beer quite brisk. The warmer the weather, or the warmer the place where the bottles lie, the sooner will fermentation begin, and the beer be ripe and fit for use. Strong ales may be kept in bottles of glass, without the risk of forcing out the cork or bursting the

glass, but weak ales undergo a much more violent and unmanageable fermentation than strong ales; hence table-beer in warm weather may burst the bottles, while strong ale will not be affected. In some kinds of beer, where there is much fixed air generated, stone bottles, such as those used for ginger beer, will be best, and the corks of these require to be fastened down with string or wire. Great care should be taken that the bottles are perfectly clean; and one great advantage of glass is, that its transparency enables this to be seen. When a small cask of ale or beer of any kind is half consumed, it is a good practice to bottle the remainder, which otherwise would get too flat; but in this case attention must be paid to the time when it is required to be fit to drink. The rule for ascertaining whether beer is *up*, is when, on holding up the bottle to the light, you perceive a rising above the beer.

BOTTLING WINE.—The first thing to be attended to is the choice of good corks; they should be perfectly new, well cut, and flexible; any having black spots in them should be rejected. When the wine runs clear, place a shallow tub under the tap of the cask, and take care that there are two or three small holes near the bung or in it, to allow the air an ingress, to supply the place of the wine withdrawn. All being ready, hold the bottle under the tap in a leaning position. Fill the bottle to within two inches of the top of the neck, so that when the cork comes in, there may remain three-quarters of an inch of space between the wine and the lower end of the cork. The corks should be dipped, not soaked, in wine, and should enter with difficulty; they are driven in with a wooden mallet. If the cork is to be waxed, it must be cut off to less than a quarter of an inch. Champagne bottles must have their corks driven about half way, and fixed down by a wire, this makes them easy to draw. While a cask of wine is bottling off, it is impossible to exclude the admission of air to the surface of the liquor, except some particular method is employed, and if the operation lasts some time, the wine is almost certain to be injured; the best prevention for this, is a bottle of fine olive oil, which being poured into the cask and floating on the surface of the wine, totally excludes the air, and prevents acidity or mouldiness for a whole year When the crust, or precipitation of wine in bottles, is deposited in excess, and is about to be removed, the wine should be decanted into fresh bottles, or the deposit may mix with and injure the wine. Wine to be fit for bottling, must not only be separated from the gross lees, and have attained perfect clearness by fining, but it must also remain a certain time in the cask, to ripen; for this, no precise rule can be laid down. Generally speaking, however, wine should not be bottled until it has lost its sharpness, and is no longer liable to fermentation. When wine is bottled too soon it often ferments and remains always sharp; the best time to perform this operation is in the month of March or October, especially if the weather be fine and clear.

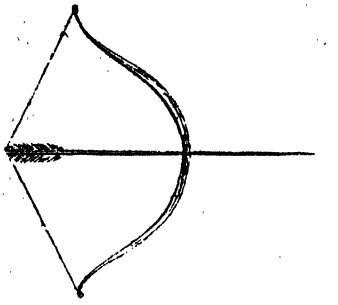
BOUILLON.—A kind of French soup or stew, prepared as follows:—An earthen pot, made to hold from one to seven pounds of meat, is provided. A sufficient quantity of lean meat, usually part of the leg or shoulder, is put into this vessel, which is then filled up with cold water, the proportion being five pints of water to a pound and a half of meat. The pot is then placed on the hearth close to the wood fire, and generally on the hot ashes. When it begins to simmer, the scum which is thrown up is carefully removed from time to time, three quarters of an hour being allowed for this process. A carrot, half a parsnip, a turnip, an onion, a little celery, and any other vegetables in season are then added, together with salt, pepper, and spice. After these additions the pot remains covered at the fire, and is kept there simmering for six hours more, hot water being from time to time supplied in the place of that which has evaporated.

BOUQUET.—A French word which has become English by adoption, and the same as our nosegay, or collection of cut flowers. In the arrangement of a bouquet a judicious exercise of taste is desirable, so that a pleasing and effective whole shall be produced. It is necessary, for instance, that there should not be too many flowers of one kind or of the same colour, but varied as much as possible, and so arranged that they blend and harmonize well with each other. It is usual to place the largest and most beautiful flowers in the centre, the remainder ranging around, according to their attractiveness, the outer edge being formed of the simplest flowers, or merely of green foliage. For particular occasions bouquets are further ornamented with fancy papers, having an aperture in the centre, through which to insert the stems. There are also bouquet holders of gold, silver, or pearl, real or imitative, furnished with a chain and ring, which admits of the bouquet being attached and suspended from the wrist, or any part of the dress. Bouquets are usually taken by ladies to balls, assemblies, theatres, &c.; and on such occasions a gentleman may show his refinement and taste by providing the lady whom he may be about to escort with a bouquet.

BOUQUET DE LA REINE.—A highly fragrant and much esteemed perfume for the handkerchief, &c., compounded as follows:—Oils of bergamot and lavender, of each 30 drops; neroli, 15 drops; oils of verbena and cloves, of each, 5 drops; essence of musk, ambergris, and jasmine, of each, half a drachm; rectified spirit of wine, 2 ounces; mix.

BOW, IN ARCHERY.—It is not easy to construct a serviceable bow; and the best plan is to buy one at a respectable archery warehouse; but if you are determined to make one for yourself, select two pieces of yew tree, laburnum, or thorn, of the length you require. Let one piece, that for the inside, be about half the length of the outside piece; lay them together, and bind them firmly round with cord; place in the centre a piece of cloth or velvet for the hand. Do not weaken the bow by tapering

off the ends too finely. For the bow-string hempen cord is the best, its thick-



ness depending upon the strength of the bow. The strength of the bow is calculated upon the principle, that its spring (the power whereby it regains its natural position) is always proportioned to the extent of its flexion. This is in general cases a fair experiment. The same result may be arrived at by the following method:—The bow being strung, place it horizontally on a ledge, hook a scale on the string, and the weight sufficient to bear it down till it is the length of an arrow from the bow is equivalent to the resisting force. See ARCHERY.

BOW, IN ETIQUETTE.—A mode by which well-bred persons in England recognise and salute each other. A bow ought to be made by bending the upper part of the body and the head forward in a gentle curve; the action should be neither too laboured nor too curt, but the body should be inclined forward, and suffered to regain its erect position with an elastic sort of motion. The occasions upon which this gesture of respect is to be performed are innumerable, such as on entering or leaving a room, meeting with or addressing a lady, appealing to a public assembly, taking wine at dinner, tacitly admitting an error, or permitting an adverse opinion to override your own, acknowledging a compliment, signifying attention when individually addressed, bidding adieu to persons when the acquaintance is slight, &c. On the other hand it must not be repeated too frequently so that it becomes a mark of servility and excessive obsequiousness. In this, as in many other instances involving particular points of etiquette, a person's own good sense and correct taste must step in and define the line, within which it would be rudeness to fall short, and beyond which it is absurdity to overstep.

BOWEL COMPLAINTS are in all cases symptoms of the effect of other causes, and never occur spontaneously, but are the result of indigestive food or excessive acidity of the stomach, the presence of a large quantity of bile in the small intestines, acrid and miscting medicines, wet feet or exposure to cold; the result of disease in the mucous or muscular coats of the bowels, exposure to miasmata or infectious air, and the inhalation of noxious gases.

1. *Bowel Complaint, attended with Sickness and Vomiting.*

The vomiting should be first allayed by small effervescing draughts or wineglasses of soda-water, with a teaspoonful of brandy, given every half hour, and a blister the size of a crown piece laid on the pit of the stomach: while for the relief of the bowels the following mixture is to be given in doses of two tablespoonfuls every hour till the relaxation is checked.

Prepared chalk . . .	1 ounce.
Aromatic powder . .	2 drachms.
Sugar	1 drachm.
Peppermint water . .	8 ounces.

Mix well in a mortar, and add

Tincture of kino . . .	2 drachms.

When the bowel complaint is attended with pain or griping in the stomach, 1 drachm of the TINCTURE OF ASSAFŒTIDA, and 40 drops of LAUDANUM are to be further added to the mixture, which is still to be taken in the same quantity, and, if necessary, repeated as frequently.

2. *Bowel Complaint, the result of Improper or Undigested Food.*

Prepared chalk . . .	1 ounce.
Carbonate of magnesia	2 drachms.
Carbonate of soda . .	1 drachm.
Carbonate of ammonia	2 scruples.
Camphor water . . .	8 ounces.

Mix well in a mortar, and add

Tincture of kino . . .	2 drachms.

Mix and take two tablespoonfuls directly, and one every hour afterwards.

3. *Bowel Complaint, from Exposure to Cold or Wet.*

Infusion of red roses .	8 ounces.
Epsom salts	½ ounce.

Dissolve, and add

Diluted sulphuric acid	30 drops.

Mix, and take two tablespoonfuls every three hours, and one of the following pills every four hours. Should the skin be dry and hot, give 10 grains of Dover's powder, at bedtime, in a little gruel.

Compound rhubarb pill,
Extract of henbane,

of each one scruple. Mix, and divide into eight pills.

4. *Bowel Complaint, attended with Cramps and Spasms.*

Apply hot mustard poultices, made with equal parts of mustard and flour, over the the bowels, and to the inside of each thigh, and give the following mixture and pills every hour till relief is afforded.

Prepared chalk . . .	1 ounce.
Aromatic powder . .	2 drachms.
Carbonate of ammonia	1 drachm.
Mint water	8 ounces.

Mix well, and add

Tincture of kino . . .	3 drachms.
Sulphuric ether . . .	1 drachm.

Mix; two tablespoonfuls with one pill every hour.

Camphor	6 grains.
Powdered opium . . .	4 grains.
Calomel	9 grains.
Extract of hemlock, enough to make into a mass, which is to be divided into six pills.	

5. *For the Bowel Complaints of Young Children* the most efficacious and convenient remedy is the tincture of kino, given in doses of 20 to 60 drops, in a little sugar and water, and repeated every hour or two till the relaxation is stopped. When the bowels are disordered from teething, it is best to give an alternative powder every four hours, for two or three times, such as the following for an infant of nine months, increasing the strength according to the age.

Grey powder	6 grains.
Rhubarb	2 grains.
Scammony	9 grains.

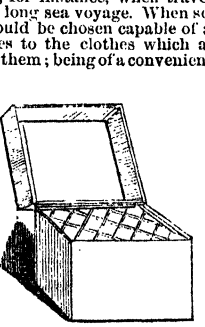
Mix well, and divide into three powders.

When the relaxation has been stopped, it is always advisable to take an aperient pill, in a day or two after, to restore the bowels to a healthy condition. In many simple cases of bowel complaint, a dose of castor oil is the only remedy required, and where resulting from improper food, by its aperient action it both removes the cause and the effect with it. The bowel complaint, or diarrhœa, that occurs as a critical symptom in fever, is on no account to be hastily or injudiciously checked; but when calling for treatment, the mixture No. 4 is the most advisable one to employ for that purpose.

BOWLS.—This game is of great antiquity, and has existed in a variety of forms. That which has ultimately become the proper English game of bowling, is performed with balls of fine hard wood on a smooth shaven lawn, called a bowling green. There are two parties, and each individual possesses a bowl. One of each party bowls alternately. The object is to deliver the ball from the hand along the surface of the green, and in such a manner, as to place it close by an appointed mark. The party which first gains the specified number of points, by being nearest the goal, is victor. The goal, or object played to, is a small ball called the *Jack*. It is not fixed upon any particular spot; but is bowled by one of the party to a certain distance. A knowledge of the value of forces, which can be gained only by experience, is necessary in bowling; but a not less important art is the knowledge of giving a bias to the bowl. The following are the rules of this game, as laid down by the Roxburgh Club, and such as essentially govern the game generally:—

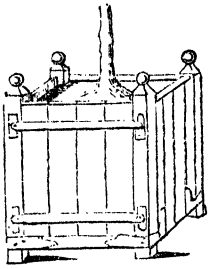
1. The game to consist of nine points, unless otherwise agreed; and the throwing of the jack and playing first, to be decided by lot. 2. If the jack is thrown into the ditch upon any occasion after the first throw, the opposite party have the privilege of throwing it anew, and not afterwards moved, if three clear feet of the ditch in front of the players. 3. All players, when throwing their ball, to have one foot on the aftermost white ball marked on the cloth; the position of the cloth not to be changed during an end; and if by accident removed from its situation, to be placed as near as possible to the same spot; and a bowl touching a jack at any time during its course on the green is what is called a "toucher," and counts the same as any other bowl, though in the ditch. 5. If the jack, or bowl, after touching the jack, is run into the ditch, the place where either rests may be marked, the jack placed at the edge of the ditch, and both replaced when the end is played out. 6. If the jack is *burned*, or displaced otherwise, that, by the effect of the play, the opposite party to have the option of playing out the end, or beginning it anew. 7. When a bowl is burned, if belonging to the party responsible for it, it is to be put off the green: if belonging to the opposite party, to be replaced as near its original position as possible by the party to whom it belongs. If the jack is burned by a non-player, the end to be played over again. 8. If a bowl is accidentally marred by an opponent, it shall be in the option of the party playing to let it rest, or play it over again; if it is marred wilfully by an opponent, it may be placed anywhere, at the pleasure of the player. If a bowl is marred in either case by the player's party, the opponents to have the same privilege. 9. If a bowl (without touching the jack) rebounds from the ditch, it shall be put off the green; and if it has disturbed either jack or bowls, they shall be replaced as near as possible by the opponent's party. 10. After an end is played, neither jack nor bowls to be touched until the game is counted and all parties satisfied. No measuring till the end is played. 11. No player to change his bowl during the game; the party doing so loses the game.

BOX FOR CLOTHES.—Although, generally speaking, boxes are not the most suitable receptacles for clothes, still there are occasions when they must of necessity be used; as, for instance, when travelling, or making a long sea voyage. When so needed, boxes should be chosen capable of adapting themselves to the clothes which are to be packed in them; being of a convenient length,



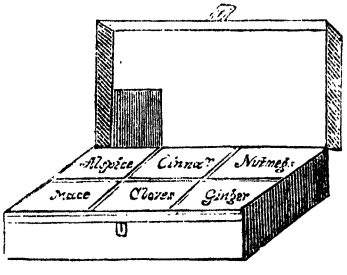
depth, &c., and having partitions where the separation of certain articles is desired. For female attire, the box seen in the engraving is especially well adapted. It has a frame with a narrow girth crossed within, and resting on a projection some inches below the top of the box. This admits of frills, laces, caps, and other light articles being fixed on the upper side.

BOX FOR PLANTS.—A substitute for a large pot, of a cubical figure, and generally formed of wood; though, in some cases, the frame is formed of cast iron, and the sides of slate cut to fit, and moveable at pleasure. The construction of these boxes consists of



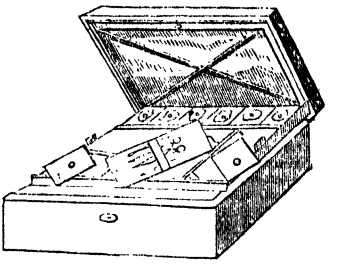
two of the sides being fixed, and the other two moveable, but kept in their places by a couple of iron bars with hinges, which are fastened on one side, and on the other are hooks to catch in. By using these boxes, the state of the roots may be readily examined, the old earth taken out, and fresh put in at pleasure; another material advantage is, that plants may be shifted, by sliding them from one box to another, without disturbing the roots.

BOX FOR SPICES.—In culinary operations, it is essential that all the apparatus, even of the most trifling kind, should be orderly arranged, and ready at hand. With this view, a box for the several kinds of



spices is indispensable, so that any, or all of them, may be ready for use immediately they are wanted. These boxes are of various constructions; but that shown in the illustration is the best, as it not only prevents the aroma of the spices from escaping, but by having each compartment clearly designated, prevents the possibility of one spice being taken in mistake for another.

BOX FOR THE WORK-TABLE.—This convenient and elegant receptacle is almost indispensable for females who are much employed in needlework; as it contains, in a compact form, all the implements and materials called into requisition; and possesses the double advantage of costing but little, and of being portable. The moveable



tray holds the scissors, knife, stiletto, bodkin, &c.; the part beneath is capable of containing the more bulky materials generally used and the part immediately beneath the lid is adapted to retain any article that is required to be kept with great care.

BOXING.—The art of self-defence, which, so long as it is kept within its legitimate limits, without being degraded into a brutal pastime, may be advantageously acquired by every man, in order that, as occasion requires, he may be able to protect himself against aggression and insult. Books: *Pierce Egan's Boxiana*; *Owen Swift's Handbook to Boxing.*

BOX TREE.—An evergreen bush or small tree, found all over Europe, as well as upon the chalk-hills of England. The wood of this tree is very valuable; it is of a yellowish colour, close-grained, very hard, and heavy; it cuts better than any other wood, is susceptible of a very fine polish, and is very durable. Box trees may be raised from seed, which should be sown soon after it is ripe, in a shady border of light loam or sand, but they are generally propagated by cuttings planted in autumn, and kept moist until they have taken root. The *box plant* is best known for its use in gardens as edgings to borders; the kind so employed is a dwarf variety. Dwarf box is increased by parting the roots or slips. The best time for transplanting this shrub is October, though it may be removed almost at any time, except summer, if it be taken up with a good ball of earth.

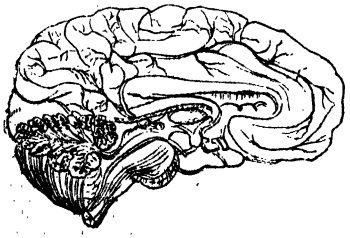
BRACES.—A portion of male attire, worn for the purpose of connecting the trousers with the other portions of apparel; some objections have been urged against them, one being, that owing to the strain they necessarily occasion on the shoulders, they are injurious, and interfere with the due development of the chest; if, however, they are chosen of supple and elastic materials, and not fastened too tightly, no ill consequences need be apprehended from their use.

BRACELET. — An ornament worn by females upon the wrist, fashioned from a variety of materials, and of numerous designs. Care should be taken that these ornaments do not fit so tightly as to impede the circulation of the blood or irritate the skin. In a picturesque point of view, brace

lets tend to set off a white and well rounded arm, but where there is a tendency to redness, or the wrist is bony, they are very unbecoming; as they only serve to bring forward more prominently defects, which it would be wiser to hide altogether.

BRAG.—A game at cards, formerly much in fashion. As many persons as the cards will supply may play, each depositing three stakes, the sum of which is divided into three unequal portions. Three cards are dealt at once to each person, the last being turned up all round. The first stake is won by the player to whom the highest card is turned up. The ace of diamonds has precedence over every other card; and if two players have hands of equal value, the elder has the precedence. The second stake is won by the *brag*. A pair of aces is the best brag, a pair of kings the next, and so on in order. The knave of clubs and the nine of diamonds combined with any pair, make what is termed a *pair royal*, which has preference over everything, except a *natural pair royal*, formed of any of these similar cards. A natural pair, however, does not supersede an artificial pair made by these favourite cards. Sequences and flushes count after these pairs. The sport of the game arises at this point. Any player who *brags* that he holds a better hand than his neighbour, may stake upon it according to his desire of confidence; and the player who brags longest and ventures most, sweeps the stake, although, perhaps in truth, his hand is inferior in value. Either party, however, may, if he pleases, demand to see the hand of the other, and then the strongest hand wins. The third stake is won by the eldest player whose cards amount nearest to thirty-one.

BRAIN.—The brain is a large flat sheet of considerable dimensions, expanding from the spinal marrow like an open umbrella from the stem that supports it; and con-



sists of two distinct substances; the under surface soft, white, and tenacious, like a cake of marrow, and the upper surface more firm than the other, and of an ashy grey colour. This sheet of brain is rolled up so as to confine it in the smallest compass space, having at the same time regard to the rise and fall of its substance, in time with the swell and exhaustion of the lungs, and when so confined to protect it as far as possible against ordinary dangers.

The brain is divided into two perfect halves, called hemispheres, right and left; while each hemisphere, in turn, is further divided into three distinct parts or lobes. There are also five small cavities made between the convolutions, called ventricles. Besides the division into hemispheres and lobes, the brain is further subdivided into the brain proper—the cerebrum, and the little brain—the cerebellum, which is situated at the back of the head. The first is the seat of imagination, judgment, and thought, and the source of those actions which are the result of volition, or dependence on the will; from the latter proceed those animal propensities and appetites that are, in the natural state of man, irrespective of the judgment or will; and are, therefore, called involuntary. The brain, as well as being the seat of judgment and all the reflective functions of wisdom and intelligence, is also the vital principle and source of all the nerves of the body. To protect this delicate organ from friction, the bones that contain it, inside of the skull, are lined with a thick fibrous membrane, that covers all the asperities of the bones as with a pad; and between this and the exterior surface of the brain, has been expanded a very fine, thin, serous texture, like the glazy pellicle on the inside of an egg shell, the purpose of which is to secrete a fluid that shall lubricate the surface of the membrane above, and allow the brain to glide about its box with smoothness and facility. At the same time, dipping into all the convolutions, and following the brain in all its folds and doublings, is a third delicate membrane, a perfect network of arteries, veins, and lymphatics, all woven together by the most gossamer tissue, and the duty of which is to carry nourishment, or blood, to every part of the substance of the brain.

The brain is subject to many and various diseases, both the result of accident and such as are ordinary to the organ itself.

BRAIN FEVER is characterized by two distinct epochs or stages—excitement and collapse; and though often distinct and well defined, it occasionally happens that the one stage is so blended with the other as not to be appreciable, till the graver consequences of the second period evince themselves. The symptoms of the first stage are deep and intense pain in the head, tightness across the forehead, throbbing of the temporal arteries, ringing in the ears, flushed face, bloodshot eyes, and a wild and glistening stare; the pupils are contracted, and particularly sensible of light, while the ears are impatient and irritable to the sense of noise: violent delirium, want of sleep, convulsive paroxysms, attended with a hot dry skin, hard quick pulse, a white coated tongue, great thirst, nausea and vomiting, and a confined state of the bowels. Sometimes the delirium is the first symptom shown, or the disease may progress to a culminating point in a more insidious manner, often commencing with an apparent attack of biliary vomiting. This formidable disease usually proves fatal in a few days, sometimes in twelve hours.

The mode of treatment resolves itself into

blood-letting, purgatives, and cold applications to the head. In bleeding, respect must be had to the *effect* produced, and not to the *quantity* abstracted, that is, till the pulse is affected, or fainting takes place; for this purpose, the patient should be bled *standing*, and from a *large* orifice, in a full stream. About half an hour after the bleeding, and when the patient has rallied from the fainting, cupping is to be employed behind the ears, or the nape of the neck, while half-a-dozen leeches are applied to each temple. At the same time, bladders of ice are to be applied to the shaved head, occasionally varied by rubbing ether over the scalp briskly, and allowing it to evaporate. As constipation is a marked feature of brain fever, powerful purgatives must be employed from the first indication of the disease; for this purpose, one of the following powders should be given every three hours, and *three* tablespoonfuls of the accompanying mixture every *four* hours.

Powders.—Calomel . . . 30 grains.
Jalap . . . . . 2 drachms.
Ipecacuanha . . . . 6 grains.
Mix and divide into six powders.

Mixture. — Infusion of
senna . . . . . 7 ounces.
Epsom salts . . . . 2 ounces.
Syrup of buckthorn . 1 ounce.
Sal volatile . . . 1 drachm.
Mix.

If this does not keep up a frequent and vigorous action on the bowels; in addition, put two drops of croton oil on the tongue, or wipe the wet cork or stopper of the bottle on the patient's lips.

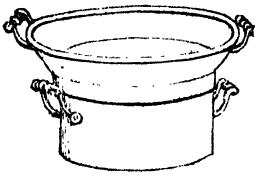
After twelve hours, and between that and two days, the *second stage*, or series of symptoms sets in, the headache and wild delirium cease, and is succeeded by a low indistinct muttering and a state of stupor, from which it is finally impossible to rouse the patient. Hearing and vision become imperfect and difficult, with squinting, double vision, and distended and immovable pupil: the spasms have given place to twitching of the muscles, and starting of the tendons: the limbs are cold and powerless, or palsied, the countenance ghastly; a cold sweat breaks out over the body, and the patient dies in a state of profound coma.

The treatment in this second and fatal stage, is necessarily one more of regimen than medicine. If the pulse is hard, a blister may be put on the head; but the great art lies in the judicious application of stimulants, such as ether, ammonia, valerian, beef-tea, wine, and opiates.

The following mixture combines most of these agents, and may be employed to promote reaction, accompanied with thickened beef-tea, and bottles of hot water to the feet.

Carbonate of ammonia . ½ drachm.
Powered opium . . . . 3 grains.
Ipecacuanha . . . . 3 grains.
Mix in a mortar, and add
Camphor water. . . . 5½ ounces.
Compound tincture of
cinnamon . . . . ½ ounce.
Sulphuric ether . . . 1 drachm.
Mix. A tablespoonful every two hours.

BRAISING.—An operation in cookery, of French invention, and esteemed by epicures as the most perfect method of dressing meats. It is eminently suited to white meats, lean venison, turkey, and domestic fowls. Braising is a comparatively easy process, and the same rules apply either to meat or poultry. Clean, season, and stuff, or lard, where necessary, the article to be dressed. Line the bottom of a stewpan (just large enough to hold the meat) with slices of good bacon, of fat beef, sliced onion, carrot, and turnip. Strew in a few chopped herbs, with salt, mace, black and Jamaica peppercorns, a few bay leaves, and a clove of garlic; observing to vary and suit the seasonings to the nature of the preparation. Lay the meat or poultry on this compound, and cover it with a layer of the same ingredients. Over this, place a round of buttered paper, wrap a cloth about the lid of the stewpan, and press it closely down, setting a weight over it, to keep it so, and to prevent the escape of the savoury steam, which the meat or poultry ought to imbibe till completely saturated. Set the stewpan over the embers of a wood fire, mixed with the hot ashes; place embers above it, and let it stew gently for two hours and-a-half. When done, take it up, and keep it very hot; strain and reduce the gravy by quick boiling, until it is thick enough to glaze with; brush the meat or poultry over with a portion of it, put the remainder into the dish, and send it directly to table. *Braising Pans* are of



various forms, but the one illustrated is generally considered the most suitable; the stewpan of modern form, however, or any other vessel that admits of the embers being placed upon the lid, will answer the purpose nearly as well.

BRAN.—The husks or shells of wheat which remain when separated from the flour in the mill. It contains a portion of the farinaceous matter, and has a laxative quality; for this reason, bread partially made with it is sometimes recommended to be eaten instead of white wheaten bread. It is also useful as a domestic remedy for several minor complaints; a decoction of it, sweetened with sugar, is taken for coughs, hoarseness, &c. A handful mixed with a pail of warm water forms an excellent emollient foot-bath; and as a poultice, it is efficacious for sores and wounds. It is of wheat bran that starch is principally made. Dyers reckon bran among the non-colouring drugs, and use it for making what is termed the "sour waters" with which their several

dyes are prepared. It is also used by calico printers to remove the colouring matter from those parts of their goods which are not mordanted. Bran is employed as a cooling laxative for horses, in the form of a mash, and as a vehicle for occasional changes of food used medicinally. It is given before and after medicine, and forms the main agent in the stable for aiding purgatives in their action.

BRAN YEAST.—Boil one pint of bran and a small handful of good hops, in two quarts of water, for ten minutes; strain it through a sieve, and when lukewarm, add three or four tablespoonfuls of beer yeast, and two of treacle; put it into a jug; cover it, and place it before the fire to ferment.

BRANDY.—The spirituous liquor produced by the distillation of wine only, and not from any other fermented body. But brandy consists not merely of the spirit drawn from wine, it contains also some water, and is flavoured by the essential oil of the grape, which has been dissolved by the alcohol produced during fermentation. The average proportion of alcohol in brandy varies from 48 to 54 per cent. When pure, it is perfectly colourless, and only acquires a pale brown or yellow tint from the cask. When brandy is first imported, it is generally 1 or 2 over proof, but its strength decreases with age; and by the time that it is usually taken from the bond-store for sale, it is seldom stronger than 3 or 4 under proof. The very finest brandies average from 5 to 10 under proof, and never exceed 2 under proof; they then contain more than half their weight of water, and from their boiling point being higher, they come over to this country more fully charged with essential oil, and the other volatile and fragrant principles of the grape; thus possessing, in a greater degree, that peculiar aroma and flavour for which they are so much esteemed. The compound known as *British brandy*, is made chiefly from malt spirit, with the addition of mineral acids, and various flavouring ingredients.

BRANDY, ADULTERATION OF.—Brandy undergoes adulteration, both abroad and at home. The common practice in France is to add spirit of wine and colouring, to raise the strength of the liquor before exporting it. This is technically called *making up* for the London market. It is done to any extent desired by the English purchaser, and the quantity and prices of the substances so added, are regularly set forth in the invoice. When the purchaser is not well acquainted with the trade, and desires a strong spirit at a low rate, the common practice is to sell him brandy so mixed as genuine. The usual strength at which brandy is sold in England, is about 11 or 12 under proof; when weaker than 17 under proof, it becomes seizable by the excise. The strength at which it is sold and "permitted" in the wholesale trade, is generally 10 under proof, to which it is reduced by adding water; and it is never less than 12 under proof, unless a different strength has been agreed on at the time of sale. French brandy, in addition to the adulterations already noticed, is also disguised by burnt sugar, cayenne pepper, grains of paradise, horse-radish, acetic acid, almond cake, and other flavouring and acrid substances. In the majority of cases of adulteration, the palate will be the readiest detector, but the fraud may be discovered more definitively by gently evaporating a little of the suspected liquor in a spoon or glass capsule, when the acrid matter, colouring, and sugar, will be left behind, and may be readily distinguished by their flavour, sweetness, and glutinosity. A little perfectly pure brandy, evaporated in a similar manner,—on a watch-glass for instance,—merely leaves an extremely slight discoloration on the surface. In the trade, the addition of water to spirit is technically called "*reducing*," whilst absolute adulteration is known under the questionable name of "*improving*." The only method to obtain perfectly pure brandy, is either to take it direct from the bond-store, without allowing it to enter a private cellar, even for an hour, or to buy it of some known respectable dealer, at a price that offers no inducement to dishonesty.

BRANDY CREAM.—Boil two dozen blanched sweet almonds, with four pounded bitter almonds, in a quarter of a pint of milk; when cold add to it the yolks of five eggs, which have been beaten well in cream; sweeten, and put to it a gill of brandy. After it is thoroughly mixed, pour to it a quart of thin cream; set it over the fire to simmer, but not to boil. Stir till it thickens, then pour into cups or glasses, and when cold it will be ready. A ratafia drop may be added to each cup; if intended to keep, the cream must be previously scalded.

☞ Almonds, sweet, 24; bitter, 4; milk, ½ pint; eggs, 5 yolks; brandy, 1 gill; cream, 1 quart; sugar, to taste.

BRANDY PUDDING.—Line a mould with raisins, stoned, then with slices of French roll, next to which, place ratafias or macaroons, then another layer of raisins, followed by the roll and the biscuits, and so on alternately till the mould is full, adding at intervals, and by degrees, a gill of brandy. Beat four eggs, add a pint of milk, sweetened, half a nutmeg, and the peel of half a lemon finely grated. Let the liquid sink into the solid part; then flour a cloth, tie it tightly over, and boil for one hour, turn into a dish and serve with sweet sauce.

☞ French roll, ratifias, and raisins, sufficient; brandy, 1 gill; eggs, 4; milk, 1 pint; nutmeg, ½ of 1; lemon peel, ½ of 1.

BRANDY, USES AND PROPERTIES OF.—There is no spirit that exercises so beneficial an effect on the system when taken in moderation, as brandy, for in many cases it is not merely a stimulant, but has powerful medicinal properties. In cases of suspended animation, such as from partial drowning, or intense cold, hanging, &c., brandy is the surest restorative that can be applied. It is also of the greatest benefit when the frame has become exhausted by any extraordinary demand that has been made upon it. In many inward complaints, such as spasms, colic, and diarrhœa, it almost always affords effectual relief. In all cases however

where brandy is administered medicinally, care should be taken that the quantity is not excessive; and to guard against this, it will be found safest to give a tablespoonful of brandy mixed with a wineglassful of hot water, from time to time, according to the urgency of the case. Weak brandy and water, cold, is the best beverage that can be taken by dyspeptic and bilious persons with their meals, the proportion being a tablespoonful of brandy in half a pint of water. Brandy, however, when taken in excess, is capable of injuring the system in the same degree as in moderation it produces benefit. Under these circumstances it heats the blood, preys upon the liver, and impedes the functions of the digestive organs; in fact the best rule to observe in regard to brandy is, to drink it as little as possible habitually, when in health, so that it may be able to operate with due effect when there is occasion to have recourse to it.

BRASS.—This useful alloy of copper and zinc is now generally manufactured by plunging the *copper*, in slips, into the zinc, melted in the usual manner. The former metal rapidly combines with the fluid mass, and the addition is continued until an alloy is formed, somewhat difficult of fusion, when the remainder of the copper is at once added. The brass thus formed is broken into pieces and remelted under charcoal, and a proper addition of either zinc or copper made, to bring it up to the colour and quality desired.

BRASS WORK, TO CLEAN.—Rub it over slightly with a piece of flannel dipped in sweet oil; next, rub it hard with another piece, dipped in finely powdered rottenstone; then clean it with a soft linen cloth, and polish off with wash-leather.

BRAWN.—Having cleaned a large pig's head thoroughly, and rubbed it with salt, boil it until the bones can be removed with ease; season with salt and pepper, and lay the meat in a mould whilst it is hot; press this down with a board and heavy weight, and let it remain in a cool place for six hours; then boil for about an hour, covering the mould with the liquor in which the head was first boiled; press again after this boiling. The flavour is very much improved by adding in layers, when the mould is filled, some salted and boiled tongue, in thin slices.

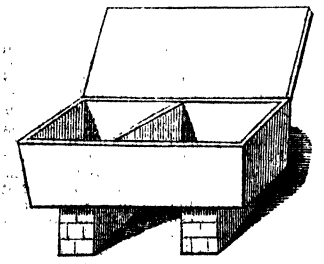
BRAWN, MOCK.—Boil a pair of calves' feet very tender; take off the meat, and have ready the jelly piece of pork, salted with common salt and saltpetre for a week. Boil this almost enough; take out all the bones, and roll the feet and pork together; then bind the roll very tight with a strong cloth and coarse tape. Boil it till tender, then hang it up in the cloth till cold.

BREACH OF TRUST.—A trustee, banker, merchant, broker, attorney, agent or person under power of attorney, fraudulently disposing of property, or a director or manager of a public company, fraudulently appropriating property, or keeping fraudulent accounts, or wilfully destroying books, papers, or writings of the company of which he is a member, or being concerned in making any false entry, or any material omission in any book of account or other document, or publishing any fraudulent statement, or any person knowingly receiving property fraudulently disposed of, if found guilty, is liable to the punishment of being kept in penal servitude for the term of three years, or imprisonment for not more than two years, with or without hard labour, or by fine; and any person being the bailee of any property, fraudulently converting the same to his own use, although he should not break bulk or otherwise determine the bailment, is guilty of larceny.

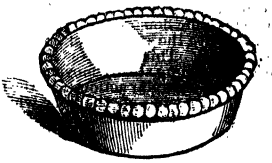
BREACH OF PROMISE OF MARRIAGE.—A contract to marry, like all other agreements, must have mutuality for its basis; therefore an action for the breach of it may be maintained as well by a man against a woman as the contrary. The promise need not be in writing, nor is it necessary to prove an express promise in so many words. The contract may be evidenced by the unequivocal conduct of the parties, and by a general yet definite understanding, between them, their friends and relations, that a marriage is to take place. And although the precise time is not agreed upon, the law will presume that the parties promised to intermarry in a reasonable or convenient, time upon request. But unless the defendant incapacitates himself by marrying another person, a request must be proved. The pre-engagement of the defendant to another person forms no defence to this action, as he cannot thus avail himself of his own wrong; nor is the promise of a man to marry within a reasonable time void, although he was married at the time of making such promise, because his wife might have died within a reasonable time. If a man knowingly promises to marry a woman of immodest character, he is bound to do so; but if he after promise discovers the true nature of the woman's character, he is justified in breaking that promise. A promise of marriage is not binding if it be obtained, or if the continuation of the engagement be procured, by means of a fraudulent and false representation to the defendant, or wilful concealment from him of the plaintiff's former situation in life, and the circumstances of her family. Parties cannot be compelled to marry who could not live happily together, whether the reason were a mental or bodily infirmity. It is a good answer to an action for breach of promise of marriage, that after the promise, and before the breach, the plaintiff absolved the defendant from his promise, and the performance thereof.

BREAD.—Two very important reasons urge the propriety and necessity of using home-baked bread in preference to that purchased of the baker; these reasons are its superior quality and its cheapness. With regard to quality, the difficulty of obtaining pure and wholesome bread is well known, and it is equally notorious that the deleterious compounds often vended under the name of bread, seriously impair the diges-

tive organs, and prejudice the health generally. With regard to cheapness, the fact has been ascertained that, in making the bread at home, there is a saving of one-third of the cost of baker's bread. It is therefore apparent that on the score of both economy and health, it is of the utmost consequence, especially in large families, that home-made bread should be used. Many novices in bread-making imagine that it is a difficult art to attain, whereas, it is both simple and easy; the success of the process depending upon certain principles, which may be readily understood, and are as follows:—The requisite quantity of flour is made into a paste or *dough* with water, and this dough, previously to baking, is submitted for some time to the action of a moderate heat; a state of fermentation then ensues, in which process a large quantity of carbonic acid gas is diffused amongst the mass, which is prevented from escaping by the solidity of the dough, which in consequence becomes puffed up and spongy, and ultimately covered with a light porous paste; to assist and expedite this operation, yeast is introduced. In bread-making a great deal depends on the chief ingredients used; the *flour* should be especially selected with the greatest care; it should neither be too new nor too old, and should be ground about six weeks before it is required. The most advantageous method is to preserve the grain itself, and to have portions of it ground from time to time, as needed. For this purpose a person should provide himself with a handmill, the cost of one in which 20lbs. of flour may be ground in forty or fifty minutes, would be about £4 10s.; this outlay would be soon covered by the saving effected, to say nothing of the promotion of health, by avoiding the too common adulterations which flour undergoes. *Yeast* is an important auxiliary, demanding the greatest attention, for unless it be good and in a fitting state to produce ready and proper fermentation, the best flour will fail to yield wholesome or even eatable bread. A knowledge of the due proportion is also indispensable; too much impairs the flavour of the bread and diminishes its nutrient qualities, while too little fails to render it light



and, as a consequence, digestible. The only *implements* of any consequence required for bread-making, are a kneading-trough, when a large quantity is to be made; this is an oblong wooden box, with a lid to it, as seen in the accompanying engraving. When, however, a small quantity only is required, a large earthenware pan, glazed on the inside, will answer the purpose; this has also the recommendation of



being less liable to absorb the moisture which afterwards becomes sour, and is more easily kept clean and dry than anything else. The pan, however, should be of a sufficient size and depth to contain the quantity of flour required for the bread, without being much more than half filled, as there should be space enough to knead the dough freely, without danger of throwing the flour over the edges, and also to allow for its rising. The other implements required are, a hair sieve for straining yeast occasionally, and one or two strong spoons.

Supposing a person never yet to have attempted to make bread, wishing to do it well, and having no one to furnish the necessary instructions, such person may succeed perfectly by strictly attending to the directions hereafter given. It must be premised, however, that as a small baking is easier to manage than a large one, and the expense attendant on failure necessarily much less, the receipt is given for a limited quantity by way of trial. Put half a gallon of flour into the pan; then with a large metal or wooden spoon hollow out the middle, without entirely cleaning away the flour from the bottom of the pan; then take either a large tablespoonful of brewers' yeast, which has been rendered solid by mixing it with plenty of cold water and letting it afterwards stand to settle for a day and night, or nearly an ounce of fresh German yeast; put it into a large basin, and proceed to mix it, so that it shall be as smooth as cream, with three quarters of a pint of just warm milk and water, or water only. In order to prevent lumps forming, the liquid must be poured in by spoonfuls just at the beginning, stirring and working it round well, to mix it perfectly with the yeast, before the remainder is added. Pour the yeast into the hole made in the middle of the flour, and stir into it as much of that which lies round it as will make a thick batter; this must also be free from lumps; strew plenty of flour on the top, throw a thick clean cloth over it, and set it where the air is warm, taking care not to place it too near a large fire, and at the same time raising it from the floor, so that it may be protected from constant draughts of air, which would otherwise pass over it. Look at it from time to time after it has been laid for nearly an hour, and when it is perceived

that the yeast has risen and broken through the flour, and that bubbles appear, it is then ready to be converted into dough—this is technically called the *sponge*; place the pan on a strong chair or table of convenient height, and pour into it half a pint of warm milk or water; stir into it as much flour as you can with a spoon. Next throw plenty of the remaining flour on the top of the leaven, and begin with the knuckles of both hands to *knead* it well. This process is best performed by a strong steady movement, rather than a quick irregular action. In the meantime keep throwing up the flour which lies under and round the dough, on to the top of it, that it may not stick to the fingers. When the flour is nearly all kneaded in, begin to draw the edges of the dough towards the middle, in order to mix the whole thoroughly, and continue to knead it in every part, spreading it out and then turning it constantly from the side of the pan to the middle, and pressing the knuckles of your closed hands well into and over it. When the whole of the flour is worked in, and the outside of the dough is quite free from it, as well as from all lumps or crumbs, and does not stick to the hands when touched, it will be sufficiently prepared, and may be again covered with the cloth, and left to rise a second time. In three quarters of an hour, look at it; and should it have swollen very much, and begun to crack, it will be in a fit state to bake. Turn it then on to a paste-board, and with a large sharp knife, divide it into two, shape it into loaves, and despatch it to the oven. If it is to be baked on a flat tin, or on the oven floor, dust a little flour on the board, and make the loaves up lightly into the form of dumplings. Give them a good shape by working them round quickly between the hands, without lifting them from the board, pressing them slightly as you do so; then take a knife in the right hand, and turning each loaf quickly with the left, just draw the edge of it round the middle of the dough, but do not cut deeply into it. Make also one or two slight incisions across the tops of the loaves, as they will rise more easily when this is done. To prevent the bread sticking to the pans, and being turned out with difficulty after it is baked, they should be rubbed with butter. When the loaves are drawn from the oven, they should be turned upside down or on their sides, or they will become wet and blistered from the confined steam; they should thus remain until they are perfectly cold.

For baking on a large scale, the following is one of the most approved receipts:—Put a bushel of flour into a kneading trough. Mix a pint of yeast thoroughly, with as much milk-warm water; make a deep hole in the middle of the flour, and pour the yeast and water into it; then take a spoon and work it round the edges of this body of moisture, so as to bring into it by degrees, flour enough to make a thin batter, which must be well stirred for a minute or two. Throw a handful of flour over the surface of this batter, and cover the whole with a cloth thickly folded to keep it warm. Set it by the fire, regulating the distance by the state of the weather, and the season of the year. When the batter has risen enough to make cracks in the flour, form the whole mass into dough, thus:—Begin by strewing six ounces of salt over the heap; and then beginning round the hole containing the batter, work the flour into the batter, pouring in milk warm water or milk, as it is wanted. When the whole mass is moistened, knead it well. Mould the loaves; let them rise for twenty minutes, and put them into an oven which has been previously heated. The length of time required for baking will be proportioned to the size of the loaves. The baking in an ordinary oven, will require about an hour for a four pound loaf, fifty minutes for a three pound loaf, and so on in proportion.

The following *general rules in connexion with bread-making*, will be found worthy of attention:—1. Bread is better baked without tins, which impart to the crusts an unnatural degree of hardness. 2. The temperature of the water or milk, must be regulated by the season; in summer, it should be milk-warm; in autumn and winter, a few degrees warmer; and in frosty weather, as hot as the hand can bear it; but never scalding, or the whole will be spoiled. 3. Soft water only should be used for bread-making, filtered rain water being the best of all. 4. When there is reason to suspect, either from the appearance or smell of the flour, that it is not good, and there is still a necessity for using it, let it be baked for an hour in a very slack oven; and add to it, when making into dough, ten grains of carbonate of ammonia, carefully powdered, for every pound of flour. 5. Bread should be put into the oven as soon as the loaves are formed, and when in, the oven door should be fastened up closely, and only opened when absolutely necessary. 6. When bread is home-baked, the time when it will be ready for baking should be correctly calculated, so that the oven may be made fit to receive it at the exact moment. Should it have to be carried to a baker's, a thick cloth folded three or four times, should be thrown over it before it is sent, and removed only when it reaches its destination. 7. Bread made entirely with milk, becomes dry much sooner than that which is moistened with a portion of water. If the flour and yeast are good, water alone, will yield the most wholesome and nutritious bread. 8. The making of the dough should be completed in one operation; for if abandoned when half made, and allowed to become cold before it is finished, it is certain to be spoiled. 9. Yeast that is sour, or that has been frozen, or scalded by having over-hot liquor poured to it, will fail to produce light bread. 10. To ascertain whether dough be light enough to bake, let the knuckles be pressed hard upon it; and if the impression disappears in a short time, it is ready for the oven. 11. Rather a quick oven is required to bake bread properly. Occasionally, it will be light and well-flavoured when slowly baked, but seldom of a good colour. The heat should be so regulated, that it may penetrate the dough thoroughly before the outside becomes hard.

12. If bread is withdrawn from the oven before it is sufficiently baked, it should be returned immediately; for if suffered to become cold, the application of heat will have no effect upon it. 13. When the dough has been kneaded into too thin a consistence, so that it spreads about, instead of remaining in shape, when moulded into loaves, it should be put into rather a slow oven, otherwise the outside will speedily harden and lock up the moisture. 14. In warm weather, the fermentation of the sponge and dough must be watched with critical precision. If either be left in a state of active fermentation for so short a period above the proper time, as even half an hour, there is a risk of sourness, and the mass will sink and become heavy. In any weather, the quality of the bread will be prejudiced by over-working. 15. As the heat of the oven is greatest at the further end, and at the sides, the largest loaves should be placed there, and the smaller ones in the centre, and near the mouth of the oven. 16. When bread is sufficiently baked, the surface will be uniformly browned, everywhere firm to the touch, the bottom crust being especially hard. To test whether bread is done which has been cut, press down the crumb lightly in the centre with the thumb: when it is elastic and rises again to its place, it is a proof that it is perfectly done; but if the indentation remain, it is not done. Books: *Acton's Bread-Book; Wedlake's How to make Bread at Home; Accum's Treatise on Bread-making; Cobbett's Cottage Economy.*

BREAD, ADULTERATION OF.—Bread is systematically adulterated with various deleterious ingredients, the chief of which are alum, chalk, bones, potato-pulp, and salt.

Alum increases the whiteness and firmness of the bread made from inferior flour, and thereby causes it to resemble bread made from the very best flour. The qualities which alum imparts to a loaf are very unimportant, having reference merely to the appearance, "lightness," neatness of shape, &c. The chemical action of alum on moistened flour is analogous to tanning, and destroys in a considerable degree its nutritiveness. It converts the gluten of the flour into a kind of tough, tenacious "wash leather," which is difficult of digestion. This gives the dough a tenacity and firmness, enabling it to retain the thousand of little air bubbles given off by the yeast, which constitutes the "lightness" or spongy porous character of the bread. Hence, flour that will not "rise" may be made to do so by means of alum. Another object in the use of alum is, that it preserves the upright form of the loaves, and prevents them from adhering firmly together, thereby enabling the baker to separate them more readily on their removal from the oven. An unalumed loaf is, with a little practice, distinguishable from an alumed one by its appearance alone. It is not so bulky nor so symmetrical in its shape; its sides are roughened and torn in being separated from the batch. Unalumed bread "bites short;" alumed bread "bites tough;" and the rough sour taste of alum is slightly perceptible in it. The most marked contrast, however, is apparent in "crumbling," when a day or two old; unalumed bread crumbles with the greatest facility by rubbing it between the hands, whereas, alumed bread, however old, "crumbles" with difficulty. In the same way, alum renders the new loaf less liable to crumble when cut.

Chalk, Whiting, Plaster of Paris, &c., are often mixed in small quantities with the flour, for the purpose of improving the colour of the bread, and increasing its yield — the increased yield simply signifying *more water.* These ingredients may be readily detected by pouring on the bread oil of vitriol diluted in six or seven times its weight of water; if effervescence ensue, it is proof that there is adulteration. Bread made with flour containing more than four per cent. of chalk, &c., is spotted here and there with white marks, which are accumulations of carbonate of lime. *Bones*, burned to whiteness, and ground to an impalpable powder, are chiefly used to adulterate *thirds* flour, which, being of a somewhat gritty nature, will disguise the grittiness which it is almost impossible to deprive bones of, be they ever so laboriously ground. To detect this fraud mix spirit of salt with five or six times its weight of water, and if effervescence ensue adulteration exists. Further, if the liquid be thrown on a filter of paper, the portion which runs through the paper will let fall a white heavy deposit, when pearlash is added. The mixture of *potato* with flour, although not positively unwholesome, nevertheless serves to deteriorate the amount of nourishment which bread made from pure wheaten flour affords, and consequently a fraud is committed. This adulteration may be readily detected by the microscope. The cells which contain the starch corpuscles are in the potato very large; in the raw potato these are adherent to each other, and form a reticulated structure, in the meshes of which the well defined starch granules are clearly seen; in the boiled potato, however, the cells separate readily from each other, each forming a distinct body, and the starch corpuscles are much less distinct, and much altered in form. The following test places the matter beyond all doubt. Put about 100 grains of the suspected bread into a glass, and pour upon them, first one fluid ounce of distilled water, and then one fluid ounce of diluted solution of iodine. If the bread contains any fecula the liquor will assume a crimson tinge, which will increase according to the quantity of potato starch present. When pure wheaten bread is submitted to the same treatment, at first no colouring is produced, but about a quarter of an hour after the addition of the water of iodine, streaks of a purple or violet colour begin to appear from upwards downwards, and in the course of half an hour the liquor acquires a light blue tinge, the intensity of which is seen gradually augmenting. *Salt*, when added in a large quantity to the dough, imparts to it the property of absorbing, concealing and retaining a much larger quantity of water than it otherwise would. Bread made from such dough, will, on leaving the oven, come out much heavier than it ought, and the addi-

tional weight will be simply water. Fortunately, the taste of such bread is sufficient index of its bad quality; it is rough in its grain, and has this remarkable property, that two adhering loaves will generally separate unevenly, one taking from the other more than its share.

Adulteration of bread is also practised by *mixing the meal of inferior grain with the wheaten flour*. The presence of *barley* may be discovered by the aid of the microscope. If it be present in large quantities, however, it can be ascertained by treating a portion of the suspected bread for some time with boiling water, when, if the adulterant be barley flour, an insoluble starch remains. When the flour of *maize* or *rice* is mixed in any considerable proportion with wheaten flour, the bread is harsh and dry; if *Indian corn* is used to any extent, it communicates a distinct yellow tinge, and feels coarse; it has, moreover, a peculiar sweet flavour.

A fraud of a kindred character with adulteration is frequently practised, especially by low-priced bakers, in giving *short weight*, and although the mockery of weighing the bread on delivery may be gone through, a previous tampering with the weights and scale will leave a deficiency of weight. Housekeepers therefore, should provide themselves with weights and scales, so as to check any such attempts at dishonesty. It ought also to be known that *new bread weighs more than stale*, the latter losing a portion of its water by evaporation. This circumstance is well understood by bakers, with whom it is a common practice to throw empty sacks over the loaves, as soon as they are taken out of the oven, to prevent the escape of water. It has been ascertained by direct test that the average excess of weight of new bread over stale is half an ounce in every two-pound loaf. Supposing, therefore, that a family consume thirty two-pound loaves weekly, the aggregate loss will be exactly a pound of bread. In an article of such extensive consumption as bread it is of the utmost consequence to obtain a supply as pure as possible, as the repeated introduction into the stomach of the deleterious compounds enumerated is calculated to produce ill-health, and to prevent recovery where it already exists. Persons, therefore, should deal with a respectable tradesman, rather than purchase their bread of those who systematically undersell their competitors. See FLOUR.

BREAD, BARLEY.—Mix one bushel of wheat flour with three quarters of a bushel of barley meal. Make this into dough, with salt, yeast, and warm water, and bake for two hours. As barley meal does not ferment readily with yeast, it is always best to set the sponge with wheat flour altogether, adding the barley meal when the dough is about to be made.

BREAD, BRAN.—To four pounds of best household flour put two tablespoonfuls of small beer yeast, and half a pint of warm water; let it stand two hours in a warm place. Add half a pound of bran and a teaspoonful of salt; make the dough with skim milk or warm water; cover it up, and let it stand for an hour. Put the loaves into warm dishes, and let them stand twenty minutes before they go into the oven.

BREAD, BROWN.—This may be made from pure wheaten flour ground coarsely, or from a mixture of wheat, barley, and rye-flour, in the proportion of two pounds of good wheaten flour to one of each of the other. Oatmeal may be substituted for the barley flour, or added to the barley and rye in the proportion of one third. When making brown bread use a larger quantity of yeast and less water, and knead for an hour.

BREAD CAKE. — Separate from the dough, when making common white bread, as much as is sufficient for a quartern loaf. Knead well into it two ounces of Lisbon sugar, two of butter, and half a pound of currants. Warm the butter in a teacupful of good milk. When thoroughly kneaded, make into the form of a cake, and bake in a tin.

☞ Dough, 1 quartern; Lisbon sugar, 2 ozs.; butter, 2 ozs.; currants, ½lb.

BREAD CHEESE-CAKES. — Slice a penny white loaf as thin as possible; pour over it a pint of boiling cream, and let it stand for two hours. Beat up eight eggs, half a pound of butter, and a grated nutmeg. Put in half a pound of currants, and a tablespoonful of brandy. Bake in pattipans.

☞ Bread, 1 penny loaf; cream, 1 pint; eggs, 8; butter, ½lb.; nutmeg, 1; currants ½lb.; brandy, 1 tablespoonful.

BREAD CHIPS, TO SERVE AS BISCUITS.—Cut thin shavings of bread from a stale loaf, spread them on a dish, or lay them singly on the tin tray of an American oven, and dry them very gradually until they are perfectly crisp; then bring them to a pale straw colour; withdraw from the fire, and, as soon as they are cold, pile them on a napkin, and serve them without delay. They require an extremely gentle oven to bake them properly.

BREAD CRUMBS, FOR CUTLETS.—Cut off the crumb of a stale loaf, break it with the hands, put it into a clean cloth, and rub it in order to crush it; sift it through a fine cullender, and add to it salt and pepper, and parsley finely chopped. Melt a piece of butter, and dip the cutlets into it; put them into the bread crumbs and turn them about till they are well covered; sprinkle them with salt and pepper, and then broil or fry them.

BREAD CRUMBS, FOR FISH.—Cut thick slices from the middle of a loaf of light stale bread, pare the crust entirely from them, and dry them gradually in a cool oven until they are quite crisp through; let them become cold, then roll or beat them into fine crumbs, and keep them in a dry place for use. To strew over hams or cheeks of bacon, the bread should be left all night in the oven; which should be sufficiently heated to brown, as well as to harden it. It may be sifted through a dredging box over to the hams after it has been reduced almost to powder.

BREAD CRUSTS, TO SERVE WITH CHEESE.—Tear the crumb of a new loaf into rough pieces with a couple of forks, lay them on a tin, and place them in an oven for ten minutes.

BREAD, ECONOMICAL.—Clean, sound, whole wheat, which, with all its bran and all its flour, is to be crushed or ground to a desirable fineness, with no screening of any kind. The meal or flour is then to be mingled in the proportion of half a pint of water, or so saturated with carbonic acid gas, to a pound of flour or meal. When the gas-water and meal are thoroughly commingled, the dough is to be placed in the oven. The loaves ought to be so arranged as to become crusted all over. The temperature of the oven should be regulated by a thermometer, and the stay of the bread in the oven up to the period of its delivery, must also be exactly regulated. The bread thus made, by commingling flour with water saturated with carbonic acid gas, in the proportion mentioned, is light and exceedingly palatable. If preferred, the bread can be seasoned with salt, or flavoured with sugar. Only the coarse flake bran is to be removed from the flour; of this take 5lbs., and boil it in rather more than 4 gallons of water, so that when perfectly smooth you may have 3½ gallons of clear bran water; with this knead 56lbs. of flour, adding salt and yeast in the same way and proportions as for other bread. When ready to bake divide it into loaves, and bake them 2½ hours. Flour will imbibe three quarts more of bran water than of plain, so that it does not produce a more nutritious food, but makes an increase of one-fifth of the usual quantity of bread. The same quantity of flour which, kneaded with water, will produce 69lbs. 8oz. with bran water, produces 83lbs. 8oz.—a gain of 14lbs. When ten days old, if put into the oven for twenty minutes, this bread will appear quite new again.

BREAD FRIED, FOR GARNISHING.—Cut the crumb off from stale bread into slices the thickness of the blade of a knife, stamp them into any form, heat a little olive oil in a stewpan, and put in the sippets; fry them, some white and some brown. When crisp, drain and dry them, and put them by, separately in paper cases, according to form and colour. When they are wanted, pierce the end of an egg, let a little of the white out, and beat it with the blade of a knife; mix with a little flour; heat the dish slightly; dip one side of the sippet into the beaten paste, and stick it on the dish; in this manner continue until the garnishing is finished.

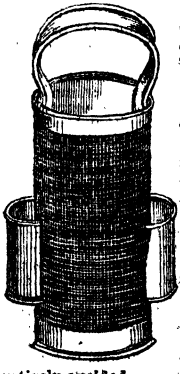
BREAD FRITTERS. — Strew half a pound of currants on a dish, and dredge them well with flour; grate some bread into a pan until a pint of crumbs is produced; pour over them a pint of boiling milk, in which two ounces of butter have been stirred; cover the pan, and let it stand for an hour. Then beat the mixture thoroughly, and add half a nutmeg grated, a quarter of a pound of white powdered sugar, and a wineglassful of brandy. Beat six eggs till very light, and stir them by degrees into the mixture. Lastly add the currants, a few at the time and mix the whole thoroughly. It should be brought to the consistence of a thin batter, and if it turns out too thin, add a little flour. Have ready over the fire a heated frying-pan with boiling lard. Put in the batter in large spoonfuls, and fry the fritters to a light brown. Drain them on a perforated skimmer, or an inverted sieve, placed in a deep pan, and send them to table hot. Serve with wine and powdered sugar.

☞ Currants, ½lb.; bread crumbs, 1 pint; milk, 1 pint; butter, 2 ozs.; nutmeg, ½ of 1; sugar, ½lb.; brandy, 1 wineglassful; eggs, 6.

BREAD, FANCY. — See BREAKFAST-CAKES, CRUMPETS, MUFFINS, ROLLS, RUSKS, SALLY-LUNNS, &c.

BREAD, FRENCH.—To four pounds of the finest flour put a quart of lukewarm milk, a little salt, a quarter of a pound of melted butter, and half a pint of yeast; whisk the fluids together, and add three beaten eggs; mix the flour with this, handling it as little as possible; let the dough rise, and mould the bread into rolls, cakes, &c. Bake on tins in a quick oven.

BREAD, FRENCH BEAN.—The seed of the white French-bean, or haricot, boiled quite tender, and rubbed through a sieve and mixed with two-thirds of their weight of flour or meal, will make bread which in flavour and appearance can scarcely be distinguished from genuine wheaten bread. After the beans have been prepared as directed, the pulp from them should be thoroughly incorporated with the flour or meal, and the bread finished in the usual way. Although this bread may be freely eaten by persons in robust health, it is not calculated for those whose digestion is delicate.



BREAD-GRATER. — A culinary implement used for producing bread crumbs when they are required for the various purposes of cooking. It is used upon precisely the same principle as the nutmeg grater, the bread being rubbed briskly upon the perforated surface, and the crumbs falling through into the hollow cylinder beneath. By the use of the bread grater the desired end may be attained more readily and perfectly, and any unnecessary waste of bread is entirely avoided.

BREAD, INDIAN WHEAT. — Upon seven pounds of Indian-meal pour four quarts of boiling water, stirring it all the time; let it remain till lukewarm, then mix it with fourteen pounds of fine wheaten

flour, to which a quarter of a pound of salt has been already added; make a depression in the surface of the mixture, and pour into it two pints of yeast, which must be thickened to the consistence of batter with some of the flour; let it stand all night, when the whole should be well kneaded and allowed to remain for three hours. It may then be divided into loaves, which, in this instance, are better baked in tins, letting the dough remain in them for half an hour previously to placing them in the oven.

BREAD JELLY. — Cut the crumb of a penny roll into thin slices, and toast them equally of a pale brown; boil them gently in a quart of water till a jelly is produced, which may be known by putting a little in a spoon to cool; strain it upon a piece of lemon peel, and sweeten to taste; a little wine may be added. This is a light and pleasant repast for invalids.

BREAD, LAWS RELATING TO. — Under the assize acts, bakers are restricted to bake only three kinds of bread,—viz., wheaten, standard wheaten, and household; the first being made of the finest flour, the second, of the whole flour mixed, and the third, of the coarser flour. The loaves are divided into peck, half-peck, eight pounds eleven ounces, and the quartern, four pounds five and a half ounces, avoirdupois. Now, however, it is enacted, that within the City of London, and in those places where the assize is not set, it shall be lawful for the bakers to make and sell bread made of wheat, barley, rye, oats, buck-wheat, Indian corn, peas, beans, rice, or potatoes, or any of them, along with common salt, pure water, eggs, milk, barm, leaven, potato, or other yeast, and mixed in such proportions only as they shall think fit. It is also enacted, by the same statutes, that bakers in London, and in all places within ten miles from the Royal Exchange, where an assize is not set, may make and sell bread of such weight and size as they think fit. *But* it is at the same time enacted, that such bread shall always be sold by avoirdupois weight, of sixteen ounces to the pound; and in no other manner, under a penalty, for every offence, of not more than forty shillings. French or fancy bread, or rolls, may, however, be sold without previously weighing the same. Bakers or sellers of bread, are bound to have fixed in some conspicuous part of their shop, a beam and scales, with proper weights, for weighing bread; and a person purchasing bread, may require it to be weighed in his presence. Bakers and others sending out bread in carts, are to supply them with beams, scales, &c., and to weigh the bread, if required, under a penalty of not more than £5. Bakers, either journeymen or masters, using alum or any other unwholesome ingredients, and convicted on their own confession, or on the oath of one or more witnesses, to forfeit not exceeding £20, and not less than £5; if beyond the environs of London, and not exceeding £10, nor less than £5, if within London or its environs. The adulteration of meal or flour is punishable by a like penalty. Loaves made of any other grain than wheat without the City and its liberties, or beyond ten miles of the Royal Exchange, to be marked with a large Roman M. Any ingredient or mixture found within the house, mill, stall, shop, &c., of any miller, mealman, or baker, which after due examination shall be adjudged to have been placed there for the purpose of adulteration, shall be forfeited; and the person within whose premises it is found punished, if within the City of London and its environs, by a penalty not exceeding £10, nor less than 40s., for the first offence; £5 for the second offence; and £10 for every subsequent offence. And if without London and its environs, the party in whose house or premises ingredients for adulteration shall be found, shall forfeit for every such offence not less than £5, and not more than £20.

Notwithstanding these enactments, it is notorious that the adulteration of bread is almost universally practised. Dr. Hassall mentions the fact of twenty-four samples being purchased from different bakers in the metropolis, the *whole of which were adulterated with alum*; and Mr. Normandy declares it to be his belief, that *no bread exists in London free from admixture with mashed potatoes.*

BREAD, POTATO. — Boil the quantity of potatoes required in their skins. When done, peel them, and bruise them with a rolling pin, to the consistence of a paste. To this, add as much flour as there is potato-pulp, and some yeast. Knead them well, putting as much water as may be necessary. When properly kneaded, form them into loaves, and place them in the oven, taking care that it be not quite so hot as for ordinary baking, or the bread will become hard on the outside before the inside is properly baked. The door of the oven should not be closed so soon as is usually done. This bread must be allowed a longer time to bake than any other.

BREAD PUDDING. — Cut some light white bread into thin slices. Put into a pudding shape a layer of any sort of preserve, then a slice of bread, and repeat until the mould is almost full. Pour over all a pint of warm milk, in which four beaten eggs have been mixed; cover the mould with a piece of linen; place it in a saucepan with a little boiling water; let it boil for twenty minutes, and serve with pudding sauce.

BREAD PUDDING, FOR INFANTS. — Grate some stale bread into a teacup, pour boiling milk over it; and when cold, mix with the yolk of an egg. Boil it in a cup for a quarter of an hour.

BREAD PUDDING, PLAIN. — Grate white bread; pour boiling milk over it, and cover close. When soaked for an hour or two beat it fine, and mix with it two or three eggs well beaten. Put it into a basin that will just hold it; tie a floured cloth over it, and place it in boiling water. Serve with melted butter poured over. It may be eaten either with salt or sugar.

BREAD, RICE. — Simmer slowly over a gentle fire a pound of rice in three quarts of water, till the rice has become perfectly soft, and the water is either evaporated or imbibed by the rice; let it become cool, but not cold, and mix it thoroughly with four

pounds of flour; add to it a little salt and four tablespoonfuls of yeast; knead it thoroughly, and let it rise before the fire; make it up into loaves with a little of the flour, which, for that purpose, must be preserved from the four pounds. Bake it for rather a long interval.

BREAD, RYE.—Mix rye with wheat flour, in the proportions of one-third of the former to two-thirds of the latter, and proceed as in other bread. This bread is very firm, solid, and nutritious, and retains its firmness for a long time.

BREAD, SAGO.—Boil two pounds of sago in three pints of water until it is reduced to a quart, then mix with it a pint of yeast, and pour the mixture into twenty-eight pounds of flour. Make into bread in the usual way.

BREAD SAUCE.—Pour half a pint of boiling milk over a breakfast cupful of stale bread crumbs in a jug; cover this, and in twenty minutes at soonest, beat it up in a small saucepan, adding butter and salt, cayenne and mace to taste. Add as much boiling cream or milk as will thin it; boil up and serve. Sometimes an onion is added, but, as its taste should be scarcely perceptible, it must be boiled in four or five waters previously to being employed.

BREAD SOUP.—Boil some pieces of bread crust in a quart of water, with a small piece of butter. Beat it with a spoon, and keep it boiling till the bread and water are well mixed; season with salt.

BREAD, TO FRESHEN.—Stale bread may be brought to almost the same state as when newly baked, by putting it into a cool oven for nearly an hour.

BREAD, TO KEEP.—When bread is perfectly cold it should be laid into a large covered earthen pan; this should be kept free from crumbs, frequently scalded, and then wiped dry for use. Loaves which have been cut should have a smaller pan appropriated to them, and this also should have the loose crumbs wiped from it daily. The bread pans, instead of standing on the floor, should be placed upon a proper stand or frame made for the purpose, by means of two flat wedges of wood, so as to allow a current of air to pass under them.

BREAD, UNFERMENTED.—Mix four pounds of flour, half an ounce (avoirdupois) muriatic acid, half an ounce (avoirdupois) carbonate of soda, and a quart of water; first mix the soda and flour well together by rubbing them in a pan, then pour the acid into the water, and incorporate well by stirring. Mix altogether to the required consistence, and bake in a hot oven immediately. This bread keeps longer than bread made with yeast, and is far more sweet and, generally speaking, more digestible.

BREAD, USES AND PROPERTIES OF.—Bread differs widely from the flour of which it is composed, owing to the chemical changes that take place during the process of baking, for although raw flour contains starch, gluten, and saccharine matter, none of these substances can be found in their true character in baked bread. A chemical combination has therefore taken place, by which a new compound has been formed, and which is fitter for digestion than either of these proximate principles separately. Bread may be made of the flour of different grains; but in this country the bread chiefly used consists of three different sorts, the *white*, the *wheaten*, and the *household*. Fine white bread is made of wheat flour only; wheaten bread of flour mixed with the finer bran; and household bread of the whole substance of the grain, including the coarser bran. Wheat flour, on account of the gluten that it contains, admits more readily than any other of being converted into light spongy bread. Hence wheaten bread is most generally acceptable, because the more porous bread is, the more easily is it digested. The reason of this is, that the bread, which by its lightness, has the largest volume, presents the greatest surface to the digestive juices, and is more easily absorbed. It is, however, insisted upon by medical authorities, that bread for ordinary consumption should not be made of too fine a flour, for the gluten of bread is apt to oppress the stomach in the process of digestion, so that the coarser particles of flour are required for the purpose of acting mechanically upon the coats of the stomach, and to keep up a degree of wholesome irritation to assist its functions. The result of investigation and of various tests, tends to prove that persons who are in robust health, who take much exercise, or who eat bread in small quantities only, and mixed with other food, may freely partake of the finest wheaten bread without suffering any ill effects. But that persons in a delicate state of health, especially dyspeptic patients, others whose employment is chiefly sedentary, and others, again, who consume large quantities of bread, would do well to eat brown bread, in which a portion of bran is introduced, wholly, alternately, or occasionally, as may be deemed requisite. Bread should always be thoroughly baked, and should never be eaten until it has stood at least twenty-four hours after being taken out of the oven. Newly baked bread contains an excess of mucilage in consequence of not having parted with its moisture, hence it invariably disagrees with the stomach, and frequently produces indigestion, biliousness, diarrhœa, dyspepsia, and similar ailments.

Bread has been called the "staff of life," because it is the only food that could alone support life for any length of time; and because we ordinarily eat more of bread than of any other kind of food, and always with an undiminished appetite and relish. In every stage and condition of life it is acceptable, and it may be allowed with advantage to the aged and the weak, because it sufficiently supports the system without stimulating or relaxing it. It is not necessary to eat bread with every kind of diet, but a certain proportion should form an addition to every meal with those whose digestion is at all weak. With articles of food that contain much nourishment in small bulk, it is useful to give the stomach the proper degree of expansion. When added to animal food, bread has also the advantage of pre-

venting the loathing attending a too copious use of animal food, and also of counteracting its strong tendency to putrefaction. Under certain conditions, however, bread becomes prejudicial; if eaten too freely, or to serve as a meal, it produces viscidity, obstructs the intestines, and lays the foundation of habitual constipation; it is also injurious to young infants, and occasions disorder, griping, and flatulence. If circumstances render it necessary that bread must be given to infants, it should, at all events, be slowly toasted, or rebaked as hard as a biscuit or rusk throughout, and then well soaked. Bread in addition to being eaten in its original state, is also used for a variety of culinary purposes. It is likewise employed as a domestic remedy, in the form of an outward application.

BREAD AND BUTTER PUDDING.—Thickly butter a dish, and line it with small slices of the crumb of a loaf, cut thin; spread over them some well washed and picked currants, then a layer of thin slices of bread and butter, and so on alternately, till the dish be almost full; then pour in a quart of milk, mixed with four beaten eggs, a saltspoonful of salt, half a grated nutmeg, and sugar to taste. Bake it for three quarters of an hour.

☞ Milk, 1 quart; eggs, 4; salt, 1 salt spoonful; nutmeg, ½ of 1; sugar, to taste; bread and butter, and currants, sufficient.

BREAD AND MILK. — Cut slices of fine stale bread into small pieces, and pour boiling water over them; cover close, and let it stand for ten minutes, after which pour over good new milk in an equal quantity, and flavour with sugar or salt.

BREAD AND RICE PUDDING.—Boil a quarter of a pound of rice in milk till it is quite soft, put it into a basin, and let it stand till next day. Soak some sliced bread in cold milk, drain the milk off, mash the bread fine, and mix it with rice, beat up two eggs with it, add a little salt, and boil it for an hour.

BREAD AND SUET DUMPLINGS.—Mix altogether half a pound of grated bread, half a pound of suet chopped small, the juice and grated rind of a lemon, quarter of a pound of moist sugar, and two eggs; make this into five dumplings; boil them in cloths for half an hour, and serve with sweet sauce.

☞ Bread, ½lb.; suet, ½lb.; lemon, 1; sugar, ½lb.; eggs, 2.

BREAKFAST. — This being the meal which is to support the body during the most active part of the day, great care should be taken to have it served with undeviating regularity. When the breakfast is served punctually and satisfactorily, it gives an impetus and a cheerfulness to the whole proceedings of the day; but a late breakfast frequently disarranges a whole chain of events. Indeed, such is the sensibility of the stomach, when recruited by a good night's rest, that, of all alteration in diet, it will be most disappointed at any change of this meal—either of the time of serving it, or of the quantity or quality composing it—so much so that the functions of a delicate stomach will be under such circumstances frequently deranged throughout the whole day after.

Breakfast is to the strong and healthy a most enjoyable meal, and it may always be considered as one of the best signs of health when a person can eat and digest a good breakfast, especially after exercise. The circumstance that the strong and healthy can enjoy with impunity a good breakfast has given an erroneous idea as to the advisability of invalids making it a hearty meal, and still worse, of prefacing it by exercise. With very many, perhaps the majority of people in this country, especially in towns, the interval between rising and breakfast is not one of great vigour; the powers both of body and mind are undoubtedly recruited if there has been due rest; but they are not in full action, and if too long an interval be permitted to elapse before food is taken, they become exhausted, and still more so if physical exertion is had recourse to. With persons of a weak constitution exhaustion of any kind before breakfast, such as walking, gardening, bathing, or even cold sponging, is almost sure to prove injurious. For, in these cases, exertion instead of improving digestion, weakens it. The erroneous opinion so generally formed on this point arises no doubt from the fact that exercise and exertion before breakfast induce an appetite; this may very possibly be the case, but at the same time it should be borne in mind that *digestion* is also required, in order that food may perform its proper office; and if one exists without the other, the effect is rather injurious than otherwise. The explanation is, that the nervous power which should have aided the process of digestion has been used up, and a full breakfast taxes the already overwrought nervous energy beyond the powers of endurance.

The time at which breakfast should be taken must depend upon a variety of circumstances. Generally speaking, about an hour after rising will be found the most appropriate. By that time the powers of the system have fully recovered from the inactivity of sleep, and the functions of the stomach and other organs have then come into full play. If abstinence is prolonged beyond this interval, the physical and mental energies, unsupported by the supply of food which indirectly gives them birth, gradually lessen, and incipient exhaustion ensues. The fluids of the stomach and smaller tissues begin to act upon the coats of those viscera instead of on the food, and an unpleasant feeling of hunger, or a loss of appetite comes on as a natural consequence. The exceptions to this general rule are, that many persons, even those who are not in the habit of taking supper, from a weakened condition of the system, experience an uneasy sensation of languor, accompanied by a feeling of debility and depression, which unfit them for the slightest exertion until they have taken food. On the other hand, many persons retire to rest at a late hour, immediately after eating a hearty supper, and rise at a disproportionately

early hour, so that the food has not had time to digest properly; and in such cases the breakfast hour may be delayed beyond the usual interval, so that the food of the previous night may have the opportunity of passing from the stomach before a fresh supply is introduced.

When breakfast cannot be taken within a reasonable period after rising, a biscuit or crust of bread may be eaten in the interim. A raw egg or two sucked from the shell, or broken into a cup of tea and drunk, will be found most valuable for this purpose.

The quantity and quality of food to be taken at breakfast, must depend on the constitution, habits, and pursuits of the person. Individuals exposed to cold moisture, the morning dews, or unwholesome air, should fortify their stomachs with a good and substantial breakfast. When the dinner hour is late, the morning meal for a person in health should be sufficiently solid to prevent the necessity of having recourse to a hearty luncheon. Tea and coffee are now the morning *beverages* generally used by all classes in this country; and the choice of these must depend on the experience of each individual, as to which agrees with him best. Coffee is preferred by many; but although very grateful to the palate, it is apt to prove heating. For the delicate, the bilious, and the young, it should not be taken strong, and should be well softened down with milk and sweetened with sugar. Tea is considered as extremely grateful and refreshing, but in many cases it acts injuriously upon the nerves. In making this beverage, it is best to use good black tea, and to drink it of a moderate and reasonable strength. Green tea should, by all means, be avoided. Chocolate is occasionally taken with breakfast, but owing to its oily constituents, it is apt to disagree with all but the strongest stomachs. Cocoa, sometimes recommended as an occasional drink, and when made from the nibs, may prove beneficial. Persons affected with indigestion, and those with weak stomachs, are frequently troubled with heartburn, and other uneasy sensations, every time they take much warm fluid; in such cases it is advisable to drink a cup of weak tea on rising in the morning, and only a small cup of tea with breakfast, in order to avoid mixing much liquid with solid food—a combination that rarely agrees well with the enfeebled or delicate stomach. The *solid food* for breakfast should be easy of digestion and nutritious; and sufficient to afford the gentle stimulation which the system requires. Females, children, and persons leading a sedentary life, should confine themselves to a sufficient quantity of good bread and butter; to which an egg, or a small rasher of mild bacon, may be advantageously added. Persons engaged in active occupations, may venture somewhat further, and add a little ham or cold meat. When an undue time will elapse before the luncheon or dinner, and particularly during the colder season of the year, the broiled leg of a fowl, an underdone mutton chop, or a little tender rump-steak, will be found by the persons last referred to, very acceptable. But excess must be particularly avoided: a rule easily violated at the breakfast table. In all cases, and especially when a weakened condition of the digestive powers exists, new bread, hot rolls, butter in excess, and the fat of meat are to be avoided.

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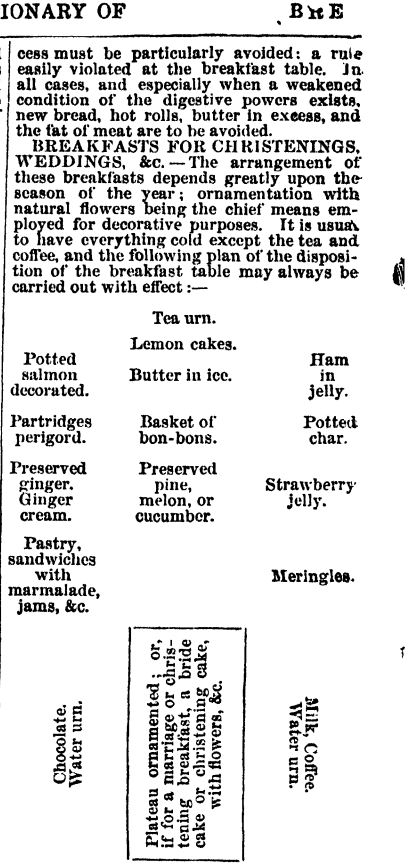

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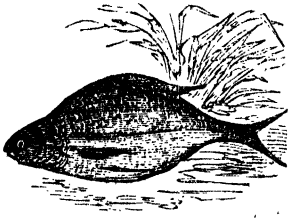
places. Game and lobster salads may make part of the dishes, and venison is an appropriate luxury. Ice-pails may, in hot weather, be placed on the table. Plovers' eggs, hot, in a napkin, or cold, laid in moss, are tasty. At such entertainments, the lighter dessert wines are used, and also liqueurs. Toast, rolls, muffins, eggs, may find a place on the side table. Fruit may form a part of the repast, according to the season.

Breakfasts are supplied by pastrycooks at so much per head, according to the style in which they are to be served; the charge usually ranging from 4s. to 10s. Under such arrangement the contractor provides every article that is to be used, as well as what is to be consumed. Attendants are also sent, who prepare the table, wait on the guests, and ultimately clear the things away. Breakfasts thus supplied are the most satisfactory. The repast is better "got up" than it generally is, when private resources are only available. The person who gives the breakfast is spared all trouble and anxiety, the guests are much better pleased, and the expense is very little more than the home-prepared festival.

BREAKFAST ROLLS.—To two pounds of flour put a teaspoonful of salt, a quarter of a pint of fresh yeast, and as much water as will make a batter. Stir this well till it is smooth, and let it stand covered before the fire to rise for two hours. Add as much more flour to it, which you should have rubbed down with the butter you mean to put to the rolls. Work the dough very smooth, divide it, and mould it into rolls; bake them in tins.

BREAM.—Called by naturalists *Cyprinus Brama*, is a deep but narrow or thin fish, and is of two kinds, the silver bream and the golden or carp bream, of which the latter is the more prized for culinary purposes, and also grows to a larger size, sometimes attaining the weight of seven or eight pounds; it is



a broad, hog-backed fish, with a forked tail, a small dorsal fin, which is compensated for by the largeness of the anal one, and by the more than usual size of the forked fin between the dorsal and the tail. It has a small head and mouth, and a prominent eye; the haunts of the bream are ponds and deep sluggish parts of rivers, with marly or clayey bottoms, except in March and April, and again in June, just after spawning; when they are found in the gentle streams, with a sandy or gravelly bottom. Bream spawn about the end of May, at which time they leave their usual haunts in the deepest parts of a river or pond, and seek those spots which are fullest of weeds, on which they deposit their spawn. Old Izaak Walton tells us that the male fish is provided with two milts, and the female with two large bags of spawn. The rivers of this country most prolific in bream, are the Ouse, in Bedfordshire and Huntingdonshire, the Oundle, in the latter county, the Cam, in Cambridgeshire, the Yare, in Norfolk, and the Wey, in Surrey; whilst in some parts of the Lea and the Thames, very fine specimens of this fish will be found.

The best *time* for fishing for bream, is in the months of July and August; although, if the weather continue warm and genial, good sport may be obtained in September, and even in October. The *rod* should be light and pliable, about 12 feet in length; the butt and next joint made of cane, bamboo, or deal; the third joint of lance wood or hickory; and the top joint of lance wood, green heart, or spliced cane. The *reel* may be either of brass or wood; the *running line* should be fine, and either plaited or twisted. The former is more suitable, if to be used with a brass reel, and the latter for the wooden one; the *bottom line* or *tackle* should be of fine round gut, from 3 to 6 feet long; the *hook*, number 6 or 7; and the *float*, a turkey or swan quill, or cork, according to the stream in which it is intended to be used. As bream are fond of resorting to the deepest parts of ponds, or to the deepest holes in rivers, where the water is sometimes 20 or 30 feet deep, a *sliding float* should be added to the stock of knick-knacks which go to make up the full complement of any angler's stores; the use of this float is, that if a *fixed float* were used, and if it were fixed at the proper depth, the line would be too long for casting in, and the fish when hooked could not be brought to the surface for netting or landing, in consequence of the float not being able to pass through the rings of the rod; the line, say 20 or 30 feet below the float, would be unmanageable by a 12-foot rod, even if the angler were on a high bank; the *sliding float* should be made of cork, with rings just large enough for the running line to pass freely through, fixed at the *top* as well as to the *bottom*, and in a direct line with each other, to keep the float stationary at the proper depth, or rather to make the float keep the bait in its proper position; the line must be stopped from passing through the rings of the float by taking a loop therein, through which may be placed a piece of string or line large enough to do this, but small enough readily to pass through the rings of the rod; when in the water, the buoyancy of the float will keep it on the surface, and the line will pass through the rings until checked by the piece of inserted string or line. Of course the position of this must be changed according to the depth of the water to be fished in. The *leger line* is also used for bream fishing. The best *baits* for bream are lob, dew, red, and marsh worms, gentles, wasp grubs, and paste, but they may be taken with wheat-pith, greaves, grasshoppers caddis, and sal-

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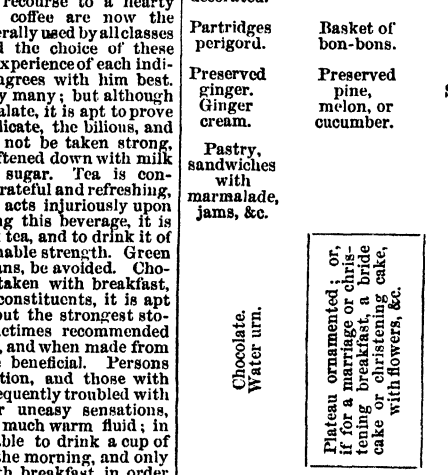

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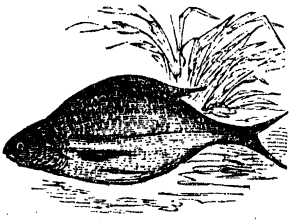
BREAKFAST ROLLS.—To two pounds of flour put a teaspoonful of salt, a quarter of a pint of fresh yeast, and as much water as will make a batter. Stir this well till it is smooth, and let it stand covered before the fire to rise for two hours. Add as much more flour to it, which you should have rubbed down with the butter you mean to put to the rolls. Work the dough very smooth, divide it, and mould it into rolls; bake them in tins.

BREAM.- Called by naturalists *Cyprinus Brama*, is a deep but narrow or thin fish, and is of two kinds, the silver bream and the golden or carp bream, of which the latter is the more prized for culinary purposes, and also grows to a larger size, sometimes attaining the weight of seven or eight pounds; it is



a broad, hog-backed fish, with a forked tail, a small dorsal fin, which is compensated for by the largeness of the anal one, and by the more than usual size of the forked fin between the dorsal and the tail. It has a small head and mouth, and a prominent eye; the haunts of the bream are ponds and deep sluggish parts of rivers, with marly or clayey bottoms, except in March and April, and again in June, just after spawning; when they are found in the gentle streams, with a sandy or gravelly bottom. Bream spawn about the end of May, at which time they leave their usual haunts in the deepest parts of a river or pond, and seek those spots which are fullest of weeds, on which they deposit their spawn. Old Izaak Walton tells us that the male fish is provided with two milts, and the female with two large bags of spawn. The rivers of this country most prolific in bream, are the Ouse, in Bedfordshire and Huntingdonshire, the Oundle, in the latter county, the Cam, in Cambridgeshire, the Yare, in Norfolk, and the Wey, in Surrey; whilst in some parts of the Lea and the Thames, very fine specimens of this fish will be found.

The best *time* for fishing for bream, is in the months of July and August; although, if the weather continue warm and genial, good sport may be obtained in September, and even in October. The *rod* should be light and pliable, about 12 feet in length; the butt and next joint made of cane, bamboo, or deal; the third joint of lance wood or hickory; and the top joint of lance wood, green heart, or spliced cane. The *reel* may be either of brass or wood; the *running line* should be fine, and either plaited or twisted. The former is more suitable, if to be used with a brass reel, and the latter for the wooden one; the *bottom line* or *tackle* should be of fine round gut, from 3 to 6 feet long; the *hook*, number 6 or 7; and the *float*, a turkey or swan quill, or cork, according to the stream in which it is intended to be used. As bream are fond of resorting to the deepest parts of ponds, or to the deepest holes in rivers, where the water is sometimes 20 or 30 feet deep, a *sliding float* should be added to the stock of knick-knacks which go to make up the full complement of any angler's stores; the use of this float is, that if a *fixed float* were used, and if it were fixed at the proper depth, the line would be too long for casting in, and the fish when hooked could not be brought to the surface for netting or landing, in consequence of the float not being able to pass through the rings of the rod; the line, say 20 or 30 feet below the float, would be unmanageable by a 12-foot rod, even if the angler were on a high bank; the *sliding float* should be made of cork, with rings just large enough for the running line to pass freely through, fixed at the *top* as well as to the *bottom*, and in a direct line with each other, to keep the float stationary at the proper depth, or rather to make the float keep the bait in its proper position; the line must be stopped from passing through the rings of the float by taking a loop therein, through which may be placed a piece of string or line large enough to do this, but small enough readily to pass through the rings of the rod; when in the water, the buoyancy of the float will keep it on the surface, and the line will pass through the rings until checked by the piece of inserted string or line. Of course the position of this must be changed according to the depth of the water to be fished in. The *leger line* is also used for bream fishing. The best *baits* for bream are lob, dew, red, and marsh worms, gentles, wasp grubs, and paste, but they may be taken with wheat-pith, greaves, grasshoppers caddis, and sal-

mon roe. The *ground bait* for bream should be selected according to the *bait* intended to be used; either worms, chopped into pieces about an inch long, carrion gentles, wasp grubs, boiled barley or malt, either whole or coarsely ground, and grains; and should be cast into the place intended to be fished 20 or 24 hours before commencing. The bream is a very shy fish, and requires that the angler should practise great caution if he would succeed in taking him. Books: *Blaine, Daniel, Walton (Ephemeras' Edition) Bailey's Instructor.*

BREATH, IMPURE.—There is nothing more annoying to a person of refined feeling, or disagreeable to all who approach him, than to be afflicted with an impure breath; and as the causes are so limited from which it proceeds, and the mode of treatment so simple and attainable by all, it becomes a great social dereliction in any one so afflicted not to immediately avail himself of a remedy. Impure breath can only proceed from three causes, an unhealthy state of the stomach, unclean or decayed teeth, and salivation. For the latter condition there is no remedy till the course of medicine that has produced it has been withdrawn. When depending upon an impure state of the stomach, the best remedy is wormwood or camomile tea, taken in cupfuls, three times a day, with half a teaspoonful of carbonate of soda in each dose, with an aloetic or colocynth pill, twice a week. By this means, persisted in for a short time, the worst case of fetid breath may be conquered, when dependent on a depraved state of the digestive organs. For impure breath, the consequence of the state of the mouth and teeth, the only cure is cleanliness, and where it is inconvenient or impossible to stop the decayed teeth, and the patient is disinclined to have any stumps or shells of teeth removed, the mouth may always be kept clean and perfectly inoffensive by the daily use of the tooth-brush and the following powder.

Powdered cuttlefish .	2 drachms.
Powdered myrrh . .	½ a drachm.
Carbonate of soda . .	1 drachm.
Charcoal powder . .	1 ounce.

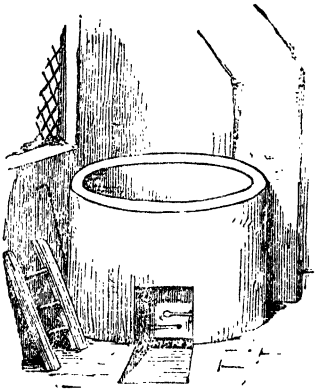
This powder should be used freely, and allowed to remain some minutes in the mouth and over the teeth before being washed away.

To effect the same object, but in habitual and long standing cases, the teeth may be cleaned with warm water in which a small quantity of the chloride of lime has been dissolved, in the proportion of half a spoonful to a pint of water. By a simple adherence to one or more of these plans this most unpleasant annoyance can always be mastered, and its repetition prevented.

BREWING.—The process of brewing ought to form a part of the domestic economy of every family, for similar reasons as those that apply to home made bread, namely, that the article thus produced may be obtained much purer and for a far less cost than when purchased from the brewer or the publican. Brewing is not a difficult art, a great deal depends upon proper management and strict attention to certain definite rules; and whatever obstacles may present themselves at the outset will soon be overcome by practice and personal experience.

The process of brewing may be divided into three distinct heads—1. The utensils employed. 2. The ingredients used. 3. The various operations performed.

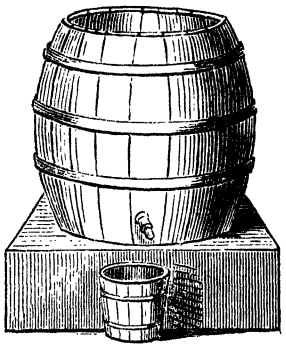
1. THE UTENSILS. *The Copper* is used for heating the water; sometimes it is fixed for the purpose, if the brewing be on a tolerable scale; or in a portable one, if the brewing be limited; in short, the size of the copper must depend upon the extent of the establishment, and what is required; the copper in the engraving is a fixed one



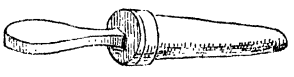
of the smallest size. But it is not absolutely necessary that a copper should be designed purposely for brewing; the ordinary washing copper with which every house is furnished may be employed. If this be the case the size of the copper will determine the extent of the brewing. If it be required to brew two kinds of beer at the same time, namely, nine gallons of ale, and nine gallons of table beer, the capacity of the copper should not be less than thirteen gallons. If one kind of beer be only required, then, for each nine gallons the copper should contain, if the whole quantity of grist be mashed only once, thirteen gallons; if the mashing be performed in two separate operations, seven gallons; if in three operations, five gallons. It is not economical to exceed these capacities, at least, not to extend them to fifteen, nine, or seven gallons. To save time and labour it is desirable that the copper be placed, if it can be conveniently done, at such a height as will allow the water to run from it into the mash tub, by means of a wooden spout or gutter. Much trouble, besides waste, will also be avoided if the copper be furnished with a metal tap; but, instead of having it soldered in, it is better when consisting simply of a pipe of sheet copper, coming out level with the bottom, and projecting beyond the brickwork in

which the copper is fixed. Into this tube the tap may be easily secured, as is done by fixing it in a cask, and again removed as occasion may require. The tap should be of a size sufficient to prevent its being choked by the hops in drawing off the malt wort.

The Mash Tub is the vessel which is to hold all the ground malt or grist,



and water enough to make the infusion of sweet wort for ale. It is generally made of wooden staves, fixed by hoops of iron or wood; two-thirds of any broad bottomed cask or barrel will do for this purpose. All that is essentially necessary is to have the vessel capacious enough to hold the malt and water to be infused, with a contrivance at the bottom to let off the infusion or sweet wort into another vessel. For this purpose some have a metal tap fixed near the bottom, but in cheaper ap-



paratus a spigot and faucet is found sufficient for those who cannot afford the other. This is merely driven tight into the hole in the lower part of the tub, and the peg takes out. The objection to this contrivance, however, is that it is apt to swell by the hot liquid, and in attempting to draw off the wort, the apparatus may be forcibly pulled out altogether. The size of the mash tub must be adapted to the mode of brewing to be pursued. A smaller or larger mash tub will be required for the same quantity of liquor, according to the number of mashes it is to undergo. But in any case it should be large enough to hold the whole of the wort of which the ale is made, and all the malt, and there should be likewise room enough left to mash in; for this purpose the liquor should not reach above five to six inches from the edge of the mash tub.

The Under-back is a shallow tub placed below the mashing tun, for the wort to run off into when drawn from the grains. Its size is proportioned to that of the mashing tun. It is best to be large enough to hold all the wort of one mashing, that the wort may not be cooled by being transferred into other vessels previous to boiling. This tub should have its capacity divided into gallons, that the quantity of wort from each mash contained in it may at once be known by mere inspection.

The Cooler is a flat tub used for the purpose of cooling the wort before it is fermented; common washing tubs will answer this purpose tolerably well. For each nine gallons of liquor to be brewed let these tubs contain in the whole fourteen gallons, which may be divided in the following manner, and from these sizes a calculation for any greater scale may be readily made; the larger tub, in each case, being intended to serve in the three-fold capacity of *receiver*, *cooler*, and *gyle-tun*. For a brewing of eighteen gallons, one sixteen gallon and one twelve gallon tub are required. For twenty-seven gallons one tub of eighteen gallons, and two tubs of twelve gallons, are necessary. To brew a barrel, the larger tub should have a capacity equal to thirty gallons, while each of the other two should be able to hold thirteen gallons.

The Thermometer is found of great service to the brewer, and should always be employed where accuracy is required. By it the proper heat of the mash is regulated, and of the worts when drawn from the mash tun. It indicates when the worts in the coolers are of the proper temperature to begin the fermentation, and it marks the progress of this process by the increase or diminution of heat. For this purpose a common thermometer with a metal scale, enclosed in a tin case, will do.

2. THE INGREDIENTS USED.—These consist of malt, hops, water, and yeast. *The Malt* is chosen according to the intended character of the brewing; pale, amber, high-dried, or any mixture of them, as the occasion may require. The amber-coloured is best adapted for general brewing, but pale malt is preferable for brewing in a small way; either may be procured of any respectable maltster. Malt varies much in *quality*; when good its grains are large, full of flour and plump; they break easily between the teeth, and if drawn across a board leave a chalky trace. The shell or husk also should be thin and brittle. When the malt is purchased, inquiry should be made, whether it is old or new. If the malt be new, it should be left exposed to the open air one or two days after grinding, before it is used. If it be old, it will be better to have it ground on one day and brewed the next without allowing it to stand after it is broken. It should be bruised moderately small, so that every grain be crushed: but if ground very fine, it will clog the mash and impede the draining of the wort. The *quantity* of malt used in domestic brewing may be regulated as follows:—If the beer be not intended for keeping, one bushel of malt will make twelve gallons of common or table ale. Or from one bushel of malt may be brewed twenty-four gallons of table beer, without any table ale or nine gallons of ale, and six of table

beer, or six of ale and twelve of table beer, or any other proportions, bearing in mind that the *common* ale and table beer are here considered as two of table beer, being equal to one of ale. This is the smallest quantity of malt that should be employed for brewing twelve gallons of good table or common ale. It must be understood, that the malt be measured before it is ground, because a bushel of malt by measure produces, when coarsely ground, one bushel and a quarter of grist, and when finely ground, the increase of bulk is still more considerable; hence, if the malt be purchased in a ground state, this allowance must be made accordingly. *Hops*, like malt, vary much in quality; the best are of a bright colour between yellow and green, of a pungent fragrant smell, and when rubbed between the hands, of a glutinous character; if any brownness of colour appears on them, it is a sign that their qualities have partially perished. They should be chosen free from leaves, stems, &c., and be kept in a dry place closely packed, or they will become damp and mildewed. Hops do not keep perfectly good for more than a year, and therefore it is best to procure them of the present year's growth. The *quantity* of hops used may be regulated according to the palate. One pound of hops to a bushel of malt produces a pleasant bitter, and is considered a good proportion, but less may be used if the draught is quick. The *water* best adapted for brewing is variously estimated, some giving the preference to soft water, and others to hard. But it may be considered that any kind of good drinkable fresh water will do for brewing, provided it be free from impregnations derived from stagnant pools or ponds containing decayed animal and vegetable substances. In all cases it is advisable that the water should be allowed a sufficient time to settle before it is used. *The yeast* must be sweet and good, for upon that circumstance proper fermentation mainly depends. The best yeast is that which is collected at the top, and which has become a dense tough froth, formed when the fermentation has been a good deal advanced. What has fallen to the bottom, or the ground yeast, is not so powerful. Though yeast can be kept, yet new yeast is more active than old. Yeast is also liable to become putrid by keeping, and the smallest quantity of this, or the least tendency to it, will inoculate a whole tun. The *quantity* of yeast that should be used cannot be the same exactly for all cases, for it must depend partly on the quality of the beer, and upon the season: in most cases a larger quantity of yeast will have the same effect as a higher degree of heat in exciting the fermentation, and a smaller quantity will be equivalent to a lower temperature; but, in general, a gallon for four barrels may be stated as the usual proportion when the wort is from 60 to 70 degrees; if the heat be greater a smaller quantity will be sufficient.

3. *The operations* in the process of brewing are, mashing, boiling, cooling, fermentation, and cleansing. *Mashing* is extracting from the ground malt, by the addition of hot water, the infusion or wort. During the process of mashing, a peculiar principle contained in the malt, called by chemists *diastase*, reacts upon the starch with which it is associated, and converts it first into a kind of gum, and ultimately into a species of grape sugar. The more perfectly this is effected, the richer will be the resulting wort in sugar or "*saccharine*," and the stronger and more alcoholic the beer produced by its fermentation. Mashing is effected by three distinct processes. The action of the first mash is merely to extract the sugar contained ready formed in the malt; that of the second to convert the starch into sugar by the action of the diastase; and that of the third to fully complete the last-named object, as well as to carry away the remaining portion of extract left from the second mash. The quantity of water to be employed for obtaining the different mashes must be determined by the relative capacities of the mash tub and the copper; care should be always taken to employ so much for the first mash as will keep a sufficient quantity in the copper to prevent its being injured by the fire. When you commence the process of mashing, fix the mash tub in a convenient situation, and in a slightly slanting position, so that it may readily receive the water from the copper, and also allow sufficient room for the person who is to stir the mash. Then having adapted to the orifice of the spigot or tap that projects within the tub, a wicker strainer covered with a case of close canvas, to prevent the grains and fine flour from passing through, pour in the mash tub ten gallons of boiling water, for every five pecks of malt to be employed. When the water has cooled down to 160 degrees in summer, or 170 in winter, let one person gradually pour the malt into the tub, while another stirs and mixes it with the water. Then thoroughly agitate the whole mixture, and keep stirring for twenty or thirty minutes, in order that every particle of malt may become completely saturated. After which cover the mash tub closely with malt sacks, cloths, or whatever else is handy, to keep in the steam.

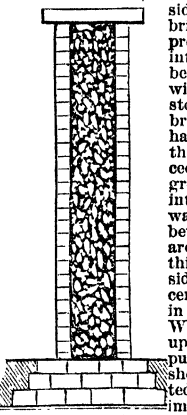
When the mash has stood for at least one hour and a half in winter, and one hour in summer, draw off a few quarts of wort into the under-back, and return it into the mash tub, that it may run off clear; when it runs clear, draw off the whole as quickly as possible. During the time the first mash is standing on the malt, refill your copper with water, and bring it to the heat of 190 degrees for the second mash; and when the first mash has run off, lade as much water on the malt as will make it of the same consistence as the first mash. If the brewing be intended only for nine gallons of beer per bushel of malt, five and a half gallons of water is the proportion required for the second mash. Let the water be poured on the malt by one person, while another plies the "oar" for at least half an hour. If it be intended to brew only one kind of liquor, the second wort may run into the same receiver containing the first wort. The second mash must stand for an hour and a half, and then be drawn off as

quickly as possible. The third mash should be made by adding the remaining portion of the water heated to 200 degrees, this should be well stirred and staud for an hour. Although three separate operations of mashing are here stated, if time or convenience does not admit of this proceeding, the grist may be mashed in two operations only, with the whole allowance of water to be employed; in that case a quantity of water will be seen lying on the top of the malt, the mash being too thin, and a portion of the extractive matter remains in the grain which is mashed out by the second mash. But it is always preferable to make three mashes. When you have mashed a third time you may proceed with the process of *boiling*. Empty your copper of water, and, if it will hold the whole of the wort, fill it with the first and second worts together with the hops, and likewise your third wort, as soon as it has run off; if the copper be not large enough to boil at once, mix your worts together, and boil them twice; taking care to add the hops of the first boiling to the second. Boil the mixture till the liquor *breaks*, or becomes clouded with large fleecy flakes. This will take place probably when the wort has been boiled about one hour. The breaking or curdling is best observed by taking a basinful of the wort out of the copper and suffering it to cool, when the flakes will be seen distinctly in the wort. Whilst the boiling is going on, arrange the tubs for the cooling process, by raising them from the floor on to a support, to allow a free circulation of air beneath them; then place a hair sieve over it, supported by a frame of four pieces of wood joined ladder-wise, and resting on the edge of the tub, strain the boiled liquor through the sieve. Put the hops back into the copper, and boil them again with the second and third wort. *Cooling* is the next process, the object of which is to reduce the temperature of the liquor as quickly as possible, in order to avoid acidity or "souring." When the boiling is finished, the mash tub must be cleared of the grains, and after rinsing it with water, fill it with the boiled wort, and put it in a place where it is not exposed to a current of cold air, to serve as a gyle tun for the wort. When the contents of the several tubs have so far cooled, that the average temperature of the different quantities united will be from 62 to 65 degrees, the process of *fermentation* then takes place; pour the whole into the gyle tun, add the yeast, and, having covered up the vessel, let it stand in a moderately warm place The method of mixing yeast with the wort is as follows: take one pound of good yeast, and about two quarts of wort, stir them well together, and place them near the fire for a few minutes till the mixture begins to ferment; then pour the whole into the gyle tun, and agitate the contents briskly with the oar; then cover up the vessel. After fermenting twenty-four hours, take a handful of flour, and the same quantity of salt, place them before the fire to get warm, and sprinkle them over the contents of the gyle tun; then give the whole a good stirring. If the fermentation proceed too rapidly, and there appear danger of the whole contents of the vessel overflowing, the yeast may be beat down with a stick, and the tub uncovered: a door or window may also be opened in the place where the tub stands to admit a cool draught of air, for retarding the fermenting process. If the fermentation is languid and feeble, one or two large stone bottles, filled with hot water, closely corked, may be let down into the tub, to increase slightly the temperature of the liquor. The commencement of the fermentation is indicated by a line of small bubbles forming round the sides of the vessel, and in a short time extending over the whole surface. A crusty head soon forms, and then a thick rocky one, followed by a light frothy head. At length the head assumes a yeasty appearance, the colour becomes yellowish-brown, and a vinous odour is developed. As soon as this last head begins to fall, the liquor should be skimmed continually every two or three hours until no more yeast is formed. It may be regarded as a rule that the lower the temperature is, and the slower, more regular, and less interrupted the process of fermentation, the better will be the quality of the brewing, and the less liable to be changed by age. *Cleansing* consists in running the beer from the gyle tun into casks or other vessels, set sloping, so that the yeast, as it forms, may work off the one side of the top, and fall into a vessel placed below to receive it. The process of *cleansing* is generally commenced as soon as the saccharine in the fermenting wort falls to about ten pounds per barrel, a degree of attenuation which it usually reaches in about forty-eight hours. When *barreling* the beer, draw off the fermented liquor from the thick sediment in the fermenting vessel into clean casks, previously rinsed with boiling water; and when the casks have been filled, strike a few strokes with a mallet on the hoops, in consequence of which the air-bubbles become displaced, the liquor subsides a little and leaves more to be added. A slow fermentation will still go on in the beer, and an additional quantity of yeast become disengaged, and overflow the barrels, which should be placed with the bung-holes inclined a little on one side. The same liquor which overflows from the cask—being saved by means of vessels placed underneath—may be used for filling up the barrels. In four or five days the beer will have purged itself from the yeast; let it stand a few days more till the vinous fermentation is completed, which is easily perceived by the yeast at the bung-hole turning brown and becoming full of holes, the casks may then be bunged up. The casks should be occasionally examined, especially in warm weather. If a hissing noise is audible at the bung-hole, the spile may be left in loosely till the liquor has become quiet; but it is better to check the fermentation, which may be done by repeatedly wetting the cask with cold water all over with a mop. The beer being well prepared and completely worked off, it will then be proper to remove it to the place where it is to remain for use. As soon as it is placed in the cellar—where it should be

kept as far as possible from a current of air—the bung must be drawn, and the casks filled up quite full with fine beer, skimming off the head from time to time that will arise in consequence of its being rolled over. After being attended to in this manner for two or three days, the casks should be bunged tight, and a hole bored with a gimlet near the bung for the vent peg, which should be left rather slack for a day or two. In three weeks or a month the beer will become fine, and may then be tapped. The following important items in the process of brewing cannot be too strongly insisted upon:—The proper heats of the water in the different mashings; the length of time the water should stand on the mash; the time that the wort should actually boil; the necessity of getting the wort cool as soon as possible; the proper heat for mixing together the wort and the yeast, and the subsequent attention thereto; but above all the constant care to fill up the barrels repeatedly.

In addition to the foregoing special directions for the process of brewing, the following *hints and cautions* will be found worthy of attention. The *best time* for brewing is cool weather; March and October being expressly suited for brewing in a small way. If for want of room you are obliged to brew during warm weather, let the quantity be not greater than is requisite for immediate use; for most liquors, brewed during hot weather, seldom keep long. *Cleanliness* cannot be too particularly observed, especially in the summer season: every particle of matter left in the utensils, after being used, creates a foulness not easily afterwards got rid of, and inevitably imparts a bad taste for a length of time to subsequent brewings. Some days previous to the operation of brewing being commenced, all the casks and tubs should be filled with water, to render them tight. By neglecting this precaution, many disagreeable consequences may follow by unexpected leakage, particularly if the utensils are not well-seasoned vessels that are constantly kept in use. Immediately after the brewing utensils are made use of, they should be carefully and thoroughly washed out, and rinsed with cold water, and this operation must be renewed from time to time, if they are not soon again to be made use of. During the summer months a few lumps of unslacked lime should occasionally be thrown into each, and, with such lime liquor, the vessels should be well scoured. The copper likewise requires attention; it should never be used without being scoured, and in doing this the bottom, and all round the tap, should be specially examined, to see that no coat of verdigris adheres. *Preparations* should be made for brewing on the day before the actual process commences; the materials should be laid ready at hand, the utensils arranged in proper order, the copper filled, and the coals provided for the fire. Purchase malt in or before the month of May, to avoid the summer-made malts. Malt is also cheaper at that period than at any other. Purchase hops in October or November; if in a good ripening season, and they are in fine condition, lay in your stock. Seasons differ greatly. Easterly winds are bad for brewing, and worts exposed to them rarely escape injury. The sweet wort particularly will often contract an acidity not to be eradicated; therefore always shut out easterly winds, whenever it is possible. The mash-tub, underback, &c., ought to be painted when new and dry; first, by priming, which should be followed by three coats of paint, each successive coat increasing in substance; thus forming an unyielding mass. Wood so guarded will never shrink. Avoid all drugs of every kind; the true flavour of beer is derived from malt and hops alone; and the introduction of other ingredients, independently of the injury they occasion, is utterly useless and opposed to common sense. Books: — *Accum's Art of Brewing*, *Every Man his own Brewer*; *Levesque's Art of Brewing*; *Black's Practical Treatise*; *Roberts' Domestic Brewer*. See ALE, BEER, BOTTLING, CLARIFICATION, FINING, RACKING, &c.

BRICK AND CONCRETE WALL.—This method of construction is often adopted to economize bricks, and is as follows:—The



sides are carried up brick on bed, and, to produce the thickness intended, the space between is filled up with rough gravel, stone chips, broken brickbats, or any dry hard material. As the building proceeds, thin hot lime grouting is poured into the heart of the wall till all the spaces between the packing are completely filled; this adheres to the side brickwork and cements it together in one solid mass. Where walls are put up to suit temporary purposes, this plan should not be adopted, as it is almost impossible to separate the bricks from each other after the concrete has become fully set. By this plan it will readily be seen that a great saving of bricks is effected; for example, a 14-inch wall, built solid, requires 3620 bricks per rod, whereas by this plan 1210 bricks are sufficient, being the number required to build two 4-inch walls only. If to this is added the expense of the concrete, the brick and concrete wall will even then be found much the cheapest and most durable.

BRICKS are the materials most generally employed for the walls of private dwellings in this country, and when they are well made and properly burnt, no substance is superior in durability. But as modern bricks are often so carelessly made that they crumble to pieces in a very short time, much judgment is required in their selection

and purchase, and the best method is, to visit several brickfields before deciding. Bricks will last for a long time without requiring any attention beyond an occasional scraping of the surface and the filling up the vacancies left by the wasted mortar, known as pointing.

BRIDE.—See WEDDING CEREMONY.

BRIDE CAKE.—Take four pounds of flour well dried, four pounds of fresh butter, two pounds of loaf sugar, a quarter of an ounce of mace, and the same of nutmeg. To every pound of flour put eight eggs and four pounds of currants, which have been well washed and picked, and dried before the fire until they have become plump. Blanch a pound of sweet almonds, and cut them lengthwise, very thin; a pound of candied citron, the same of candied orange, and the same of candied lemon-peel, together with half a pint of brandy. First work the butter to a fine cream with your hand, then stir in the sugar for a quarter of an hour, beat the whites of the eggs to a strong froth, and mix them with the sugar and butter; beat the yolks of the eggs for half an hour, and mix them well with the rest; then by degrees put in the flour, mace, and nutmeg, and continue beating the whole till the oven is ready, put in the brandy, currants, and almonds lightly; tie three sheets of paper round the bottom of the hoop, to secure the mixture, and rub it well with butter, put in the cake, and lay the sweetmeats in three layers, with some cake between each layer; as soon as it rises and colours, cover it with paper before the oven is closed up, and bake it for three hours. It may be iced or not, as desired.

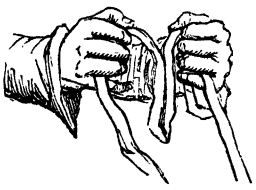
☞ Flour, 4lbs.; butter, 4lbs.; sugar, 2lbs.; mace, ¼oz.; nutmeg, ¼oz.; eggs, 32; currants, 16lbs.; almonds, 1lb.; candied citron, 1lb.; candied lemon-peel, 1lb.; candied orange-peel, 1lb.; brandy, ½ pint.

BRIDEGROOM.—See WEDDING CEREMONY.

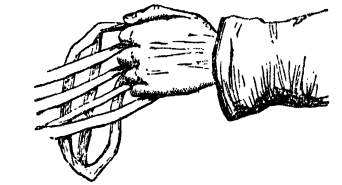
BRIDEGROOMSMAN.—See WEDDING CEREMONY.

BRIDESMAID.—See WEDDING CEREMONY.

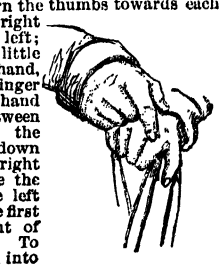
BRIDLE.—This contrivance for directing, encouraging, and restraining the horse when mounted, consists of the bit, headstall, and reins. The management of the latter forms an important feature in horsemanship, and varies according to the style of riding, the



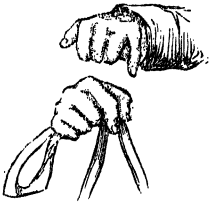
design of the rider, and the propensities of horses. In holding the snaffle reins separately, one rein passes into each hand, between the third and fourth fingers, and out of it over the forefinger, where it is held down by the thumb. When afterwards further advanced the reins are held in the left hand—as at first taken up—the left rein passing under the little finger, and the right under the third finger, both lying smooth through the hand, the superfluous rein hanging over the first joint of the forefinger, and the thumb being placed upon it. Riders should not throw their right shoulders back, as they are apt to do, when they first take the reins in one hand. The right arm should hang by the side, with the hand in a line with the thigh, or, if holding the whip, it may be kept a little lower than the left, in order not to obstruct the operation of the bridle. Generally speaking, it is better to ride with the snaffle alone, and to use the curb occasionally; in this case the curb reins may have a slide upon them, and may hang on the pommel of the saddle or on the horse's neck; when, however, the rider holds the curb as well as the snaffle, having both in the left hand, while the curb reins are placed as above described, the snaffle reins are placed within them, that is, the left snaffle rein enters under the second, and

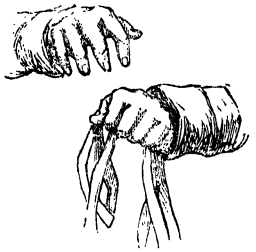


the right under the first finger and both pass up through the hand, and out of it over the forefinger, precisely as do the curb reins, except that they lie at first above, then within, and lastly under them. Shifting the reins should be done expertly, without stopping the horse, altering the pace, breaking the time, or looking to the hands. When the snaffle reins are held in one hand, the method of shifting from the left hand is as follows:—Turn the thumbs towards each other; carry the right hand over the left; in place of the little finger of the left hand, put the forefinger of the right hand downwards between the reins; lay the reins smoothly down through the right hand, and place the thumb upon the left rein, between the first and second joint of the forefinger. To shift them again into

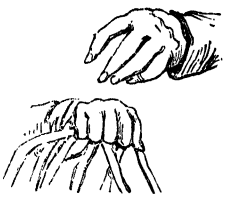


the left hand, it is only necessary to carry the left hand over the right; to put the little finger of the left hand downwards, between the right and left reins; to pass them gently upwards through the hand, and to let the ends hang over the forefinger as at first. When both curb and snaffle reins are held in the usual method, they should be shifted to the right hand, in a similar manner, by turning the thumbs towards each other; carrying the right hand over the left; putting the forefinger of the right hand into the place of the little finger of the left; the second

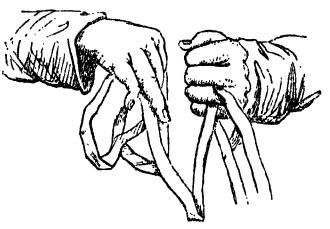




finger of the right into the place of the third finger of the left; and the third finger of the right into the place of the second finger of the left; and laying the reins smoothly down through the right hand. When the reins are shifted again to the left hand, the fingers of the left hand should be put into

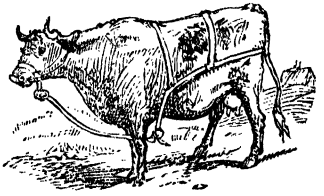


the places they were previously taken from, the reins being turned smoothly upwards through the hand and over the forefinger. Separating the reins is sometimes necessary. When a horse refuses obedience to one hand, two may be used. It is seldom, however, necessary to take more than one rein in the right hand, and this the right rein of the snaffle only; for this purpose the rider turns the back of his right hand upwards; puts the first three fingers over the snaffle rein; receives it between his little and third fingers, and lets the superfluous end hang over the forefinger, with the thumb upwards, as he does the bridle hand. *Adjusting the*



reins is shortening or lengthening them, wholly or partially, as occasion may require. To *adjust the whole*, take the superfluous reins that hang over the forefinger of the left hand, into the right, so that with that hand the horse may be supported, and every step he takes, felt. Then open the fingers of the left hand, so as to slip it up and down the reins smoothly and freely, and thereby adjust them at pleasure. *To shorten the curb rein, and lengthen the snaffle*, take into the right hand the centre of the curb rein that hangs over the forefinger, slip the whole of the reins too long, pass the left hand down them, and feel with the fingers whether both the curb reins are of equal length, before grasping with the left hand, or quitting with the right. *The shortening of the snaffle, and lengthening of the curb*, is similarly effected, by taking into the right hand the centre of the snaffle that hangs over the forefinger, and proceeding in the same way. *When any single rein requires shortening*, apply the right hand to that part which hangs over the forefinger, and draw it tighter. When the reins are separate, or occupy both hands, and want adjusting, the hands must be brought together to assist each other; remembering that the inner hand, or that which supports the attitude the horse works in, is not to depart from its position, so as to occasion any disorder, but that the outer hand is to be brought to the inner, for the purpose of adjusting them.—See BIT, CURB, REINS, SNAFFLE, &c.

BRIDLE, FOR OXEN.—When oxen are turned into pastures, it is generally necessary



to place some gear on them to prevent them from cropping the trees, and to preclude the possibility of their tossing when viciously inclined. For this purpose, the contrivance

known as the Normandy breechin, is best adapted, its application being shown in the accompanying engraving.

BRILL.—A fish somewhat like the sole, but broader, and intermediate between that and the turbot. It is a fine fish, not greatly inferior to the latter, though much cheaper.

BRILL, BOILED.—An hour before it is dressed, soak it in water with some salt in it. Score the skin across the thickest part of the back, to prevent it breaking on the breast, which will happen if this precaution be not observed, by the swelling of the fish. Put into a fish-kettle of cold water a large handful of salt, lay the fish on a drainer in it. When on the point of boiling, skim it, and afterwards set the kettle on the side of the fire to boil as gently as possible for from ten to twelve minutes. This allowance of time is for a fish weighing from five to six pounds. Have a fish-napkin properly arranged on a fish-drainer, and carefully dish the fish.

BRILL, FRIED.—Cut off the fins close to the sides, scrape off the slime, and dry the fish well; then egg them over, dip them in bread crumbs, and fry to a pale brown in plenty of dripping or lard. Garnish with fried parsley, serve up with melted butter or soy, ketchup or anchovy sauce.

BRILL, FRIED IN BUTTER.—Cut the fish from off the bones, in cutlets of about three inches or more; remove the skin from the dark side, but let the pale side remain. Dip each cutlet into butter, and fry in plenty of dripping. Garnish with fried parsley, and serve up with anchovy and melted butter.

BRIMSTONE.—See SULPHUR.

BRIOCHIC CAKES.—Make a paste with half a pound of flour and a little hot water, mixed with a spoonful of yeast; wrap up this paste in a cloth, and put it in a warm place for twenty minutes in summer, and for an hour in winter; then put a pound of flour on the board; mix the paste that you have prepared with it, together with three quarters of a pound of butter, five eggs, a little water, and a few grains of salt. Knead altogether three times; then wrap it up warmly, and let it remain for nine or ten hours. Cut the paste into pieces of the size desired, and mould them as you please; egg them over and bake them:—small one for half an hour, medium size for an hour, and large one for an hour and a half.

☞ *Paste:* flour, ¼lb.; hot water, sufficient; yeast, 1 tablespoonful. *Add:* flour, 1lb.; butter, ¾lb.; eggs, 5; water, sufficient; salt, a few grains.

BRITANNIA METAL.—An alloy composed of block tin, antimony, copper, and brass. It takes a high polish, does not readily tarnish; and when kept perfectly bright, nearly approaches the lustre of silver. It is not acted upon by acids, and may be safely used in the preparation or the partaking of food. A number of domestic utensils are made from this metal, and their cost being very moderate, they are brought within the reach of nearly all persons.

BRITANNIA METAL, TO CLEAN.—For this purpose a paste may be used, composed as follows:— Sift rotten-stone through a muslin or hair sieve: mix with it as much soft soap as will bring it to the stiffness of putty: to about half a pound of this, add two ounces of oil of turpentine. It may be made up into balls, or put in gallipots; it will soon become hard, and will keep any length of time. When the metal is to be cleaned, rub it first with a piece of flannel moistened with sweet oil; then apply a little of the paste with the finger, till the polish is produced; then wash the article with soap and hot water, and when dry, rub with soft wash-leather, and a little fine whiting.

BRITISH MUSEUM.—This national collection is situated in Great Russell Street, Bloomsbury Square, London. The public are admitted free on Mondays, Wednesdays, and Fridays, between 10 and 4, from the 7th of September to the 1st of January; between 10 and 5, from the 7th of January to the 1st of May; and between 10 and 6, from the 7th of May to the 1st of September; and daily during the weeks of Easter, Whitsuntide, and Christmas; also on Saturdays, in the summer months, after 12 o'clock. It is closed from the 1st to the 7th of January, the 1st to the 7th of May, and the 1st to the 7th of September, inclusive, on Ash Wednesday, Good Friday, and Christmas Day, and also on any special fast or thanksgiving day, ordered by authority.

The various objects of interest collected together, are classified somewhat as follows:—The Egyptian Antiquities are in two rooms—one on the ground floor called "The Egyptian Saloon," the other upstairs called "The Egyptian Room." *The Egyptian Saloon* consists of the heavier objects, such as Sarcophagi, Columns, Statues, Tablets of the Dead, Sepulchral Urns, &c., and comprises about 6000 objects. *The Egyptian Room* contains 102 glass cases of small statues, various articles of ancient domestic use, weapons, amulets, &c. *The Nineveh Marbles* are placed in a cellar under the building, and form a collection of early and interesting specimens, brought from the country whose name they bear. *The Etruscan Room* contains a collection of vases discovered in Italy. The collection is arranged chronologically, and according to the localities in which the several antiquities were found. *The Elgin Marbles*, so called from the Earl of Elgin, who brought them over to England in 1801. They consist of relics of Grecian architecture, and are considered as the most perfect specimens of ancient art. *The Phigalian Marbles, Egini Marbles, Lycian Marbles, and Boudron Marbles*, are various collections separated under their distinctive heads, and are all, more or less, interesting. *The Townley Collection* consists of marbles belonging to all periods, except the most ancient. *The Bronze Room* contains a number of cases of specimens of Greek and Roman art; comprising bronze utensils and personal ornaments, metal mirrors, lamps, incense vessels, candelabra, &c. *The Modern Marbles* chiefly represent the most celebrated Englishmen, from Shakspeare downwards. *The Medal Room* contains Greek, Roman, Saxon, and other coins, geographically and chrono-

logically arranged; those of each country being kept separate. The library of printed books consists of 500,000 volumes, comprising upwards of 700,000 works, taking each separate pamphlet as a separate work. *The Manuscripts* are divided under several heads, and the rarest of these, entitled select, can only be seen and examined in the presence of an attendant. *Print Room—Drawings, &c.* A small, but interesting and valuable collection of some of the most celebrated artists of ancient and modern times. *Mineralogy and Geology* arranged in the north gallery, with running titles supplied on the outside of the glasses, and labels within them. *Zoology*, comprising an extensive and interesting collection, especially of birds of almost every known species.

It is obvious from the numerous and varied points of interest which the British Museum presents, that it is impossible to view the whole collection at one visit; and it will, therefore, be found less fatiguing and more satisfactory, for the visitor to confine himself to certain departments on his first visit, and inspect the remainder on the same principle at subsequent intervals.

BROCCOLI, CULTURE OF.—This species of cabbage, of which there are many varieties, is propagated by seed. As all the kinds are not generally at command, the following times and varieties are specified as being those employed in general practice, and by which a supply always abundant is accomplished. A first sowing may be made under a frame at the close of January, and a second at the end of February, or early in March, on an eastern wall border, of the purple, cape, and other cauliflower varieties, for production at the close of summer and during autumn; the seedlings from these sowings are respectively fit for pricking out, if that practice be followed, in March and early in April, and for final planting at the close of the latter month and May. In April another crop of the same varieties may be sown for pricking out in May, and planting in June, to produce at the close of autumn and in early winter. During the month of May a fourth and larger crop than any of the preceding, of the early purple and white varieties, to be pricked out in June and planted in July; and finally, the last open ground crop may be sown in June, to be pricked out in the succeeding month and planted in August and September; the plants will follow from the others in succession throughout winter and spring. By these repetitions an almost continued supply is afforded. Each variety should be sown separately, and the sowing performed thinly; the beds not more than three or four feet wide, for the convenience of weeding. The seed must not be covered more than half an inch, and the beds must be netted over, to keep away the birds, which, especially, in showery weather, are very destructive. The fitness of the plants for pricking out is indicated by their having five or six leaves, rather more than an inch in breadth; they are set four or five inches apart each way, and water given every night until they have taken root. They must have four or five weeks' growth before they are again moved; or not before they have leaves nearly three inches in breadth. When planted out they must be set on an average two feet asunder each way; in summer a little wider, in winter rather closer. Water to be given at the time of planting, and occasionally afterwards until they are established; during the droughts of summer it may be given plentifully with the greatest advantage. They must be hoed between frequently, and the mould drawn up about their stems.

To force forward the winter-standing varieties, they should be taken up in November, and after the outer leaves are trimmed off, laid on their sides in a sloping position in a bank or terrace of light earth, space sufficient being left between every two plants that their heads do not come in contact. To continue the supply uninterruptedly, even in midwinter, the best practice is that when the crop sown about the third week in May has been planted out, the weaker plants which remain should be left eight or ten days to acquire strength, and then planted in pots filled with very rich compost, to be shaded and watered until struck. These are to be plunged in the ground at similar distances as the main crops, and about three inches below the surface, so as to form a cup for retaining water round each; these cups are filled up by the necessary earthings, which must be pressed firmly down to prevent the wind loosening them. *To preserve the winter-standing crops* from destruction by the severe weather, they should be taken up early in November, injuring the roots as little as possible, and laid in a sloping direction in the soil with their heads to the north. Or a small trench should be made in the first week in September, at the north end of each row, in which the adjoining plant is laid so low that the centre of its stems at the top is put level with the surface of the ground, the root being scarcely disturbed; it should then be immediately watered, and the roots covered with more mould. Thus every plant in succession is treated. Before the arrival of snow, a small hillock must be raised round each plant, to support its leaves and prevent their being broken. *For the production of seed* such plants of each variety must be selected, in March or April, as most perfectly agree with their peculiar characteristics, and are not particularly forward in advancing seed. As the branches spread, four or six stakes should be placed at equal distances round each plant, and hooped with string, to support them and prevent their breaking. When the pods begin to form water should be given repeatedly, and occasionally some thrown over the whole plant, which tends to prevent mildew. Before the pods begin to change colour, those from the extremity of every shoot must be taken away, as they yield seed which produce plants very apt to run to seed without heading, and by an early removal others are benefited. The branches ought to be gathered as soon as the pods upon them ripen. Varieties must never be planted near each other, or they will be

reciprocally contaminated. The seed ripens in August or September, and it is recommended to preserve it in the pod until wanted; although the general practice is to beat it out and store it as soon as it is perfectly dry.

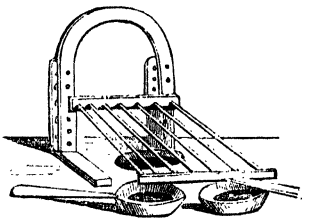
BROCCOLI, PICKLED. — Take firm, well-coloured vegetables, before they are quite ripe, and cut away the bark of the stems and all the green leaves. Scald them for four minutes in a pan of boiling brine, and then drain and dry them thoroughly. When dry pull them into properly sized branches, trim the stalks smoothly, and pack them up in jars: pour over them cold, vinegar in which black and Jamaica pepper, ginger, cloves, and a little cayenne, have been previously boiled.

BROCCOLI, PROPERTIES OF. —This esculent when boiled and eaten with a moderate quantity of pepper, is very wholesome, nutritious, and exceedingly easy of digestion; it furnishes a good assimilating dish along with solid animal food, and acts an auxiliary part in the dietary arrangement.

BROCCOLI, TO DRESS. — Choose those that are close, compact, and of a good colour. Strip off the outside leaves and trim away the tops of the inner leaves, cut off the stalk at the bottom, and pare away the outer, husky skin from it and the branches. Having washed them, lay them head downwards in a pan of cold water and salt, which will bring out all insects, and boil them open on a drainer, in plenty of water, with a little salt. Skim the water well: from ten to fifteen minutes will boil them. When the stalks are nearly tender they are ready. Melted butter is either served with the broccoli, or separately in a butter boat.

BROGUES, CORRECTION OF.—An *Irishman*, wishing to throw off the brogue of his mother country, should avoid hurling his words out with a superfluous amount of breath. It is not *broudher* and *widher* that he should say, but the *d*, and every other consonant, should be neatly delivered by the tongue, with as little noise, clattering, or breathing as possible. Next, let him drop the roughness or rolling of the *r* in all places but the beginning of syllables; he must not say *stor-rum* and *for-rum*, but suffer the word to be heard in one syllable. He should exercise himself until he can convert *plaze* into *please*, *plinty* into *plenty*, *bacon* into *beacon*, and so on. He should modulate his sentences so as to avoid directing his accent all in one manner—from the acute to the grave. Keeping his ear open for good examples, and exercising himself frequently upon them, he may become master of a greatly improved utterance. A *Scotchman* is betrayed into a contrary fault to that which the Irishman commits, and is continually drawling his tones from the grave to the acute. The smooth guttural *r* is as little heard in Scotland as in Ireland, the trilled *r* taking its place. The substitution of the former for the latter must be a matter of practice. The peculiar sound of the *u*, as spoken in the north, must be compared with the several sounds of the letter, as they are heard in the south; and the long quality which a Scotchman is apt to give to the vowels that ought to be essentially short, must be clipped. In fact, aural observation and lingual exercise are the only sure means to the end.

BROILING.—This culinary process is to small joints of meat what roasting is to large joints. *The apparatus required in broiling* is very simple, and consists only of a gridiron to be placed over the fire; or one with channelled bars leading to a trough beneath, placed before the fire. An improved broiling apparatus has lately been introduced, which consists of the ordinary form of gridiron, supported by two uprights and united by an arch; and the lower part being bent to a right angle, it stands loose by its weight alone, at the proper place, and may be removed when broiling is not required. The best method for using this apparatus is the following:—Instead of keeping the gridiron horizontal, which occasions much of the fat to fall upon the iron, it should be kept slanting, as in the engraving, by which the



fat runs down the bars into ladles placed to receive it. This apparatus is to be recommended for the cleanliness, facility and expedition with which the process can be performed. In broiling, generally, particular regard must be paid to the cleanliness of the utensil; it must be kept quite clean between the bars and bright on the top; before it is used the bars should be rubbed with fresh suet. It should then be heated for a few minutes, and when warm rubbed with a piece of brown paper; this will prevent the meat from sticking to the bars, or from being marked by them. Broiling requires a brisk, clear fire, the surface being modified by the sprinkling of salt. The ordinary gridiron should be placed sloping over the fire, that the fat may run off to the back of the grate, instead of falling on the live coals and smoking the meat; if this precaution should not prevent its making an occasional blaze, lift the gridiron quickly beyond the reach of the smoke, and hold it away until the fire is clear again. Turn the meat quickly and frequently while it is broiling, in order to preserve the juices; for this purpose a pair of tongs should be used instead of a fork, which allows the juice to escape. If, however, tongs are not used, the fork should be stuck into the outer skin or fat of the cutlet, chop, or steak, and not into the lean, as by that means a portion of the gravy will be wasted. Broiled meat should be rather underdone than otherwise, and it should be removed from the fire on the instant that it is

deemed to be sufficiently cooked. Hot dishes should be ready to place it on, and it should be sent to table immediately. Observe never to baste anything on the gridiron, because that may be the means of burning it and occasioning the fire to smoke; and also, if any butter or sauce be added after it is dished up, do not press the spoon or knife on the meat, as the crispness will be removed and the juices will render the viand leathery and unpalatable. Cutlets from the centre of the leg of mutton or from the neck are preferred to chops, for broiling where any delay is likely to take place between the interval of the meat being cooked and eaten, as the fat of chops, etc., becoming chilled or soddened by standing, it not only loses its pleasantness of flavour, but has its digestibility impaired. Cutlets or meats of any other form when egged and crumbed for broiling, should afterwards be dipped into clarified butter, or sprinkled with it plentifully, as the egg-yolk and bread will otherwise form too dry a crust upon it. Broiled meats are sometimes seasoned with salt and pepper, and brushed with a little oil or butter, to keep them moist, but unless this be done, no seasoning of salt should be given until they are just ready to be dished. Broiling is the best possible mode of cooking several kinds of fish and preserving their flavour, amongst which may be specified mackerel, whiting, and salmon in cutlets; when fish is thus dressed, it should be wrapped in a thickly buttered sheet of writing paper before it is placed on the gridiron, by this means it will retain its flavour better, and be less liable to be smoked. When a fowl or any other bird is cut asunder before it is broiled, the inner part should be first laid to the fire.

Although broiling possesses the advantage of expeditious cooking, it is not to be recommended on the score of economy, as a great proportion of the nutritious juices is discharged in the process, beyond the means of recovery. On dietary principles, however, broiling is a superior mode of dressing food. If the portion of meat is not too thick, and its fibre be cut across, the heat quickly penetrates and loosens the texture, while from the suddenness of the operation, the juices are prevented from being carried off, and it is thus rendered peculiarly tender and palatable. For invalids especially, broiling is deemed as the best mode of cooking meat, where it is given to restore strength, whilst as a matter of taste, it is often best suited and most acceptable to the fickle appetite of the sick person.

BROKER.—A sworn broker is a person licensed to act as the agent of parties in the sale or purchase of goods, stocks, shares, or funds, and in the negotiation of the receipt or payment of money beyond seas. He is paid for his services by a commission or percentage upon the amount or value of the business he is engaged to transact. He need not have the possession of the goods for the transfer of which he bargains, and he may not buy or sell upon his own account. He delivers to the buyer and seller respectively bought and sold notes, which contain the whole of the contract, and are sufficient to bind the parties. A material variation between the bought and sold notes is fatal to the contract. In the City of London a person must obtain a license from the Corporation to act as a broker, for which he pays £2 a year, and acting without such license renders him liable to a penalty of £500.

A Shipbroker is employed to procure goods on freight or a charter for ships outward bound, to enter and clear vessels at the Custom House, to collect the freight on goods, and generally to take an active part in all business between merchants and shipowners. *An Insurance broker* is an agent for effecting with the underwriters at Lloyd's an insurance of a ship or cargo. It is his duty to inform the underwriter of all the circumstances in his knowledge relating to the insurance, and, on the part of his principal to take care that the contract is properly executed. Unlike other brokers, an insurance broker, though he has given up the name of his principal, continues personally liable to the underwriters for the amount of the the premium, but he is not liable to make good to the owner of the ship or merchandise, who must look to the underwriters in the event of loss. *Exchange or bill brokers* negotiate the purchase and sale of bills of exchange drawn upon foreign countries; from their knowledge of the rate of exchange they fix the average rate of exchange in these securities, by which merchants consider themselves bound. The title of bill broker is also given to another class of persons, whose business it is to employ the spare money of bankers and capitalists, in discounting bills of exchange having some time to run before they become due. *Stock-brokers* are employed to transact business in the funds for stockholders, and conclude contracts or bargains in government or other stock. They are paid by a brokerage or commission, which they are entitled to deduct from the produce of the sale; generally an eighth (2s. 6d.) per cent. It is usual to apply the name of broker to a person who buys and sells second-hand furniture, although such an occupation does not bear any analogy to brokerage as here described. These persons do, indeed, sometimes superadd to their business the appraising of goods, and the sale of them by public auction, under warrants of distress for rent, for the performance of which functions they must provide themselves with an excise license, and they come under the regulations of an act of parliament. The business of a pawnbroker is altogether different from that of the commercial brokers here described. See DISTRESS FOR RENT, PAWNBROKER, STOCK-JOBBING, &c.

BROMPTON STOCKS.—These beautiful flowers are biennials, and their seed should be sown early in May, in a border of light sandy soil, with an eastern exposure, and never in front of a hothouse or south wall, as they cannot bear too much heat. The seeds should be sown very thinly in narrow drills, made about six inches apart. As soon as the plants begin to grow and have expanded their second pair of leaves, they

should be watered every evening with a watering pot having a very fine rose. When the plants are about three inches high, they should be thinned out, so as to be at least six inches apart, and the plants removed should be carefully replanted in another bed. In about a month's time they should be thinned again, and the alternate rows taken up, so as to leave the remaining plants about a foot apart every way; the plants removed being taken up with balls of earth, and carefully transplanted, watered, and shaded, till they have re-established themselves. Great care is necessary in transplanting, as the stocks have long tap-roots, with very few fibrils attached. When the plants are wanted to be very fine, they may be protected during winter by hoops and mats, or hand-glasses; but in general, this is not thought necessary. In March or April, a compost should be formed of sandy loam, or sand enriched with the remains of an old hot-bed, or vegetable mould formed of decayed leaves; and pits about two feet deep and two feet in diameter, dug in flower borders and filled with it, into which the stocks should be transplanted, with balls of earth attached, as large as can be taken up. They should be carefully shaded and watered till they have taken root; and afterwards they should be watered every night till they come into flower.

BRONCHITIS is now much milder in its attacks, and seldomer met with than formerly, though it still remains a disease of both severity and danger. *Acute bronchitis* is characterised by general fever, heat of the skin, difficulty of breathing, with hurried and sometimes laborious respiration; a peculiar sense of fulness and roughness of the windpipe, followed by hoarseness, oppression, or pain over the region of the heart, accompanied by a short dry cough. After from six to twelve hours, a secretion of mucus takes place in the trachea and bronchial tubes, producing a wheezing, rattling noise as the patient respires; and in consequence of the blood not being freely exposed to oxygen in its passage through the lungs, the lips and cheeks assume an ashy or dusky hue. The pulse at the first is quick and hard, but after a time, becomes full and what is called, soft; but so compressible, that a little extra pressure of the finger will apparently extinguish it. There is at the same time great prostration of strength, considerable anxiety and alarm, with pain in the head, giddiness, and when the symptoms are severe, even delirium.

Bronchitis arises in general from exposure to cold and humid atmosphere; taking cold after violent exertion, or from any of the ordinary causes of cold or sore throat. The hoarseness and dry full sense, experienced in the nose and windpipe, is often felt extending far down the chest, attended with considerable sneezing; and the efforts of a dry, hard cough, causing pain both in the chest and shoulders.

Chronic bronchitis, when arising as a primary disease, presents some or all of the previous symptoms; but in a considerably modified form, the fulness in the windpipe, oppressed and laborious breathing, hoarseness and cough, are, however, the most general symptoms of chronic bronchitis; the expectoration, though after a time becoming more free, is far from being copious, and consists of discoloured mucus; sometimes of a purulent appearance, at others stained with blood, or streaked with a brick-coloured fibrinous matter. The symptoms are generally exaggerated towards night, when they are attended with increased fever and night sweats.

Treatment of acute bronchitis.—In full bodied constitutions, if the disease be taken in its first stage, bleeding to the extent of eight or ten ounces may be very safely and beneficially employed; but as the debility that attends bronchitis is both great and sudden, unless adopted in the *earliest* stage, the practice would be highly culpable, as all the physical stamina is required to throw off the collected mucous from the bronchial passages so bleeding, unless employed early, can never properly be practised. When necessary, an emetic must be immediately given, consisting of antimonial and ipecacuanha wines, of each half an ounce, or the following powder:—ipecacuanha 15 grains, tartar emetic 1 grain, mix; to be dissolved in a little warm water and drunk directly, following it up by frequent draughts of warm water. If the first emetic does not operate freely, repeat the same dose within the hour, assisting the action, if necessary, by tickling the throat with a feather. As soon as the vomiting has subsided, apply a blister 3 inches wide by 6 inches long, down the centre of the chest, and give a tablespoonful of the mixture below every two hours. Take of—

Distilled water	6 ounces.
Tartar emetic.	6 grains.
Powdered nitre	1 scruple.

Dissolve, and add tincture of colombo, 2 drachms—mix. At the same time, between the doses, let the patient inhale the steam of hot vinegar and water, and wear a veil over the face, so as always to breathe through a medium. When the blister has risen and the plaster has been removed, apply a hot bread poultice, which repeat every hour, for two or three times; and finally, dress with violet powder.

When the expectoration changes its character and becomes thick, greenish and ropy, it will be necessary to give stimulating expectorants, to facilitate the discharge; for that purpose, the annexed mixture, in doses of a tablespoonful every three or four hours is to be employed. *Expectorant mixture.*

Gum ammoniacum. . .	2 drachms.
Carbonate of ammonia .	1 drachm.

Rub into a powder, then add a teaspoonful of water; triturate till the whole is rubbed into a smooth, creamy paste, when add, by degrees, six ounces of water.

Syrup of squills	1 ounce.
Tincture of tolu	2 drachms.
Spirits of sweet nitre . .	2 drachms.
Paregoric	½ an ounce.

Should there be much restlessness or want of sleep, 30 drops of laudanum may be taken at bed time in a little gruel, or added to a

dose of the expectorant mixture. Or when the mixture is not necessary, from 10 to 15 grains of "Dover's powder," according to the age and strength of the patient, should be taken an hour before bed time. It is also necessary to take an occasional aperient, which should consist of two assafœtida pills at night, and a black draught the following morning; or five grains of blue pill, and a dose of Epsom salts, three hours afterwards. The patient should be kept as much as possible in one temperature during the attack; and all lengthened conversation and fatigue strictly avoided. The diet should be light, low, and farinaceous, and consist of eggs, milk, custards, and sago, and tapioca puddings; and only when the expectorant or stimulating stage has been reached, should the drink be anything stronger than gruel. But when the expectorants are indicated, it becomes necessary to give wine, or other stimulants, and support the patient's strength by a more generous diet.

Treatment of chronic bronchitis.—Where the symptoms are severe, the treatment may begin by placing a blister on the throat, and giving the expectorant mixture already prescribed. But in ordinary cases, it will be sufficient to place a large hot bran poultice on the throat and chest, renewing it every three or four hours; and twice a day rubbing the chest and throat with the following embrocation:

Dissolve, by heat, two drachms of camphor in two ounces of olive oil, and add spirits of sal volatile half an ounce, and at the same time give the expectorant mixture in tablespoonful doses every two hours.

Where there is much loss of rest, and much anxiety, the annexed mixture is to be substituted for the expectorant, and taken in doses of two tablespoonfuls every four hours.

Dovers powder	1 drachm.
Carbonate of ammonia . .	2 scruples.
Camphor water	8 ounces.
Sulphuric ether	1 drachm.

At the same time, the steam of hot vinegar and water is to be inhaled, and the patient's strength supported by a proper and efficient dietary; with all the precautions advised in acute, observed in the management of chronic bronchitis.

BRONZE.—A metallic alloy composed principally of tin and copper, remarkable for the exactness of the impressions which it takes by moulding, as well as its durability. On a small scale, this alloy is prepared in crucibles, but for statues and larger works, on reverbatory hearths. The fusion of the mixed metals is conducted as rapidly as possible under pounded charcoal, and the melted mass is frequently stirred together, to produce a perfect mixture before casting.

BRONZE ARTICLES, TO CLEAN.—This should be done by merely dusting with a feather brush, or with a soft cloth, as washing will take off the bronzing.

BRONZING PLASTER FIGURES.—With a solution in water of palm-oil soap, mix a solution of sulphate of iron and sulphate of copper; this furnishes a brownish green precipitate, the colour of which may be modified at pleasure by the addition of a greater or less quantity of one or the other of these salts. The precipitate, after being washed and dried, is re-dissolved in a mixture of good varnish of linseed oil, and wax; and with this solution the figures (having been previously heated) are coated; on becoming dry they will be found to be perfectly bronzed.

BRONZE, TO REMOVE STAINS FROM.—Make the article very hot by dipping it in boiling water, then rub it with a piece of flannel moistened with suds made from yellow soap: rub clean with soft linen cloths. If the article to be cleaned be a tea urn or other similar vessel, it should be filled with boiling water before the outside is touched.

BROOCH.—An article of female ornament, usually placed in front of the dress. As these ornaments are very conspicuous, they should always be of the best materials, and of chaste workmanship; but when they are necessarily of inferior value, they should be of small size and of neat pattern.

BROOMS.—Articles in daily use in connection with domestic economy, made of various materials and of a variety of forms, according to the uses to which they are applied—such as *carpet brooms*, made of a strong white grass, termed whisk; *chamber brooms*, made of long hogs' bristles; *hand-brooms*, *banister brooms*, *&c.*; *feather brooms*, for dusting pictures, mirrors, and delicate articles; and *hearth brooms* for sweeping up the cinders of the grate; there is a description of this latter, made with the handle to shut up short, like a telescope, so that the brush part is entirely concealed when not in use; and the exterior being ornamented, it may take its place by the side of the fire in drawing-rooms or sitting-rooms without appearing unsightly. There are also brooms for offices, yards, and areas, of birch, some of which are made for this purpose in the form of chamber-brooms, of the inside of the canes called rattan, after the outside has been stripped off for the seats of chairs; these are extremely effective and durable, as well as cheap.

BROTH.—A decoction usually obtained from animal substances, and peculiarly adapted as a food for sick persons. When properly made, with a requisite proportion of the various ingredients, and without fat, it is a nutritious article of diet, and may supply the place of both meat and drink; but when taken to any extent, bread should be eaten with it, otherwise it is apt to disagree with the stomach. When broths are made for the sick, they should be varied in strength, according to the state of the patient. Light broths agree with weak stomachs; mutton is reckoned the best ingredient on these occasions; chicken next. In cases of diarrhœa, broth in excess is apt to increase the nausea, but it is at the same time extremely beneficial, if properly managed and administered; in such cases it is best made from veal or fowl, and thickened

with rice, which may be strained off, and it must be given in small quantities only at a time. Broth is best made by putting the article from which it is to be formed, into the quantity of cold water requisite, and keeping the whole at a heat somewhat short of boiling for many hours; it should then be allowed to cool, and the fat skimmed off. The following rules will also be found of essential service in making broth. 1. Procure wholesome meat, properly killed. 2. Earthen vessels are preferable to those of metal, as a less degree of heat keeps them boiling; and once heated, a few hot cinders will retain as gentle a degree of boiling as may be desired. 3. Use double the quantity of water to the weight of meat. 4. Add a sufficient quantity of common salt, to facilitate the separation of the blood and slime that coagulate under the form of scum. 5. In the early stage of the process sustain such a degree of heat as will throw off the whole scum. 6. Afterwards a lower, but an equable temperature, that the broth may simmer gently till the substances employed, whether nutritive, colouring, or flavouring, are perfectly combined with the water, according to the several degrees of solubility.

BROTHS, VARIOUS.—See BARLEY, BEEF, CALF'S FEET, CHICKEN, MUTTON, VEAL, &c.

BROWN DYE, *for Cotton.*—First imbue the material with brown oxyde of iron, by soaking it in iron liquor; then dye it by boiling for two hours in a bath of quercitron bark. This will give a drab, olive, or yellow, according to the quercitron used, then by mixing a little sumach with the bark and boiling again, any shade of brown may be obtained. *For Silk.*—Fill a copper or saucepan with soft water; when it gently boils, put in a quarter of a pound of chipped fustic, two ounces of madder, one ounce of sumach, and half an ounce of cane wood; if not required to be so red, the cane wood may be omitted. These should boil for two hours, that the ingredients may be thoroughly incorporated. The copper must then be cooled down by pouring in cold water, the goods may then be put in, and simmered gently for half an hour or an hour; if this colour should require darkening or subduing, it may be done by taking out the goods and adding a small piece of green copperas. When of the colour desired, rinse in two or three waters and hang up to dry. *For Wool.*—Various substances are used for this branch of dyeing; walnut peels, or the green covering of the walnut when first separated, are white internally, but soon assume a brown, or even a black colour, on exposure to the air. They readily yield their colouring matter to water. They are usually kept in large casks covered with water for above a year before they are used. To dye wool brown with them, nothing more is necessary than to steep the cloth in a decoction of them till it has acquired the desired colour. The depth of the shade is proportioned to the strength of the decoction. If the cloth be first passed through a mordant of alum, the colour is brightened.

BROWN SAUCE.—Put into a saucepan two pounds of beef, the same quantity of veal, an old fowl, some onions and carrots, and throw over the whole a pint of water; place this on a strong fire until it begins to glaze, then put the vessel on a slower fire, and when the glaze begins to brown, put to it a little stock, adding to it some mushrooms, a bunch of parsley, a few cloves, and some bay leaves; skim it, add a little salt, and let it simmer for three hours; then strain the liquor off, and add to it a roux which has been made in a separate vessel; let it boil again for another hour; then skim off the fat, pass the liquor through a sieve, and it will be ready for use.

BROWN SOUP.—Stew four pounds of lean beef, stuck with cloves, in four quarts of water, a stick of cinnamon, and a blade of mace. When the goodness is boiled out of the beef, take it out, and put in two gills of red wine, a little salt, and an onion. After it has browned some time, add two tablespoonfuls of browned flour, and a glass of white wine. Let it simmer, and serve it up in a tureen with sippets of toasted bread.

☞ Beef, 4lbs.; water, 4 quarts; cinnamon, 1 stick; mace, 1 blade; cloves, sufficient; red wine, 2 gills; salt, a small quantity; onion, 1; flour (browned), two tablespoonfuls; white wine, 1 wine glassful.

BROWN SOUP, WITHOUT MEAT.—Put into a saucepan three quarts of water, with bread raspings sufficient to thicken it; two or three onions cut small, some whole pepper, and a little salt; cover it close, and let it boil for an hour and a half; strain it off through a sieve. Then cut up celery, endive, spinach, and sweet herbs, and fry them in butter until they are of a fine brown; when done, put them in soup; boil it till the vegetables and herbs are tender, and the soup of a proper thickness; serve with fried bread, either in a tureen or separately.

BROWNING FOR GRAVIES, SOUPS, &c.—To give a brown colour to soups and gravies, fry some onions with flour to a good brown colour, and add them to the soup; or toast a piece of bread as crisp and as brown as possible; or put in raspings, which may always be had from the baker's; or melt some lump sugar in an iron ladle or spoon until it becomes brown, pour it upon boiling water, and stir it; give it a boil and keep it for use in a bottle. The following is an approved receipt for soups and gravies generally:—To a gill of water add four ounces and a half of lump sugar, and half an ounce of fresh butter, put them into a small pot, set them over a gentle fire, and stir with a wooden spoon until a light brown is produced. Then add a pint of water, boil and skim it, and bottle off for use when cold. As much of this may be added to the soup or gravy as will give it the desired colour. To make a *clear browning for gravy or gravy soups*, put a knuckle of veal, two pounds of lean beef, and an equal quantity of lean gammon of bacon, all cut into slices, into a stewing pan, with a sufficient quantity of chopped carrots, turnips and celery, to two quarts of water; stew the meat till quite tender, but do not brown it. Thus prepared it will serve either

in soup, or brown, or white gravy; if for brown, add some of the above colouring, and boil for a few minutes.

BRUISES.—Bruises may proceed from many causes, be of many varieties, and occur in any part of the body. When severe, and happening over a joint, total rest of the limb must be enjoined, and the joint kept constantly soothed by fomenting it with a folded flannel, wrung out of a hot decoction of camomile flowers, and poppy heads, made strong. The same application may be applied to any other bruised part of the body, and where the pain is severe. When a swelling results from a bruise, not over a joint, wet a folded rag well with the extract of lead, and lay it over the part, repeating the process in a few minutes; with the third or fourth application the swelling will have disappeared. In the bruises and hurts received by children from falls, this will be found in all cases an invaluable remedy. When the skin has been broken by the bruise, and there is much discoloration and pain, apply the extract of lead, and over that, place a hot bran or camomile poultice, re-wetting the rag with the extract on every occasion of renewing the poultice.

BRUSHES are usually made of hog's bristles, of different degrees of coarseness and fineness, and of various lengths. The hair is doubled and fixed into holes by means of wire, which is concealed by a thin plate of wood that covers it. In ill-made brushes this covering is apt to come off and expose the wire, and when this fails the hair comes out. When this accident occurs the wood should be glued on again securely. In some brushes the hair is merely fixed into the holes by a kind of cement, and are accordingly worthless. The various brushes in common use may be enumerated as clothes brushes of various kinds, hat brushes, coarse and fine shoe brushes, nail brushes, tooth brushes, crumb brushes, bottle brushes, scrubbing brushes, blacklead brushes, and furniture brushes.

Clothes brushes are best when made of grass whisks, as they extract the dirt and dust more effectually than the ordinary clothes brush, and do not injure the nap. *Hat brushes* should be of soft material, and furnished with a velvet pad on the back, which binds the nap together, and gives it a fine gloss.

BRUSHES, TO CLEAN.—Put a dessert spoonful of pearlash into a pint of boiling water and shake the brush about in it until it be perfectly clean; then pour some clean hot water over it; shake, and dry before the fire.

BRUSH CASE.—A convenient adjunct to the dressing table, and a contrivance well adapted for travelling-bags, &c.; by this means the hair brushes are kept clean, and also prevented from soiling other articles that are in their proximity. These cases may be fitted with a lock and key.

BRUSSELS SPROUTS, CULTURE OF.—A winter vegetable growing two or three feet high, and along the stalk of which small green heads, like cabbages in miniature, sprout out, each growing from one to two inches in diameter, and the whole being ranged spirally along the stem. The plants are raised from seed, of which an ounce is sufficient for a seed bed four feet by ten feet. The seed is sown in spring under a frame, so as to bring the plants forward; they are then transplanted into an open border with a good aspect, and in this way they may be obtained from July to the May following. The plants need not be placed at more than eighteen inches each way, as the head does not spread wide, and the side leaves drop off. It is usual to cut them off about a fortnight before gathering from the stem. In spring, when the sprouts are disposed to run to flower, their growth may be checked by taking up the plants and laying them into the ground in any shaded spot. The seed is generally procured every second year from Brussels, as the plants are found to degenerate if grown two seasons from British seed.

BRUSSELS SPROUTS, TO DRESS.—Wash the plants perfectly clean; put them in boiling water, with a little salt, and then let them boil gently for half an hour; then strain them through a cullender. Set the cullender over the saucepan, and cover it over with a cloth; the steam will keep them hot, and they will drain perfectly dry.

BUBBLE AND SQUEAK.—Cut into pieces convenient for frying, cold roast or boiled beef; add pepper and salt, and fry them; when done lay them on a hot drainer, and while the meat is draining from the fat used in frying them, have in readiness a cabbage already boiled in two waters, chop it small and put it in the frying-pan with some butter, add a little pepper and keep stirring it, that all of it may be equally done. When taken from the fire, sprinkle a very little vinegar over the cabbage, just enough to give it a slight acid taste. Place the cabbage in the centre of the dish and arrange the slices of meat neatly around.

BUCKSKIN GLOVES, TO CLEAN.—Wash them in warm water and soap until the dirt is removed, then pull them out into their proper shape, or stretch them on wooden hands. Do not wring them, but place them one on the other and press the water out. Mix a little pipe-clay, or pipe-clay and yellow ochre (according to the colour required), with vinegar or beer. Rub this over the outside of the gloves, and let them dry gradually in the shade or by the fire, but at some distance from it. When about half dry, rub them well and stretch them on the hand or wooden mould; after they are rubbed and dried, brush them with a soft brush, to extract the dust. Finally, iron the gloves with a smoothing iron moderately heated, taking the precaution to place a piece of cloth or paper over them; when this process is completed they will look equal to new. Tanned gloves, commonly called Limerick, are genteel and economical in spring and autumn, as they do not soil so soon as white. The tan colour is made by infusing saffron in boiling water for about 12 hours, and rubbing the infusion over the

leather with a brush. The water should be soft, and never applied in any case at more than blood heat.

BUCKTHORN. — A hardy, indigenous, prickly shrub, common in hedge-rows; flowering in May, and ripening its fruit in September. It is propagated by seed, layers, and grafts. The juice of the unripe berries forms a deep green dye, if boiled with a little alum. A syrup made from its berries is sometimes used as a purgative, but it is apt to gripe, and need not be employed when there are so many better medicines of the same class.

BUDDING.—The operation of transferring the buds of one tree to the branches of another. Its use is the propagation of plants, which could not be affected at all, or much less conveniently, by the other modes of extension, such as striking by cuttings, grafting, &c. The process is also employed for multiplying a species or variety more expeditiously than by either of the other modes of propagation. The time of performing the operation is from July to September, and the mode is as follows:— The first thing to be done is, to select a young shoot of the current year, from which the bud is to be taken, and a stock of one or of several years' growth, into which the bud is to be inserted. The bud is cut out with a portion of the bark and the wood attached above and below the footstalk of a leaf, in the axil of which leaf the bud is situated. To do this a sharp penknife or budding knife is inserted in the shoot, about three-fourths of an inch below the bud, and passed up beneath the bud to about half an inch above it; the bud, with the bark and wood to which it is attached, is then held in the left hand, and with the knife in the right hand the thin film of wood is quickly picked out, leaving the bud attached — technically called the shield. A shield is then formed in the back of the stock, about a third of an inch in length; and a transverse cut is made within one-fourth of an inch of the upper part of the longitudinal slit. The bark is opened on both sides of the longitudinal slit by means of a thin flat piece of bone or ivory; or, in nursery practice, with the end of the handle of the knife, which is made thin on purpose. The bud is now inserted in its natural position, with the bud bearing upwards, and a portion of the upper part of the bark, to which the bud is attached, is cut across, so as to fit to the transverse cut which was formed in the stock. The bud is made fast in its situation by tying it with a strand or ribbon of bast matting; this being done in summer or autumn, the matting remains on for a month or six weeks, according to circumstances, till the back of the bud shows by its healthy appearance that a vital union has taken place. The matting may now be loosened, and in a week or two altogether removed. *Shieldbudding reversed* is performed by paring the transverse cut at the bottom of the perpenpicular slit intsead of at the top; and its most important use is to induce a state of productiveness in fruit trees; this mode is preferred by those who think that the sap rises in the bark equally with the wood—a principle which some are disposed to question. It is, however, generally admitted to be the best method for trees having gummy sap. *Niche budding* is when the wood is retained in the bud. In placing the bud on the stock, the principal thing to be attended to is, to bring the horizontal edges of the base of the niche in the stock, and those of the bud, which is to fit into it, into the most perfect contact possible; because the union is produced, not as in common summer budding, by the junction of the soft wood of the stock with the rudiment of the soft wood on the inside of the bark of the bud, but by the junction of soft wood with soft wood. This mode of budding will always succeed best when the niche in the stock is made where there is already a bud, making the horizontal cut through the base of the bud. *Annular or ring budding* is performed by joining the stock and scion together, as shown in the engraving, but in either case the top of the stock is not to be interfered with. This is a valuable mode of propagating trees or shrubs with hard wood and thick bark, or those which, like the walnut, have buds so large as to render it difficult to bud them in the common way. There are many other kinds of budding, but these are in the most general use.

It sometimes happens in the case of roses, that the bud will produce a shoot the same season in which it has been inserted, but it more frequently remains dormant till the following spring; at this period the stock should be cut three or four inches above the bud; and the shoot, as it grows, should be slightly tied to the portion of the stock left on above the bud, in order to prevent it being injured by high winds. The second year this portion of the stock may be cut off close to the bud. Buds may be in-

serted in stocks at a few inches from the ground, in which case the plants produced are called dwarfs; or in straight stems at four, five, or six feet from the ground, when the plants produced are called standards. The latter is the most common mode of budding roses and orange trees; but other shrubs and trees of rare or ornamental kinds are commonly budded within a foot or a few inches from the ground. Sometimes buds of several kinds are inserted in the same stock, and sometimes buds are inserted in branches in different parts of the tree, for the sake either of supplying vacant places in the branches, or of producing several kinds on the same tree. In all cases of budding, it is essential that the stock shall not be very different from the bud to be inserted in it. In some cases it is even necessary that the bud and the stock should be of the same species; while, on the other hand, it sometimes happens that a bud may be inserted successfully in any stock which is of the same natural order.

BUG.—The shape, colour, and offensive smell of this insect are but too well known. The female bug deposits her eggs in the beginning of summer, and being of a glutinous nature they readily adhere to anything which they touch. The places generally chosen to deposit the eggs in, are the crevices of bedsteads and other furniture, or the walls of a room. In about three weeks these eggs hatch, and the young bug comes forth, very closely resembling the parent insect, except in size, which it fully attains in about three months. There are various remedies devised for the extermination of this pest, but the most effectual *preventive* is cleanliness. In new houses, where the habits of the family are orderly, and a general attention is paid to cleanliness throughout, there will be little danger of bugs; but on removing to an old house which has had various occupants, these disgusting insects frequently make their appearance with the commencement of the warm weather, from having been permitted to get possession of the crevices of the wood work on the walls; and, if the rooms are papered, they often contrive to effect a lodgement between the edges of the paper and the plastering. In this case the best remedy is to have the paper torn off (first loosening it by washing it all over with a broom or brush dipped in water), and the walls purified by whitewashing or painting. If bugs are found in the crevices of the skirting board of an old house, their haunts should be well washed with a strong solution of corrosive sublimate in water, which, however, is exceedingly poisonous, and should only be intrusted into the hands of careful persons. An excellent precaution against bugs under any circumstances, is, to have all the bedsteads in the house taken down every spring, and after washing the joints with cold water and yellow soap, to have the whole of the bedstead completely coated with copal-varnish. In aggravated cases, where the whole room, walls, floor, and ceiling are infested, the only effectual remedy is fumigation; to effect this, remove every article from the room, after satisfying yourself that they are perfectly free from vermin, then close every opening, chink, and crevice in the room that is capable of admitting the air, this is done by pasting paper over them. Next cut up four ounces of brimstone into an iron pan, light some slips of linen dipped in the brimstone, and place them in the pan, leave the room without delay, closing the door and covering even the keyhole. In twenty-four hours no living creature will resist the fumes; sometimes, however, eggs remain, and a fresh fumigation may afterwards be required. For *occasional or local applications* to any part of the room or bedstead, the following receipts will be found efficacious:—1. Take two ounces of quicksilver and the whites of two eggs, or any larger or smaller quantity in the same ratio; beat the quicksilver and the whites together until they become a froth, then with a feather apply the compound thus formed to the various holes and crevices infested. 2. Spirits of wine, half a pint; spirits of turpentine, half a pint; crude sal ammoniac, half an ounce; corrosive sublimate, one ounce; camphor, one ounce. This mixture should be inserted into the joints of the bedstead, &c., with a syringe, and the surface washed with a sponge fastened to a stick; every part of the woodwork must be washed with it. Care should be taken that this mixture is *not applied by candlelight*, as the flame might cause the spirits of wine and turpentine to ignite and the most serious consequences to ensue. 3. Two ounces of red arsenic, a quarter of a pound of white soap, half an ounce of camphor dissolved in a teaspoonful of rectified spirits, made into a paste of the consistence of cream; insert this mixture in the openings and the joints of the bedstead. When it is intended simply *to expel bugs from the bed*, as for instance when persons are travelling and put into beds infested with bugs, a simple and efficacious plan is, to suspend a small bag of camphor to the bed, just in the centre, overhead. The sprinkling of a few drops of oil of lavender, or a more liberal sprinkling of lavender water, between the sheets and on the pillow, will also answer the desired end. In both of these cases the odour is more than the insects can endure, so that they are compelled to keep within their haunts.

BUILDING SOCIETIES are a species of joint stock company, the members of which subscribe periodically, and in proportion to the number of shares they hold, different sums into one common fund. This fund becomes large enough to be advantageously employed by being let out at interest to such of the members as desire advances, and the interest, as soon as it is received, making fresh capital, is lent out again and again, so as to be continually reproductive. Large

sums may be raised in this manner; for, to take an example, if one thousand shares were subscribed for, at 10s. per month per share, the amount in one year would be £6000, which, month by month as received, might be advanced to any members who would wish to become borrowers. The payments of *borrowers* are so calculated as to enable them to repay, by equal monthly or less frequent instalments, within a specified period, the principal of the sum borrowed and whatever interest may be due upon it throughout the duration of the loan. The other members who have not borrowed, and who are generally called investors, receive at the end of a given number of years a large sum, which is equivalent to the amount of their subscriptions with compound interest accumulated upon them.

As regards the purchasing of house property, Building Societies must be deemed particularly beneficial. Under ordinary circumstances, a large portion of every man's income is usually absorbed by the payment of rent, especially among the poorer classes, who pay for their tenancy much more heavily than their richer neighbours, considering the relative value of the houses which they occupy. But by means of these societies persons who are not possessed of capital, and who merely receive their incomes periodically, may become possessors of a house; and this they are able to do only from the practical fact that the annual repayments required by a society upon a loan do not much exceed the rent of a house, which could be purchased with the sum borrowed; so that a man living ten or fourteen years in a house, instead of paying his rent to a landlord, and thus losing so much money for ever, pays it with a small addition to a building society for a limited number of years, and in consideration of his consent to this arrangement the society advances him at once the money requisite for the purchase of the property, which thus, in the stipulated time, when the loan has been repaid with interest, becomes entirely his own, the money advanced being in the meantime secured by a mortgage on the house. Building societies are generally founded with the same object in common, but carried out with various modifications. They are divided into two distinct classes, the one terminating, the other permanent. A *terminating* society is one which it is intended to close at the end of a certain period, when all the shares of the members have realized their full amount. In a *permanent* society, it is merely the membership of a shareholder that terminates at the end of a fixed number of years, when he receives the value of his shares, the society itself continuing for ever. The majority of the terminating societies announce at the time of their formation that their shares represent a fixed sum, usually £120, to be realized at the expiration of a given number of years, by which time it is expected the association will terminate with that result. The number of years is generally ten or fourteen, although some societies exist whose anticipated duration is eleven or thirteen years, and some in which the amount of the shares is £50 or £100. The subscriptions of the members are a few shillings per month per share, varying with the number of years calculated as the probable duration of the society but not allowed by the statute to exceed twenty shillings per share, and the investing or non-borrowers are promised the amount of their shares at its close. The subscriptions are received at monthly meetings, and with as little delay as practicable; the advances are lent to those members who wish to become borrowers, and to obtain a loan in the shape of a present advance on each share they hold or take up, in lieu of the amount which they would otherwise receive at the end. The sum advanced per share of course depends on the number of years that remain between the time of borrowing, and the date at which the society is expected to terminate. The theory upon which a terminating building society proceeds is as follows. Let the case be that of a fourteen years terminating society, formed on the basis of a five per cent. rate of interest, and consisting of shares of £120 each, on which every member pays 10s. at the beginning of each month during fourteen years. This sum is assumed, because such a monthly annuity would, at five per cent. rate of interest supposed, realized monthly, and continually invested and reinvested accumulate to £120 at the end of fourteen years; hence £120 is the amount that a non-borrowing member would be entitled to receive at the close of the society. On the other hand it is known that £60 cash, invested at five per cent. rate of compound monthly interest, will accumulate to £120 in nearly fourteen years. If then, a member should wish to discount one share, and take its present value at the beginning of the society, he would be entitled to receive £60, in consideration of his subsequent monthly payments of 10s., or £6 a year for fourteen years. Similarly, should he desire to borrow £300, or five times £60, he would have to make payments on five shares, amounting to £30 a year. As the society progresses in its existence, the number of remaining months over which a borrower's payments can extend, diminishes, so that the amount of advance per share which a member would be entitled to receive, if he wished to borrow at a later period of the society than the beginning, would depend upon the date of his first becoming a subscriber. If he had only just entered before receiving a loan, the amount of advance per share would merely be the discounted present value of his future payments, but if he had been a subscriber for some months previously, then, in addition to the allowance for his future subscriptions, he would also be entitled to a sum arising from his past payments.

Various objections are urged against terminating building societies, but the chief one is that the opportunity for investment soon ceases. At the beginning of the term a person might be willing to engage to pay £30 a year for fourteen years on a corresponding loan; but if only six years of the

duration of the society were unexpired before he joined it, he might find £59 18s. a year highly inconvenient; and if only four years, £85 12s. 6d. a year, quite out of the question.

In a *permanent society* the investors pay a certain monthly subscription during a fixed number of years, calculated as sufficient for the realization of their shares, at the end of which time the amount due is paid to them and they retire from the association, so far as such shares are concerned. The investors represent the proprietors of the society. New members can enter at any time, and commence their subscriptions without paying up any arrears, or any increase on the original entrance fee, whereas, in terminating societies, the fee on entering is increased, without sufficient reason, year by year, until, from being originally only 2s. 6d., it is in some cases raised to £6 per share. The duration of membership is counted from the month of a member's first entrance. This causes every month a fresh series of members to be added to the society, or new shares to be issued, so that, taking an example, if the term of membership were ten years, or one hundred and twenty months, and fifty new shares were taken up, on the average, every month, there would, at the end of the first ten years be six thousand shares subscribed; supposing always that if any were withdrawn, the average were yet kept up by an increase in the new comers. At the end of the first one hundred and twenty months, fifty would be paid out; but as new members would come in, the number of subscribers would be undiminished, and month by month afterwards, as successive periods of one hundred and twenty months were completed, old members would go out and new ones come in. In this society a member ceases to be an investor when he becomes a borrower, receiving whatever amount is due to him on his investing shares with interest up to the time of borrowing. The loan, secured by a mortgage on the property purchased, is for an optional fixed number of years, and is repaid with interest by a corresponding monthly subscription. As an example of the working of this society; suppose a member purchase a house for £300, which would return a *net rental* of £30 per annum, and he borrows that sum, for which his repayments during ten years, covering principal and interest, would amount at per annum (by monthly instalments of £3 11s. 3d.) to

	£42 15 0
Multiplied by ten years	10
Making the total repayments . .	427 10 0
Deduct ten years' rent	300 0 0
Leaving the cost, as far as the Building Society is concerned .	£127 10 0

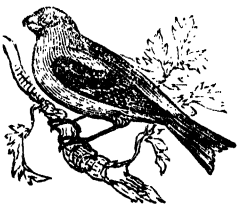
For which sum the member has thus secured to his family a house free of rent for the remainder of its lease. The above example is for ten years; a person may, however, purchase a house for smaller annual payments, if he take the loan out for twelve or fourteen years. It will thus be seen that the purchase would cost the borrower only £12 15s. a year for a reasonable space. It cannot be disputed that to secure so important an advantage it is worth any reasonable effort, the sacrifice of some unimportant luxury, or the employment of a portion of a person's leisure hours in some profitable pursuit, would be certain to secure the desired end. And when that is accomplished, the temporary sacrifice is repaid a hundredfold by enabling a man to appropriate the whole of his income, without being interfered with by the serious deduction for rent, to more solid and lasting comfort for himself and his family. It should also be borne in mind that when an income is dependent solely upon a person's own exertions, its receipt is liable to be intercepted by sickness or other accident, nevertheless, the landlord expects his rent as regularly as usual, and, in default of payment sells off the home, and expels the tenant into the streets. But a man who has a house of his own still keeps a home over his head, and being able to accomplish that, is in a better position to struggle with adverse circumstances. In short, when the advantages held out by building societies are considered, and the comparatively easy means by which those advantages may be obtained, it becomes a matter of surprise that any person should be found so short-sighted as to literally waste a large portion of a moderate income. For instance the economy of being a house proprietor, is approximately like that of being the proprietor of one's furniture. On entering upon housekeeping, no prudent man, if he can possibly help it, thinks of hiring furniture, well knowing that the hire very soon amounts to the whole value; and yet how many thousands of persons there are in the metropolis only, who deem it an unwise piece of extravagance not to purchase their articles of household furniture, and yet are content to hire their houses, thereby commiting the anomaly of hiring houses or apartments to deposit their unhired furniture in.

BULBS are plants which belong to a particular division of vegetables having certain peculiarities requiring a particular mode of culture. They are, with scarcely a single exception, very ornamental, from the large size of their flowers in proportion to the entire plants, and from the brilliancy of their colours. Their principal peculiarity is, that they produce but a limited number of leaves every season; and hence, if these leaves are

cut off or injured, no new leaves are produced during the same season, In all other

herbaceous plants, when the leaves are destroyed fresh leaves are produced to a comparatively unlimited extent; and, if the season be long enough, the plant may produce a sufficiency of foliage in the current year to enable it to mature flowers in the next. But in bulbs the case is different —the leaves produced are very few, and if they are shortened before they are fully grown, or cut off before they begin to decay, the bulb is deprived of nourishment to such an extent, as either not to flower at all the following season, or to flower very weakly. Thus, the great art in the culture of bulbs, is to preserve all their leaves uninjured, to expose them fully to the sun and air, and by no means to cut them off till they have begun to decay at the extremities. By far the greater number of bulbs flower in spring, and produce their flower stems immediately after they begin to grow; shortly after they have flowered they cease growing, and remain dormant and without leaves during the remainder of the year. Hence, almost all bulbs require to be planted in autumn, and also, require a free, dry, and somewhat rich soil, into which their roots may penetrate easily, and procure nourishment without difficulty for their rapidly growing leaves. The bulb is in all cases strengthened by preventing the flowers from producing seeds; and in most cases it ought to be taken up as soon as the leaves are decayed, and preserved in dry sand or earth, and in some cases on shelves, or in papers in a dry room, till the planting season in autumn. Bulbs which are indigenous to Britain, such as those of the common wild hyacinth, and some of the narcissi, receive little injury from remaining in the ground all the year; but improved varieties of indigenous bulbs, and all bulbs from warm climates, such as those of the hyacinth, the ixias, &c., are greatly injured by the moisture of our summers, and when left in the ground, require the interposition of art to keep the soil moderately dry. From the circumstance of bulbs growing with great rapidity when in a state of vegetation, they require abundance of water, and this is the reason why the soil in which they are planted should always be deep, so as to retain the moisture. In one sense bulbs are more easy of culture than any other class of plants, because, the germ being previously formed, and the nourishment provided for in the body of the bulb, it is only necessary to supply heat and moisture to cause these to develope. Bulbs never last more than one year, a new one forming every season after the plant has done flowering, as the old bulb wastes away. Bulbs are generally propagated by a smaller species produced at the side of the old ones, which are called offsets, but they may be also propagated by seeds; the seeds should be sown in beds of light earth, where the plants may remain till they come into flower, which will generally be in from three to five years. The soil for almost all bulbs should be a free sandy loam, and the situation open and fully exposed to the sun.—See CROCUS, HYACINTH, NARCISSUS, TULIP, &c.

BULLFINCH. — When first taken, the bullfinch may be allowed to range the room



with other birds, except some particular reason exist why it should be kept in confinement. The shape and size of the cage are of little consequence, as the bullfinch is a quiet bird and thrives under all circumstances. It is, however, usual to put those which have been taught, into a handsome cage of brass wire, and in a room by themselves, as their artificial song might spoil that of other birds, if within hearing. *The food* for those that are allowed to run about, may consist of German paste, and a little rape seed by way of variety. Those which are kept in a cage, however, must have rape and hemp seed, with occasionally a little plain biscuit. Rape seed soaked in water, without any hemp seed, increases their longevity, as the latter is too heating and often ends in causing blindness or inducing decline. They occasionally require a little green food also, such as water-cress or lettuce. The bullfinch is an exceedingly affectionate bird; very averse, both when wild and confined, to being separated from his mate, and when with her, continually caressing and calling to her. They breed three or four times a year. The female lays from two to six eggs of a bluish white, with a circle of violet and brown spots at the large end. The young birds are hatched in a fortnight. If they are to be taught to whistle, they must be taken out of the nest when half fledged, kept very warm, and fed every two hours with rape seed soaked for several hours in cold water, afterwards scalded, strained, bruised, mixed with bread, and softened with milk, of this, two or three mouthfuls must be given at a time. The male bullfinch may be distinguished from the female by a slight red tinge upon the breast. They do not begin to whistle till they are able to feed themselves, but must nevertheless be whistled to immediately they are taken, as in this case the lesson is more deeply and readily impressed upon the memory. The bullfinch is one of the few birds that can be induced to learn a tune which may be reduced to the form of musical notation. A great number of them are brought from Germany, where they are instructed to the utmost degree of refinement. To accomplish this, however, the course of instruction must last at least nine months, for, if of less duration, they will either confuse their different airs, learn false notes, transpose passages, or, perhaps, altogether forget their lesson at the first moulting. Even when

they have been taught it is as well to keep them apart from other birds, for their aptness at learning renders them liable to catch up any novelty. It is also necessary to help them when they hesitate, and to repeat their song to them especially at moulting time, else there is danger of having an imperfect performer. They are generally capable of retaining in their memory three distinct tunes, and in these they are best instructed by means of a bird-organ or a flute. The utmost perfection, however, is attained by teaching them one air only, together with the usual short flourish or prelude. *Bullfinches* may be *tamed* by the following method:—A fresh caught bird is allowed to feed himself in his cage for one day. A band is then prepared, such as fowlers put round the wings of a decoy bird, with which, and a thread one foot in length, the bullfinch is so fastened that he can neither fall down nor beat himself to death. His food is then put into a little bag, to which is attached a small bell, and his drink poured into a vessel similarly furnished; at first when these are offered him, the chained bird will neither eat nor drink; it is then as well to leave the vessels with him for a day or two and allow him to help himself, yet approaching whenever he is seen to eat. On the third day he will readily take his food whenever offered, and the bell must be rung as long as he is eating; when he has finished he must be carried about on the hand; upon which, as he finds he cannot get loose, he will at last begin to eat quietly. On the third or fourth day he will probably of his own accord fly to the hand in which the seed bag is, he must then be liberated, and will be found to follow the hand however far it is withdrawn. Should he take the opportunity of flying away, he must again be bound and left without food for several hours. In this manner the bullfinch may be tamed in the course of a few days, and be taught to fly to the hand whenever he hears the bell. The *diseases* by which bullfinches are attacked, are costiveness, diarrhœa, epilepsy, and the moulting disease. On these occasions a change and regulation of food will generally work a cure.

BULLOCK'S HEART, TO DRESS.—Make a veal stuffing and introduce it into the upper part of the heart. Roast it until well done, and serve with currant jelly.

BULLOCK'S LIVER, FRIED, WITH POTATOES.—Stew two or three pounds of liver in one piece, in a small quantity of water for three hours, then take it out, and stew an equal quantity of potatoes, cabbage, carrots, and turnips, mixed, seasoning with pepper and salt. When nearly done, take them out of the liquor and divide them into pieces of the size of an egg. Then place them into a fryingpan, ready heated, with a little lard or dripping, with the liver cut into slices; fry the whole till sufficiently done. Then turn the contents of the frying pan on to a dish before the fire; put a little stock into the pan, thickened with flour, and when warmed up, pour it over the liver and vegetables, and serve.

BULLOCK'S LIVER AND RICE.—Soak three pounds of liver for half an hour in water, then boil it gently in three quarts of water, with one pound of rice, add two or three onions, a little parsley, four tablespoonfuls of vinegar, pepper and salt. At the time of adding the seasoning, cut the liver into slices; a rasher or two of bacon may also be introduced.

BUNIONS. These painful affections of the feet are generally situated on the great toe, and are the consequence of an inflammation of the bursæ of the joints, and are caused entirely by pressure, from the faulty make of the shoe.

Bunions, when first formed, are soft, and rise after the pressure of the finger; but this condition soon changes, if the exciting cause is continued, to a permanent thickening, and disfigurement of the part. The *treatment* of bunions must commence by removing the provoking cause, pressure; and where the inflammation extends to the skin, and the pain is acute, a few leeches should be applied, and the toe well fomented with a camomile poultice. When the inflammatory stage has been subdued, the bunion is to be rubbed with mercurial ointment and camphor, in the proportion of two drachms of the latter to one ounce of the former. For the long standing bunion, absorption should be attempted by occasionally rubbing the enlargement lightly with lunar caustic, the part having been previously softened by a hot fomentation. As soon as one cuticle has peeled off, apply the caustic again; and so on, repeating the application several times. From the first, the pressure must be taken completely off the part, by wearing a small adhesive plaster spread on the thickest buckskin, with a hole cut out large enough to admit the bunion to pass through.

BUNS.—Mix two pounds of flour with half a pound of sugar. Make a hole in the middle of the flour, and pour in two tablespoonfuls of yeast, and half a pint of warmed milk. Make a thin batter of the surrounding flour and the milk, and set the dish covered before the fire till the leaven begins to ferment. Put to the mass half a pound of melted butter, and milk enough to make a soft paste of all the flour. Cover this with a dust of flour, and let it rise once more for half an hour. Shape the dough into buns, and lay them apart on buttered tin plates in rows, to rise for half an hour. Then bake in a quick oven. See BATH BUN, SCOTCH BUN, &c.

☞ Flour, 2lbs.; sugar, ½lb.; yeast, 2 tablespoonfuls; milk, ½ pint; butter, melted, ½lb.; milk, sufficient.

BURGUNDY PITCH.—A resin obtained from the pine tribe, but the genuine article is seldom procurable; that sold for it being a preparation made from common resin. It is used for plasters which are slightly stimulant.

BURGUNDY WINE. See WINES.

BURIAL.—Unless the party deceased had been ill 12 hours before death, or been attended by a medical man, there must be an inquest before the funeral can take place. A dead body may not be removed until 48

hours after death, nor until the registrar of deaths for the district has had twenty-four hours notice of the death, and has received a certificate stating the cause of death and signed by the medical man who attended the deceased during the last illness; or in case no medical man attended, then some medical man called in after death.

Before the funeral, the undertaker must procure from the registrar of deaths a certificate that the death has been duly registered by him, and deliver the same to the minister, who shall be required to perform the religious service for the dead; and if there shall have been an inquest on the body, then the certificate of the coroner is sufficient. And in case a minister is requested to bury a dead body without such certificate, then he must give notice thereof to the registrar within seven days afterwards, under a penalty of £10.

An individual under whose roof a poor person dies, is bound to carry the body decently covered to the place of burial. The overseers of a parish are not bound to bury the body of a pauper lying in the parish, but not in a parochial house, although such pauper died in a hospital within the parish, and were a married woman, whose husband was settled in the parish and receiving relief there. But when a body lies in the house of a parish or union, the parish or union must provide for the interment. See DEATHS, REGISTRATION OF.

BURNET, CULTURE OF.—This is a hardy perennial plant, flowering from June till September, when the seed ripens. The leaves are pinnated, and form a tuft next to the root; but alternate on the stem. The stalks rise to fifteen inches in height. The flowers are small, and of a pale red colour, having a number of threads in the middle. The plant may be raised from seed; of which half an ounce will suffice for a bed 3 feet by 4 feet. It may either be sown in spring or early in autumn. It may also be propagated by parting the roots early in spring. When the plants are of 2 or 3 inches in growth, transplant into rows, at 6 inches apart, plant from plant. Cut down all flower-stalks not intended for seed.

BURNET, USES AND PROPERTIES OF.—The leaves of the burnet are employed in flavouring soups, sauces, &c.; they are also mixed in salads, and form a favourite herb for cool tankards. When used in moderation, burnet agrees with most ages and constitutions; but if taken to excess it becomes difficult of digestion, and induces constipation.

BURNING GLASS.—A name given to a glass or mirror so formed as to collect the sun's rays which fall on it into a point or small surface, and thereby produce an intense heat, and set fire to combustible substances. The point at which the rays meet, and where the greatest heat is produced, is called the *focus* or *burning point*. The rays of light or heat may be concentrated either by refraction or reflection; in the former case, they must pass through a transparent refracting substance; in the latter, they fall on a concave polished surface of silvered glass or bright metal.

BURNS.—Burns are generally considered fatal when they occur on the head, throat, chest, and bowels, from the inflammation induced in the important organs immediately beneath these parts. Burns over joints are particularly serious from the consequences so liable to ensue in such situations, namely, the formation of a stiff joint, and contraction of the cuticle, causing the limb to be drawn up or bent. The contraction is so great after all burns, that the greatest circumspection is necessary during the cure to avoid a malformation; for, if the part is kept long at rest, or two parts of the body in contact, such as the chin upon the breast, or the arm by being bent, adhesion will take place, and either a very frightful or most inconvenient permanent disfigurement will be established.

The following remarks should be borne in mind by every one who has anything to do with a burn, and cannot be too firmly impressed on the memory. *First*, that as the exposure to the air of a burnt surface is the cause of the continuance of pain, the part cannot be too soon protected from the atmosphere. *Second*, that burns, if instantly wrapped up and kept excluded from the air, require no medicament whatever, and heal in a few days. *Third*, that when the clothes of a person are on fire, the person is to be instantly enveloped in the carpet, hearth-rug, blanket, coat, or any other article that, by smothering the fire, will extinguish the flames. *Fourth*, that the blister raised by burning is never to be broken, nor burnt clothes adhering to the flesh removed.

TREATMENT.—In whatever part of the body a burn may be situated, the treatment is the same; the part must be immediately covered with a double fold of wadding, laying the woolly side next the skin. Should pieces of the dress adhere to the cuticle, cut carefully all the loose edges off, and lay the wadding over what remains. If the burn has been extensive, and there is much prostration of strength, and a sinking pulse, brandy, ether, and ammonia must be given every half hour, to rouse the action of the heart, in draughts consisting of a tablespoonful of brandy, half a teaspoonful of sal volatile, twenty drops of ether, and a wineglassful of water; at the same time, to counteract the shivering and sense of cold that usually follow such accidents, apply heated bricks or bottles of hot water, to the feet, thighs, and arm-pits. Should the pain, in spite of the exclusion of air, continue an hour after encasing the part or parts in wadding, give 40 drops of laudanum in one of the above draughts, and repeat the same amount, if necessary, in an hour. This dose, of course, applies to adults; to a child from five to twelve years, from five to ten drops. When the wadding becomes moist from the exudation, on no account remove it, but lay over the moistened dressing another layer of wadding. When the pain and tenderness subside, the part is to be exercised as much as convenient, and the burnt surface kept constant-

ly covered till the new cuticle has formed and the dressings fall off by degrees.

Where neither wadding, wool, nor fine cotton can be procured to envelope the burn, cover the part instantly with handfuls of flour, violet powder, Peruvian bark, or any harmless impalpable powder, adding more whenever moisture appears through the thick cake thus made over it; and continue in the same manner as directed with the wadding, to apply fresh powder as the occasion demands, till the healing state of the burn warrants the application of a poultice, to bring off the collection. When softened and removed by one or two poultices, the part is to be again dusted lightly, or treated with the wadding, to protect the new cuticle. To those possessed of the domestic articles of medical use, recommended in the first number of this work, the following mode of procedure is advised as at once the most practical and efficacious.

Immediately pour over the burnt part, wherever it may be,—except the eye or mouth—sufficient of the extract of lead to wet the burn, and directly after, lay smoothly on, a piece of wadding a little larger than the size of the injury, and with the wool next the skin; over this apply a double fold of the same material, and secure it by a loose bandage; keep the patient quiet, and administer tablespoonfuls of brandy and water, or sweetened gruel with brandy, at the same time implicitly follow the previous directions.

When burns occur over vital organs, as the chest and belly, and the pulse is full and hard, with much difficulty of breathing, bleeding must be resorted to, and an immediate action established on the bowels, and the inflammatory state of the system provided for, by taking the following pills and mixture:—

Powdered aloes	24 grains
Powdered scammony . . .	24 grains
Colocynth	18 grains
Calomel	1 scruple

Mix; make into a mass, which divide into twelve pills. Two to be taken directly, and repeated every four hours, till they act freely. Mixture:—

Powdered nitre	1 drachm,
Camphor water	6 ounces,

Dissolve, and add

Tartar emetic	3 grains,
Tincture of squills	2 drachms,
Tincture of opium	2 drachms.

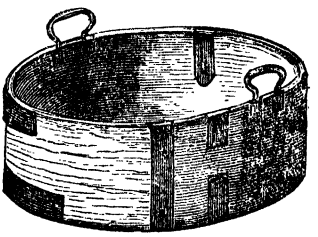
Mix; take two tablespoonfuls directly, and one every hour after.

Burns on the throat and chest often produce severe and difficult breathing, when, if not relieved, the patient might expire from suffocation. The feet and legs, must, therefore, be plunged into hot water of a sufficient temperature to attract a sudden supply of blood and make them look red, and the effect of this diversion continued by one or two mustard plasters to the feet, or a blister to each thigh.

Burns, the result of acids, must be treated first, by a free application of powdered chalk or magnesia, to counteract the acid, this is then to be washed off, and the wadding or wool applied. Burns caused by quick or slacked lime are to be washed directly with vinegar and water till all the corrosive substance has been neutralized, and then healed by dressing with the extract of lead and the wadding.

BURNT EAR.—See SMUT.

BUSHEL.—A measure of capacity for dry goods, as grain, fruit, pulse, and many other articles, containing four pecks, eight gallons, or thirty-two quarts. Corn is now invariably measured by the imperial bushel. It is of cooper-work, made of oak, and hooped with iron, and, according to the Weights and Measures Act, must be stamped by competent authority before it can be legally used; and having been declared the standard measure of capacity in the country for dry measure, it forms the basis of all contracts dependent on measures of capacity when otherwise indefinitely expressed. The bushel must contain just 2150·42 cubic inches, though its form may vary. The form



represented in the figure is the most convenient. It is not too broad for the mouth of an ordinary half-quarter sack, nor too deep to compress the grain too much, and its two handles are placed pretty high, so that it may be carried full without the risk of upsetting. Besides the standard or legal bushel there are several local bushels, of different dimensions, in different places. At Abingdon and Andover a bushel contains 9 gallons; at Appleby and Penrith, a bushel of pease, rye, and wheat, contains 16 gallons; of barley, big malt, mixed malt, and oats, 20 gallons; at Carlisle a bushel contains 24 gallons; at Chester a bushel of wheat, rye, &c., contains 32 gallons, and of oats, 40; at Dorchester, of malt and of oats, contains 10 gallons; at Falmouth, the bushel of stricken coals is 16 gallons, of other things, 20 and 21 gallons; at Kingston-upon-Thames, the bushel contains 8½; at Newbury, 9; at Reading and Wycombe, 8¾; at Stamford, 16 gallons.

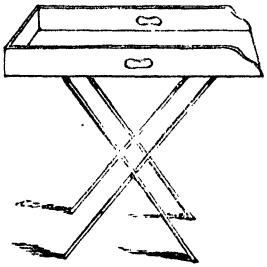
BUSINESS HABITS.—Every man who aims at becoming a clever and a successful man of business, must exhibit a regular and consistent line of conduct. He must have a character for strict regularity and attention to his duties. He must deny himself, in a great measure, to ordinary pleasures and amusements, and govern his private

and domestic conduct by a system of method and regularity similar to that observed in business pursuits. In addition to regularity and attention, and strict moral integrity, the possession of business habits implies also the possesion of a certain mental aptitude for conducting business. The chief intellectual qualities requisite are a sound understanding, quick perception, prompt decision, and firmness in execution. The two latter are qualities which every man must practise and improve for himself; the former are natural endowments which men do not possess in common—which are strong or weak in different men, but capable of being more or less strengthened and improved by all. To the foregoing qualifications may be added the cultivation of a pleasant and agreeable manner, for much depends on this. There is nothing that creates a more unfavourable impression than a rude, hasty, imperious, or uncourteous manner. On the other hand, a man who is courteous and obliging will always conciliate favour, for the nearer men approach to free and unreserved intercourse with each other, the more smoothly the affairs of life appear to move forward. It is a law of our nature that the more agreeable we are, the more gratification we experience. This we find demonstrated in our daily commerce with the world, and it is therefore of immense importance to a man of business that, in addition to his other qualifications, he should study to acquire an agreeable and conciliatory manner. The main principles in connection with the immediate conduct of business will be found to be conveyed in the following rules. Fulfil every engagement punctually. Do nothing carelessly or in a hurry. Employ nobody to do what you can easily do yourself. Keep everything in its proper place. Leave nothing undone that ought to be done, and which circumstances permit you to do. Keep your own business to yourself, and do not interfere with the business of others. Be prompt and decisive with your customers, and let your word be your bond. Be clear and explicit in all bargains, take care to understand every transaction thoroughly yourself, and do not let others misunderstand you. Leave nothing of consequence to memory which can and ought to be committed to writing. Retain copies of all letters, invoices, and other documents connected with business, tabulated, classified, and put away in such a manner that any document may be produced at a moment's notice. Never suffer your desk to be confused by many papers either lying inside or upon it. Have certain places for books, and other things in constant use, always keeping them in their places when not required, so that they may be readily found without confusion or loss of time. Superintend your own business affairs as much as possible; your personal attendance will be always more satisfactory to your customers, and will also ensure your servants paying proper attention to their duties. Examine your books day by day, so that you may inform yourself of the progress you are making with your customers, and the progress they are making with you. Avoid as much as possible all sorts of finessing in money matters, and do not lend your name to any transaction that is not straightforward or in good faith. Be economical in your personal expenditure, and rather live within your means than beyond them. Be cautious how you become security for persons, and choose rather to offend them by refusal, than to be unjust to your creditors by acquiescence. Take pleasure in your business, and it will soon become your recreation. Hope for the best, prepare for the worst, and bear manfully whatever may happen.

BUTLER.—Where no steward is kept, the butler is the principal domestic of the household, and, therefore, much is expected from him. The duties of a butler are limited or extended, according to the class of employer he serves; the average duties appertaining to this situation are nearly as follow:—1st, the cellar, including bottling wine and stacking it, brewing and bottling beer, and all the incidentals peculiar to these departments, with or without the aid of a professed brewer; 2ndly, cleaning boots and shoes, and brushing clothes; 3rdly, cleaning plate, and knives and forks, and waiting at table; 4thly, answering the door bell, and that of the sitting-room, occupied by the elder branches of the family. It is obvious therefore that a servant of this description requires considerable aptitude for his office; he must be quick without being noisy, methodical in his habits, scrupulously neat and clean in his personal appearance; he must also have a good address; and although many things may occur to try his temper, he must never be betrayed into any impertinent expression, or a churlish demeanour. The following is the routine of work for a day, and so arranged as to conduce to the various duties being performed in the easiest and most regular manner. Rise at 6 o'clock, and commence cleaning the boots and shoes, knives, &c. At 7 collect the gentlemen's clothes, brush them, and return them to the room. At half-past 7 prepare the table for breakfast. At 8 take your own breakfast. From half-past 8 to half-past 9 attend the family breakfast table. From half-past 9 till 10, clear away and wash the things used for breakfast. From 10 till 1 attend to the duties of the cellar, and to the answering of the bells. At 1 prepare luncheon, after this obtain your own dinner as soon as you can, and then devote the remainder of the afternoon to washing and polishing plate, cleaning and preparing lamps, &c. Then follow in regular succession, laying the dinner, waiting at table, and clearing away; finally, tea and coffee are to be served up, which, with the attendance on the drawing-room bell, completes the day's duties. Book: *Houlston and Wright's Industrial Library, The Butler.*

BUTLER'S TRAY.—A domestic contrivance consisting of an oblong tray, made of oak or other strong wood, having a ledge three or four inches in height extending all round it, and a space at each end to admit the hands when it is required to be removed

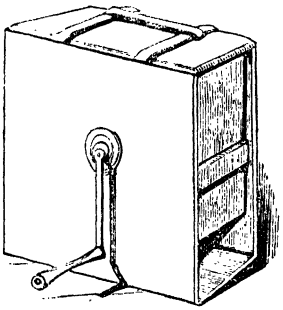
from one place to another. It usually rests on tressels which are placed in some remote part of the dining-room or outside the door, to facilitate the removal of dishes, &c., to



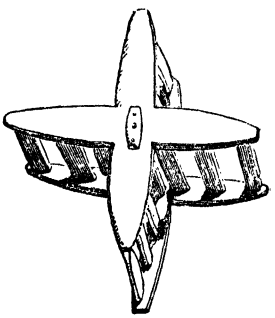
and from the table. Simple as this contrivance is, yet many establishments are without it, and the servant has, consequently, to make four or five journeys up and down stairs instead of one.

BUTTER, ADULTERATION OF. — Butter is chiefly adulterated with water and with salt, and these when introduced over and above the amount necessary to ensure preservation, are purposely added to increase the weight and bulk. A simple method of determining approximately the amount of water present in any sample, is to melt the butter, fill a small bottle with it, and place it near the fire for half an hour or so; when the water, on account of its weight, will sink to the bottom. Excess of salt may be easily detected by the taste and smell, and also betrays itself by exuding from the butter in greater or less quantities. Butter is also adulterated with lard and with flour, and in either case an unnatural whiteness is imparted, which soon leads to detection; when flour has been used especially, a pasty appearance will present itself, and instead of spreading readily on the bread, it will roll up and also cling to the knife, in spite of repeated efforts. Genuine butter is of a golden hue, and has a peculiarly fresh smell, which cannot be imitated.

BUTTER CHURNING. — This process, which is by no means difficult, is performed as follows:—The milk on being drawn from the cows, must be put into a tub and left to cool. After it has cooled, pass the milk through a milk-sieve into the milk-dishes, and fill them to the depth of two inches only. To know at once the age of milk in the dishes, *one* mark or score should be made on the dishes just filled, to show that they contain the last drawn milk; a second mark is made, at the same time, on the dishes containing the milking before this, and a third put on the dishes containing the milk drawn before the second milking, and which contain the third milking or oldest milk. The next thing to be done is to *take off the cream*. In ordinary summer weather, the cream should not be allowed to remain longer on the milk than three milkings. But should the weather be unusually warm, the milk should not be more than eighteen hours old, before the cream is taken off. The cream is skimmed off milk with a skimmer or creamer ordinarily; but in stationary coolers of metal or of stone, a spigot is drawn half out from the hole in the bottom, on the near side, through which the milk runs slowly into a vessel below, and leaves the cream on the bottom of the cooler. The cream, when taken off, is put into a cream jar, in which it accumulates until churned into butter. Every time a new portion of cream is put into the jar, its entire contents should be stirred, in order to mix the different portions of cream into a uniform mass. The cream soon becomes sour in the jar, and twice a week it should be made into butter, however small the quantity may be at a time. There are many varieties of churns, but the one now most generally used is the *Box hand-churn*. This is best made of birch



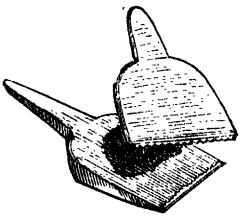
or plane tree, and requires to be carefully formed, so as to be water-tight. It is of very little consequence whether the bottom is formed to the circle of the agitator, or remains flat, as far as the production of butter is to be considered; but for the process of cleansing, the curved bottom will



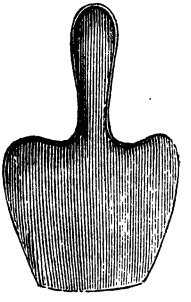
present some advantages. A cover is fitted close in the top of the box, with convenient handles. The *agitator* is of the usual form;

the dimensions of its parts are unimportant, except that they have sufficient strength and present sufficient surface to produce the requisite degree of agitation in the fluid. This form of churn may be enlarged to any dimensions to suit hand labour or power.

On converting the cream into butter, the first act is to put the churn into a proper state, assuming that the churn, when last used, was put aside in a thoroughly clean and dry state; about two quarts of hot water should be poured into it to scald and rinse it. In summer it should be rinsed with cold water after the hot, but not in winter. The churn being thus prepared, strain the cream into it through a bag of coarse linen cloth. To effect this, it must be dipped in water, and then held over the churn; and on the cream being slowly poured into it from the jar, the liquid part will run through into the churn, but the clotted part will remain in the bag. The best temperature at which cream can be put into a churn is 55 degrees Fahrenheit, and it is one easily attained in a cool apartment early of a summer's morning. The churning should be done slowly at first, until the cream has been completely broken and rendered a uniform mass; it then becomes thinner, and the churning is felt to be easier. The motion may then be slightly increased and continued until a change is heard in the sound within the churn, from a low smooth to a harsh tone, and until an unequal resistance is felt to be opposed to the agitators. The butter may soon be expected to form after this, and, by accelerating the motion a little more, it will form the sooner; the moment the mass within is felt to be firm and the agitators impeded, the motion should entirely cease. The rates of motion in churning butter at different times are of some importance, for when performed too slowly, the butter will be strong tasted; and when the motion is too rapid, the butter will be soft and frothy, and is said to have *burst*. In very warm weather, or when the cream is put in too warm, the churning is liable to burst with any degree of fast motion. The precise motions in churning, at the respective periods of the changes taking place in the cream, are difficult to determine, and much must be left to judgment. When butter forms from cream in churning rather less than an hour, it is satisfactory work; when it comes much sooner it is soft, and when much later it is strong tasted. *The utensils required for the use of butter* are a small tub for putting the butter into from the churn; a wooden flat shallow kit, to wash butter in; and a stoneware jar for keeping salt dry. Immediately on being formed, butter should be taken out of the churn and put into the small tub for the purpose. Cold water is then put into the flat kit, which is set in an inclined position, and the butter is washed, by being kneaded out and rolled up several times on the bottom of the kit amongst the water. Lumps of it are then taken in the hand, and beaten with the palms alternately, in order to extract every particle of the buttermilk, the least portion of which would soon render the butter rancid. The milky water is strained off, fresh water poured in, and the butter is again washed and worked as often as the water becomes milky. If intended to be kept or disposed of in a fresh state, the washed lump is divided into pound or half pound portions each, and placed in separate lumps in the tub amongst water. Each of these lumps is then clapped firmly by the hand, and moulded into the usual form. For the table, any requisite number of pounds should now be moulded from the lump into small pats; to accomplish this,



pat moulds and hands are used. Objections have been urged against the use of the hand in making up butter; and it is certain that hot clammy hands will impart a disagreeable taint and flavour to the butter; but naturally cool hands, made clean by washing in warm water and oatmeal, *not soap*, and then rinsed in cold water, may be employed. Under any circumstances, less handling can be given to the butter, by the partial use of the spade, which may be employed in the first process of the washing, by dividing and rubbing, and rolling it amongst the water on the bottom of the flat tube, before it is beaten by the hands.

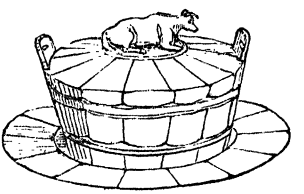


The spades are generally 4 inches square, with the handle 4 inches long. The lower side of the face is thinned away to a sharp edge. These implements will last longest when made of the wood of the apple tree.

Besides cream, butter is made from the *entire milk*, which is usually allowed to stand until it becomes sour, and requires a shorter time to convert it into butter than when the milk is sweet; but to obtain butter in these cases a large churn is required, and the churning must be continued for a long time, seldom less than three hours, and often as much as five. The butter obtained from this source is very good, and it has the advantage of possessing a uniform character in all seasons, the temperature of the milk being more easily obtained than that of the cream. The process of churning from the

whole milk is very simple. The milk is poured into coolers at first, and from them it is drawn off into vats sufficiently large; the vats are then put by, to stand totally undisturbed till the whole acquires a sufficient degree of acidity. The time required for this purpose varies a little, according to the heat of the weather, and the temperature of the milk-house. The point is ascertained by the formation of a thick scum on the surface. All the milk need not be of the same age—the milk of Sunday and Monday may be churned on the Thursday morning; that of Tuesday, Wednesday, and Thursday morning, on the Saturday evening; and that of Thursday evening, Friday, and Saturday, on the Monday morning. If the butter is intended to be salted it is specially treated. After being washed clean as above described, it is weighed in the scales, the salt weighed, and immediately applied to the lump. Practice varies considerably in the quantity of salt given to butter; but half an ounce of fine pure salt to a pound of butter is sufficient, if to be kept; or half an ounce to two pounds, if for immediate use. In the process of salting, the butter is spread out in the tub, after the washing, and the salt, ground fine, is sprinkled over it little by little; the butter is then rolled up and rubbed down with the lower part of the palm of the hand, until the whole mass appears uniformly incorporated with the salt. To ensure uniform salting, only half the salt should be applied at once, and the butter lumped and set aside until next day, when whatever of brine or milk may have exuded in the meantime, should be poured off. The other half of the salt should then be rubbed in in like manner, and the salted lump put into the jar or firkin on the second day.

BUTTER DISH.—Butter should always be kept in a pot or dish, in order that it may be



preserved firm and clean; it has also a more delicate appearance when thus sent to table than when exposed on a plate. Butter dishes may be made of either china-ware or glass, the latter, however, is preferable. They also appear in a great variety of designs, that shown in the engraving being one of the most chaste and elegant.

BUTTER, MELTED.—Put into a basin a dessertspoonful of flour and a little salt, then mix with them very gradually and very smoothly, a quarter of a pint of cold water; turn these into a small clean saucepan, and stir them constantly over a clear fire until they have boiled a couple of minutes, then add an ounce and a half of butter cut small; keep the sauce stirring until this is entirely dissolved.

BUTTER, RANCID, TO IMPROVE.—Wash it, melt it gradually, skim it, and put to it a slice of charred toast or some pieces of charcoal.

BUTTER, SALT, TO FRESHEN.—Churn it afresh with new milk, in the proportion of a pound of butter to a quart of milk.

BUTTER, TO CLARIFY.—Cut the butter in slices; put it into a jar, which set in a pan of boiling water until it melts. Skim it, take it out, and when it has cooled a little, pour it gently off, keeping back the curdy sediment.

BUTTER, TO PRESERVE.—Dry salt thoroughly before the fire; pound it as fine as possible; spread a layer of it at the bottom of a jar, then press and beat the butter down with a wooden rammer, cover the top with a thick layer of salt, so that when converted into brine it shall completely protect the butter.

BUTTER, USES AND PROPERTIES OF.—As an article of food in its natural state, and in cookery, for sauces, &c., is almost indispensable. When fresh, it forms a nutritious and instinctive addition to farinaceous food; and when melted is advantageously eaten with certain vegetables that are deficient in oily matter. Butter, however, must be used with moderation, as when eaten in excess it relaxes and debilitates the stomach, and gives rise to biliary derangements. Persons of a bilious temperament should be especially careful in the use of butter, eating it but seldom and then only in small quantities. When butter has been exposed, whether alone or combined with farinaceous articles, to a high temperature, such as of an oven, it becomes exceedingly unwholesome, and irritates weak stomachs to such a degree that it may be almost ranked as a poison.

BUTTERED BISCUITS.—Dissolve half a pound of butter in half a pint of warm milk, and with four pounds of flour make up a stiff but smooth paste, roll it very thin and stamp out the biscuits, prick them with a fork, and bake them on tins in a quick oven.

☞ Butter, ½lb.; milk, ½ pint; flour, 4lbs.

BUTTERFLY VIVARIUM.—See VIVARIUM.

BUTTERMILK.—The residuum of cream or milk deposited in the process of churning. It is sour to the taste, thick, and consists of butter, curd, and water. When fresh, it is a pleasant beverage, and if made of sweet cream is a delicious and wholesome food. It answers the purpose of cream to eat with fruit, when mixed with a little milk and sweetened with white sugar.

BUTTERMILK CAKES.—To a quart of flour add a pint of buttermilk and a teaspoonful of salt, dissolve a dessertspoonful of soda in a little warm water and stir it into the milk, which pour upon the flour while foaming. Beat all well together, adding flour enough to make a smooth dough. Roll it out, divide it into cake with a paste

cutter, and bake it in a quick oven for fifteen or twenty minutes.

☞ Flour, 1 quart; buttermilk, 1 pint; salt, 1 teaspoonful; soda, 1 dessertspoonful; spoonful; water, sufficient.

BUTTERMILK PUDDING. — Mix a quart of new milk with a pint of buttermilk; drain off the whey, and mix with the curd the crumb of a French roll grated, half a lemon peel grated, quarter of a pint of cream, three ounces of cold melted butter, the yolks of five and the whites of two eggs; sweeten the whole to taste, and bake with puff paste for half an hour.

☞ Milk, 1 quart; buttermilk, 1 pint; French roll, 1; lemon peel, ½ of one; cream, ½ pint; butter melted, 3ozs.; eggs, 5 yolks, 2 whites.

BUYING AND SELLING, LAW RELATING TO.—This is a transmutation of property from one person to another in consideration of a certain price. No contract for the sale of goods to the value of £10 or upwards is valid, unless the buyer actually receive and accept part of the goods sold, or unless he give something by way of earnest to bind the bargain, or in part of payment, or unless some note or memorandum in writing be made and signed by the party or his agent who is to be charged with the contract. With regard to goods *under* the value of £10, no contract or agreement is binding unless the goods are to be delivered within a year, or unless the contract be made in writing signed by the party or his agent. The delivery of a penny or a glove is sufficient *earnest* within the statute; the acceptance of the key of the warehouse in which the goods are deposited; the payment of warehouse rent; the directing them to be conveyed by a particular carrier; or the re-sale of them to a third person, are all an affirmance of the bargain. The note or memorandum of a bargain for the price of £10 or upwards, must state the *price* for which the goods were sold. Where no act remains to be done by the vendor, as counting, weighing, or measuring, the moment the bargain is struck the property of the goods is vested in the purchaser and remains at his risk; so, if a horse die in the interval of sale and delivery, the vendor is entitled to his money, though no actual change of property has taken place.

As a general principle, the law affords no redress for *oversights* committed in the *purchase of estates*, which might have been avoided by ordinary judgment and vigilance. But if the vendor knowingly conceal *latent defects*, either as regards the estate or its title, he cannot compel the execution of the contract, though the estate be sold expressly subject to all its faults. If it be falsely asserted that a valuation has been made of an estate at a higher price than really was the case, the purchaser is not bound to complete the purchase. So if the particulars of the sale of a house describe it in good repair when it is not so, the purchaser need not fulfil the purchase, unless there be time to complete the repairs before his right of possession commences. A false affirmation of the amount of rent would relieve the purchaser. From the moment of sale the purchaser becomes the virtual owner, and, consequently, from that time entitled to any profit or subject to any loss that may subsequently accrue to the estate. And, on the other hand, the vendor is entitled to *interest* on the purchase money from the time of the bargain to that of payment.

The property in *horses* is not easily altered by sale without the express consent of the owner; for a purchaser gains no property in a horse that has been stolen, unless it it has been bought in a fair or open market. The owner's property in the horse stolen is not altered by sale in a fair, unless it be openly ridden, led, walked, or kept standing for one hour at least, and has been registered, for which the buyer pays one penny. Sellers of horses in fairs or markets must be known to the person who takes toll there, and who is bound by the statute to keep a place for that purpose from ten in the forenoon till sunset; sales made otherwise are void. The owner of a horse stolen, notwithstanding the *legal sale*, may redeem the same on the payment or tender of the price within six months after it is stolen.—See CONTRACT, DEPOSIT, EXCHANGE, SALE OR RETURN, WARRANTY, &c.

C.

CAB FARES, AND REGULATIONS.—These are at the present time in a very unsettled state, but we may observe generally that cabs can be hired in London either by distance or by time. The prevailing fares are, by *distance*, one shilling for two miles and under, and at the rate of sixpence for every additional mile or part of a mile. For any *time* not exceeding one hour the usual fare is two shillings. Where a fare is calculated according to distance, and the driver is required to stop on the way, a further sum of sixpence is to be paid for every quarter of an hour he shall have so been stopped. No back fare to be taken or demanded. If not otherwise expressed at the commencement of the hiring, the fare to be paid according to distance. For a fare to be paid according to time, no driver will be compellable to hire his carriage after eight o'clock in the evening or before six o'clock in the morning. Cabs are licensed to carry two persons. Two children under ten years of age to be counted as one adult; a special bargain is made when more than two persons are carried, but if no notice be taken of the extra number of persons by the cabman at the time of hiring, he cannot demand more than his legal fare. When more than two persons shall be carried inside a cab, with more luggage than can be taken inside, a further sum of twopence for every package carried outside is to be paid by the hirer, in addition to the fare; but all luggage that can be carried inside is not to be charged for. The amount of fare according to distance

and time which may be legally demanded, is to be distinctly painted both on the inside and the outside of the carriage. The driver must also produce a book of fares when required. No driver can be compelled to drive more than *six miles* from the place of hiring. When hired by time, no driver shall be required to drive at a faster rate than four miles an hour, unless he is paid an additional sixpence for every mile or part thereof exceeding four miles. A ticket on which is printed the number of the carriage, is to be delivered by the driver to the hirer at the time of hiring, whether he be asked for it or not. Drivers refusing to go, or exacting more than the legal fare, or not travelling with proper expedition, subject themselves to a penalty of forty shillings. Agreements to pay more than the legal fare are not binding; in such cases the excess paid may be recovered, and the driver fined forty shillings for his extortion. For a stated sum the driver may agree to drive any distance at discretion, and is liable to a penalty of forty shillings for demanding more than the sum agreed upon, though less than the legal fare. Deposit may be demanded for cabs waiting; refusing to wait or account for the deposit, or going away before the time has expired for which the deposit was made, incurs a penalty of forty shillings. *Check-strings* are to be provided, and while driving to be held by the driver, under a penalty of twenty shillings. Drivers not to permit any person to ride in, upon, or about any carriage, without the express consent of the person hiring the same, under a penalty of twenty shillings. Endangering any person by *intoxication*, *wanton and furious driving*, or using abusive and insulting language, or being guilty of other rude behaviour, subjects any proprietor, driver, or waterman, to a penalty of £3, and the licence may be revoked. Property left in a carriage is to be deposited by the driver at the police office within four and twenty hours, or in default a penalty of £10 or one month's imprisonment. Any property found by a passenger is to be given up to the driver or conductor, under a penalty of £10. Property not claimed within a twelvemonth to be disposed of, and the proceeds paid to the receiver-general of Inland Revenue. When disputes arise, the hirers may require the driver, without payment, to drive to the nearest police court, if the magistrate be sitting, if otherwise, to the nearest police station. When in a case of disputed distance it is agreed that it shall be by actual measurement, the cost of measuring must be paid beforehand by either of the parties or in equal portions by both, to be retained or refunded according to themerits of the decision. When a person is proved to have resisted the payment of the fare unjustly, he must pay all costs attendant upon the hearing of the case, and also compensate the driver for his loss of time, or in default may be imprisoned for one month.

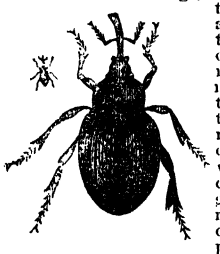
CAB-HIRING, ADVICE AND CAUTIONS RESPECTING.—Upon hiring a cab, especially if accompanied by ladies, go to the stand personally and make your own selection, so as to ensure a clean and comfortable vehicle and a good horse. The best method of any when you have particular occasion for a cab, is to find out some respectable cab proprietor in your immediate neighbourhood, with whom you will be able to make satisfactory arrangements and terms. Always provide yourself with the amount of the fare previously to starting; cab drivers seldom if ever have any change. Whenever you find that a cab driver is intoxicated, stop the cab and get out immediately you make the discovery, in order to prevent accident or personal annoyance. Never attempt to argue with a cabman respecting his fare after giving him what you consider to be just. Hand him your card and leave him to his remedy. Do not attempt to resent insolence and abuse either by words or blows, put the law in force, or walk silently away, as best suits your feelings and convenience. When accompanied by ladies or children, do not pay the fare till they are safely deposited at their destination, you will then be in a less embarrassed position to resist extortion; the same remark holds good for luggage, &c. When you require a cab to be early at your door the following morning, bespeak one, of the waterman of the cabstand on the previous night, or of a cab proprietor in the neighbourhood, as before suggested.

CABBAGE, BOILED. Wash and pick it carefully, and if very large, quarter it. Put it into a saucepan with plenty of boiling water and a tablespoonful of salt; if any scum arises, take it off; boil till the stalk is tender. Keep the vegetable well covered with water all the time of boiling, and shut out any smoke or dirt arising from stirring the fire. The flavour of an old cabbage may be much improved by taking it up when half done, and putting it directly into another saucepan of fresh boiling water. When taken up, drain it in a cullender. It may either be served plain, or chopped up and seasoned with butter, pepper, and salt.

CABBAGE, CULTURE OF.—Of this vegetable there are many varieties, but some are better adapted for growing in gardens than others, the seed of which may be obtained at any respectable seed shop. To obtain cabbage early in spring, procure half an ounce of "Atkins's Matchless," and the same quantity of the early "Nonpareil," both being dwarf and early; or buy more or less, in proportion to the size of the ground you intend planting. Between the first and the twelfth of August select an open piece of ground, and, having dug it well, sow the seed, scattering it regularly over the space allotted. Then take the spade, and throw a little soil from the sides of the bed evenly over the surface; press the bed down with your feet; then take the rake and smooth it gently over, taking care not to rake so deep as to draw the seed into masses over the bed. Water plentifully during dry weather, and watch carefully that the birds do not molest the shoots when they are breaking through the ground. Sow also at the same time an equal

quantity of the "Emperor," or "Wheeler's Imperial," which are larger and somewhat later, and which will give a succession during the greater part of the summer, or, at all events, until the early spring sowing comes in. If the plants have progressed favourably, they will be fit to plant out in the early part of September; and if onions have been grown in the same garden, it would be advisable to plant the cabbage in that piece of ground after the onions are taken off, the ground selected for onions being generally the best in the garden. After properly digging the ground, proceed to mark out the plot for the early sorts, eighteen inches from row to row; commence planting, putting the plants one foot apart in their respective rows, and fifteen inches from each other. After planting, water must be given, unless it be rainy weather. Watch for slugs, and fill up any vacancies that may occur from the seed bed of each sort respectively. As soon as the ground becomes dry on the surface, loosen the earth between the plants to the depth of two inches, which will accelerate vegetation. As the plants advance, draw the earth about them with the hoe, in order to steady them against the wind and protect them from the frost. If these rules are observed, young cabbage fit for cutting, will, under ordinary circumstances, appear in May, although much of course must depend on the season. For a succession, sow early in March, of the large sorts, and again from the middle to the end of May; and should there be some plants left in the seed bed of August sowing, plant them out in March.

CABBAGE FLY.—The larvæ of this insect will live underground, in the roots and stems of the cabbage, eating passages through them, and causing them to rot. The eggs of this insect may be recognised during winter and spring by the appearance of numerous small excrescences covering the stems close to the ground. The only remedy in the case of young plants, is as soon as the symptoms appear, to pull up the plants and burn them, by which means a riddance is made of the brood. To cut off the excrescences would simply weaken the plants, without exterminating the pest.



CABBAGE LEAVES.—If the upper side of cabbage leaves be applied to a wound, the sore is protected and quickly heals, while the under side *draws* it, and produces a constant discharge. The inner leaves of the cabbage should be applied in preference to the outer.

CABBAGE MASHED WITH CREAM.—Mash the cabbage, slice and blanch it, boil it in water with a little salt, and when it is nearly tender, take it out and dip it in cold water; then put it into a saucepan with a piece of butter, and add as much cream as will cover it, cook gently for a quarter of an hour, and serve.

CABBAGE RED, TO PICKLE. — Choose two middling-sized, well coloured, and firm cabbages, shred them very finely, first pulling off the outside leaves; mix with them half a pound of salt, tie them up in a thin cloth, and let them hang for twelve hours, then boil a quart of vinegar with an ounce of ginger, half an ounce of black and Jamaica pepper, and a quarter of an ounce of cloves. Put the cabbage into jars, and pour the vinegar over it when cold.

☞ Cabbages, 2; salt, ½lb.; vinegar, 1 quart; ginger, 1 ounce; pepper, ½oz.; cloves, ¼oz.

CABBAGE SALAD.—Select a firm, and fresh white cabbage, trim off the outside leaves, and cut down the centre of it; take out the large part of the stalk; lay the flat side of the cabbage downwards, and cut it right through into strips of about a quarter of an inch thick; strew it in the salad bowl, season with pepper and salt, and add five tablespoonfuls of oil and three of vinegar. It is then ready to serve, and may be eaten with either hot or cold meat.

CABBAGE SAUCE, KRAUT FASHION. —Shred eighteen or twenty firm white-hearted cabbages. Fumigate a tight clean cask, or butter tub, by burning a handful of green wood in it. Rub the seams with a dough made of vinegar and flour, or leaven, and strew in a handful of salt, with a few caraway seeds; proceed thus with alternate layers of sliced cabbage, and salt and caraway seeds, till the vessel is filled, pressing each successive layer firmly down. Pour off part of the liquor which will collect on the top when the cabbage is pressed down. Cover, and place the vessel in a rather warm temperature, when the cabbage will quickly ferment. After fermenting for a fortnight, take off the scum; throw a piece of cloth over the cabbage, and put on the head of the cask; press this down on the cabbage with a heavy weight, at the same time keeping the vegetable always covered with the pickle liquor. This will keep in a cool dry cellar for years. When wanted for use, boil it in water for three or four hours; drain and stew in broth, or with a piece of coarse beef or a knuckle of ham. It is served with, or over dry hashes, beef-steak pie, goose, or duck.

CABBAGE, SAVORY.—Soak two good sized cabbages in scalding water and salt for twenty minutes, then take them out and dip them in cold water. Remove a portion of the centre of each cabbage, and fill it with chopped veal and fat bacon, seasoned with salt, pepper, and other spices, and make into a stuffing with eight yolks of eggs; then tie up the cabbages securely, so that they may retain the stuffing. Put at the bottom of a saucepan some slices of bacon, chopped carrots, onions, and sweet herbs; over which place the cabbages, moistening them from time to time with good stock. Stew the whole over a slow fire for an hour and a half, after which drain the cabbages, press

them a little, remove the strings, and serve up with brown gravy and any piquant sauce.

CABBAGE SOUP.—Cut a cabbage into pieces, and scald it half an hour, then take it out and put it into cold water for a few minutes; drain it, and squeeze it dry. Put some slices of bacon at the bottom of a stew-pan, lay the cabbage in it with some chopped carrots, celery, and onion, fill it up with stock, and let it stew for two hours. Put some toasted bread in sippets in the bottom, then the cabbage; and lastly, pour in the soup, after skimming it clean. Sausages may be added, if approved.

CABBAGE, STEWED.—Choose two large, firm cabbages, cut them into strips, and entirely remove the stalk; after well washing and draining, put them into a large pan of boiling water ready salted and skimmed, and when tender, which will be in from ten to fifteen minutes, pour them into a sieve or strainer, press the water thoroughly from them, and chop them slightly. Put two ounces of butter into a saucepan, and when it is dissolved, add the cabbage, with sufficient pepper and salt to season it; stir it over a clear fire until it appears tolerably dry; then shake lightly in a tablespoonful of flour, turn the whole well, and add by slow degrees a cup of thick cream: veal-gravy or good white sauce may be substituted for this, when preferred to it.

CABBAGE, TO PRESERVE.—Cut them so that they may have about two inches of stalk remaining below the leaves, scoop out the pith for some distance down, and suspend the cabbage by means of a cord in a perpendicular and inverted position. Fill up the hollow part of the stem daily with clean cold water. Cabbages may also be preserved by being buried in the ground during winter, and they will be firm and fresh in spring.

CABBAGE, USES AND PROPERTIES OF.—The *white* cabbage is generally dressed for food. The *red* cabbage is chiefly employed for pickling. The bluish juice extracted from the latter affords an excellent test for both acids and alkalies; for it turns red with the former, and green by the latter. From the extreme liability of this vegetable to pass into a state of putrefaction, it should always be dressed and eaten as soon after it is cut as possible. As an article of diet, cabbage is wholesome and nutritious, and supplies a valuable mixture with animal food. With some constitutions, however, particularly those who are dyspeptic, they are sometimes indigestible and productive of flatulency. Under any circumstances, they should only be eaten in a tender state, and well seasoned with pepper and salt. A few drops of vinegar also improve their flavour, and render them less likely to disagree with the stomach.

CABINET PUDDING.—Stone two dozen of large table raisins, butter the inside of a basin, and stick the raisins all over it, then fill up the basin with a thick custard made of three quarters of a pint of milk, four eggs, a teacupful of finely grated bread, two tablespoonfuls of sugar, and six chopped almonds. Boil for an hour and a half, and when turned out, the raisins will be outside.

☞ Raisins, 24; milk, ¾ pint; eggs, 4; bread grated, 1 teacupful; sugar, 2 tablespoonfuls; almonds, 6.

CABINET PUDDING, FRENCH.—Boil a pint of cream with half a lemon peel and a quarter of a pound of sugar; pour it hot over half a pound of newly baked Savoy biscuits, and when the cream is soaked up cover the dish. Add the yolks and whites of eight eggs well beaten separately. Bake in a moderate oven, and serve with sweet sauce; dates, currants, or raisins may be added, and also minced marrow, almonds, and grated citron.

☞ Cream, 1 pint; lemon peel, ½ of 1; sugar, ¼lb.; Savoy biscuits, ¼lb.; eggs, 8.

CACTUS.—A beautiful succulent perennial plant, indigenous to South America.

The soil best adapted for it is a light one mixed with brick refuse or cinders; and it grows most advantageously in pots. When received late in the year, it should not be potted till the following spring; and when raised from seed, it should be sown in silver sand, and the young plants when transplanted should not be watered for several days. It may also be propagated by cuttings. When each cutting has been laid by for a day or two till the cut end has dried, plant it in a pot of mould to strike. It produces blossoms the third year. The cactus will thrive very well in a warm room with a southern aspect, otherwise it requires a frame. It usually blooms in June, but bruising the end of each fleshy leaf will force it into flower at an earlier period.

CAFFEIN.—A bitter crystallizable substance contained in coffee, varying from half to three-quarters per cent. A similarity of composition has been established between caffein and taurine, one of the constituents of bile, and it is believed that the former assists in the production of the latter, and thus facilitates the process of respiration.

CAGE.—See AVIARY; also, SQUIRREL, WHITE MICE, &c.

CAKE.—Before proceeding to the actual operation of cake-making, the various materials which are to enter into their composition undergo a certain amount of preparation; for this purpose every article should be in readiness about an hour previously to its being wanted, and placed before the fire or upon a stove, that it may become gently heated; without these precautions it is impossible to produce a good cake. The *currants* should be carefully picked and washed, and dried in a cloth set before the fire. The *eggs* should be well beaten—the yolks and whites separately. A large tin basin answers best for this purpose, as the yolks or the butter can be heated in this, occasionally over the fire or in hot water, while the whisking is going on, which materially assists the process. It is a good test of beaten eggs, when they are sufficiently thick to carry the drop that falls from the whisk. If eggs are not properly managed at first, it is difficult to raise them to a cream afterwards. After being beaten they should always be strained. If the eggs are put into cold water some time before breaking them, they will beat to a finer froth and in a shorter time when cold. In summer, put them into water with a little ice. It is better to beat them in a cool place than a hot room. *Sugar* should be crushed with the rolling pin to a powder on a clean breadboard, and sifted through a fine hair sieve. *Flour* should be of good quality, dry, and sifted. *Butter* should be cut in small pieces, well washed, and drained before using it, this will conduce to the lightness of the cake; after it is melted it must be beaten up with a little warm milk. *Lemon peel* should be thinly pared and, with a little sugar, beaten in a mortar to a paste, then mixed with either wine, cream, or a little milk, so as to divide easily among the other ingredients. *Caraway seed, ginger*, and *spices* are added in the form of a fine powder, or made into an essence by dissolving them in spirits of wine. The *milk* and *water* is made lukewarm. When all these things are ready and have stood a sufficient time, they are put into buttered pans one after another in the proper order, and well beaten together; this should be done for at least half an hour, the lightness of the cake principally depending upon the ingredients being thoroughly intermingled. In *plum cakes*, as well as in some other varieties, a *little yeast* may be added after the butter, the mass allowed to rise a little, and then again well kneaded.

The *heat of the oven* is of great importance in baking cakes, especially those that are large. It should have rather a quick temperature, or the cake will not rise properly, and will turn out heavy. To ascertain when *baked sufficiently*, the oven door should be partly opened, and a bright knife plunged into the heart of the cake and quickly withdrawn. If done enough the knife will come out as clean as it went in; if not done enough some of the cake will be found adhering to the blade. In the latter case the cake must be immediately returned to the oven. The heat of the oven ought to be kept up equally throughout, by adding fresh fuel occasionally till the cake is drawn; but, above all, attention must be given till it is properly raised. Cakes should be kept in a dry place, wrapped up and set in a close pan, to prevent them from hardening. If made without yeast they will keep a very long time. They may be heated on the hob or in a slack oven, to refresh them, when to be used. In mixing cake, the hands should be brought into contact with the materials as little as possible, particularly in warm weather: it is preferable to use a wooden spatula or spoon. See ALMOND, APPLE, APRICOT, BANBURY, BATH, BEEF, BORDEAUX, BREAD, BRIDE, BRIOCHIC, BUTTERMILK, CARAWAY-SEED, CHEESE, CREAM, CURRANT, DUTCH, FRENCH, GERMAN, GINGERBREAD, HOMINY, HONEY, INDIAN, JERSEY, KENTISH, LANCASHIRE, LEMON, MADEIRA, MARLBOROUGH, MONTROSE, NAPLES, NAVARRE, NORFOLK, ORANGE-FLOWER, PLUM, PORTUGUESE, POUND, QUEEN, RASPBERRY, RATAFIA RICE, ROCK, ROUT, RYE, SAFFRON, SAVOY SCOTCH, SHREWSBURY, SODA, SPONGE SUGAR, SUSSEX, TEA, TIPPERARY, TIPSY, TUNBRIDGE, VEAL, VENETIAN, VICTORIA, VIENNA, WASHINGTON, WIGG, WHORTLEBERRY, YORKSHIRE.

CAKE, DIETETIC PROPERTIES OF.—Cakes when plain are by no means injurious, but when rich they are indigestible, especially if eaten in any considerable quantity. As a general rule, cake should be given to young persons in small quantities; for although there may be no immediate symptoms of its unwholesomeness, the probability of indulgence in luxuries of this kind is that it will ultimately do great injury to the system, and it is certain that few stomachs will bear this kind of food long without injury to the digestion. Under any circumstances the cake given to children should be of the plainest kind.

CALCULATION, MENTAL.—Under this head are comprehended short practical methods of working arithmetical questions, partly or wholly by the mind. Mental calculation depends simply on an effort of memory, and inasmuch as this faculty is called into exercise to a certain extent, when figures are put down upon paper, so may it be employed in a degree sufficiently extended, to dispense with writing materials altogether. The principal recommendation in favour of this system is the immense amount of time and labour that it saves, for in cases where a number of calculations would demand hours to solve by the ordinary rule they may, by this method, be determined in as many minutes. Another advantage in mental calculation is, that it does not admit of so many errors being committed, as when pen and paper are used. For in the latter process the mistakes that occur do not so much arise from the incorrect working of the question, as in writing down or carrying the wrong figures, and placing them in an irrelevant position. It is also a well known fact that there is no art in which practice so soon renders a person proficient; so much so, that it is possible for a person of average

intelligence, after a reasonable course of practice, to furnish correct answers to the most difficult arithmetical questions, almost simultaneously with their being propounded. The kind of questions most commonly occurring are computations of the aggregate value of a certain number of articles at a certain price, and the adding the whole together to find the sum total. One of the methods usually adopted is to calculate the value of any number of articles by the nearest round sum, and then to apply the difference. For instance, a person buys 30 yards of a material at 5½d., and the salesman tells him instantly that it comes to 13s. 9d. He knows it is so by saying internally to himself—30 yards at 6d. would be 15s.; then if I take 30 half-pence, that is 1s. 3d., from the 15s., I find that 13s. 9d. will remain Another principle followed in this practical arithmetic is to work by aliquot parts. By remembering that a penny is the 12th of a shilling, or the 240th of a pound; that 3s. 4d. is the 6th of a pound, and so on, much of the ordinary figuring is saved. As an illustration, let it be required to find the value of 2780 articles at 3s. 4d. each. By the usual rules of arithmetic, this question would be performed by multiplying the 2780 by 40 (there being 40 pence in 3s. 4d.) and then dividing by 12 to bring into shillings, and by 20 to bring it into pounds. The practical method is much shorter; 3s. 4d. being the 6th of a pound, if 2780 be divided by 6 the amount is at once obtained thus—

6)2780

£463 6s. 8d.

The following rules and examples may be taken as the general groundwork for mental calculation, and will be found to provide for nearly every class of question that may arise:—*To find the value of* 12 *articles having the price of* 1 *given.* RULE—For every penny in the price, reckon a shilling; for every halfpenny, sixpence; and for every farthing, threepence. EXAMPLE—What will 12 yards of cloth cost at 2s. 4½d. per yard? 2s. 4½d.= 28½d., which, taken as shillings, give £1 8s. 6d.—*Ans.*

When the quantity is nearly a dozen, or some multiple of a dozen. RULE—Calculate the value of the nearest dozen or dozens, and add or subtract the value of the excess or deficiency. EXAMPLE—What is the value of 75 yards at 8¼d. per yard?

	£	s.	d.
6 doz. at 8¼d. =	2	12	6
3 extra =		2	2¼
	£2	14	8¼—*Ans.*

What is the price of 11 yards at 6½d. per yard?

s.	d.	
5	3	price of 10
0	6½	price of 1
5	8¾—*Ans.*	

When the quantity is not easily reducible to dozens, as in 87½, 19½, *&c.* RULE—Take the articles as pence, and multiply by the money.

EXAMPLE—What is the value of 19½lbs. at 10d. per lb?

19½d. = 1 7½
10

16 3—*Ans.*

To find the value of any number of grosses, having the price of 1 *article given.* RULE—Find the value of 1 dozen, and take that amount as the value of another dozen. EXAMPLE—What is the value of 1 gross at 4½d. each? 1 doz. at 4½d. each = 4s. 6d., which, being taken again, give 54s. = £2 14s. 0d. the value of 1 gross.

To find the value of 20 *articles, having the price of* 1 *given.* RULE—For every shilling in the price reckon a pound, adding 10s. for 6d.; 5s. for 3d.; 1s. 8d. for 1d.; 10d. for ½d.; and 5d. for ¼d. EXAMPLE—What is the price of 20 yards of cloth at 2s. 4½d. per yard?

2s. 4½d. as pounds give £2 7s. 6d.

To calculate the cost of 240 *articles, having the price of* 1 *given.* RULE—For every penny in the price reckon a pound. EXAMPLE—What is the price of 240lbs. at 2s. 10½d. per lb?

2s. 10½d. = 34½d., which, taken as pounds, = £34 10s.

To find the cost of 100 *articles when the price of* 1 *is given.* RULE—If the price be an aliquot part of a penny, shilling, or pound, divide the quantity thereby, and the answer is shown in pence, shillings, or pounds. If the price be not an aliquot part, for every shilling in the price reckon £5, to which add 8s. 4d. multiplied by the pence for the answer; and for every farthing add 2s. 1d. EXAMPLE—What is the price of 100 yards at 3d. per yard?

100 pence = 8 4
3

£1 5 0—*Ans.*

To find the cost of 1000 *at any price per* 100. RULE—If the price be shillings, half the number of shillings per hundred will be the answer in pounds. If the price per hundred be pence, annex a cipher, and the price will be at once shown. A great assistance to mental calculation is the learning by heart the equivalent value of any number of farthings, pence, and shillings in pounds. Books: *Martin's Pounds, Shillings, and Pence; Ferguson's Complete System; Hopkins' Pupils' Manual; Harrison's New System; Arithmetic Made Easy; O'Gorman's Intuitive Calculator; Taylor's Buyers and Sellers' Calculator.*

CALEDONIAN CREAM.—Mince a tablespoonful of orange marmalade; add to it a quart of cream, a wineglassful of brandy, six ounces of pounded loaf sugar, and the juice of a lemon; whisk it for half an hour, and pour it into a shape with holes in it, or put it into a small hair sieve, with a piece of thin muslin laid into it. Serve in custard glasses.

☞ Orange marmalade, 1 tablespoonful; cream, 1 quart; sugar, 6 ozs.; lemon, juice of 1.

CALEDONIAN QUADRILLES. *First Figure.*—The first and opposite couples hands across, round the centre, and back to places—set and turn partners. Ladies' chain—half promenade. Half right and left, repeated by the side couples. *Second Figure.*—The first gentlemen advance and retire twice. All set at corners, each lady passing into the next lady's place on the right, promenade by all; repeated by the other couples. *Third Figure.*—The first lady and opposite gentleman advance and retire, bending to each other. First lady and opposite gentleman pass round each other to places. First couple cross over, having hold of hands, while the opposite couple cross on the outside of them—the same reversed. All set at corners, turn, and resume partners. All advance and retire twice, in a circle with hands joined—turn partners. *Fourth Figure.*—The first lady and opposite gentleman advance and stop; then their partners advance; turn partners to places. The four ladies move to right, each taking the next lady's place, and stop. The four gentlemen move to left, each taking the next gentleman's place, and stop. The ladies repeat the same to the right; then the gentlemen to the left. All join hands, and promenade round to places, and turn partners, repeated by the other couples. *Fifth Figure.*—The first couple promenade or waltz round inside the figure. The four ladies advance, join hands round, and retire—then the gentlemen perform the same—all set and turn partners. Chain figure of eight half round and set. All promenade to places and turn partners. All change sides, join right hands at corners and set—back again to places. Finish with grand promenade. — See GALOPADE, LANCERS, QUADRILLE, ETC.

CALF'S BRAINS, To DRESS.—Strip off the outer skin, and having well cleaned the brains, soak them for two hours in cold water; then blanch them in boiling water, in which has been put a handful of salt, and a tablespoonful of vinegar; take them out, and put them again in cold water; then stew them for an hour with a slice or two of streaked bacon, a bunch of sweet herbs, a shalot, a little parsley, two bay leaves, three cloves, and a gill of white wine; when done, drain the brains, and pour over them a sauce made from white wine, chopped mushrooms, and a bunch of fine herbs.

CALF'S CHITTERLINGS, To DRESS.—Clean some of the largest, and cut them into proper lengths for puddings; tying one of the ends securely. Cut fat bacon into the form of dice, and with it a calf's udder and the fat that comes off the chitterlings; put them into a stew-pan, with a seasoning of salt, pepper, and mace, two bay leaves, a shalot, and half a pint of milk, let this simmer; then take off the pan and thicken it with four or five yolks of eggs; and some bread-crumbs; fill the chitterlings with this mixture, which must be kept warm, and make the links like hog's puddings; before they are sent to table they must be boiled over a moderate fire; and left to cool in their own liquor.

CALF'S EARS, To DRESS.—Cut four calf's ears deep, and even at the bottom, so that they may stand; clean and wash them well, and boil them till tender in milk and water; fill them with forcemeat, tie them with thread, and stew them in a portion of the liquor they were boiled in; season with pepper, salt, mace, and a small onion minced. Before serving, thicken the sauce with the yolk of an egg beaten up in a little cream.

CALF'S FEET BROTH.—Take two calf's feet, two ounces of veal, two ounces of beef, a crust of bread, two or three blades of mace, half a nutmeg grated, and a little salt, boil in three quarts of water till it is reduced to three pints; strain and skim off the fat.

☞ Calf's feet, 2; veal, 2ozs.; beef, 2ozs.; bread, a crust; mace, 2 or 3 blades; nutmeg, ½ of 1; salt, sufficient; water, 3 quarts.

CALF'S FEET JELLY.—Boil two calf's feet with one ounce of isinglass, to bring it to a stiff jelly. Add two or three shreds of lemon-peel, a bunch of sweet herbs, thirty peppercorns, six cloves, a blade of mace, half a nutmeg, and half a saltspoonful of salt; when the jelly is done strain it; add to it lemon-juice and sherry to taste, boil it up, and pulp it through a sieve till fine.

☞ Calf's feet, 2; isinglass, 1oz.; lemon peel, 2 or 3 shreds; sweet herbs, 1 bunch; peppercorns, 30; cloves, 6; mace, 1 blade; nutmeg, ½ of 1; salt, ½ of 1 saltspoonful; lemon-juice and sherry to taste.

CALF'S FEET POTTED.—Boil the feet as for jelly, pick all the meat from the bones, add to it half a pint of gravy, and a seasoning of salt, pepper, nutmeg, garlic, shalot, and shred ham; simmer it for half an hour, dip a mould into water, put in a layer of meat, then some pickled beet-root, and some boiled minced parsley, upon this, a layer of meat, and so on, till the mould be filled; when cold, turn it out.

CALF'S FEET PUDDING.—Pick all the meat off three well-boiled calf's feet; chop it finely with half a pound of fresh beef suet; grate the crumb of a penny loaf; shred an ounce of orange-peel, and an ounce of citron; beat six eggs into a froth; mix their ingredients thoroughly together, and add a wineglassful of brandy, and half of a nutmeg grated; boil in a cloth for three hours. Serve with sweet sauce.

☞ Calf's feet, 3; beef suet, ½lb.; bread, 1 penny loaf; orange-peel, 1oz.; citron, 1oz.; eggs, 6; brandy, 1 wineglassful; nutmeg, ½ of 1.

CALF'S FEET STEWED.—Divide a calf's foot into four pieces, and put them to stew with half a pint of water; add a potato and onion sliced, and a seasoning of pepper and salt; let the whole simmer gently for two hours.

CALF'S FEET STOCK.—Scald, remove the hair from, and wash very clean four calf's feet; put them into a saucepan with two quarts of cold water, and when boiling point is reached let them simmer for six or seven hours; take out the feet, and strain the liquor into a deep dish. On the following day remove the fat from the surface, and give the liquor another boil, until it is reduced to a quart of stiff stock.

CALF'S HEAD BOILED.—Tie the head up in a cloth, and boil it for two hours and a half in plenty of water. Tie the brains up in a separate cloth, with a little parsley, and a leaf or two of sage. Boil them one hour; chop them small; warm them up in a sauce-pan, with a little butter, pepper, and salt; lay the tongue, which has been boiled at the same time, peeled, in the middle of a small dish; place the brains round it; serve with bacon or pickled pork in another dish.

CALF'S HEAD HASHED.—Cut the head, after it has been boiled, into slices, flour them, and put them into a stew-pan, with some of the liquor the head has been boiled in, two blades of mace, a saltspoonful of salt, four artichoke-bottoms parboiled, six oysters, an egg beat up in half a pint of milk, and a little flour to thicken; stir altogether till done, and serve in a hash-dish.

CALF'S HEAD PIE.—Well soak half a calf's head, and boil for half an hour, the tongue forty minutes; cut the meat into pieces, stew the bones with mace and pepper; place at the bottom of a pie dish some parsley, ham, tongue, and pieces of boiled egg; then put in some slices of the brains, a saltspoonful of salt, and a wineglassful of water; cover the whole with a crust. The liquor in which the bones are boiled should be reduced till it is strong and of a nice flavour; strain it, and while the pie is hot, pour as much of the liquor into the dish as it will hold. Let it stand for twelve hours, and when wanted, turn it out upside down, and serve with a garnish of parsley.

CALF'S HEAD ROASTED.—After having thoroughly washed a calf's head, dry it well in a cloth, and remove the bones. Make a seasoning of mace, pepper, salt, nutmeg, cloves, and grated bread; put this inside the head where the bones came from; roll it up, run two or three skewers through it, and tie it round with tape. Roast it for two hours, basting it with butter. Then prepare a sauce from a quart of stock gravy, a dozen oysters, and a thickening of flour. Cut the tape, remove the skewers, place the head on a dish, and pour the sauce over it; garnish with sliced lemon and fried parsley.

CALF'S HEAD SOUP.—Parboil a calf's head, take off the skin and cut it into pieces of about an inch and a half square; mince the fleshy part into smaller pieces; take out the black part of the eyes, and cut the remainder into rings; skin the tongue, and cut it into slices; turn the whole into three quarts of good stock, and season with cayenne pepper, two or three blades of mace, and salt; add the peel of half a lemon, half a pint of white wine, and a dozen forcemeat balls; stew the whole for an hour and a half. Rub down two tablespoonfuls of flour with a little cold water, mix it well with half a pint of the soup, and then stir it into the pot; add the juice of half a lemon, and the yolks of eight eggs, hard boiled; let it simmer for ten minutes, and serve in a tureen.

☞ Calf's head, 1; stock, 3 quarts; cayenne pepper and salt, sufficient; mace, 2 or 3 blades; lemon-peel, ½ of 1; white wine, ½ pint; flour, 2 tablespoonfuls; water, sufficient; lemon-juice, ½ of 1: eggs, 8 yolks.

CALF'S HEAD STEWED.—Remove the bones and eyes from a calf's head; make a forcemeat with one pound of beef suet, one pound of veal, two anchovies boned and cleaned, one nutmeg grated, two or three sprigs of thyme, the peel of one lemon, and the yolks of two eggs; mince all these together with some stale bread grated. With a portion of this forcemeat, stuff that part of the head where the bones have been taken out. Tie it up in a cloth; put it into three quarts of stock gravy. Keep it closely covered, and let it stew gently for two hours; while it is stewing, chop up the brains with some lemon-thyme, parsley, and grated nutmeg; mix with it the yolk of an egg, make the mixture into balls, and fry them in boiling fat. When the head is done, keep it hot before the fire; strain off the liquor in which the head has been stewed, add a gill of sherry, and warm it in a saucepan. Put the head into a hot dish, pour the sauce over it, and lay the forcemeat balls around.

CALF'S HEAD, TO CARVE.—Cut thin slices from the snout to the back of the head, passing the knife down to the bone. The part most esteemed is the throat sweetbread, which is situated at the thick part of the neck; this should be carved in slices, and helped with the other part. If the eye is wished for, force the point of the carving-knife down on one side to the bottom of the socket, and cut it clean out. The palate or roof of the mouth is also considered a great delicacy. The lean parts will be found on the lower jaw, and the fat about the ear.

CALF'S HEART BAKED.—Clean and stuff as directed for bullock's heart, then bake instead of roasting, and serve with a rich gravy.

CALF'S LIVER AND BACON.—Cut the liver into slices, and fry it in good beef dripping or butter; half fill the pan, and put the liver in when it boils. Lay toasted rashers of bacon round it, with some fried parsley; serve with a sauce made of veal-stock, ketchup, pepper, salt, butter, and a little flour to thicken; pour a portion over the liver, and send the remainder to table in a sauceboat.

CALF'S LIVER, BRAISED.—Lard a calf's liver with bacon, and let it be dressed in braise; when done, take it off and drain it; dish it up with a ragout of sweetbreads, veal, and mushrooms.

CALF'S LIVER SCOLLOPS.—Parboil a calf's liver, and cut it into slices. Stew some fine herbs, parsley, shalot, and onions; then add the calf's liver, and let it stew over a slow fire; when done on one side, turn, and season it with pepper and salt; then take out the liver, dredge in a little flour over the herbs, and add some more gravy; let this boil for ten minutes, then heat the liver in the sauce, and serve.

CALF'S TAILS, TO DRESS.—Clean, blanch, cut them at the joints, and brown them in butter or soft kidney fat. Drain, and stew them in good stock seasoned with parsley, onions, and a bay leaf. Add green peas to the stew, if in season, or some small mushrooms. Skim and serve the ragout.

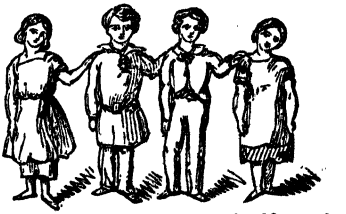
CALICO.—The various kinds of calicoes made in this country are plain white calico, usually called cotton cloth. *Duck* is a stouter kind; and *double warp* is stouter still. *Calico shirting* or tunic cloth, is a very regular made calico, to imitate linen; a superior kind is called *patent twist:* the yarn is closer twisted than in common calico. *Sheeting calico* is a stout fabric, much used as a substitute for linen, and preferable for wear in cold weather. *Printed calicoes*, usually called *prints*, are manufactured in an infinity of patterns. Calicoes are frequently so full of dressing—a preparation of lime put in by the manufacturer — that it is difficult to ascertain the quality. It is best, therefore, to choose calico, if possible, free from dress, and to take particular note that the threads are straight and evenly wove.

CALICO FURNITURE, TO CLEAN.—When curtains or bed furniture of this description are to be taken down for the summer, shake off the loose dust, and brush them lightly with a small long-haired furniture brush. Wipe them afterwards with clean flannels, and rub them with dry bread. If properly done, they will look nearly as well as when new; and if the colour be not very light they will not require washing for years. Fold them up in large parcels, and put them by carefully. While the furniture remains up it should be preserved as much as possible from the sun and air, and as the dust collects it may be blown off with the bellows. Curtains may thus be kept clean, even to use with the linings after they have been washed and newly dipped.

CALICO FURNITURE, TO WASH.—Remove as much of the dirt as possible by brushing and shaking. On no account use a particle of soda, pearlash, or anything of the kind. Allow plenty of water and sufficient room in the tub. Use soft water, and let it be no hotter than would be pleasant for washing the hands. Rub with soap in the ordinary way. Mottled soap is preferable to yellow. If a general wash is about, the water in which flannels have been washed a second time does very well for the first washing of calico furniture, provided no soda or anything else of the kind has been used. When the first washing is completed, have ready another tub with water of the same degree of warmth, into which put each piece after wringing it out of the first liquor. Repeat the process of washing in the second water, carefully observing that every part is clean. On wringing out of the second liquor immediately plunge each piece into cold *spring* water for rinsing. On taking each piece out of the rinsing-water, immediately hang it out, and let it dry as quickly as possible. In hanging the articles up, put any thick double parts next the line, letting the thinner part hang down and blow about. When these are dry, the positions may be changed, and the thick parts hung downwards. If, through unfavourable weather, or any other circumstance, the drying cannot proceed at once, the things had better remain all night in the rinsing-water, rather than lie about in the damp. If they are half dry out of doors, when taken in for the night let them be hung or spread in a room, and again hung out early the next day. If there is no chance of favourable drying in the open air, they should be quickly dried before a fire or round a stove. If starching be required, a sufficient quantity of made starch may be stirred into the rinsing-water.

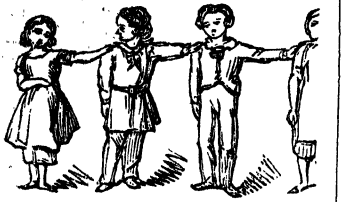
CALISTHENICS, the name given to that branch of education which relates to the healthy and graceful exercise of the body and its members. It is to be distinguished from gymnastics by the greater amount of intelligence with which it is combined. The relative position of the sciences of gymnastics and calisthenics may be illustrated thus: by means of the former a person may be brought to use a member of the body—say an arm, or a leg, or one hand - in a manner and with an effect wholly disproportioned to ordinary results; and the whole body may be rendered capable of extraordinary fatigues or labours. The latter sets out with the gradual cultivation of each member and faculty in its due proportion and with regard to its proper office; it is complete when all the elements of bodily strength and grace are immediately obedient to the will. This is the theory of calisthenics; practically it includes the apt and ready adoption of graceful attitudes and gestures at the command of a teacher. The importance of calisthenic training is now generally acknowledged, its fundamental maxims forming the basis of all true education. A good teacher of the system should unite temper with firmness. The lessons should be given regularly—at least once a day—at first during a short space and gradually lengthening; but should always cease with the slightest sign of fatigue in the pupils. A new position ought not to be gone into until the previous one has been successfully performed. The pupils should be made to realize the rule that action on their part is to follow immediately upon the word of command of the teacher. Of course the exercises may be extended to any length or may stop at a certain point, according to circumstances. It is usual to commence as follows:—

The teacher having taken a convenient place, gives the first word of command:—"A Line," when the pupils form a straight line before him. At the word "Prepare," each pupil, except the one to the extreme right, lays his left hand on his neighbour's right



shoulder, the fingers on the shoulder and the palm of the hand resting against it.

At the word of command "Take your distance," the line formed by the pupils extends from the left to the right, in the following manner: The first pupil at the teacher's right remains in his place, whilst every other pupil moves away from his neighbour at the left, until his own left arm and hand are freely stretched out, so that the points of his fingers only touch his neighbour's right shoulder. The movement



to attain this position soonest, is, by ordering the last pupil at the left of the teacher to move his own right, until he has taken his distance; then he must still move on with his neighbour at the left until he has also taken his distance, and the moving on to the left of the teacher must continue, until the second last of the line has taken his distance from the first pupil, who must not move. At the word of command "Close line," the expanded line formed by the pupils contracts from the right to the left into a straight line, the distance of each pupil from his neighbour remaining so as to admit freely the elbow of the drawn-in arm. The hands and arms are in the same positions as in "Prepare." The movement to effect the contraction of the line, begins with the second at the teacher's right and continues to the last at his left; each taking his distance by his neighbour to the left. These preparatory positions are followed by others, such as:—"Join heels;" "Hands down;" "Head up;" "Look before you;" "Shoulders back;" "Chest out;" "Feet outward," &c., &c. If care be taken to avoid every awkward or ungainly gesture, these preliminary poses may be made auxiliary to the teaching of deportment. The head is next placed in various positions; the face, eyes, shoulders, arms, hands, wrists, thumbs, fingers, the chest, legs, toes, feet, and the whole trunk are then taken in the order in which they are here enumerated; and the pupil is led by easy gradations from the simplest to the most compound movements. Book: *Calisthenics; or the Elements of Bodily Culture on Pestalozzian Principles, by Henry de Laspée.*—See DEPORTMENT, DRILLING, &c.

CALOMEL.—The submuriate or protochloride of mercury. Its constituents are—quicksilver, 79; oxygen, 9·5; muriatic acid, 11·5; or chlorine, 15·25; mercury, 84·75; in 100 parts of submuriate. There is, perhaps, no medicine that is so extensively employed as calomel; it is chiefly regarded, however, as an alterative, and in larger doses purgative. It is prescribed in doses of from half a grain up to a scruple; when given as a purgative, it is best combined with some other laxative, as extract of colocynth or rhubarb, and should be followed on the succeeding morning by some saline laxative combined with a bitter, as Epsom salts, and infusion of gentian or camomile. Calomel, like all other active preparations, particularly mercurials, is frequently abused, being prescribed by persons ignorant of its qualities; and when given in small doses, frequently repeated, it produces violent salivation. Care should be taken, therefore, not to repeat it too often, or quickly, as that effect might be produced.

CALUMBA.—The root of the *Cocculus*. It is dried in slices of a yellowish gray colour, and is generally worm-eaten. It has a bitter and slightly pungent taste, and is very mucilaginous. Calumba root is an excellent tonic medicine, especially in debility of the stomach and intestines: about ten grains of the powder may be taken twice or thrice a day.

CALVES, REARING OF.—Calves are either suckled by the mother or brought up on milk by hand. When they are suckled, if the byre be roomy enough, stalls are erected for them against the wall behind the cows, in which they are usually tied up: or they are put into large loose boxes at the ends of the byre; and unfastened at stated times to be suckled. When brought up by hand, they are put into a separate apartment from their mothers, and each confined in a crib, where the milk is given them. The crib for each calf should be four feet square and four feet in height. Abundance of light should be admitted, either by windows in the walls or sky-lights in the roof; thorough ventilation and a regular supply of fresh air should also be attended to. The crib should be fitted up with a manger to contain cut turnips or carrots, and a high rack for hay, the top of which should be as much elevated above the litter as to preclude the possibility of the calf getting its feet over it. The first food that the calf receives, consists of the milk obtained from the cow for the first four days after calving. It is then of the consistence of the yolk of an egg, and forms an appropriate food for the young calf. On giving it its first feed by the hand, in the crib, it may either be raised to its feet, or suffered to lie still. In whichever position the food is taken, it should be administered as follows:—Place the food in a small dish or pail; put the left arm round the neck of the calf, and support its lower jaw with the palm of the hand, keeping the mouth a little elevated and open, by introducing the thumb of the same hand into the side of its mouth. Then fill the hollow of the right hand with milk, and pour it into the calf's mouth, introducing a finger or two with it for the calf to suck while it is swallowing the liquid. Let it take handful after handful, in this manner, until it is satisfied. In this way it should be fed as often as the cow is milked, which is at first three times a day at least. After the first two or three days, the following method of feeding may be substituted: put a finger or two of the right hand into the calf's mouth, and holding the dish or pail of milk with the left

under its head, bring the head gradually down into the pail, and by aid of the fingers induce it to take a few draughts of the milk; while it is doing this, gently withdraw the fingers, holding the head down at the same time, taking care, however, not to dip its nostrils into the milk. In a few days the fingers will not be required, and in a few more the calf will drink of its own accord. For the first month the calf should have as much sweet milk warm from the cow as it can drink. It will be able to take three meals a day, and nearly three quarts at each meal. After the first month, to the end of the third, the quantity of milk is divided between two meals, morning and evening. In some cases half sweet and half-skimmed milk are given to the calves, and in others a substitute for milk is provided, by making gelatine of boiled linseed or sago. The linseed jelly is easily made by boiling good linseed in water, and while it is in a hot state to pour it into a vessel to cool, where it soon becomes a firm jelly; a portion of this is taken for every meal, and incorporated with a little warm milk. Sago may be prepared in the same manner; but a larger proportion of milk is required to be given with it. A third substance is made from pea-meal. For this purpose pour hot water upon the meal, and stir until the mixture is smooth; let it stand to cool, and when it becomes a jelly, mix a portion of it with as much new warm milk, into a consistence that the calf can easily drink. Suckling is a superior mode of rearing calves, provided the calf has free access to the cow which is supporting it; but if it be allowed to suckle at certain intervals only, bringing up by hand is preferable. As the season advances and the air becomes mild, and when the calves have attained the age of two months, they should have access to the open air during the day; and after some days endurance, may be sheltered at night under the shed instead of being again put in the crib. At this time sweet hay should be put in their racks, and the mangers in the shed provided with Swedish turnips. At three or four months old, according to the supply of milk, and the ready state of the grass to receive them, the calves should be weaned in the order of seniority, due regard being paid to their individual strength. When weaning is determined upon, the supply of milk should not be withdrawn all at once, but lessened daily, and given at longer intervals. At the same time that the supply of milk is diminished, the calf should be enticed to take other food, such as new bundles of the most cloverly portions of hay, fresh turnips or carrots sliced, a little pounded oil cake, and pure water at will. A small sheltered paddock, near the steading, is an excellent place for weaning calves, before turning them out into a pasture field. When calves are reared for *Veal*, they are suckled three or four times a day for the first three or four days, and then twice a day. They are placed in boarded boxes, four feet high, and just large enough inside to admit of the calf turning. The calf is fed thus for about ten weeks, when it will attain about 35lbs. per quarter, and is then considered prime veal. Calves are subject to many diseases. The *navel-ill* is a bleeding from the navel string; and in this case, a ligature should be passed close round it, a pledget of tow, well wetted with Friars' balsam, be placed over it, and changed every morning and night. Sometimes when there has been previous bleeding, inflammation suddenly appears about the navel between the third and tenth day. Fomentation should be applied, in order to disperse the tumour, and two or three doses of castor-oil given, made into an emulsion by mixing it with egg. If when the inflammation abates, extreme weakness should ensue, gentian and laudanum, with a small quantity of port wine, may be administered. For simple *costiveness*, the best remedy is the milk that comes from the cow for the first four days after calving. But in confirmed cases, doses of warm water, containing a solution of two or three ounces of Epsom salts, should be frequently administered. *Diarrhœa* is a disease to which calves are peculiarly liable. They are most subject to it when put out to grass at too early an age. The first application of a remedy should be a mild purgative, to remove, if possible, the irritation of the bowels; this should be followed by anodynes, astringents, and alkalies, with carminatives, the withdrawal of every sort of green food, and the administration of flour or pea-meal gruel. The following mixture is extremely serviceable in these cases, and it is one which may advantageously be kept always ready at hand:—

Prepared chalk . . .	1oz.
Winter's Bark, powdered.	1oz.
Laudanum	1oz.
Water	1 pint.

Give two or three tablespoonfuls, according to the age and condition of the animal, twice or thrice a day.

CAMBRIDGE DRINK.—This is merely a mixture of equal quantities of good ale and soda water; it is highly refreshing, and of a very agreeable flavour.

CAMBRIDGE MILK PUNCH.—To two quarts of new milk add the thinly pared rind of a lemon, and half a pound of loaf sugar; let it boil slowly, take out the lemon-peel, draw the liquor from the fire, and stir in quickly a couple of whisked eggs which have been mixed with half a pint of cold milk and strained through a sieve; after these are mixed the milk must not be suffered to boil. Add gradually a pint of rum, and a half pint of brandy; stir the punch to a froth, and serve it immediately in warm glasses.

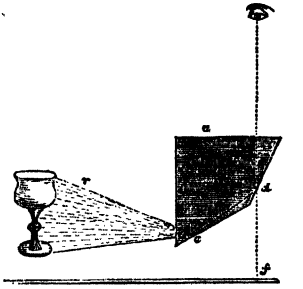
☞ New milk, 2 quarts; lemon peel, 1, eggs, 2; cold milk, ½ pint; rum, 1 pint; brandy, ½ pint.

CAMELLIA. — A genus of ornamental green-house shrub, most of them of a hardy nature, and requiring little more care during winter than protection from frost. The camelia is propagated by cuttings, layers, and seeds for stocks; and with these the other sorts are generally marked, and sometimes budded or grafted. The cuttings are formed of ripened shoots of the pre-

ceding summer, which are taken off in August, cut smoothly across at a joint or bud, two or three of the lower leaves only taken off, and the cuttings then planted,

and made firm with a small dibble. They are put into pans of sand and loam, sand and peat, or sand alone. The pans are kept in a pit or cold frame without being covered with glasses, but shaded during powerful sunshine; and in the following spring, such as are struck will begin to push, when they must be placed in a gentle heat. In September or October following the rooted plants will be fit to pot off; and in the second or third spring they may be used as stocks. Although camelias grow pretty well in the open air, yet they flourish best in a house entirely devoted to them. Such a house should be rather lofty. The plants should be raised near to the glass by means of a stage, so contrived that it may be lowered in proportion as the plants increase in height. The temperature of the house should be between fifty and sixty degrees during the growing season; but when the flower-buds are formed it may be lower, till the beginning of winter, when the buds begin to swell. To grow the camelia to a high degree of perfection, considerable care is requisite. The roots are apt to get matted in the pot, and, by the space they occupy, so to compress the ball of mould as after a time to render it impervious to water. Hence frequent attention should be paid, to see that the water poured on the pots penetrates all the earth, and that it does not escape by the sides of the pot, moistening only the web of fibres. For the same reason, examining the roots, shifting, reducing, and replanting them, is necessary at least once a year. When the plants are in flower and in a growing state they require to be liberally watered. To form handsome plants, they should be trained with single stems to rods, and pruned, so as to make them throw outside branches from every part of the stem. In summer they may be set out of doors, in a sheltered but open situation, or the glass roof may be taken off. The hardier sorts, as the double-red, blush peony-flowered, &c., answer very well when planted in a bed or border of a conservatory, provided the roof or entire superstructure can be removed in summer, to admit the full influence of the temperature. Where this cannot be done, it is better grown in portable utensils, which admit of the roots being examined, and the plants being placed in the open air, or under shelter at pleasure. The single and double-red camelia will endure the open air when trained against a south wall.

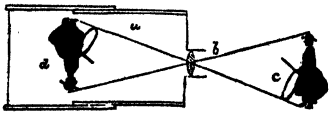
CAMERA LUCIDA.—An invention designed to facilitate the delineation of distant objects, by producing a reflected picture of them upon the paper, and also copying or reducing drawings. It consists of a solid prismatic piece of glass, mounted upon a brass frame. The prism has its angles so arranged that the rays from the object are reflected upon the paper, and is covered at top by a metallic eyepiece, the hole in which lies half over the edge of the prism, so as to afford a person looking through a view of the picture reflected through the glass, and a direct view of his pencil or tracing point. The operation of this instrument will be made more intelligible by the annexed figure. In this engraving *r* is the



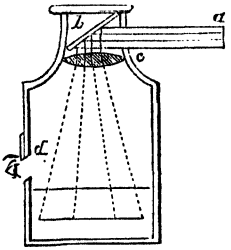
ray of light falling upon the quadrangular glass prism *a*; it is bent by two reflections *c* and *d*, and thrown upwards where it may be received by the eye, to which it will appear described on the table or sheet of paper *f* placed to receive it. The image may be magnified or lessened by placing a lens, so as either to intercept the rays before they strike the prism, or before they reach the eye. An ingenious person will be enabled readily to set up this instrument.

CAMERA OBSCURA.—An apparatus representing an artificial eye, in which the images of external objects, received through a double convex glass, are exhibited distinctly, and in their native colours, on a white ground, in the machine, in the focus of the glass. The simplest form of this instrument consists of a darkened chamber, into which no light is permitted to enter, except by a small hole in the window shutter. A picture of the objects opposite the hole will then be seen on the wall, or a white screen placed so as to receive the

light coming from the opening. A convex lens may be fixed in the hole of the shutter. Portable camera obscuras are constructed of various forms, but the design of them all is

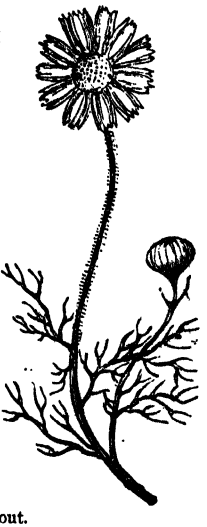


to throw the images of external objects, as houses, trees, landscapes, &c., upon a plane or curved surface, for the purpose of drawing or amusement. The figure represents the revolving camera obscura. The rays coming from the object *a* are received on



a mirror *b*, placed in a square box, and inclined to the horizon at an angle of 45°. This mirror, with the box, is capable of being turned round, so that the opening in the side of the box where the rays enter may face the object or objects to be delineated. The rays which fall upon the mirror are reflected, and passing through the convex lens *c*, are conveyed to a focus, and form an image of the object *a*, which is seen through an opening in the sides of the chamber at *d*. The surface on which the image is seen may be white paper, and thus by introducing the hand the figures may be traced with the pencil; but the picture is most distinctly seen when the image is formed on the back of a silverized mirror.

CAMOMILE, CULTURE OF.—There are two varieties of camomile—the common single and the double flowering. They require a poor dry soil, to check their redundant growth, and to economize their medicinal qualities. They will grow in almost any situation, but the more open the better. They are generally propagated by parting the roots, and by offsets, which may be planted from the close of February until the end of May; the earlier, however, it is performed the better. Camomile may be also raised from seed, the proper time for sowing being the early spring months. It is advisable to raise fresh plants by this method, after the lapse of several years, during which time the old plant will have degenerated. Camomiles should be planted eighteen inches apart, and watered moderately if it be dry weather at the time of planting. If raised from seed they require no further attention than being kept free from weeds. When three or four inches high, they should be thinned out to about six inches apart; and thus remain until the following spring, then to be again thinned and finally transplanted. A very small bed will supply the largest family. In July the flowers are generally in perfection for gathering, the best indication being when the flowers are just opening. Particular care must be taken to dry the flowers before they are stored, otherwise they will not keep. If seed be required, some of the first opening flowers should be left ungathered and suffered to ripen till September, when the plant may be cut, and the seed dried, and rubbed out.



CAMOMILE, PROPERTIES AND USES OF.—Camomile flowers, either fresh or dried, are deservedly classed among the most useful, safe, and generally employed domestic remedies. These flowers possess a fragrant and grateful odour, and a warm bitter taste. They abound with a pungent aromatic oil, and act both as a tonic bitter, and a safe emetic; externally they are also employed as a mild discutient and emollient. The forms in which the flowers are used, are, in powder, either alone or combined with other bitters and aromatics in infusion, decoction, extract, and oil. The infusion is made by macerating half an ounce of the flowers, for half an hour in a pint of boiling water; this is what is usually denominated camomile tea: it may be taken alone, or in combination, in doses of a wineglassful twice or thrice a-day, in cases of *indigestion, hysteria, and nervous debility*. This, too, is the best form in which it can be employed as an *emetic*, a cupful being taken every few minutes until it operates. When used as a *tonic*, and with a view of *promoting digestion*, the same quantity of bruised ginger as of flowers, may be added to the boiling water and left to infuse for an hour. The *decoction used for fomentations and enemas*, is made by boiling an ounce of the flowers in water for fifteen or twenty minutes. The flowers have the faculty of retaining heat for a long time, they are therefore admirably adapted for outward application to parts that require soothing by the agency of warmth. The readiest mode of applying the flower

for this purpose is to have two flannel bags of the required size, in which the flowers are to be put, and heated either by having boiling water poured over them and suffered to remain covered for a few minutes, or by being held before the fire. The reason for having *two bags*, is, that one may be heated ready for application immediately the other is removed. The oil of camomile possesses the odour of the flower with a pungent taste, and its virtues are stimulant and antispasmodic. It is used alone in doses of from five to eight drops on a lump of sugar, in colics and cramps of the stomach, and as a corrective of purgative pills. In all cases of internal use, the single flowers are to be preferred to the double flowers. When applied as fomentation both are equally efficacious.

CAMPANULA.—A species of herbaceous plants, perennial, biennial, and annual. Many of the hardy perennials are dwarf plants, producing a profusion of flowers, more conspicuous than the leaves; which renders them particularly adapted for rock work, or growing in pots.—See BELL-FLOWER, CANTERBURY BELL, &c.

CAMPHINE.—The name given in commerce to rectified oil of turpentine when sold for burning in lamps, in order to disguise the inflammable character of the liquid. The term camphine is applied by chemists to a hypothetical substance, which is supposed to exist in the artificial camphor prepared by the action of hydrochloric acid on oil of turpentine.

CAMPHOR.—A concrete, volatile, and highly odorous substance, obtained by distillation from the *Laurus Camphora*, or camphor laurel, which is a native of China and Japan. It is also found in several other members of the vegetable kingdom, and exists in a greater or less quantity in the roots, branches, and leaves of many plants, particularly in the essential oils, as the oils of marjoram, sage, and lavender. What is called *crude* or *rough* camphor is in small gray pieces and crystals, it is purified by sublimation, and is found in commerce in circular cakes, weighing about 8lbs. each. Camphor is of use to put with clothes for the purpose of keeping away moths, &c., for its vapour, when diffused through the air, is poisonous to insects.

Camphor *used medicinally* acts as a sedative, narcotic, and anodyne. It is not a very reliable stimulant, as its effect is transitory. In moderate doses it acts as a diaphoretic and antispasmodic, increasing the heat of the body, allaying irritation and spasm. It is *used externally* as a liniment when dissolved in oil, alcohol, or acetic acid, being employed to allay rheumatic pains; it is also useful as an embrocation in sprains, bruises, and chilblains, and when combined with opium, it may be advantageously employed in flatulent colic and severe diarrhœa, being rubbed over the stomach. When reduced to a fine powder, by the addition of a little spirit of wine and friction, it is very useful as *a local stimulant to indolent ulcers*. When dissolved in oil of turpentine, and a few drops are placed in a hollow tooth and covered with jewellers' wool, or scraped lint, it gives almost instant *relief to toothache*.

CAMPHORATED LINIMENT.—Dissolve half an ounce of camphor in two ounces of olive oil. *Use*, as a stimulant, soothing application, in glandular enlargements, and rheumatic pains.

CAMPHORATED OINTMENT.—Mix half an ounce of powdered camphor with one ounce of lard. *Use*, for stimulating and accelerating indolent tumours.

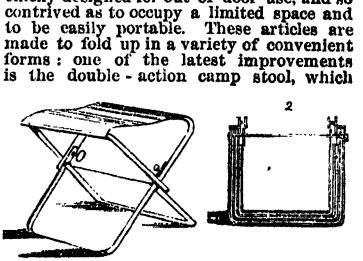
CAMPHORATED TOOTH-POWDER.—Prepared chalk, one pound; camphor, two drachms. The camphor must be finely powdered by moistening it with a little spirit of wine, and then intimately mixed with the chalk.

CAMPHOR BALLS, To PREVENT CHAPS.—Melt three drachms of spermaceti, four drachms of white wax, with one ounce of almond oil, and stir in three drachms of camphor (previously powdered by moistening it with a little spirits of wine); pour small quantities into gallipots, so as to turn out in the form of cakes.

CAMP PUDDINGS.—Put into a saucepan half a pound of butter, two tablespoonfuls of brown sugar, a quarter of a lemon peel, and a pint of water, when just on the point of boiling, take it off, and stir in half a pound of well-dried flour, taking care that it does not become lumpy; when cold, mix in six well-beaten eggs; pour this mixture into small cups and bake in a quick oven. A sauce made of wine, sugar, and butter, may be served with them.

☞ Butter, ½lb.; sugar, 2 tablespoonfuls; lemon peel, ½ of 1; water, 1 pint; flour ½lb.; eggs, 6.

CAMP STOOL.—A kind of chair or stool chiefly designed for out of door use, and so contrived as to occupy a limited space and to be easily portable. These articles are made to fold up in a variety of convenient forms: one of the latest improvements is the double-action camp stool, which



has the peculiar advantage of folding into half its compass (fig. 2) without injury to its strength, easily carried in a small travelling-bag, and giving no increase to luggage.

CANARY.—This well-known cage-bird is never found in this country except in a state of confinement, and it breeds readily in a cage. The best canaries are of a bright yellow, with a few jet-black spots. Being originally from a warm climate, they are tender, and must be kept in rooms of an agreeable temperature; if exposed to cold either in rooms or the open air, they pine and die. In dry weather in summer, their cage should be hung in the open air, or at

least in the sunshine. If the apartment is kept too hot they will moult at an improper season, and this must be avoided. Only one male should be allowed in a cage. Females for breeding are the better for having a large cage, as it affords them space for exercise. As cleanliness is the most effectual preventative of many diseases to which this bird is subject, the bottom of the cage should be constructed to draw out, and should be cleansed and strewed with sand, at least once a week. The water in the cage must be changed once or even twice a day. The *best food* for the canary is German paste. Crushed hempseed may be given occasionally, but not too often. When the paste is given to them it should be made fresh every other day. When this is not convenient, a substitute may be found by taking the crumbs of stale white bread, and after drying it in an oven, pounding it in a mortar. The powder formed in this manner will keep good for several months, and a teaspoonful may be given every day to each bird, with as much cold or lukewarm milk as will form it into a stiff paste. In summer, green food may be given occasionally, such as lettuce-leaves, turnip-tops, groundsel, and watercress. Cake and other inappropriate delicacies which persons are in the habit of giving to canaries, are very injurious; a bird in full song may be at once rendered mute by partaking of improper food of this sort. The *breeding* of canaries requires additional accommodation. For this purpose a large cage must be provided, and the pair of birds put into it about the middle of April. The female ordinarily lays six eggs, one every day. Each egg should be taken away as laid, and an ivory one substituted; and when the laying is finished, all the six original eggs may be replaced. The period of incubation is thirteen days. When the young are hatched, finely minced egg and bread should be placed near the feeding-trough, to enable the parents to carry suitable food to their young. Canaries will mate with siskins, linnets, several of the finches, and other allied birds, producing, in many instances, highly-esteemed mules. The *diseases* to which canaries are most liable are the surfeit and the yellow scab. When a bird has *the surfeit*, if the feathers of the lower part of the body are blown aside, the body will be found to be swollen, and covered with little red veins. The best remedy is to mix oatmeal with the food for two or three days, and put a little saffron in the water. If the feathers on the head fall off, and any watery eruptions should appear, the head should be washed every day with spring water, in which a little salt has been dissolved, wiping the head afterwards quite dry, and anointing the skin with palm oil. The bird should be kept warm, and a little ground rice may be given to it, boiled in milk with stick-liquorice. The *yellow scab* which attacks the head and eyes of the canary, may be cured by anointing the part with fresh butter or lard. Canaries often sicken a great deal when they are moulting; at that season they should be kept warm, the cage being set in the sun when it shines powerfully, and the cage being shielded from cold winds. The food should be nourishing, such as Naples biscuits, bread, and the yolks of hard-boiled eggs chopped small. Canaries may be taught to sit upon the hand or the shoulder, and to fly about the room. The mode of teaching requires great patience: At first the cage door is left open when there is no one in the room, and a little hemp seed scattered on the table, the water being left in the cage. The bird will hop out and take the hemp seed, and then return to the cage to drink. The next day the same process is repeated with the owner of the bird in the room. The day following the master or mistress of the bird may be seated at the table; and, finally, the hemp seed may be laid upon the lap, and if the person is kept perfectly motionless, the bird will, in all probability, venture thus far. The same operation repeated for a few days will render the bird less timid, until at length he will perch upon any part of the body, even when in motion. Canaries may be also brought to fetch and carry, and to whistle tunes; the latter is taught by playing the tunes over repeatedly on a bird-organ or flute. They will also imitate the singing of the nightingale and other birds, if kept in the same room. Canaries may also be taught to sing at night by keeping the cages covered all day, but in this case the advantage gained is scarcely warranted by the punishment inflicted.

CANCER. — The parts most frequently attacked by this disease are the glands, breast, skin, tongue, eye, lips, nose, and the tonsils. Of all these, the breast of females and the lower lip in men, are the parts where the disease occurs most often. It is a disease purely of middle and advanced life, seldom occurring under 25 years of age, frequently from 30 to 40, and most frequently between 50 and 60. Age has a remarkable effect in determining the career of cancer, for the younger the patient is the more rapid is its progress; and a cancer in youth will often prove fatal in a few weeks, while in old age it will remain in a semi-passive state for many years.

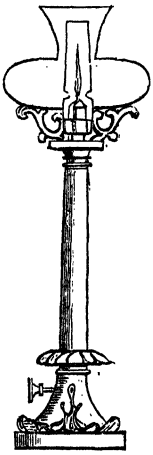
A cancerous tumour is distinguished from any other kind of tumour by its hardness and extreme apathy, neither enlarging nor diminishing under treatment as other diseased actions would do; and when situated in the breast, from the obstruction it causes to the absorbents, induces extreme emaciation, attended with cough and the usual symptoms of an impaired nutrition.

Treatment.—No disease has given rise to so many theories and schemes of treatment; and no drug has yet been discovered that can more than effect a temporary relief from pain in this truly formidable disease, for which there has been discovered but one, and not always permanent cure, and that is, excision by the knife. Smaller cancers, such as those of the lip and nose, may possibly be cured by means of powerful caustics, though the pain that such applications produce is much greater than that by by the operation of cutting out.

CANDIED FRUIT. — Fruit boiled in strong syrup and then dried. When finished in the syrup, put a layer of fruit into a new sieve, and dip it suddenly into hot water, to take off the syrup that hangs about it; then put it on a napkin before the fire to drain, and do some more in the sieve. Have ready sifted double-refined sugar, which strew over the fruit on all sides till quite white. Set it in a single layer on sieves in a lightly warm oven, and turn it two or three times. It must not be allowed to cool till dry.

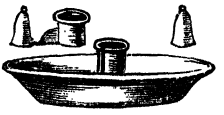
CANDIED PEEL.—Take out the pulps of lemons or oranges, soak the rinds six days in salt and water, and afterwards boil them till tender in spring water. Drain them on a sieve, make a thin syrup of loaf sugar and water, and boil the peels in it till the syrup begins to candy about them. Then take them out, grate fine sugar over them, drain them on a sieve, and dry them before the fire.

CANDLE LAMP. An improvement upon the ordinary lamp and candlestick. The candle is contained in a hollow stem with a spiral spring, which keeps it always at the same height; and the wick is elevated or depressed by means of a rack and pinion at the bottom, moved by a nut. By bringing the wick down enough the light can be extinguished. With candles of four or two to the pound, more light is given than by the same weight of candles in the common way. The smoke is also destroyed by the form of the glass cylinder put over the flame; by means of the contraction of the glass at the lower part the air is made to act upon the flame, and cause the combustion of what would otherwise escape as smoke.



CANDLES—From their portability and other qualities, supply a convenient and economical mode of obtaining artificial light for domestic purposes. They are made from various substances, wax, spermaceti, tallow, stearine, &c. Candles improve by keeping a few months. Those made in winter are the best. The most economical, as well as the most convenient plan, is to purchase them by the box, keeping them always in a cool dry place. If wax candles become discoloured or soiled, they may be restored by rubbing them over with a clean flannel slightly dipped in spirit of wine. Candles are sometimes difficult to light. They will ignite instantly, if, when preparing them for the evening, the tops are dipped in spirit of wine just before they are wanted. Light them always with a match, and do not hold them to the fire, as that will cause the tops to melt and drip. Always hold the match to the side of the wick, and not over the top. If the candles are too small for the candlesticks wrap a piece of white paper round the lower end, not allowing the paper to appear above the socket. Cut the wicks nearly close before lighting; for if the wick is too long, it will be very difficult to ignite, besides which it will cause the candle to gutter. Glass receivers for the droppings of candles are convenient and ornamental. The pieces of candle that are left each evening should be placed in a tin box kept for that purpose, and used for chamber lights.

CANDLESTICKS.—Of these there are a great variety of forms, according to the several uses for which they are required. An inconvenience often attends the candlesticks in common use, owing to the same socket not fitting any sized candle, and the consequence is that the candle must be made to fit by a troublesome and unsightly operation, which becomes more inconvenient when the candle burns down close to the socket, causing the paper to take fire, and the candle to be wasted. To remedy this, candlesticks are constructed with a cylindrical plate of metal within, fitted with a spring that gives way beneath the pressure of the candle, and keeps it fast without any papering. An improvement in the ordinary candlestick is shown in the engraving, the part in which the candle has been burnt is made to separate from the other portion of the candlestick, so that it can be more easily washed and cleaned without injury; the soldered parts of the candlestick, as usually made, being apt to loosen when immersed in hot water, or placed before the fire.



CANDLESTICKS, TO CLEAN.—Before commencing this operation, lay a sheet of brown paper upon the place where the candlesticks are cleaned, that the grease may not soil it. Scrape all the grease off the candlesticks on to the brown paper with a piece of firewood, and add the scrapings to the kitchen-stuff. Then set all the candlesticks upside down, in one of the deepest candlesticks, at a little distance from the fire, so that the grease may melt and drain into one; the candlesticks should then be wiped perfectly clean with a soft rag kept for the purpose. Polish with a little dry rottenstone or whiting put on a leather.

CANDYTUFT.—The seeds of this flower should be sown in a rich light soil in autumn, where they are to remain, and be kept rather dry during winter. In spring they should be repeatedly thinned out and watered with liquid manure, taking care not to let the liquor touch the plants. When the plants are about to flower, those of the common kind should be six or eight inches apart every way: the rocket candytuft should be from one to two feet apart; thus treated, the flowers will be very large and fine. When it is not thought advisable to follow

these directions, the seeds may be sown very thin either in autumn or early in spring, alone, or mixed with mignonette; in both cases they will have a pretty appearance in the flower borders.

CANE SEATS, TO CLEAN.—Wash the underneath part with hot water and a sponge until the cane be well soaked; add soap if very dirty. Set them out in the open air to dry.

CANTERBURY BELL. — A beautiful flower with large drooping bells, particularly adapted for broad borders and shrubberies. The soil changes the colour of the flowers. In rich ground they are a deep and beautiful blue, in poor soils, they will become reddish white or very pale blue. It is propagated by seed and by parting the root. The seed should be sown in spring, and covered with a hand-glass: transplant the seedlings into a nursery bed to remain till the following spring; then plant out. Cut off the flowers as they decay, and others will arise; weaker, necessarily, but continuing later in flower.

CANTHARIDES.—A species of fly employed in medical practice, the effects of which are stimulant, diuretic, and blistering. It is sometimes used internally, but is chiefly applied as an external application in the form of blisters; it is also calculated to produce the growth of the hair. The extreme caution required in administering this agent renders it unfit for a domestic medicine.

CAOUTCHOUC. — A vegetable gum, which, when first taken from the tree in a liquid state, resembles in appearance and consistence buttermilk or cream; in this state it will keep for two or three months if not exposed to the air; at the end of which time it coagulates and becomes thick and solid. Though warmth softens solid caoutchouc a little, and heat causes it to melt, yet after being rendered liquid in this manner it does not return to its former condition, but remains always clammy. It may be dissolved, however, by boiling in spirits of turpentine, and putting in small pieces till it forms a solution. If half the quantity of drying linseed oil be added, and both boiled together for half an hour, a varnish will be made, impenetrable to water. By means of this substance the varnish for balloons is made. Caoutchouc tubes for various purposes are now made, which combine perfect flexibility with impermeability to air. It is also converted into stoppers for decanters and bottles.

CAPER. —A trailing shrub, producing a berry used for culinary purposes. It may be raised either from seed, cuttings, or pieces of the root. Propagation by cuttings is the preferable mode; they should be a foot long and planted in autumn. The autumn following, they will be fit to remove to a general plantation.

CAPER SAUCE.—Stir into a third of a pint of good melted butter, four dessertpoonfuls of capers, one spoonful minced, and the remainder divided in half; add a little of the vinegar in which they are preserved and dish the sauce as soon it boils.

Keep it stirred after the berries are added. Nasturtiums may be substituted for capers, and prepared in the same manner.

CAPER SAUCE, FOR FISH.—To half a pint of rich melted butter add six tablespoonfuls of strong veal gravy or jelly, a tablespoonful of essence of anchovies, a dessertspoonful of chili vinegar, three tablespoonfuls of capers, and a wineglassful of mushroom ketchup.

☞ Melted butter, ½ pint; veal gravy or jelly, 6 tablespoonfuls; essence of anchovies, 1 tablespoonful; chili vinegar, 1 dessertspoonful; capers, 3 tablespoonfuls; mushroom ketchup, 1 wineglassful.

CAPERS, TO PRESERVE.—Put them as they are gathered into a jar with strong vinegar and salt, and repeat this daily until all are gathered, leaving two inches of vinegar over the capers, then tie the jar down with a skin; and if the capers are kept in a cool place, and a little fresh strong vinegar added from time to time they will remain good for four or five years.

CAPERS, USES AND PROPERTIES OF.—Capers are chiefly brought to England from Italy and the Mediterranean. They are principally used in sauces, and sometimes in medicine, having aperient properties. They provoke the appetite and fortify the stomach. They agree well with persons of a cold, phlegmatic temperament. If used immoderately, they heat and rarify the fluids too much.

CAPIAS—Is the name of the writ under the authority of which, the sheriff of a county, by his officer, arrests or takes in execution the person of a debtor, and keeps him at the debtors' prison for the county in which he is arrested until he has given bail or made deposit with him, or paid the debt, or by other lawful means shall be discharged from his custody. This is the highest execution which can be had against a defendant, and no other can be afterwards had against his lands or goods, unless he die in custody.

CAPILLAIRE.—Take fourteen pounds of good moist sugar, three of coarse sugar, and six eggs beaten well in with the shells, boil them together in three quarts of water and skim it carefully. Then add a quarter of a pint of orange-flower water, strain it off and put it into bottles. When cold, mix a spoonful or two of this syrup with any liquor that requires sweetening and flavouring.

CAPITAL LETTERS.—The proper use of capital letters is as follows:—1. The first word of every book, chapter, letter, note, or any other piece of writing. 2. The first word after a period, and, if the two sentences are totally independent, after a note of interrogation or exclamation. 3. The appellations of the Deity; as, God, Jehovah, Almighty, Supreme Being, Lord, Providence, Messiah, Holy Spirit. 4. Proper names of persons, places, streets, mountains, rivers, ships; as George, York, Cheapside, the Alps, the Thames, the Leviathan. 5. Adjectives derived from the proper names of places; as Grecian, Roman, English, French, Italian. 6. The first word of a quotation introduced after a colon, or when it is in a direct form;

as, "Always remember this ancient maxim: 'Know thyself.'" The first word of an example may also very properly begin with a capital. 7. Every substantive and principal word in the titles of books; as, Philp's History of Progress; the Useful Grammar. 8. The first word in every line of poetry. 9. The pronoun I and the interjection O are always written in capitals. Other words, besides the preceding, may be distinguished by capitals, when they are remarkably emphatic, or the principal subject of the composition.

CAPON ROASTED.—After having properly cleaned and trussed a capon, cover it with slices of fat bacon, envelope the whole in writing paper, and roast before a clear fire; baste first with a little butter, and afterwards with its own gravy; when done, serve with the gravy.

CAPON WITH RICE.—Having drawn and trussed it, cover it with slices of bacon, and put it into a stewpan with half a pound of rice, an onion stuck with cloves, a bay leaf, a bunch of sweet herbs, and some good gravy or stock; let it cook gently over a slow fire; serve it on a dish with the rice around the capon. See CHICKEN, FOWL, &c.

CAPSICUM, CULTURE OF.—Of this plant there are three species, the Guinea pepper, cherry pepper, and bell pepper; they are all raised from seed, the produce of two pods being a sufficient quantity of any one variety for an ordinary supply. Sow all the *annual* sorts at the end of March, or beginning or middle of April, in a moderate hotbed under a frame. Cover the seed a quarter of an inch deep. When the plants are two or three inches in growth, prick some into a new slender hotbed, to forward them for final transplanting; or in default of this, prick them into a bed of natural earth, at the beginning of May, if fine, settled, warm, weather; defend them at night, and in cold vicissitudes with a frame or awning of mats. Give water lightly at planting, and occasionally afterwards in moderate supplies, to assist their fresh rooting and subsequent growth. At the beginning of June, when the weather becomes settled, transplant them into the open garden, in beds of light, rich earth, from 12 to 18 inches apart, giving water. They will then advance freely, flower in July or August, and produce an abundance of pods until the end of September. To *save the seed* one or two of the largest pods should be left to ripen in autumn, and after being gathered hung up in a dry place; not, taking out the seed till wanted for sowing in spring.

CAPSICUMS TO PICKLE.—Place the capsicums in a jar, boil a dessertspoonful of salt in a quart of vinegar, and pour it while hot upon the peppers; when cold place a plate on the jar, and tie over it bladder or leather. The pickle will be fit for use in a few weeks.

CAPTAINS' BISCUITS. — To seven pounds of fine flour add half a pound of butter and a quart of milk; mix them together well with the hands till they make a hard, even, tough dough, cut it into pieces and roll it out into a paste about half an inch thick, taking care that there is no dry flour on the board, as that would make them spotty; mould them into proper shapes and sizes, and dock them on both sides, or if on one side only, let the holes penetrate through. Bake in a quick oven for ten or twelve minutes. When they are of a light brown colour take them out. Put them in the drying stove till crisp. The drying stove should be somewhat open for the steam to escape, or they will become soft.

CARAGEEN MOSS.—An Irish moss frequently prescribed as a food by the medical faculty in pulmonary and some other diseases. Carageen moss possesses the advantage of being nutritious and at the same time soothing, and by thus strengthening the stomach, without overtaxing its powers, the patient is afforded a better chance of struggling with disease. The mode of preparing this food is exceedingly simple. If it be intended as a beverage, two ounces of it are to be well washed in cold water, and to be put over a slow fire in two quarts of cold water, to simmer until reduced to half the quantity; it is then to be strained. A large breakfast cupful of this should be taken every morning on rising from bed, without sugar or milk, unless the stomach of the patient can digest milk readily, in which case as much as one-third of boiled milk may be used; if it be found unpalatable without sugar, a very small quantity may be used; but it is preferable on the score of health to dispense with sugar altogether. In cases of indigestion, where the stomach at its first meal would be over excited by tea or coffee, and chocolate would be too heavy, a cup of this decoction is exceedingly beneficial, and the more so as the regular breakfast may be taken two or three hours afterwards without injury. A cup of the same beverage may be taken with advantage at night by dyspeptic patients, with the addition of a small portion of sherry or brandy, and as much sugar as will render it agreeable; but in pulmonary complaints it is advisable to make the moss almost an exclusive food, and for that purpose the preparation of it may be varied. It should be boiled down to one-third of the quantity of water into which it is put, and made into a jelly precisely in the same way as calf's foot jelly, with the addition of wine, sugar, and spice, as agreeable. Of this a portion may be taken at intervals during the day.

CARAMEL SUGAR.—Sugar when boiled undergoes certain changes according to the degree of boiling. The last stage is called caramel, and is chiefly employed in making confectionery. In boiling sugar the caramel degree may be ascertained thus:—Take out a little on the end of a piece of wood and dip it suddenly into very cold water, if the sugar snaps with a loud noise, and is of a bright yellow colour, it is done. The pan should then be immediately taken off the fire, and the bottom of it placed in a vessel of cold water, lest the heat which is in it continue so long as to make it darker than it ought to be.

CARAWAY SEED BISCUITS.—To two pounds of flour, add two ounces of butter rubbed in, half a pound of sugar, one ounce of caraway seeds, half an ounce of ground coriander seed, half a teaspoonful of carbonate of soda, and a tablespoonful of arrowroot; mix the whole well together and make a stiff paste with warm milk, cut into thin cakes, and prick over with a fork; bake slowly.

☞ Flour, 2lbs.; butter, 2ozs.; caraway seeds, 1oz.; coriander seed, ½oz.; carbonate of soda, ½ teaspoonful; arrowroot, 1 tablespoonful.

CARAWAY SEED CAKE.—Mix half a pound of sifted sugar with two pounds of flour in a large bowl or pan. Make a hole in the centre, and pour into it half a pint of lukewarm milk, and two tablespoonfuls of yeast. Draw a little of the surrounding flour into this, and, throwing a cloth over the vessel, set it in a warm place for an hour or two. Then add half a pound of melted butter, an ounce of caraway seed, a teaspoonful of allspice, ginger, and nutmeg, with milk sufficient to render the whole of a proper consistency. Mix it thoroughly, butter and paper a tin, and pour it in. Let it stand for half an hour at the mouth of the oven to rise; then bake it.

☞ Sugar, ½lb.; flour, 2lbs.; milk, ½ pint; yeast, 2 tablespoonfuls; butter melted, ½lb.; caraway seed, 1oz.; allspice, ginger, nutmeg, 1 teaspoonful mixed; milk, sufficient.

CARAWAY SEEDS are the fruit of an umbelliferous plant. They are a good carminative; may be given whole, or in the form of distilled water, a wineglassful at a time, or may be added to other medicines, such as senna.

CARBON.—This term is used in chemistry to signify the pure combustible base of the varieties of charcoal and other carbonaceous matters; the diamond is pure carbon in a crystalline form. Carbon is an elementary substance, which combines with oxygen in two proportions, forming carbonic acid and carbonic oxide.

CARBONIC ACID.—When carbon is ignited in oxygen gas, the oxygen disappears, and the product is a gas equally colourless, but of very different qualities; this is carbonic acid. The proportions of its component parts are, carbon 28, oxygen 72. Its specific gravity is much greater than atmospheric air, and it is unfit for respiration. It is this gas which is so peculiarly noxious to human life, it is generated by charcoal or wood burnt in ill-ventilated rooms, is extracted in profusion from fermented vegetable juices, and is likewise given off in large quantities by the burning of limestone. This gas is also produced during the respiration of animals. In medical practice carbonic acid is given in the form of effervescing drinks. Some mineral waters contain it naturally; soda water, and other similar fluids, are mechanically impregnated with the gas. In most cases, the action of carbonic acid, given in this way, has a beneficial effect upon the stomach.

CARBUNCLE, is a hard, circumscribed tumour of an inflammatory character, commencing in the cellular tissue and extending to the skin, and named, from the intense burning pain that attends its progress. A carbuncle in general appearance resembles a boil, but differs from it in not having a core, and terminating in a gangrenous slough, instead of as in the other, by suppuration.

In whatever part of the body a carbuncle is formed, it is first indicated by great redness and violent pain, excessive itching, and a burning heat.

Carbuncles are more frequent in advanced life than in the young; and are generally indications of a low, putrescent or typhoid state of the system; and not unfrequently the result of it. The extent of a carbuncle is as various as the part of the body in which it appears; it varies from the size of a walnut, to the dimensions of a plate; the parts of the body most subject to their attack are the neck, shoulder, arm-pit and hip.

Treatment.—The local remedies, from first to last, are warm emollient poultices; which are to be applied directly the tumour shows itself, and continued every three or four hours, till the healing process is fairly established. As soon as the swelling becomes conical, the top is to be freely opened. The best poultice to use is either bread and water or linseed meal. To meet the constitutional disturbance, a mild alterative pill of equal parts of extract of colocynth and henbane, should be given every second day, and when the febrile action is considerable, two tablespoonfuls of the following mixture every 4 or 6 hours.

Camphor water . . .	6 ounces.
Nitrate of potass . .	15 grains.
Tartar emetic	3 grains.
Syrup of saffron . . .	2 drachms.

In addition, when there is much pain and want of sleep, add 1 drachm of laudanum to the mixture; or give the patient 25 drops at bed time, while needed. When the abscess has been opened it will be necessary to administer tonics, with a liberal diet and wine. For this purpose the following mixture is to be taken in doses of two tablespoonfuls three times a day.

Quassia	½ a drachm.
Cardamom seeds .	2 drachms—bruised.
Boiling water . .	1 pint.

Infuse for six hours, strain, and add diluted nitric acid, 1 drachm.

If the debility is excessive it will be advisable to give stimulants, in which case the following mixture is to be employed. Take of

Camphor water	3 ounces.
Compound tincture of bark, ditto cinnamon, of each	½ ounce.
Spirits of sal volatile, ditto sulphuric ether, of each	1 drachm.

Give a tablespoonful every hour, increasing the interval, as the strength of the patient rallies; at the same time continue the wine, and if required, brandy.

CARDAMOMS.—Small brown seeds of an aromatic grateful taste and smell. They are

brought from the East Indies, and are carminative and stomachic. They are chiefly employed to communicate warmth to other medicines.

CARDOON.—A hardy perennial plant, resembling the artichoke, but much taller; it produces flowers like those of the artichoke in August and September. Though a perennial, it frequently dies in the winter, and therefore requires to be raised from seed almost every year; two ounces of seed are sufficient for a bed four feet by eight. The best soil is a light deep one, not too rich. The chief sowings are made in spring, for a small early crop in the last fortnight in March; and for the main crop in the first or second week of April; for a late full crop in the end of June. To sow for transplanting, choose a bed of light common earth moderately thin, and rake in the seed evenly. When the plants have risen, thin them to three or four inches distance, and when they have been raised about eight weeks transplant them; allotting an open compartment of well-dug ground. Plant them either in level ground or in drills, at four feet and a half distance. Give water at planting and occasionally until they take root. In their advancing growth, hoe and loosen the ground about the plants, cutting down all the weeds. When the crops are to remain, sow in small hollow patches, two or three seeds in each patch. When the plants have advanced in large growth in August, September, and October, proceed to land them up for blanching. First tie the leaves of each plant together with hay or straw bands, then digging and breaking the ground, earth up round each plant, a foot or more high. As the stems rise higher, tie and earth them up accordingly, giving them a final earthing in October. They may then be dug up as wanted throughout the winter.

CARDOONS, To Dress.—The chief use of cardoons is for stewing, and for soups and salads in autumn and winter. Sometimes, however, they are fried and buttered as follows: cut them about two inches long, string and tie them in bundles like asparagus, and cut them into dice; boil like peas; add butter, pepper and salt, and serve hot. Or, string them and cut them an inch long, and stew them in port wine, sufficient to cover them, until tender; season with pepper and salt, and thicken with floured butter; pour into a dish, add the juice of an orange, and scrape Cheshire cheese all over it; then brown in the oven, and serve hot.

CARD-PLAYING, Etiquette of.—When card-playing is proposed in private circles no one should refuse to take a hand, if requested, unless the objection is founded upon principle. When ladies are about to play they should be allowed to name the stake to be played for. It is customary for a gentleman to offer to deal or shuffle the cards for a lady, or to perform any other incidental office that involves trouble. One player should not endeavour to look over another's hand, nor should he jealously guard his cards as though he suspected his adversary. Money should be won and lost with equanimity; exuberance of joy at good fortune, and an ebullition of temper at bad fortune are equally vulgar and offensive. Husbands and wives should never appear anxious to become partners at the card table; for although no private signals and inuendoes may be intended or suspected, still it is but reasonable to suppose that they are better acquainted with each other's play than any casual partners could possibly be, and therefore an unfair advantage is established. In all disputes and differences of opinion persons should avoid being noisy and imperative; it is always easy to express one's self with firmness, and yet calmly, without any detriment to the cause espoused. Money lost at cards should be paid immediately, and as quietly and unostentatiously as possible. Persons should not be eager to continue playing against the general wish, even though they may have lost; the hope of retrieving ill-fortune may be delusive, and it is certainly more agreeable to all parties for the loser to submit with a good grace. All antics, grimaces, or covert words, which are supposed to convey some special intelligence to a partner or adversary, are tricks that no lady or gentleman will condescend to be guilty of. In dealing cards, the head and body should not be thrown into a variety of violent contortions, the only motion necessary may be confined to the arms and hands. While the cards are being dealt they should not be touched, such an interruption frequently causing a mis-deal. If a person has the misfortune to be associated with a bad player as a partner, such bad player should not be continually upbraided for his want of skill, but quietly reminded of any error committed, so that it may be avoided for the future. These and many other rules of conduct which good taste and common sense will dictate, are calculated to render card-playing an elegant and agreeable recreation.

CARDS OF ADDRESS.—With persons who mix in respectable society, cards of address are an absolute necessity. When one person calls upon another to whom he is wholly or partially unknown, the card of address is at once the medium of introduction. If a person makes a call upon another who is from home or engaged, the leaving a card is the best method of notifying the fact. In the higher walks of society card-leaving forms a regular portion of the day's occupations; the hours are usually from 1 to 5 in London, and from 12 to 4 in the country. The object of these visits is to make known the arrival of persons in the particular locality, and to remind each other, as it were, of their existence. When a person is about quitting his or her place of residence, it is usual to pay a farewell visit to friends and acquaintance; and if the lady of the house is absent, a card is left with P. P. C. (*pour prendre congé*) written in the corner. When the lady making a call is married to a gentleman so engaged as to preclude his calling with her, it is considered sufficient if she leave his card at the house for the master of it. In leaving cards upon a married couple, it is usual for the lady to leave only one card, and for a gentleman to leave two.

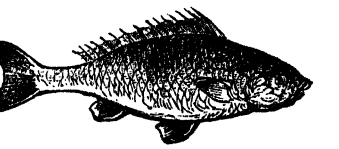
When there are daughters introduced into society, or female friends staying in the house, a card may be left for each of them, if they are personally known to the caller, or the end of that one designed for the mistress of the house may be turned up. A card is generally left on the day after a party, or within a day or two of that time. The turning up one corner of a card is usually understood to mean that the owner left it personally. Independently of the etiquette in connection with cards of address, it should be borne in mind that many emergencies may arise when they may be needed as vouchers to a certain extent of respectability. Every person removed above the lower ranks is supposed to have his card about him, failing which, any representation made would be regarded with a certain amount of suspicion and distrust.

CARMINATIVES.—Medicines that allay flatulency and spasmodic pains. See ANISEED, CARAWAY, CARDAMOMS, CASSIA, CINNAMON, GINGER, PEPPER, &c.

CARMINE.—A colouring substance, and the only one that can impart a life-like ruddiness to the portrait, or the bloom of nature to the artificial flower. The preparations of carmine are various; the French, which is as effective as any, is as follows:—Cochineal, one pound boiled for fifteen minutes in three gallons of water; one ounce of cream of tartar (in powder) is then added, the boiling further continued for ten minutes, an ounce and a half of alum thrown in, and another boil of two minutes given; the heat is then withdrawn, and in five or six minutes more the clean portion is decanted into porcelain vessels, which are set aside until the carmine falls down.

CARNATION.—Of this plant there are three varieties; the Flake, which is striped with broad bands of two colours; the Bizarre, striped with three colours; and the Picotee, bordered with a narrow margin, and dotted with small spots. Carnations should be grown in a rich loam, mixed with sand, or peat, and moderately manured. They grow best in pots, in which the earth should be pressed as firmly as possible. The plants raised from layers should be separated from the parent in August, and potted by threes in a five-inch pot. The pots should be well drained, and the plants frequently watered until the middle of October, when the watering should be gradually decreased. The layers, when first potted, may be kept in the open air, shading them from the sun for the first few days, and protecting them with hand-glasses at night if frost or biting winds are apprehended. In the middle of November remove the plants to a greenhouse or shed, and keep them entirely in the shade and protected from the frost. Let them remain here till March or April, according to the season; and after exposing them for a few days to the open air, re-pot them. In May they may be either planted out in beds, or removed to larger pots for flowering, which they will do in June and July. When the buds have formed, water the plants well morning and evening. The principal points of beauty in a carnation are, that the stem should be strong and erect, the calyx well and regularly opened, the flower round, with the petals uniformly disposed, and the stripes broadest at the margin of each petal. As the calyx of the carnation is apt to burst on one side before it opens on the other, thus spoiling the shape of the flower, many cultivators gently divide the sepals with a pin as soon as the buds are fully swelled; others slip a round piece of cardboard, with a hole in the centre, over the bud while it is yet quite small, and thrust it up over the calyx, so as to force it open first at the top. This piece of pasteboard is kept on after the expansion of the flower, and serves to retain the petals in their proper position. June and July are the months for making layers. For this purpose the outer, strongest, and lowest shoots of the plant should be preferred; and each shoot be cut about half through, in a slanting direction, at a joint. Make a furrow in the ground an inch or two deep, and bury the cut stem in it, fasten it down with a piece of hooked twig so as to completely cover the wounded part, the end of the layer standing upright an inch or two out of the earth. Water the layer moderately, and keep it shaded.

CARP is of three kinds, the river carp, the pond carp, and the crucian or Prussian carp as it is sometimes called; the first-named is the most prized by epicures, and in this country grows to the weigh of from



six to eight or nine pounds; the second obtains the larger growth of twelve or even fourteen pounds; but in Holland, Germany, and other parts of the world, they will even attain to the weight of thirty or forty pounds; the crucian or Prussian carp, also found in ponds, rarely if ever attains one pound in weight. The carp is of a golden, yellowish olive colour, with large scales, a single but wide dorsal fin, a small mouth without teeth, but (like the chub and barbel) with a bony apparatus in the throat performing some of their functions. The haunts of the river carp are, in the winter months, the broadest and most quiet parts of the river; but in summer they lie in deep holes, nooks, and reaches, near some scour, and under roots of trees, hollow banks, amongst or near beds of weeds, flags, &c. Carp deposit their spawn in May, in shallow retired water amongst weeds. There is, however, some difference of opinion as to the breeding time of the carp. The best months for fishing for carp are February, March, and April, when the weather is fine and open, and again in July, August, and September; although in the latter month, if the weather becomes sharp and cold, the angler will obtain but little success.

The tackle suitable for fishing for carp is the same as that used for bream fishing, except that the running-line and the gut should be somewhat finer, and the gut stained as near to the colour of the water to be fished in as possible; the hook should be, for worms, No. 7 or 8, and for paste, No. 9, with a short shank. The baits for carp are—malt, wheat, pastes, greaves, bullock's pith, gentles, caddis, wasp grubs, lob and red worms. (See BAIT.) The ground baits are the same as the baits.

Izaak Walton writes, "The carp bites either at worms or at paste; and of worms I think the bluish, marsh, or meadow worm is best; but possibly another worm not too big may do as well, and so may a green gentle; and as for pastes there are almost as many sorts as there are medicines for the toothache, but doubtless sweet pastes are best: I mean pastes made with honey or with sugar, which, that you may the better beguile this crafty fish, should be thrown in the pond or place in which you fish for him, some hours, or longer, before you undertake your trial of skill with the angle rod; and doubtless, if it be thrown into the water a day or two before, at several times, and in small pellets, you are the likelier to obtain your desired sport. Or in a large pond, to draw them to a certain place, either grains or blood mixed with cow dung or with bran, or any garbage, as chickens' guts, or the like (worms would be much better); and then some of your small sweet pellets with which you propose to angle, and these small pellets being a few of them also thrown in as you are angling, will be the better."

W. Wright, in *Fishers and Fishing*, advises the use of honey paste, and says, "To make this paste, your hands must be very clean, and well rinsed from soap; dip a piece of wheaten bread that is a day old into clean water for a moment, then press, and squeeze, and work it up into a stiff paste with honey; ascertain the depth of the spot where you propose to angle the day before, and make a mark so that you may know whether the water have risen or fallen; ground-bait the place with bread made into a paste, mixed with a little barley meal and a small quantity of honey, the night or even two nights before you angle; your hook must be short in the shank, and the hook should be hidden by the paste; the whole bait should be about the size of a marrow-fat pea. When fishing throw in, one at a time, very quietly, little pellets of plain paste, about the size of peas." See also *Bailey's Instructor* and *Ephemera's Walton and Cotton*.

CARP BROILED, WITH CAPER SAUCE.—Scale a large carp, crimp it, and put it in a dish with chopped parsley, salt, pepper, and oil; when it has lain in this for about an hour, broil it over a brisk fire; serve it up covered with caper sauce.

CARP FRIED.—Divide a carp by the back, flour it, and fry it quickly in good lard or oil.

CARP SOUSED.—Put the carp into a fish kettle, and pour over it boiling vinegar sufficient to cover it; let the fish boil for an hour or more, according to the size; then serve upon a dish covered with a cloth and garnished with parsley, without any of the liquid. Carp dressed in this way is generally eaten cold.

CARP STEWED.—Scale and clean the fish with exceeding care, lay it into a stew-pan, and cover it with cold broth of beef or veal. Add one small onion stuck with a few cloves, a bunch of savoury herbs, three or four slices of carrot, and a little salt; stew the carp as gently as possible for nearly an hour. Have ready some good brown gravy, mixed with two glassfuls of port wine, add a squeeze of lemon juice; dish the carp very carefully, pour the sauce over, and serve it immediately.

CARPETS, CHOICE OF.—Carpets are of various kinds, both as regards fabric and manufacture. *Brussels carpets* are composed of a warp and woof of strong linen thread, with worsted threads interwoven. When well made they are very durable. They, however, vary much in quality; the best quality ought to weigh 1¾lb. per yard, but latterly they seldom exceed 1¼lb. per yard. *Wilton carpets* are those having a long pile resembling plush or velvet, and they have the advantage of being executed in very elegant designs. *Axminster carpets* have a warp and shoot of strong linen with numerous small tufts of differently coloured worsted introduced. *Kidderminster carpets* are composed of two woollen webs which intersect each other in such a manner as to produce definite figures. They are made in various qualities ranging from 1s. 6d. to 3s. 6d. per yard. *Dutch carpet* is a very strong and cheap material. It is a yard wide, about 3s. per yard, all wool, and superior to Kidderminster. *Venetian carpets* are of the simplest kind, and low in price; they are chiefly used for bedrooms and staircases. In *choosing a carpet*, quality is not the only point to be studied, particular regard should be paid to the suitability of the carpet for the room where it is to be placed, and also to the harmony of contrast which should be established between it and the hangings and furniture of the apartment. For a carpet to produce the best possible effect, it is not enough that it be made in the best manner, that the pattern is excellent, and the distribution of the colours leave nothing to be desired; it is also requisite that the size should be proportionate to the nature of the ornaments, and that the colours of the carpet are in keeping with those of the objects most conspicuous in the apartment. Thus, the colours of the carpet should neither be so brilliant as to destroy the effect of those of the paper and the curtains, nor the contrary. A very brilliant colour, such as crimson, in the carpet may be associated with drab or other subdued colour in the curtains and paper; but at the same time, a portion of the brilliant colour should be introduced into both, as bordering or ornament. Thus a room, with a bright blue or crimson carpet, may have white, yellow, or drab curtains and paper; but blue or crimson bordering or ornaments should be introduced in them to harmonize the whole,

It would be bad taste, in the case of the blue carpet, to have green curtains or paper, or with the crimson to have scarlet, because these colours do not accord. A green carpet may have black, red, or white curtains with green borders and ornaments. A yellow carpet may have black curtains and a dark gray paper, with yellow borders and ornaments. These and other contrasts depend upon the simplest rules of art, and the eye soon informs the sense of that which offends and pleases. In addition to these considerations, the following general suggestions will be found worth attending to in selecting a carpet. Light coloured carpets are more serviceable than dark ones, because, in wearing, the gradual disappearance of the dyes from the threads is less discernible. Bright coloured carpets are most suitable for spacious apartments, because the amount of space covered tends to soften and harmonize tints, which in a small room would be too glaring. The brightest colours of a carpet should always be in the centre, so that the gradual softening off towards the borders of the tints may afford a better ground for the furniture. A sombre coloured carpet, such as one of green and black, is best suited for a room very full of furniture; for the combination mentioned controls the brilliancy of the furniture, and gives solidity and tone to the whole. Carpets of brilliant hues are best adapted for furniture made of yellow woods, such as maple, satin wood, or light oak, whilst for mahogany furniture, sombre coloured carpets are most suitable; a harmony of contrast being thus established in both instances. For drawing-rooms the best kind of carpet, generally speaking, is one of an elegant pattern and with a preponderance of light colours. For diningrooms and parlours a somewhat massive pattern and rich warm tint are to be preferred. For bedrooms the simpler the design the better, while at the same time, the colours should be cheerful without being obtrusive.

CARPETS, LAYING DOWN OF.—The most complete way of fitting a carpet to a room is to adjust it to all the recesses and angles; but this is the most expensive method and also entails waste. When economy is an object, the carpet may be square or oblong according to the shape of the room, but not fitted into the recesses; these must be covered in the best manner possible by furniture, oil-cloth, baize, drugget, &c.; or if left bare, painted in oil. A still more economical mode consists in having a border only of carpet round the room, with the middle part covered with a suitable drugget, which will look as though there was a large carpet underneath which the drugget covered. In bedrooms especially, this has the advantage of allowing the carpets to be easily taken up, to be shaken and cleaned. Carpets, also, that are not fitted to rooms, can have the wrong side uppermost for a time, to save the other side, which cannot well be done when the carpet is fitted in; they may likewise be reversed in their position, so as to equalize their wear. Thus a square carpet may have its position changed eight times, and an oblong one four times; whereas a fitted carpet cannot be altered in its position except the apartment have no recesses, which is very seldom the case. When it is decided upon having a carpet fitted to a room, an upholsterer's services should be engaged in preference to an inexperienced person, as there are few unconnected with the trade who can lay down a carpet without wasting the material, or causing it to fit loosely and unevenly.

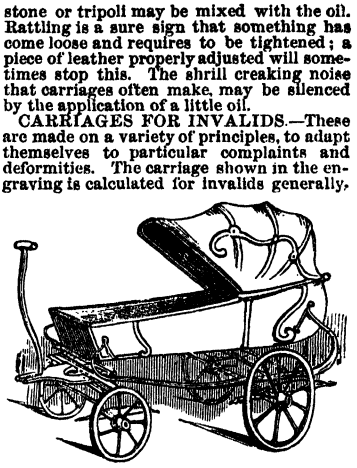
CARPETS, PRESERVATION OF.—In this, much depends upon the manner in which they are kept clean; if the dust is suffered to accumulate for too great a length of time, they require to be beaten with extra force, which has the effect of breaking the threads. It is important to the preservation of carpets that the boards are well laid; if there exist large crevices between them, the portion of the carpet that covers the crevices will be worn out in a disproportionately short space of time, and the whole of the carpet thus spoilt. Where this defect in the boards exists, and in fact in all cases, sheets of very thick brown paper should be pasted over the floor previously to laying down the carpet, which will be found an excellent preservative. As soon as a carpet begins to wear, its position should be altered, so that all parts may wear alike. It will also be found better both on the score of cleanliness and economy to have a strip of drugget or crumb-cloth to cover any portion of the carpet where there is the greatest traffic, such as from the door to the fireplace. Scouring carpets, except in extreme cases, is not to be recommended, as the process is liable to injure their texture. Generally speaking, it will be sufficient to beat them perfectly free from dust, and to sweep them afterwards with a carpet-broom as they lie upon the grass. In the meantime the floor should be thoroughly scrubbed and dried, or where it is covered with paper as previously recommended, the surface should be carefully cleaned with a damp flannel, and rubbed with a dry cloth. If, however, the carpet be very much soiled, take a pailful of clean cold water, and put into it three gills of ox-gall. Have ready another pail containing clean cold water only. Rub with a soft scrubbing brush some of the ox-gall water on the carpet until a lather is produced. When a conveniently sized portion is done, wash the lather off with a linen cloth dipped in the clean water. Let this water be changed frequently. When all the lather has disappeared, rub the part with a clean dry cloth. When the whole is finished, dry the carpet at an open window. This mode of cleaning will not only remove stains and dirt, but will also refreshen the colours. Kidderminster carpets will scarcely bear the above treatment without being rendered so soft as speedily to become dirty again. This may, in some measure, be prevented by brushing the carpet over with a hot weak solution of size in water, to which a little alum has been added. *Spots of grease* in carpeting should be covered with curd soap dissolved in boiling water, and rubbed with a brush until the stains are

removed, and the parts washed with warm water. The addition of a little gall to the soap renders it more efficacious. To *revive the colour* of Turkey carpet beat it well with a stick till all the dust is out, then with the juice of lemon or sorrel take out any spots of ink there may be. Wash the carpet in cold water, and afterwards shake it well. When it is perfectly dry, rub it all over with the crumb of a hot wheaten loaf; and if the weather be very fine, let the carpet remain in the open air for a night or two. To *beat a carpet* properly, hang it upon a stout line, and let three or four persons, each having a pliable stick, beat it with moderate force on the *wrong side:* the sticks used should have cloth tied at the ends in a knot, in order to prevent the carpet from being torn, or the seams split by the sharp end of the stick. When thoroughly beaten on the wrong side, the carpet should be turned and beaten on the right side.

CARRIAGE, BUYING AND HIRING.—The most satisfactory mode of obtaining a carriage is to have it built to order, as then it may be made to suit exactly the convenience and taste of those who require it. But it is very common for carriage-builders to let carriages upon a lease for a term of years, generally four or five, stipulating to keep it in repair all the time, accidents excepted: the hirer has thus the same advantage as with a ready furnished house. When the term expires the carriage reverts to the builder. A third method is to purchase a carriage ready built; in this manner one may generally be procured at a cheaper rate; but great judgment is necessary in the purchase. Carriages may likewise be hired for various limited periods, as by the hour, day, week, month, or year.

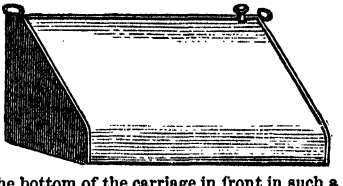
CARRIAGE, PRESERVATION OF.—The coach-house should have a boarded floor, laid hollow for the circulation of air beneath, and be extremely dry and well ventilated. It should not adjoin the stables, as the gases disengaged by the dungheaps, cesspools, or drains, have a very injurious effect upon the paint and varnish of the carriage. The carriage should not be exposed either to a too damp, or too dry situation, as from these causes the woodwork is liable to shrink or swell. The wheels require to be frequently wetted to prevent shrinking, particularly in summer. The plated and brass work should be rubbed every day to prevent their tarnishing. The leathern parts that are not japanned or blacked, require frequent oiling to preserve their tenacity. The cloths and linings of the inside should be kept free from damp, and protected from the sun; but above all, it is necessary, by frequent brushings and beatings, to keep away the moths. After the carriage has been out, it should be carefully washed and dried; cleaned, if possible, before the dirt hardens on, and well sluiced with plenty of water, to prevent any sand remaining that might scratch the varnish in rubbing. Stains on the varnish may be removed by rubbing with a piece of baize or leather dipped in sweet oil; drying the place off with flour; or if the stains resist this, a little rotten-stone or tripoli may be mixed with the oil. Rattling is a sure sign that something has come loose and requires to be tightened; a piece of leather properly adjusted will sometimes stop this. The shrill creaking noise that carriages often make, may be silenced by the application of a little oil.

CARRIAGES FOR INVALIDS.—These are made on a variety of principles, to adapt themselves to particular complaints and deformities. The carriage shown in the engraving is calculated for invalids generally,



who can take the air in a recumbent position only. This carriage may be made to partake of the character of a bed or couch, and being drawn by the hand, the invalid is subjected to as little motion as is possible. See BATH CHAIR, INVALID CHAIR, &c.

CARRIAGE WARMER.—A vessel made of tin, with an aperture in one corner fitting with a screw, into which the hot water is poured. The carriage warmer is placed at



the bottom of the carriage in front in such a position that the feet may rest upon it comfortably, and an agreeable warmth is thus imparted. The heat will be retained for three or four hours, and in long journeys a fresh supply of hot water may be easily obtained from houses on the road.

CARRIER.—A common carrier is one who undertakes for hire to transport from place to place the goods of such as choose to employ him. A railway company is a common carrier. He is bound to carry the goods of all persons offering to pay his hire, to take proper care of them in their passage, and to make a safe and right delivery of them. He is answerable for every loss or damage happening to them while in his custody, no matter by what cause occasioned, unless it were by the act of God, such as a tempest. In other cases, even his entire faultlessness does not excuse him, thus he is liable for damage done by accidental fire

or by a robbery; his liability continues up to the time of the goods being delivered. No common carrier by land for hire, is liable for the loss of, or injury to, gold or silver, precious stones, jewellery, watches, clocks, time-pieces, trinkets, bills, bank-notes, orders, notes or securities for payment of money, stamps, maps, writings, title deeds, paintings, engravings, pictures, gold or silver plate, or plated articles, glass, china, silks, manufactured or unmanufactured, wrought up or not wrought up with other materials, furs or lace, contained in any parcel, when the value exceeds the sum of £10, unless at the time of the delivery at the booking-office, the value and nature of the article shall have been declared, and the increased charges for insurance paid or agreed to be paid; and persons sending such parcels, are bound by a notice to that effect being affixed in the booking-office. Carriers must give a receipt for such a parcel, if required, acknowledging the same to have been insured, and such receipt is not liable to any stamp duty. Parties entitled to damages for parcels lost or damaged, may recover the extra charge for insurance. A carrier is not concluded as to the value of any parcel by the value declared; the person to whom the goods are sent is the proper person to sue the carrier in case of loss or damage.

CARROT, CULTURE OF.—Of this vegetable there are many varieties; but the two most commonly cultivated, are the *early horn* and the *long orange*. Select a piece of ground of a dry, deep, sandy soil, previously prepared and enriched by trenching, till October, the surest indication of fitness being when the leaves become yellow, and are diminished. For this operation choose a dry day, cut off the tops as they are drawn, and let them be exposed to the sun and wind previously to being stowed away. To prevent the attacks of insects and worms, to which carrots are subject, the best remedy is a liberal supply of chalk, lime, or lime-ashes, spread on the land and dug in previously to, or at the time of sowing and manuring in the preceding autumn. The ground being ready about the middle of March, mark it out in drills one foot apart and one inch deep. Take an ounce of the early horn kind, and as the seeds adhere very much together, mix them with more than two-thirds of their bulk of dry sand, and separate them by rubbing through the hands; then sow the seed and sand equally together through the drills. The quantity mentioned will sow about a perch of fifteen feet square; cover in the drills, and rake the whole earth over smoothly. This operation should be performed when the surface is dry. For a late or winter crop, use the long orange kind, sowing about the middle of April; this sort requires deeper ground than the former. As soon as they appear above ground, the hoe must be applied and all weeds removed. Should they appear in bunches, thin them with the hand when sufficiently large to take hold of, and repeat this process until they stand at from two to five inches apart. As they advance in growth the hoe must be used vigorously, all weeds exterminated, and nothing more than this will be required until they attain their final growth.

CARROT JAM.—Boil some carrots till quite tender, and rub them through a sieve. To one pound of the pulp add three quarters of a pound of loaf sugar; boil it to a jam, and when nearly cold, add the juice and the grated rinds of two lemons, and half a teaspoonful of essence of cloves.

☞ Carrot pulp, 1lb.; sugar, ¾lb.; lemons, 2; essence of cloves, ½ of 1 teaspoonful.

CARROT MARMALADE.—After having well washed and scraped some carrots, cut them into pieces of about two inches in length; put them into a pan with as much water only, as will prevent the bottom of the pan from burning its contents. Cover them close, and let them stew over a moderate fire until they are quite tender; then mash them thoroughly, and pass them through a hair sieve; prepare and clarify a syrup, using, for every pound of pulp, a pound of sifted sugar and half a pint of water; clarify it and boil it up until it adheres to the spoon; put in the pulp, boil it up until it forms a fitting marmalade; then put it into pots.

CARROT MASHED.—Boil till quite tender some fine, highly flavoured carrots, press the water from them, and rub them through a fine hair sieve; put them into a clean saucepan or stewpan, and dry them thoroughly over a gentle fire; then for a dish of moderate size, mix well with them two or three ounces of good butter, cut into small bits, keeping them well stirred. Add a seasoning of salt and cayenne, and serve them very hot, garnished or not at pleasure, with small sippets of fried bread.

CARROT PUDDING.—Pound in a mortar the red part of two large carrots after they have been boiled; add a slice of grated bread, two ounces of melted butter, two ounces of sugar, a tablespoonful of marmalade, half a teaspoonful of grated nutmeg, and four well beaten eggs, mix all well together; bake it in a dish lined with puff paste.

☞ Carrots, 2 (red parts of); bread grated, 1 slice; butter melted 2 ozs.; sugar, 2 ozs.; marmalade, 1 tablespoonful; nutmeg, half of 1 teaspoonful; eggs, 4.

CARROT RAGOUT.—Cut carrots into pieces two inches long, and boil them in water for twenty minutes. Take them out, drain them in a sieve, and put them into a stewpan with some good gravy, a little white wine, a bunch of sweet herbs, and a seasoning of salt and pepper. Thicken the sauce if necessary, and serve.

CARROT SOUP.—Put some beef bones into a saucepan, with four quarts of the liquor in which beef or mutton has been boiled; add two large onions, a turnip, and a seasoning of pepper and salt; boil the whole for three hours. Have ready the red part of six large carrots scraped and sliced, strain the soup on them, and stew them till soft enough to pulp through a hair sieve or coarse cloth. Pulp in a mortar half a pound of cold roast beef or beefsteak, add all to the soup, and serve it very hot.

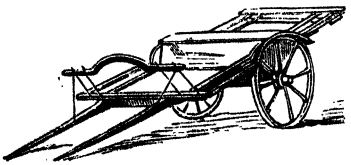
CARROT STEW.—Scrape and wash the carrots, and after blanching them, cut them in slices. Make a sauce with a slice of butter, some salt, pepper, and shred parsley; moisten with milk, and thicken with the yolks of three or four eggs. Let them stew a short time, and serve with the sauce. A few slices of bacon may be added and served with it.

CARROTS BOILED.—Scrape, wash, and clean them; if large, cut them into two or four pieces, set them over the fire in boiling water with some salt in it, and boil them for two or three hours. Very young carrots will only require one hour.

CARROTS, PRESERVATION OF.—To preserve carrots during the winter they should be taken from the ground a short time previously to the frost setting in. Put them in a dry, convenient place under cover, and lay them in a long ridge shape. Have ready some sand or fine coal ashes; commence by placing the carrots about two and a half feet wide at the bottom, with a layer of sand and ashes alternately until about three feet high, placing them in such a manner that the ridge shall come narrow at the top; then cover the whole a few inches thick with sand or ashes.

CARROTS, USES AND PROPERTIES OF.—This vegetable contains a large amount of nutriment, but is not easily digested by weak stomachs, and for this reason they should always be young, and boiled till quite tender. Carrots contain a considerable portion of saccharine matter, and an empyreumatic oil, which invests them with anti-scorbutic properties. For culinary purposes they are employed in a variety of forms, but chiefly to mix with soups, stews, &c., and they are almost universally eaten with boiled beef. Carrots form an excellent food for horses, and act as a remedy for shortness of wind. They also possess a healing property when applied to sores and wounds in the form of a poultice.

CART.—Vehicles of this class are constructed upon various principles suitable to the uses to which they are put. Carts are used for agricultural purposes more than any other, and they possess distinctive features according to the branch of agricultural operations they are employed in. One of the most recent improvements in this direction is a corn and hay cart, which is of simple construction, but possessing complete efficiency and remarkable safety from upsetting. It also possesses the advantage of easy conversion into an open dray-cart for carrying timber or other heavy loads. No cart that is used on roads should be without springs; they lessen the draught, and, by preventing jolting and shaking, add to the durability of the vehicle.



CARTILAGE.—The ends of the bones at the joints are capped by a smooth white substance, somewhat softer than themselves, upon which they move and turn; this is cartilage. It consists of coagulated albumen with a very little gelatine, and therefore is not soluble in boiling water, except by long-continued boiling under pressure. In very young animals the bones consist almost entirely of cartilage; as age advances, the bones become harder and more brittle, having more albumen and earthy matter, and less of gelatine. In some fishes, as in the skate, the bones are entirely cartilaginous.

CARVING.—One of the most important acquisitions in the routine of daily life, is to know how to carve well. Every person who mixes with society at all, is likely to be called upon at any moment to perform this office; to refuse to undertake it savours of illnature and selfishness; and to perform it in an awkward and bungling manner, is painful and unpleasant for lookers-on and exceedingly humiliating to the operator. The best method of becoming an adept in carving neatly, and expeditiously, is to dine at hotels and taverns, where there is a *table d'hôte* or ordinary, and daily assist in cutting up the dishes prepared for the public dinner. Carving is not to be considered alone as an accomplishment to be displayed at the tables of others; it is in fact a very requisite branch of domestic management, and highly important in an economical point of view; for it is notorious that a joint of meat ill carved will not serve nearly so many persons as it would if it were properly carved. But this art does not solely consist of *cutting up*, it requires a certain amount of tact and judgment to cut fairly, and to observe an equitable distribution of dainties so as to give general satisfaction. In the first place, whatever is to be carved should be set in a dish sufficiently large for turning it if necessary; but the dish itself should not be moved from its position, which should be so close before the carver as only to leave room for the plates. The carving knife should be light, sharp, well-tempered, and of a size proportioned to the joint, strength being less required than address in the manner of using it. The carver must carefully avoid all clumsiness of attitude and deportment; squaring the elbows, tucking up the coat-sleeves, dropping the knife and fork, splashing the gravy, and overturning glasses, are evidences of awkwardness and ungracefulness on the part of the carver. To carve standing is considered vulgar, and to obviate this the seat of the carver should be raised to the requisite height. In carving, the eye must be employed as well as the hand; there is an art in discovering when a person's plate needs replenishing, without appearing to be too solicitous, and there is also tact and delicacy in recommending some particular dainty, which you have reason to think will be acceptable.—See BEEF, DUCK, FOWL, GOOSE, MUTTON, PORK, TURKEY, VEAL, &c.

CASCARILLA.—The bark of *croton eleutheria*, or the *sea-side balsam*, a tree growing in the Bahamas and Jamaica. It is an aromatic bitter, stomachic, and tonic. *Dose*, ten to thirty grains in the form of powder, infusion, or tincture; in diarrhœa, dysentery, dyspepsia, low fever, &c.

CASEINE.—A chemical element distinguished from fibrine and albumen by its *not coagulating*, either spontaneously or by heat, and by forming a skin when its solution is evaporated. It is found in vegetables, chiefly in seeds, and in largest proportion in leguminous seeds. In the animal kingdom it is chiefly found dissolved in milk, and it is also present in some vegetable juices. It is that principle in milk which is coagulated by an acid, and which forms cheese. Cheese made from skim-milk, and well pressed, is nearly pure caseine.

CASH AND CREDIT.—The consideration of these two modes of payment must be understood here to apply chiefly to domestic and personal expenditure. Every person, be he married or single, be his wants few or many, is compelled to expend money for the purchase of the comforts and necessaries of life. In procuring these, the question which suggests itself is, which system of expenditure is the most prudent and satisfactory; cash or credit. To solve this problem correctly, the first principle upon which the question hangs need only be inquired into. It must be conceded as a matter of course that the seller of goods makes a distinction between cash customers and customers on credit; it would be unreasonable and unjust to place both on a similar footing; in what, then, does this difference consist? In this—the articles sold for cash are charged at the smallest remunerative profit; those sold for credit are set down at any price best accordant with the seller's caprices and necessities; as a general rule, the difference between cash and credit prices may be fairly estimated at twenty per cent. At this rate, supposing a person makes purchases during the year to the extent of £250 on credit, he absolutely deprives himself and his family of £50 annually thereby, to cancel the obligation which he has accepted of his tradesmen; whereas a person purchasing for cash expends only £200 for articles of a similar quality and to the like quantity, thereby not only saving the £50 excess, but having the opportunity of increasing the surplus amount by judicious outlay, interest, or otherwise. Again, a person purchasing for cash, receiving the articles at the time of payment, is pretty well assured that he has everything he pays for; but where articles are "booked," it may occur intentionally or unintentionally that some things are charged for that have not been delivered; and in disputed items tradesmen generally obtain the advantage over the customer. Finally, the person who pays cash may deal with any tradesman he thinks proper, his only object being to obtain the best value for his money. But the person who takes credit is, to a certain extent, coerced by the tradesman, and cannot deal with a rival shopkeeper without creating offence. In many instances, the person who takes credit is perfectly well aware that the articles vended to him are much dearer and not nearly so good as may be procured elsewhere; but with the fear of the account before his eyes, he can only utter a feeble complaint, and suffers the imposition until such time as he is able to purchase emancipation by the settlement of his bill. The fallacy of dealing systematically upon credit may be readily illustrated thus: Supposing a person in the receipt of an income of £250 from the age of twenty-five to fifty-five, deals exclusively on credit during the whole of that time, the positive sacrifice of income, as before stated, would be £50 per annum. This amount accruing from year to year, with interest added at the rate of five per cent., would realize upwards of £3,500. At the age of fifty-five, the energies of the man of business begin to fail him; and, in the course of nature, it is time for him to retire and leave his work to other hands. Now, if the foregoing calculation is taken as the basis of a man's income and expenditure, the result shown is, that the man who deals for cash during thirty years of his life, is, at the end of that time, in possession of a comfortable independence sufficient to enable him to retire; while he who lives upon credit finds himself in the autumn of life without any provision to fall back upon, and still condemned with impaired powers, and exhausted faculties to work for a livelihood, as unremittingly as in his younger days. Nor are pecuniary considerations the only ones in connection with this question. The man who pays cash has many advantages over his neighbour who deals for credit; he is freer from care and anxiety, he does not dread to meet a creditor at every turning he takes, or fear a dun in every knock; nor is he humiliated in the opinion of the world abroad, and in the eyes of his servants at home.

CASH-BOOK.—See BOOK-KEEPING.

CASINO.—A game of cards generally played by four people, but occasionally by three or two; the points consist of eleven, and the lurch is six. The points are thus calculated:—Great casino (ten of diamonds), 2 points; little casino, (deuce of spades), 1 point; each ace, 1 point; the majority in spades, 1 point; the majority of cards, 3 points; sweep before the end of the game, 1 point. In some deals at this game it may so happen that neither party wins anything, as the points are not set up according to the tricks, &c. obtained, but the smaller number is continually subtracted from the larger, both in cards and points, and if they both prove equal, the game is played over again, and the deal goes on in rotation. When three persons play, the two lowest add their points together, and subtract from the highest; but when their two numbers together either amount or exceed the highest then neither party scores.

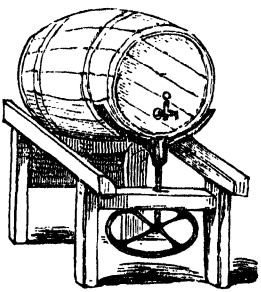
LAWS.—The deal and partners are determined by cutting. The dealer gives four cards by one at a time to each player, and either regularly as he deals, or by one, two, or more at a time, lays four more cards face

upwards on the board. After the first cards are played, four others are to be dealt to each person till the pack is exhausted; but it is in the first deal only that any cards are to be turned up. The deal is not lost by the dealer, unless it be in the first round before any of the four cards are turned up on the table. Any person playing with less than four cards must abide by the loss, and should a card be found, the player whose number is deficient appropriates the same. Each person plays one card at a time, with which he may not only take at once every card of the same denomination on the table, but also all that will combine therewith; as for instance, a ten takes not only every ten, but also nine and ace, eight and deuce, seven and three, six and four, or two fives; and if he clear the board before the conclusion of the game, he scores a point. Whenever any player cannot pair or combine, he has to put down a card. The number of tricks are not to be examined or counted before all the cards are played, nor may any trick but the last won be looked at. After all the pack is dealt, the player who obtains the last trick sweeps all the cards then remaining unmatched upon the table.

RULES.—The principal objects are to remember what has been played; and when no pairs or combinations can be made, to clear the hand of court cards, which cannot be combined, and which are only of service in pairing, or in gaining the final sweep; but if no court cards are left, it is best to play any small cards except aces, as thereby combinations are often prevented. In making pairs and combinations, the preference should be given to spades, for obtaining a majority of them may save the game. When three aces are out, play the fourth as soon as possible, as it cannot then pair, but when there is another ace remaining, it is better even to play the little casino, which can only make one point, than to risk the ace which may be paired by the opponent with a sacrifice of two points; and if great casino and an ace be on the board, prefer the ace, which may be paired or combined, whereas great casino can only be paired. Sweep the board when an opportunity offers; always prefer taking up the card laid down by the opponent; also as many as possible with one, endeavouring likewise to win the last cards or final sweep. While great or little casino is in, avoid playing either a ten or a deuce. When you hold a pair, lay down one of them, unless when there is a similar card on the table, and the fourth not yet out. Attend to the adversary's score, and, if possible, prevent them from saving their lurch, even though you otherwise apparently get less yourself; particularly if you can hinder them from clearing the board. At the commencement of the game, combine all the cards, if possible, that being more difficult than pairing; but when combinations cannot be made, do not omit to pair, and also carefully avoid losing opportunities of making tricks.

CASK.—A vessel of capacity for containing beer, wine, and other liquids. The care and management of casks is an important affair in a large establishment. It is found that they last longest when stored either in a dry situation, or in one uniformly very moist. Continual variations from one atmosphere to another speedily rot casks. As soon as casks are emptied they should be bunged down quite air-tight, with as much care as if they were full, by which means they will be preserved both sweet and sound. Should any of the hoops become loose, they should be immediately driven up tight, which will at once prevent the liability of their being lost or misplaced, as well as the casks becoming foul or musty from the admission of air. For this purpose those out of use should be occasionally examined. To *sweeten casks when musty*, it is best to unhead them and wash them with quick-lime, or they may be washed with oil of vitriol diluted with an equal weight of water. When casks are very foul and resist these remedies they should be charred; a simple and effectual method of performing this, is to wash the dry casks out with the strongest oil of vitriol. In all cases the greatest care must be taken to scald or soak, and well rinse out the casks after subjecting them to the purifying process.

CASK-STAND.—A stand upon which beer, wine, &c. is placed, made upon improved principles. This contrivance is fitted with a screw which supports the full cask in such a manner that it stands perfectly level; and as the liquid is withdrawn the screw is made to turn so that it lowers the front part of the cask by degrees, and facilitates the flow of the liquid without disturbing it. By this plan the beer is neither wasted nor deteriorated, as is frequently the case when a cask is tilted in the ordinary way.



CASSEROLE.—Having cleaned and drained half a pound of rice, moisten it in a stewpan, with some fat; that which gathers on the top of liquor in which meat has been boiled will do. Strain some broth or soup, add to it a large quantity of grease, some pieces of fat bacon and a little salt; mix it with the rice to make it swell as much as possible; stir it frequently over a slow fire to keep it from sticking; when it is soft strain it through a cullender and press it well with a wooden spoon. The mould being

selected for the casserole, raise it with the fat drained from the rice, taking care that every part of the inside of the mould be well greased, then cover it with rice, and place a piece of the crumb of bread in the middle, and cover it with rice also; press it in equally with a spoon, and let it cool. When the rice has become firm dip the outside of the mould into boiling water; add a covering of paste made with flour and water; flatten it all round with a spoon, and make an opening in the top with a knife, then put it into a very hot oven, baste it with the grease, and when it has become of a fine colour, take it out of the oven, remove the crust, and the bread; next displace some of the rice from the inside, leaving sufficient to resist the weight of whatever may be put inside it. Fill it with minced meat, ragout, fricassee of chickens, macaroni, or scallops of fish that have been already served at table; return it to the oven, and when thoroughly browned, serve.

CASSIA.—The bark of the *cinnamonum cassia*, imported from China, Malabar, Bombay, and the Mauritius. It resembles the true cinnamon in flavour, and is frequently substituted for it. The cassia bark may be distinguished from cinnamon by its being considerably thicker and coarser, having a short fracture and a smooth edge; the taste leaves a bitter astringent upon the tongue.

CASTILE SOAP. — A mixture compounded of soda and olive-oil; used in medicine for making pills, plasters, &c. It is sold both white and mottled; the former is preferable.

CASTOR OIL.—A well known aperient obtained from the seeds of the *ricinus communis*. The best kind of castor oil is that known as cold-drawn, which is prepared by pressing the seeds without the aid of heat, and is brought to this country from the East Indies in tin canisters. Castor oil is one of the safest and most certain aperients; it acts quickly without producing pain or constitutional disturbance, and instead of inducing costiveness, leaves a greater tendency to relaxation than previously existed; another advantage is that where repeated doses are necessary the quantity requires to be diminished instead of being increased. From early infancy to old age, castor oil may, as a general rule, be given with perfect safety; the dose for infants and children being from half a teaspoonful to two or more teaspoonfuls, according to the age. For grown-up persons the dose is one, two, or three tablespoonfuls. The great objection to castor oil is the nausea which is caused by it, so much so that some stomachs cannot possibly retain it; and in many instances the mere appearance of it will prevent persons taking it. Many methods are employed for disguising the taste of castor oil; one of the best is to beat it up with the yolk of an egg, and then add gradually a little cinnamon or peppermint-water, or a little plain water with two teaspoonfuls of the tincture of cardamoms A common mode is to mix the castor oil with brandy, whisky, rum, or gin, but the oil being heavier than the spirits, it sinks to the bottom, or adheres to the sides of the cup or glass, and if taken in this way the oil and the spirits should be put into a phial together, well shaken, emptied into a wineglass, and swallowed before time is allowed them to separate. It should also be known that a piece of orange or lemon-peel, chewed previously to taking a dose, blunts the acuteness of the nerves of taste, and renders the oil less offensive.

CASTOR OIL POMADE. — Castor oil, four ounces; prepared lard, two ounces; white wax, two drachms; bergamot, two drachms; oil of lavender, twenty drops. Melt the fat with the oil, and on cooling add the scents, and stir till cold.

CASTS.—In preparing casts and moulds with *gelatine, wax, fusible metal*, and similar substances, it is important to use them at the lowest temperarure compatible with fluidity, as when only a few degrees hotter the water which adheres to the objects from which the casts are taken is converted into vapour and produces bubbles. Fusible metal may be allowed to cool in a teacup until just ready to set at the edges, and then poured into the moulds. When taking impressions from gems, seals, &c., the fused alloy should be placed on paper or pasteboard, and stirred about till it becomes of the consistence of cream, from incipient cooling, at which moment the die or seal should be suddenly stamped on it, and a perfect impression will be then obtained.

CAT. — Of this well-known domestic animal there are several varieties, the most valuable of which is the tortoiseshell. Another variety is of glossy black, and another white. White cats are generally very delicate, apt to take cold, and liable to various diseases. They are also frequently deaf. The most hardy and useful variety is the tabby, of a grayish brown colour variously marked with black. Cats are extremely useful in a house for destroying mice and other vermin, and their domestic habits and moderate appetite entail comparatively little trouble or expense in keeping them; a small portion of milk and the scraps of meat, &c., from the table is all that they require. The habits and instincts of the cat are distinct from those of any other animal. One most remarkable fact is that whenever a cat is removed from one house to another, even though it be blindfolded and carried in a bag, it will find its way back to its original home. To prevent this it is a common practice to butter a cat's feet on the first night of a removal, and as they are extremely sensitive in their feet, they will at once busy themselves in licking them clean, and in the meantime become more accustomed to their new abode. Cats are more attached to places than persons, and it is no uncommon thing for them to select a certain spot and occupy it every day for years. They are also fond of warmth, and of high positions, such as tables, window-sills, &c. Another peculiarity of the cat is the extreme caution and delicacy with which it moves, so much so, that it will walk from one end to the other of a narrow chimney-piece, crowded with ornaments, without

breaking or even displacing one of them. But the most striking peculiarity of all in connection with cats is, that whenever they fall or are thrown from a window or other high place, they almost invariably alight on their feet; this is accounted for as follows: when they find themselves falling with the head downwards they curve up their long slender bodies so that the back forms an arch, while the legs remain extended. This alters the course of the centre of gravity so much that the body of the cat makes a half-turn in the air, and the feet become lowest. This aërial manœuvre also breaks the force of the fall, so that a cat is scarcely ever killed, and seldom hurt through falling from a height. Cats are remarkably healthy animals; if they are affected by the distemper it is generally between the first and third month of their lives. The symptoms are, that the kitten will not take any food; it ceases to play; and appears to become very chilly, seeking the chimney-corner, or any warm place in which it can hide itself. When a kitten has this disease, it generally recovers; but if it is a full-grown cat, it frequently dies. The remedy is to give brimstone or some other aperient medicine, and to feed the cat with light biscuit spread with butter. With this a little manna may be given; the animal should then be left undisturbed for twenty-four hours, after which more biscuit, butter, and manna are administered; but by this time the cat is generally cured. A good plan to keep cats in health is occasionally to put sulphur in the milk or water that they drink.

CATALEPSY.—A disease purely of a nervous character, in which certain parts of the nervous system are in a state of profound coma, or sleep, and others preternaturally excited. The patient remains exactly in the position and attitude, in which he was when taken in the fit, for from two or three minutes, sometimes the period extends to several hours. The chief characteristic of this disease is the rigidity of the muscles and entire body; and though the limbs may be moved into any position, the patient himself has no control over them, or knowledge of what is done. The remote cause of this disease depends upon some of those half revealed phenomena that give rise to other maladies affecting the brain and spinal marrow; while the more immediate cause is often any sudden paroxysm of joy or anger, strong emotions of the mind, or inordinate grief. The attack generally comes on without any previous warning. The *treatment* is first to discover and remove all exciting causes and sources of irritation, and then by a course of alteratives and tonics, purify and brace the system. At the same time change of scene, exercise, and sea-bathing act as powerful auxiliary means. Should the attack be attended with headache, suffusion of the eyes, or ringing in the ears, blood-letting must be resorted to, and a blister applied on the nape of the neck, before adopting the course of systematic tonics already mentioned.—See EPILEPSY.

CATAPLASM.—See POULTICE.

CATARACT.—A disease of that part of the eye called the lens, situated near the centre of the organ, and the body that receives and transmits the rays of light to the retina. Cataracts are always slow in their formation, the obscuration commencing at the side, and gradually spreading over the entire lens; so that total blindness does not occur till the opacity is entire, the patient being frequently able to see objects from the side or corner of the eye, after the portion in the axis of vision is rendered white or milky.

Treatment.—It is very questionable if, without an entire change of occupation, and a long absence from all visual excitement, cataract is ever cured by medical means; if it is, however, it must be treated in the earliest stage of the disease, and by a long course of steady and energetic practice.

CATARRH is a falling down or flow of humours from the head; that running from the eyes and nose (the reaction from an exciting cause), and generally known as the first symptoms of a cold, and the precursor of measles.—See COLD, COUGH, &c.

CATECHU.—An extract obtained principally from a species of acacia tree, which grows in various parts of India. It is used both externally and internally. It is an excellent and very powerful astringent, and is frequently employed for that purpose to restrain purging, when unattended by inflammatory action. A little of it put into the mouth, and sucked slowly, is the best remedy for relaxation of the uvula or pap of the throat, when it hangs down and causes irritation, cough, and difficulty of swallowing. It is used in the same manner as a remedy for sponginess of the gums when they bleed from trivial causes; and also for slight ulcerations of the mouth. One of the most valuable external applications of catechu is in the sore and chapped nipples of nurses; it must be used in the form of tincture, put on the nipple each time after the infant has been nursed, by means of a small paint brush or feather, and wiped off with the damped corner of a towel before the infant is again put to the breast. The infusion of catechu is made as follows:—Extract of catechu, powdered, six drachms; cardamoms, bruised, one drachm; boiling water, one pint; let this simmer by the fire in a vessel lightly covered, and strain. *Dose*, from two to four tablespoonfuls.

CATERPILLARS.—These noxious insects, which derive their chief sustenance from leaves and flowers, are well known for the depredations they commit on the vegetable world. In August and September they destroy cabbages and turnips to an incredible extent, and commit their ravages in fields and gardens whenever easterly winds prevail. Various means have been devised for their destruction, and any of the following may be employed with good effect. Mix and heat three quarts of water, and one quart of vinegar, put in a pound of soot, and stir the whole well till thoroughly incorporated. Sprinkle the plants with this preparation every morning and evening, and

in a few days all traces of the destructive visitors will disappear. If any eggs are deposited they never come forward after this application; and if transformed into worms they will sicken, die, and fall off. *Cabbages and turnips* may be especially protected by sowing with hemp all the borders where they are planted, so as to enclose them, and not one of the vermin will approach. When *gooseberry or currant bushes* are attacked, put pieces of woollen rag in every bush; the caterpillars will take refuge in them during the night, and in the morning large numbers of them may be thus taken and destroyed. If this do not succeed effectually, dissolve an ounce of alum in a quart of tobacco liquor; and as soon as the leaves of the bushes appear in the least corroded, sprinkle the mixture on with a brush. The *leaves of plants* may be effectually dusted with sulphur put into a piece of muslin or a dredging-box; this not only destroys the insects, but materially promotes the health of the plants. When *fruit trees* are attacked by caterpillars, they may be destroyed by a strong decoction of equal quantities of rue, wormwood, and tobacco, sprinkled on the leaves and branches while the fruit is ripening. On placing a chafing-dish of burning charcoal, with a little brimstone thrown on it, under the branches of the tree, the ascending vapour will not only destroy all insects, but prevent the trees from being infested with them any more that season. Caterpillars also breed in the household and commit ravages on furniture and clothes. The best remedy in these cases is to strew about bay leaves, wormwood, lavender, or rue, walnut leaves, or black pepper in grains.

CATGUT.—Clean thoroughly the entrails from the newly-killed carcass of a sheep or any other animal. Soak them in soft water for two or three days, then scrape them with a small plate of copper having a semi-circular hole cut in it, the edges of which must be perfectly smooth and incapable of cutting. Wash them; lay them in clean water till the next day, when they are again to be scraped. Let them soak in water again for one night; and two or three hours before they are taken out, add to each gallon of water two ounces of pearlash. Finally scrape them quite clean from their inner mucous coat. Wipe them dry, twist them slightly, and pass them through a hole in a piece of brass to equalize their size; as they dry they must be passed every two or three hours through other holes, each smaller than the preceding one. When thoroughly dry they will have attained a round and well polished surface, and being then oiled, they are fit for immediate use.

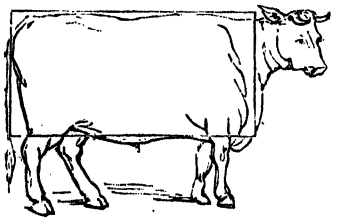
CATHARTICS—Medicines which, taken internally, produce a purgative effect. Cathartics are commonly divided into five classes: *stimulating*, such as jalap, aloes, colocynth; *refrigerating*, as glauber, Epsom salts, and cream of tartar; *astringent*, as rhubarb, and damask roses; *emollient*, as castor oil, manna, and mallows; and *narcotic*, as tobacco, henbane, and foxglove.—See PURGATIVES.

CATSUP.—See KETCHUP.

CATTLE.—Under this head is included the ox tribe. The first point to be ascertained in examining an ox is its purity of breed, and this may be arrived at from several indications. In a pure breed, the colour of the bald skin on the nose and round the eyes is always definite, and without spots When horns exist they should be small, tapering, and sharp pointed, long or short, according to the breed, and of a white colour throughout in some breeds, and tipped with black in others. The second point to be ascertained, is the form of the carcass. It is found that the nearer the section of the carcass of a fat ox, taken longitudinally, vertical, transversely vertical, and horizontally, approaches to the figure of a parallelogram, the greater quantity of flesh will it carry within the same measurement: to do this, it should possess the following configuration:—The back should be straight from the top of the shoulder to the tail. The tail should fall perpendicularly from the line of the back. The buttocks and twist should be well filled out. The brisket should project to a line dropped from the middle of the neck. The belly should be straight longitudinally, round laterally, and filled at the flanks. The ribs should be round, projecting horizontally, and at right angles to the back. The hocks should be wide and flat; and the rump from the tail to the hocks should be well filled. The loin bones should be long, broad, flat, and well filled; but the space between the hocks and the short ribs should be rather short and well arched over, with a thickness of beef between the hocks. A long hollow from the hocks to the short ribs indicates a weak constitution, and an indifferent thriver. From the loin to the shoulder-blade should be nearly of one breadth, and from thence it should taper a little to the point of the shoulder. The neck-vein should be well filled forward, to complete the line from the neck to the brisket. The covering on the shoulder-blade should be as full out as the buttocks. The middle ribs should be well filled, to complete the line from the shoulders to the buttocks along the projection of the outside of the ribs; these constitute the principal points that are essential to a *fat ox*. The first of the points in judging of a *lean ox*, is the nature of the bone. A round thick bone indicates both a slow feeder and an inferior description of flesh. A flat bone, when seen on a side view, and narrow when viewed either from behind or before the animal, indicates the opposite properties of a round bone. The whole bones in the carcass should bear a small proportion in bulk and weight to the flesh, the bones being only required as a support to the flesh. The texture of the bone should be small grained and hard. The bones of the head should be fine and clean, and only covered with skin and muscle, and not with lumps of fat and flesh, which always give a heavy-headed dull appearance to an ox. The fore-arm and hock should be clean and full of muscle, to endure travelling. Large joints indicate bad feeders. The neck should be small from the middle to the head. A full, clear, and prominent eye, is a nice in-

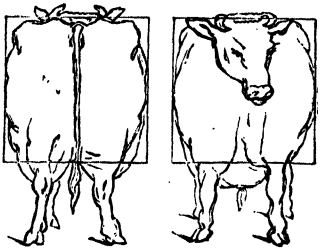
dication of good breeding, and an excellent index of many properties in the ox. A dull heavy eye unmistakeably indicates a slow feeder. A rolling eye, showing much white, is expressive of a restless capricious disposition, which is incompatible with quiet feeding. A cheerful clear eye accompanies good health; a dull one indicates the probable existence of some internal lingering disease; the dulness of eye, however, arising from internal disease is of a totally different character from a natural or constitutional phlegmatic dulness. The next point to be ascertained is the *state of the skin*. A thick firm skin, which is generally covered with a thick-set, hard, short hair, always feels hard to the touch, and indicates a bad feeder. A thin, meagre, papery skin, covered with thin silky hair is indicative of weakness of constitution, though of good feeding properties. A perfect skin is thick and loose, floating, as it were, on a layer of soft fat, yielding to the least pressure, and springing back to the finger, like a piece of soft, thick, chamois leather; it is also covered with thick glossy soft hair. The other greatest points are, that the head should be small and set on the neck, as if easily carried by the animal. The face long from the eyes to the point of the nose. The skull broad across the eyes, contracted a little above them, but tapering considerably below them to the nose. The muzzle fine and small; the nostrils capacious; the ears large, slightly erect, and transparent; the neck short and light. A droop of the neck from the top of the shoulder to the head indicates weakness of constitution. The legs below the knees should be rather short than long, and clean made. The tail rather thick than otherwise, and provided with a large tuft of long hair. The *position of the flesh* is important: that part called the spare rib in Edinburgh, and the fore and middle ribs in London, should be well covered. The division between the horns called the closing, should be characterized by a thick layer of fat, a thick flank, and a full neck bend. The last points are the shoulder joint and shoulder, and if these parts are well covered, the animal may be considered matured. When the frame of a short horn ox is scrutinized, it will be found to present a

Fig. 1.



straight level back from behind the horns to the top of the tail, full buttocks, and a projecting brisket: in short, the rectangular figure represented by fig. 1. There is also the level loin across the hook-bones, the level top of the shoulder across the ox, and perpendicular lines down the hind and fore legs on both sides; these constituting the square forms when the ox is viewed before and behind, as represented in figures 2 and 3. There are also parallel lines from the

Fig. 2. Fig. 3.



sides of the shoulders, along the outmost points of the ribs, to the sides of the hind quarters; and these lines are connected at their ends by others of shorter and equal length, across the end of the rump and the top of the shoulder; thus constituting the rectangular form of the ox when viewed from above down upon the back, as represented by fig. 4. It may be pretty accurately

Fig. 4.

asserted, that the carcass of a full-fed, symmetrical, short-horn ox, included within the rectangle, is in length double its depth, and in depth equal to its breadth; hence, figs. 2 and 3 are squares, and figs. 1 and 4 each two similar squares placed in juxtaposition. The form of short-horn breed is perfect according to this rule.

CATTLE, REMEDIES FOR DISEASES OF.—*Cleansing drink.* One ounce of bayberry powdered, one ounce of brimstone powdered, one ounce of cumin seed powdered, one ounce of diapente. Boil these together for ten minutes, and administer in a little gruel. *Colic.* One pint of linseed oil, mixed with half an ounce of laudanum. *Cordial.* One ounce of caraway seeds, one ounce of aniseed, quarter of an ounce of ginger powdered, two ounces of fenugreek seeds. Boil these in a pint and a half of beer for ten minutes, and administer when cold. *Diarrhœa.* Half an ounce of powdered catechu, and ten grains of powdered opium in a little gruel. *Dysentery.* The same as for diarrhœa. *Fever.* Bleed; and then give one ounce of powdered nitre and two ounces of powdered brimstone in a little gruel. If the bowels

are constipated, give half a pound of Epsom salts in three pints of water daily, if needed. *Hoove* or *Hoven*. Use the elastic tube as a prevention, let the cattle be well supplied with common salt, and restrained from rapid feeding, when first grazing upon rank grass or clover. *Mange*. Half a pound of black brimstone, quarter of a pint of turpentine, one pint of train oil. Mix them together, and rub the mixture well in over the affected parts. *Milk Fever*. Two ounces of brimstone, one ounce of diapente, one ounce of cumin seed powdered, one ounce of powdered nitre. Give this in a little gruel, and well rub the udder with goose grease. *Murrain*. Half a pound of salts, two ounces of bruised coriander seed, one ounce of gentian powder. Give these in a little water. *Poisons* swallowed by cattle are commonly the yew, the water dropwort, and the common and water hemlock. One pint and a half of linseed oil is the best remedy. *Purge in poisoning*. Either one pound of salts in a quart of water or gruel, or from a pint to a pint and a half of linseed oil. *Redwater*. Bleed; and then give a dose of one pound of Epsom salts, and half pound doses repeated every eight hours until the bowels are acted upon. *Sprains*. Embrocation: Eight ounces of sweet oil, four ounces of spirits of hartshorn, half an ounce of oil of thyme. *Sting of the adder, or slowworm*. Apply immediately to the part strong spirits of hartshorn; for *sting of bees*, apply chalk or whiting mixed with vinegar. *Worms*. Half a pound of Epsom salts, with two ounces of coriander seed bruised in a quart of water. *Yellows*. Two ounces of diapente, two ounces of cumin seed powdered, two ounces of fenugreek powdered. Boil these for ten minutes in a quart of water, and give daily in a little gruel.

CAUDLE BROWN. — Mix two tablespoonfuls of finely ground oatmeal in mild sweet small beer two hours previous to using it; strain it from the grits and boil it. Add nutmeg and lemon-juice, and sweeten to taste.

CAUDLE, FOR PLUM OR MARROW PUDDING.—A wineglassful of white wine, two tablespoonfuls of rum, or rum-shrub, pounded sugar to taste, a little grated lemon-peel and cinnamon; stirred into thickened melted fresh butter; grate a little nutmeg on the top.

CAUDLE WHITE.—Made in the same way as brown caudle, substituting water for beer.

CAULIFLOWER, A LA FRANCAISE.—Strip off all the green leaves, and divide each cauliflower into three or four parts, trimming the stalks quite close; put them with the heads downwards into a stewpan, which will just hold them, half filled with boiling water, into which an ounce of butter and some salt have previously been thrown; when they are quite tender, drain the water from them, place a dish over the stewpan, and turn it gently upside down; arrange the vegetables neatly in the form of one large cauliflower, and cover it with melted butter into which some lemon-juice has been stirred.

CAULIFLOWER BOILED. — Choose those that are compact, of a good colour, and from five to eight inches in diameter. Strip off the outside leaves, and trim away the tops of the inner leaves; cut off the stalk at the bottom, and pare away the outer, husky skin. Wash them thoroughly, lay them, head downwards, in a pan of cold water and salt, which will draw out all the insects. Boil them open on a drainer, in plenty of boiling water, with a little salt; from ten to fifteen minutes will boil them, and when the stalks are tender they are ready. While boiling, skim the water well. If the heads vary in size, put in the larger ones first. Serve with or without melted butter.

CAULIFLOWER. CULTURE OF. — This vegetable is propagated by seed, of which half an ounce is sufficient for a bed four feet and a half wide, by ten feet in length. There are two varieties of cauliflower; the early, which is small and most fit for growth under glasses, for the winter-standing crop; and the large, for the open ground plantation. The *first sowing* should be at the close of January, or early in February, under a frame. The plants will be fit to prick out in March, and may be finally removed during April and May; a portion to be placed under hand glasses for more immediately succeeding winter-standing crops. At the beginning of March and April a *second sowing* is to be made in a sheltered border, the seedlings of which may be pricked out in May, and planted finally in June for production at the end of summer. A *third sowing* should take place in the last week of May; to be pricked out in June, and finally planted at the end of July, to produce during October and November, and in favourable seasons, until Christmas. The seed should be sown broadcast, and covered half an inch thick with fine mould. The seedlings are of sufficient size for pricking out when they have four or five leaves of about an inch in breadth; they must be set three or four inches apart each way. The mould must be frequently loosened by the hoe, and drawn up about their stems. In dry weather during summer, a cup-like hollow should be formed round each plant and filled twice a week with water; and as soon as the flower appears, it must be applied every other day. As the head appears exposed, it is advantageous to break some of the leaves, and turn them over it as a shelter from the sun; this preserves them from becoming of a yellow hue, and also retards their advancing to seed. For the *winter-standing crop* the seed should be sown in the third week of August, in a warm border, or an old hotbed, with the protection of a frame or hand glass. The seed bed, if not one that has grown cucumbers, &c., must be well manured with dung from a cucumber bed, or a basis five or six inches thick of dung in a perfectly decayed state must be formed, firmly trodden down, and covered with an equal depth of rich light mould; in this the seed is to be sown a quarter of an inch deep, and shade during the hottest part of the day with matting. Moderate watering must be given as may seem necessary. The plants appear in

about a week, and they must be shaded and watered in like manner. The plants are fit for pricking out at the close of September, when their leaves are rather more than an inch wide. They should be placed in a similar soil and situation to that from which they have been removed. At the latter part of October, or early in November, they must be removed and planted in clusters, of from three to six, in rows three feet apart each way, and sheltered with handglasses until spring. Late in February or early in March, part of the plants may be removed from under the handglasses, two strong ones being left under each glass, and set out in the open ground; the soil and sheltered situation resembling as nearly as possible that from which they are removed. Care must be taken to remove the plants with a considerable portion of earth adhering to the roots. Those continued under the glasses should have air freely admitted to them. Earth should be drawn carefully about their stems, without any being allowed to fall into their hearts. In mild weather, hot sunny days, and during genial showers, the glasses may be removed, but replaced at night. About the end of April, or early in May, the glasses may be entirely dispensed with. The leaves to be broken down over the heads, as previously directed. For the *production of seed*, some plants of the winter-standing crop that have fine heads must be selected. The seed ripens in September, and the branches should be gathered as soon as this occurs. If carefully preserved, the seed remains in a fit state for use until three or four years old.

CAULIFLOWER FRIED.—Select a fine large cauliflower, and lay it in cold water for an hour. Boil it for twenty-five minutes in a saucepan of hot water slightly salted; then divide into small portions, and spread it on a dish to cool. Prepare a batter, made in the proportion of one tablespoonful of flour, and two of milk, to each egg. When the cauliflower is cold, have ready a frying-pan over a clear fire, with a piece of fresh butter in it. When it begins to boil, dip each piece of cauliflower twice into the batter, and fry them a light brown; serve hot.

CAULIFLOWER PICKLED.—Choose the whitest and firmest cauliflowers. Divide the flower into small pieces, and lay them in a brine of salt and water strong enough for an egg to float on the surface, for a week or ten days. Take them out of the brine and put them into a saucepan of water. Boil them for ten or fifteen minutes; drain them and lay them on coarse cloths in the sun until all the moisture is evaporated. Put them into jars and pour over them, cold, a pickle of vinegar in which mace, long pepper, white peppercorns, and a few grains of allspice, have been simmered. Tie the jar down close, and add vinegar from time to time, as it becomes absorbed.

CAULIFLOWER PRESERVED.—Clean them and cut them into pieces; boil them in salt and water. Take them off, drain them, and put them in the sun to dry for two days; then put them into a cool oven until perfectly dry; when cold place them in paper bags, and hang them up until required.

CAULIFLOWER, PROPERTIES OF.—Although this vegetable does not of itself afford a large amount of nourishment, yet it is a valuable adjunct to animal food; and possesses antiscorbutic properties. Persons with weak stomachs should refrain from eating melted butter with cauliflower.

CAULIFLOWER RAGOUT.—Wash them thoroughly, and stew them in brown gravy with a seasoning of pepper and salt, till they are tender. Serve them in a dish with gravy poured over them.

CAULKING.—A process which consists of stuffing the crevices between boards with oakum, which is rope untwisted into its original state of fibre. The oakum is forced in by a blunt chisel and a mallet. When the crevices are caulked, melted pitch is poured on them; or laid on with a pitch mop. Caulking affords great support and serves to hold together more securely a vessel or any other moveable wooden body.

CAUSTICS.—Substances which corrode and destroy the texture of the skin, and also of organized bodies.—See LIME, NITRATE OF SILVER, POTASSA, &c.

CAUTIONS.—See ACCIDENTS, CHARCOAL, MEDICINE, POISONS, SICK ROOM, &c.

CAVIARE.—The prepared roe of the sturgeon. Caviare is made in Russia by rubbing the roe through a sieve, and salting it. It is then dried and sprinkled with fish-oil, and compressed for exportation.

CAYENNE, ADULTERATIONS OF.—Cayenne, when exposed to the light for any length of time, always loses the fine bright red colour it at first possesses, and therefore becomes deteriorated in the eyes of the purchaser; in order to remedy this, a quantity of red lead is added, which not only causes it to keep its colour for a length of time, but also adds to its weight, and consequently to the profit of the vendor. Cayenne pepper is also adulterated with common salt, and with finely pulverized brick-dust and ochre. Red lead may be easily detected by the rapidity with which it sinks in water, through which the pepper is diffused; or by digesting it in dilute nitric, or in acetic acid, and then applying to the filtered red solution the usual tests for the detection of lead, such as sulphurated hydrogen and sulphate of soda—the former giving a black and the latter a white precipitate. The presence of brick-dust and ochre may be ascertained, by incinerating the portion which could not be dissolved by the acid, when the above inorganic impurities will be left behind. The adulteration of salt may be detected by exposing a portion of the suspected compound to the action of the air, on paper, and if the colour becomes deeper, and the paper is stained and wetted, the presence of salt is a matter beyond a doubt. With regard to red lead it is a highly deleterious substance, characterized by a disposition to accumulate in the system, and finally to produce symptoms of a very serious nature. Thus it is that however small the dose taken from day to day, the constitution is sure to be at last brought under the in-

fluence of the poison and to become seriously affected.

CAYENNE ESSENCE.—Steep half an ounce of good cayenne in half a pint of strong spirits for a fortnight, strain and bottle it for use.

CAYENNE GARGLE.—In the early stage of sore throat, the best gargle is a wine glassful of half vinegar and half water, and as much cayenne pepper as will lie on a sixpence. If this be used as soon as the first symptoms of sore throat make themselves felt, the remedy is almost sure to be effectual after two or three applications. If, however, the symptoms do not abate after some hours it would be better not to persist with the gargle.

CAYENNE, PREPARATION OF.—A condiment produced from capsicums and chilies. This pepper is preferable when homemade, for there is no other way of ensuring its being genuine, and the manipulation is very simple. The flavour of chilies is superior to that of capsicums. Strip off the stalks from a hundred large chilies, put the pods into a cullender, and set them before the fire to dry for twelve hours. Then put them into a mortar with one-fourth their weight of salt; pound and rub them till they are as fine as possible, and put the powder into a well-stopped bottle; about two ounces of cayenne will be produced. Capsicums and chilies are ripe and in good condition during the months of September and October.

CAYENNE, USES AND PROPERTIES OF.—Cayenne used as a condiment to food promotes digestion and prevents flatulence; and when not immoderately used is undoubtedly serviceable to persons of languid digestion; in too large quantity it will prove an irritant poison. It may be employed medicinally with advantage in the form of a pill: two parts of cayenne, three of compound rhubarb pill, and one of quinine, form an excellent dinner pill, from three to six grains of which may be taken twenty minutes before the meal for a week or ten days consecutively, by persons of feeble habit of body with tendency to constipation.

CAYENNE VINEGAR.—Put half an ounce of cayenne pepper into a bottle, and pour on it a pint of pale vinegar. Cork it closely, and shake it well every two or three days. It may remain any length of time before it is poured off, but will very soon be ready for use.

CEDAR.—A native tree of the mountains of Libanus and other high adjacent regions, where it attains a great height, and grows to a protracted age. Cedars may be raised from seeds which ripen in England, or are imported from the Levant. When procured from cones, which is a work of some difficulty, they are sown in deep seed-pans or boxes; and when fit for removal the seedlings are nursed and placed in pots until they are large enough to be planted out in the open ground. While nurslings, many of them require a stake, to which a leader must be kept constantly trained, in order to ensure a regular growth. Cedar is employed for making a variety of articles of domestic use, but it is pre-eminently valued, both on account of freedom from warping and its aromatic smell, for making chests of drawers intended as receptacles for clothes.

CELERY BOILED.—This vegetable is extremely good when dressed like sea-kale, and served on a toast with rich melted butter. Wash it thoroughly, trim off the ends, take off the coarse outer leaves, cut the roots of equal length, tie them in bunches, and boil them in plenty of water with the usual proportion of salt, for twenty or five and twenty minutes.

CELERY, CULTURE OF.—Of this esculent there are several varieties. The *Italian* is preferable for general culture. The *red* variety is hardy to withstand the winter, and although coarse for salads, is well adapted for soups and stews. The *turnip rooted* is calculated on account of its root which is fit for use in September and October, and may be preserved throughout the winter. All the sorts are propagated from seed, half an ounce of which is sufficient for a bed four feet and a half by ten. The soil most suitable is a moist rich mould. Any of the varieties may be sown in the spring in the open garden, at two or three different times, from the 21st of March to the 7th of May; but the principal sowing should be made during the early part of April. For *early summer and autumn* celery, sow a small portion towards the end of February in a moderate hotbed. When the young plants are two inches high, prick out some into a warm border, two or three inches apart. When the leaves are six inches high, in May or June, transplant them into trenches for blanching. When they are advanced in the trenches from eight inches to twelve, begin to earth them up several inches on both sides of each row: continue earthing up by degrees as they rise higher, till they are whitened from six inches to twelve inches in length, when they may be taken up as wanted. To raise the *main crops* for summer, autumn, and winter, make a considerable sowing at the commencement of April. Sow, in beds of light mellow earth, and rake in the seed lightly and regularly. In very dry weather give moderate watering both before and after the plants come up. When they are three or four inches high, thin the seed-bed and prick out a quantity at successive times into intermediate beds, three or four inches asunder. Water those removed, and continue water till they have struck. When either the plants left in the seed-beds, or those removed, are from six to twelve inches high, *transplant them into trenches* for blanching. For this purpose allot an open compartment. Mark out the trenches one foot wide, and three feet distance; dig out each trench lengthwise, a spade in width and seven or eight inches deep. Lay the excavated earth smooth in the intervening spaces, making the edges of the trenches equally full and straight; loosen the bottom slighly in a level order, and dig in some rotten dung to a moderate depth. Then, having lifted the plants, trim any long straggling tops of the leaves and fibres of the roots, and slip off side shoots,

Plant a single row along the bottom of each trench four or five inches apart. Give an immediate watering, and occasionally afterwards, if the weather be dry, till the plants take root and show a renewed growth. Continue planting out a monthly succession in June, July, August, and September, thus providing for a supply from July and August of the present summer throughout the course of autumn and winter, until May in the following spring. As the plants from the trenches rise from ten to fifteen inches high, begin to *land up for blanching*, trimming in the earth gently, when first raised to the stems with a hoe or spade. When the plants are of more advanced growth, earth them up equally on both sides of each row three, four, or five inches, according to the height and strength of the different crops. Repeat this once a week or fortnight till by degrees they are landed up from twelve inches to two feet, in order to blanch them of some considerable length. Continue thus landing up the different crops from July to February. As the autumnal and main winter crops attain full growth, give them a final landing up near the tops, which will increase the extent of the blanched portion, and also protect the latter crops more effectually during the winter. For *late spring celery*, to stand till the end of May in the succeeding spring, it is expedient to make a small late sowing at the commencement of May. The plants when six weeks old may be pricked out on to intermediate beds in rows, six inches by three inches asunder, to remain till September or October; then transplant them into moderately capacious trenches; as they advance in growth, earth them up slightly in winter; and give them a final earthing up in February or March. In order to afford *occasional shelter*, on the approach of frost, take up a part of the crop, and lay it by under dry sand for winter use. To preserve the plants left in the bed, lay some dry litter over the tops; which remove during every interval of mild weather. To *take the crop*, it is best to begin at one end of a row, and dig clean down to the roots, which then loosen with a spade, that they may be drawn up entire without breaking the stalks. Celery is liable to be eaten by a maggot which breeds in the leaves, and to the attacks of a parasitical fungus. When either of these evils occur, there is nothing left but to destroy the plants, or to remove them altogether from the garden, and make a new plantation in a fresh soil.

CELERY ESSENCE.—Soak half an ounce of celery-seed in a gill of brandy. A few drops will flavour a pint of soup or broth, equal to a head of celery.

CELERY FRIED.—Blanch the celery in some rather strongly salted water, and let it stew gently in a little strong stock. Take out the celery, draw it, and dip it into batter; then fry it in boiling dripping. When it is done it is to be powdered with sugar, and candied with a salamander.

CELERY FRITTERS.—Cook the celery in a saucepan with a little fat bacon, sweet herbs, and salt, moisten with rich stock, and cover the whole with a few slices of bacon and some oiled paper. When thoroughly done, take out the celery, and soak it for some time in brandy and sugar, then dip it into thick butter, and fry, covering it with sugar, and candying as in the preceding.

CELERY, IN IMITATION OF PRESERVED GINGER.—Cut the blanched part of the celery in pieces, and boil it in water with a large quantity of ginger until it is quite tender, then throw it into cold water and allow it to remain for an hour. Put it over a slow fire in good syrup, with some pieces of ginger, and let it remain simmering for an hour. Cool it again, and in the meantime thicken the syrup by further evaporation. Put the celery in again, and repeat the same process. After a third simmering in this way, taking care to keep the syrup thick, put the celery into pots, and cover with a syrup.

CELERY, PRESERVATION OF.—Keep it in a cool dry place, the roots being covered with tan.

CELERY SAUCE.—Cut into small pieces six heads of white celery, with two small onions. Put them into a stewpan with a small piece of butter, and stew them over a slow fire till quite tender. Add two spoonfuls of flour, half a pint of broth, a wineglassful of cream or milk, and a little salt and pepper. Boil it for a quarter of an hour, and pass it through a fine hair sieve. When celery is not in season, a quarter of a drachm of celery seed, or a few drops of the essence, will impregnate half a pint of sauce with a perceptible flavour of the vegetable. This sauce is intended for boiled turkey, veal, or fowl.

CELERY SOUP.—Cut six heads of celery into pieces about two inches long, wash them well, drain them on a hair sieve, and put them into a soup saucepan, with three quarts of clear gravy. Stew it gently by the side of the fire for about an hour, till the celery is very tender. Remove the scum as it rises, and season the liquor with salt. When celery cannot be procured, half a drachm of the seed, pounded fine, will give a flavour to the soup, if put in a quarter of an hour before it is done. A little of the essence of celery will answer the same purpose.

CELERY STEWED.—Cut five or six roots of celery to the length of the inside of the dish in which they are to be served. Stew it in broth or common stock, and serve with a rich brown gravy.

CELERY, USES AND PROPERTIES OF.—In addition to the culinary uses to which celery is put, it is also eaten raw mixed with salad, and is generally introduced at the conclusion of a dinner with the cheese. When cooked it is a wholesome vegetable, although not affording much nourishment, but when eaten raw, it is frequently digested with difficulty, and on weak stomachs especially, it sits in a cold heavy mass, and materially interferes with the assimilation of food.

CELLAR.—In the construction of a cellar the first point is to provide such a drainage as will draw off the water at least one foot lower than the surface of the cellar floor. If the soil be naturally wet, the flooring should be of flag-stones or tiles, and laid hollow.

The walls should also be built hollow, and if convenient, with a powerful cement, rather than with common mortar: or at least they ought to be coated over with cement on the inside. In very cold, or extremely hot situations, cellars should be fitted with double doors and double windows, and the windows in all such cases ought to fit tightly. The space between the double windows need not be more than from six inches to a foot; but the space between the double doors ought to be at least three feet, so that one door may always be shut before the other is opened. Cellars need not exceed seven feet in height. In general they are better under ground and arched over with masonry; but the same results may be obtained above ground by double walls, very small and double windows, double or thickly thatched roofs, and double doors. Articles that are not frequently wanted are better kept in a dry cellar than in any other place, because they are there less subject to atmospheric changes. It cellars, however, are damp, they are unfit for storing anything except liquors in glass, or in earthen vessels. See BEER CELLAR, FRUIT CELLAR, WINE CELLAR.

CELLARET. — A capacious kind of drawer, usually forming part of a sideboard or cheffonier, constructed with partitions, &c., so that decanters and wine bottles may be placed in an upright position within it, and drawn to and fro without disturbing the liquors, or breaking the vessels that contain them.

CELLARIUS WALTZ.—The gentleman takes the lady's left hand with his right, moving one bar to the left by *glissade*, and two hops on his left foot, while the lady does the same to the right, on her right foot; at the second bar they both repeat the same with the other foot; this is repeated for sixteen bars; they then waltz sixteen bars, *glissade*, and two hops, taking care to occupy the time of two bars, to get quite round. The gentleman then takes both hands of the lady, and makes the grand square, moving three bars to his left, at the fourth bar making two beats while turning the angle; the same repeated for sixteen bars; the lady having her right foot forward, when the gentleman has his left foot forward; the waltz is again repeated; after which several other steps are introduced, which require to be seen to be understood.

CEMENT.—This term includes all those substances employed for the purpose of causing the adhesion of two or more bodies, whether originally separate, or divided by a fracture. As the substances that are required to be joined together are exceedingly various, and differ very much in their properties, texture, &c., a variety of cements possessing very different characteristics are employed. The following will be found to include all those that are best calculated for domestic manipulation: CHEESE CEMENT, *for earthenware, &c.*—Grated cheese, 2 parts; quicklime (in fine powder), 1 part; white of egg, sufficient; beat to a paste. CURD CEMENT, *for glass and earthenware.*—Obtain curd by adding vinegar or rennet to milk; add a little white of egg and powdered quicklime; beat the whole into a paste. CHINESE CEMENT, *for glass, china, fancy work, jewellery, &c.*—Finest pale orange shell-lac (broken small), one part; rectified spirit (strongest) two parts; digested together in a corked bottle in a warm place until dissolved. It should have about the consistence of treacle. DIAMOND CEMENT, *for glass, china, and polished steel.*—Dissolve five or six pieces of gum mastic, each the size of a large pea, in as much rectified spirit of wine as will serve to render it liquid; and in another vessel dissolve as much isinglass, previously softened a little in water (though none of the water must be used) in as much French brandy or good rum as will make a two ounce phialful of strong cement, adding two small pieces of gum galbanum or ammoniacum, which must be rubbed or ground till they are dissolved. Then mix the whole with a sufficient heat. Keep the glue in a phial closely stopped, and when it is to be used, set the phial in boiling water. EGG CEMENT, *for earthenware, glass, china, marble, alabaster, spar ornaments, &c.*—White of egg thickened with finely powdered quicklime. PARABOLIC CEMENT, *for glass, earthenware, &c.*—Curdle skim milk with rennet or vinegar, press out the whey and dry the curd by a very gentle heat, but as quickly as possible. When it has become quite dry, grind it in a coffee or pepper mill, and afterwards triturate it in a mortar until reduced to a very fine powder. Mix this powder with one-tenth of its weight of new dry quicklime, also in a very fine powder, and to every ounce of the mixture add six grains of powdered camphor, triturate the whole well together, and keep it in small wide-mouthed phials, well corked. When required for use make into paste with water, and apply immediately.

In the application of cement many persons entertain a misconception which ought to be removed. Generally speaking, persons imagine that the thicker the cement is put on the edges, the firmer and readier the junction will be; whereas the exact opposite is the fact, the *thinner* the stratum of interposed cement the stronger will be the junction of the surfaces operated upon. And to effect this purpose the cement should be lightly applied to the edges of the fracture by means of a feather. See BOTTLE CEMENT, FIREPROOF, WATERPROOF, &c.

CERATE SIMPLE. — A composition of equal parts of yellow wax and olive oil, used alone as an emollient application to sores, or as a base to compound more active ointments.

CEREMONIES, MASTER OF.—A person appointed to arrange the dances at balls and to attend to the general conduct of the ball-room. He is the person with whom all complaints are lodged, and to whom the wishes of the dancers individually and collectively are made known. The master of the ceremonies is delegated with a certain amount of authority for the time being, which it is agreed on all hands to respect. He is supposed to preside over the comfort and happiness of the assembly generally, and it is a mark of ill-nature and question-

able taste, for any individual to obstruct and molest him in the performance of his duties. At assembly-rooms where a permanent master of the ceremonies is retained, he is supposed to be acquainted with the names, and, to a certain extent, the position of the frequenters of the rooms; and it is through him that the introduction of persons previously strangers to each other may be made. He is also the proper person to provide partners for dancers who are in want of them. The qualifications for a master of the ceremonies are, a perfect knowledge of dancing, a correct ear for music, a quick eye, energetic will, and unfailing urbanity and good temper. He must also be intimately acquainted with all the amenities and observances of social life. Finally, he should be somewhat above the middle height, of a light figure, neatly and appropriately dressed, and a gentleman in appearance, language, and manners.

CERTIORARI. — A writ directed to a judge of an inferior court directing him to certify or to return the record of a cause depending before him to a superior court, to the end that the party may have more sure and speedy justice; for instance, in criminal cases, a certiorari may issue at any time before trial, directing the removal of an indictment into the Court of Queen's Bench.

CERVELAS.—Chop up some fat streaky pork, with parsley, shalots, and a little garlic; season well with pepper, salt, and allspice; fill skins rather shorter and wider than those used ordinarily for sausages, and boil slowly for two or three hours.

CHAD GRILLED.—After having cleaned the chad, put it on a dish with a gill of Florence oil; add salt and pepper, and let it remain in this seasoning for an hour. Broil it over a slow fire, and serve with caper sauce.

CHAFF.—A food for horses, produced by cutting up hay with straw in a machine for that purpose. Sometimes it serves as an auxiliary for other food, and in many instances it is given alone. With hard worked horses, where it is desirable that the meal should be despatched as soon as possible, and rest taken immediately afterwards, feeding with chaff is generally practised. But in private stables, where there is no such object in view, chaff is only useful from the economical motive of inducing the horse to chew his corn, and as this object is thoroughly accomplished a regular supply is desirable. The best plan of all is to mix straw and clover with upland hay, in the proportion of nearly two of straw to one of hay.

CHAFFINCH.—This bird is about the size of the house sparrow. The beak, which is conical, is white in winter, but at the time of pairing, when the bird begins to sing, it becomes dark blue, and remains so until the moulting season. The colour of the beak is therefore a sign whether or not the bird has begun to sing. The female is easily distinguished from the male, being smaller; the colour of the head, neck, and upper part of the back, is greyish brown; on the lower part, a light drab; and the breast reddish gray. The natural food of this bird in summer consists chiefly of insects, and in winter of seeds and grain. In confinement it may be fed upon rapeseed soaked in water the previous day, with occasionally a very little hempseed, green chickweed and plantain,

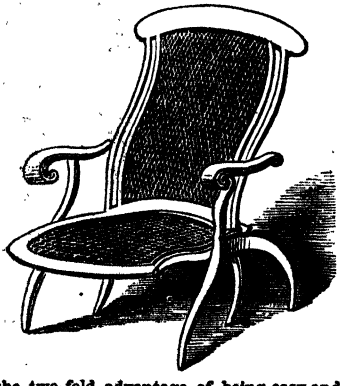
with now and then a little lettuce leaf, or slice of apple. It should also have mealworms and ants' eggs, and occasionally a little meat cut very small. Chaffinches are generally very ill at the moulting season, and frequently die. The bird, at this juncture, should be well fed with insects, meat cut very small, and bread boiled in milk. Its other diseases are generally cured by saffron or a rusty nail being put into its water. It should at all times be supplied with a large bathing-pan, the water in which should be changed every day. The feet of this bird frequently become swelled and covered with scales, which should be removed with a very sharp knife; and if the feet become sore, they should be dressed with lard or butter.

CHAFING IN INFANTS.—From a neglect of proper cleanliness, infants are very apt to become chafed in the wrinkles of the neck, behind the ears, and other parts of the body. To remedy this, the excoriated parts should be bathed twice or thrice a day with a little warm milk and water, and afterwards dusted with violet powder. In aggravated excoriation, a wash composed of two parts of rectified spirits and one of water, may be used. Great caution should, however, be observed in drying up discharges behind the ears of infants, as bad consequences are apt to ensue from an injudicious use of repellent applications in such cases. In some infants of a gross habit, and particularly about the time of teething, a species of excoriation sometimes appears low down in the neck, which at length degenerates into large deep sores, sometimes terminating in gangrene. To these fomentations of cinchona bark should be applied, and mild aperients administered at the same time.

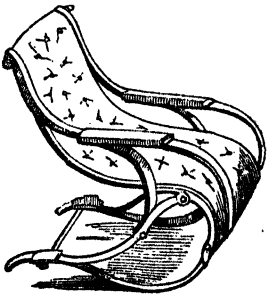
CHAIR.—In the construction of chairs, comfort, elegance, and adaptability are alike to be studied. Chairs used in parlours and

dining-rooms, should be substantially made and of capacious dimensions; those for drawing-rooms, light and tasty; and for bed-chambers and dressing rooms, neat and plain. To persons who are in the habit of sitting for many hours at a time, it is of the first importance that the shape of the chair be such that the weight of the body may not press unequally upon it. For this purpose both the seat and back of the chair should be of convenient depth and breadth. Many varieties of chairs are made with this view, and several improvements have lately come into vogue. The *reclining chair* is one

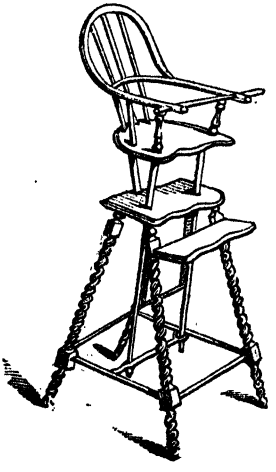
especially adapted for ease and comfort, being so constructed as to accommodate the body in any posture from the recumbent to the perpendicular. The *Derby chair* possesses



the two-fold advantage of being easy and portable, as it is made to fold up into a compact form, and may be carried from place to place without materially increasing the bulk of the luggage. The *rocking chair* is of American invention, and affords a delightful seat; by the mere movement of the body this chair rocks to and fro with an easy and regular motion, and will stand still when it is so desired. The rocking chair is especially adapted for persons of a nervous and irritable temperament, the oscillating motion tending to soothe and allay the nervous system by



congenial exercise. It is also the fact that many persons are able to obtain sleep almost at will after being seated in a chair of this description for a few minutes. The *nursing chair* is an excellent contrivance for lighten-



ing the labours of the nurse as well as pleasing the child. The infant is placed in the chair as seen in the engraving, with its feet resting on the board in front, and being protected by a rail from falling out. When the child is seated the weight of its body acts upon springs placed beneath, and it is moved up and down with an easy and regular motion, and without being subjected to those hazards which are frequently entailed by being tossed about in a person's arms.

CHAIRMAN.—Under this title is comprehended the person who is selected at a public meeting or a dinner to preside over the assembly. The chairman of a public meeting is generally a person of influence and position; he need not necessarily be an orator, for his duties, so far as speaking is concerned, may be confined to a few aptly chosen words, promptly and clearly delivered. He ought to display firmness and decision, and a bearing both conciliatory and uncompromising, so as to harmonize as much as possible the opposing elements of which public meetings are frequently composed. The chairman of a public meeting has to open the proceedings by rising and shortly explaining the motives for which the meeting has been convened; he then usually calls upon some one individual to speak to the question, and the various speakers follow one another in succession. It frequently happens that several *resolutions* have to be proposed, and it is the duty of the chairman to call upon some person to propose the resolution, and after it has been seconded, to ask the meeting to declare their opinion by *holding up their hands*. If the majority of hands be held up in favour of the resolution, it is then declared to be carried; others are successively disposed of in the same manner. Sometimes an *amendment* is proposed in opposition to the resolution; and as this course of proceeding frequently engenders disapprobation and a display of acrimonious feeling, it is incumbent on the chairman to obtain a hearing for the speaker, and to claim for the amendment the same free and fair discussion as was accorded to the original resolution. When all the resolutions have been passed, the chairman finally rises, generally to acknowledge a vote of thanks which has been previously proposed to him; and that done, he declares the meeting to be ended or adjourned, as the case may be, and bowing politely to his auditors, vacates the chair.

The chairman of a public dinner is chosen as much for his social qualities and eloquence as for his influence and position. A person so situated, to be successful, must possess a certain amount of good fellowship; he must have a smile, a nod, and a kind word for all, and a certain free and joyous manner calculated to impart a feeling of comfort and conviviality to the assembled guests. At large public dinners a toast-master is generally provided, who stands behind the chairman, and calls out the toast that is about to be proposed, whereupon the chairman rises, and speaks appropriately to the subject. But at festivals more limited and less ceremonious, and where a chairman appears to the best or worst advantage, he has to propose the toasts himself; and upon each occasion of his rising the vice-chairman, who faces him, or some person who sits by his side, claims the silence and attention of the guests by rapping on the table with a hammer provided for that purpose. Independent of the toasts incidental to the particular meeting, there are usually a round of loyal and patriotic sentiments proposed; these are taken in their order, and together with any others written down on a slip of paper, which the chairman has by him, and which should be ticked off or marked out as they are disposed of. As soon as the chairman receives intimation that all the guests or the majority of them are assembled, and the table duly provisioned, he knocks on the table, and either says grace himself or calls upon some person to do so; the covers are then removed, and the chairman's duties begin. At this period of the dinner, he should chiefly study those placed near him, and who are generally supposed to be the most honoured guests, assisting them or seeing that they are assisted according to their wishes. As the repast advances, he should take wine with one and another, and give vent to an occasional apt remark or harmless pleasantry, to bring out backward dispositions, and to circulate good humour and friendly feeling generally. When the dinner is over and the cloth removed, grace after meat is either said or sung. Dessert is then placed upon the table, and while this is being done the chairman should avail himself of the interval to arrange any notes or memoranda that he is likely to require in the course of the evening. As soon as the dessert is set, and the wineglass of each guest is filled, the chairman rises and proposes the health of the Queen, calling on the guests to respond to the toast upstanding. The remaining members of the Royal Family, the Army and Navy, and other institutions are proposed in rotation. When the representatives of any of these are present they respond to the toast as a matter of course, and if there is any nice point to decide, or hesitation in the matter, the chairman may indicate such person as he deems most fit to reply. In all of these *routine toasts* the chairman should avoid prolixity, and dismiss them with a few cordial words and unmistakable heartiness. Usually there is what is termed *the toast of the evening*, and in proposing this the chairman is expected to dwell somewhat fully, and to speak in his best and most eloquent manner. It would be as well for the chairman to inform himself of the particulars in connection with the toast, if so needed, previously to the dinner taking place, and if he does not positively compose a set speech, to weave the materials together with such apposite allusions as his own good sense and taste may dictate. When the last toast is arrived at, the chairman intimates the fact; and having returned thanks for his health being drunk, which follows as a matter of course, he is at liberty to vacate the chair, and thereby dissolves the formal character of the festivities. The duties of a chairman cannot be discharged effectually unless he keep himself perfectly calm and collected; he should therefore be moderate in his libations, and notwithstanding the many temptations to which he is subject, avoid taking any more wine than he feels sure is beneficial for him. If unhappily any display of ill-feeling should obtrude itself among any of the guests, the chairman should promptly interfere, and courteously appeal to the better feelings of the contending parties. In short, the combined happiness and

comfort of a certain body of persons are, to a great extent, placed under the control of the chairman, and it is to him that the successful or unsuccessful issue of the dinner is mainly attributable

CHALK. — A carbonate of lime, which exists in the hills and cliffs of England. Chalk is extremely useful for many purposes. Calcined like common lime, it is used for manure and for cement, in polishing metals and glass, also as a marking material, and in painting, whitewashing, and various other processes. Chalk has also medicinal properties: it is used internally in diarrhœa in the form of mixture, and externally as an application to burns, scalds, and excoriations.

CHALYBEATES. — Medicines containing iron. Chalybeate waters are, by virtue of the iron they contain, powerful tonics, and well adapted as curative agents in diseases of debility generally. Before having recourse to them, however, medical advice should always be taken. The more generally used chalybeate springs in this country are Tunbridge Wells, Cheltenham, and Scarborough; Leamington and Harrogate also possess chalybeate waters; and Hartfall and Peterhead, in Scotland.

CHAMPAGNE. — A wine made in the south of France, and exported in large quantities to England. There are many kinds of champagne, but the best are those which froth slightly. They are improved in the drinking by ice, which tends to repress the effervescence. Though one of the most delicious wines, champagne ought to be indulged in with great precaution. The piquancy of flavour and the sparkling brilliancy, are mainly derived from the presence of an acid, which, if not counteracted, is productive of deleterious consequences. The alcohol it contains is, though much less than the strongest of port or Madeira, peculiarly exciting, and stimulates the stomach to a greater action than it can well bear. Habitual indulgence in champagne has a tendency to produce gout, apoplexy, &c., with all the accompaniments of deranged digestion. A few grains of carbonate of soda thrown into the wineglass will obviate some of the ill effects, although it somewhat interferes with both the taste and appearance of the wine. To accomplish the same end, a little magnesia may be taken a few hours afterwards in a separate form.

CHAMPAGNE BRITISH, RED.—Crush forty quarts of ripe green gooseberries in a tub, pour on them ten gallons of soft water that has been well boiled and become cold, add three pounds of sliced beetroots that have been boiled for twenty minutes, without breaking their skins, stir all well together and leave them to steep for four days covered up, stirring well three times daily; strain the liquor and filter it through a flannel bag into the cask, add thirty pounds of loaf sugar in small lumps, two ounces of bruised ginger, the thin rinds of four lemons, and an ounce of isinglass dissolved in a quart of liquor; leave the bung out until the fermentation has ceased, then add a quart of brandy, put in the bung, and secure it with paper and sand. Keep it in a cool cellar for twelve months, then put it in champagne bottles, wire the corks and seal them. It will be in high perfection in six months more.

☞ Gooseberries, 40 quarts; water, 10 gallons; beetroots, 3lbs; sugar, 30lbs; ginger, 2ozs; lemon rinds, 4; isinglass, 1 oz (dissolved in a quart of liquor); brandy, 1 quart.

CHAMPAGNE BRITISH, WHITE. — Slice thirty pounds of fresh-gathered rhubarb stalks into a clean vessel, put upon them a peck of the tops of young spring nettles bruised or shred, and two ounces of best ginger sliced. Boil ten gallons of soft water for three-quarters of an hour, with thirty pounds of loaf sugar and the whites of twelve eggs well beaten, skimming the whole until it is perfectly clear. Pour this liquor boiling hot upon the nettles, and covering close, let them infuse for three or four days, stirring it well after the steam has subsided, and twice each day. Then strain the liquor into a clean vessel, and filter it through a jelly bag into a ten-gallon cask upon the thin rind of four lemons and four ounces of white sugar candy; fill the cask completely, put in the bung lightly, or cover the bung-hole with a tile, and when it has ceased fermenting add a quart of pale brandy, and stop it up for a year or more. Then draw it off into champagne bottles, fasten the corks with wire, and seal with green wax. It should be kept a year longer to be in perfection, and in a cool, dry cellar.

☞ Rhubarb, 30lbs; nettles, 1 peck; ginger, 2ozs; water, 10 gallons; sugar, 30lbs; eggs, 12 whites; lemon rinds, 4; sugar candy, ¼lb; brandy, pale, 1 quart.

CHANTILLY BASKET. — Bake sweet biscuits quite crisp, have ready some sugar clarified and boiled to crackling height. Stick a small skewer into each biscuit, and dip its edge in the sugar. Fix them one by one, as dipped, round a dish or mould that will shape the basket. When one row is done, begin another. The candied sugar

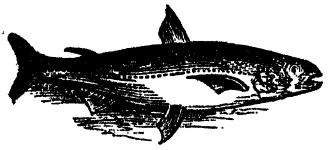
will make the biscuits instantly stick. Three or four tiers will be high enough. An ornamental border of coloured drops of gum-paste may be given to the basket. Any dry sweetmeat may be served in this basket, being previously lined with tissue paper.

The engraving illustrates a Chantilly basket, containing a tipsy cake, stuck over with almonds.

CHAPPED HANDS.—This troublesome complaint is caused by the action of the wind and frost on the skin. It may be avoided in a great measure by drying the hands thoroughly after washing them, and by never using warm water to wash with. When they have already appeared, however, the following lotion will be found useful:—borax, two scruples; glycerine, half an ounce; water, seven and a half ounces. This may be used twice a day.

CHAPPED LIPS.—Put into a tin saucepan a quarter of an ounce of benjamin, storax, and spermaceti, half an ounce of alkanet root, a large juicy apple chopped, a quarter of a pound of fresh butter, and two ounces of beeswax; simmer the ingredients together till all be dissolved, and strain it through linen. When cold melt it again, and pour it into small pots.

CHAR.—This fish seldom ventures into a running stream; its principal resort being the lakes of the colder regions. Very fine char have been found in the lakes of Westmoreland. The char is somewhat like the trout, but more slender and longer. The colour of the back is an olive green variegated with spots of a dusky white, and others of



a dull yellow. The belly is of a pale red, and in the female approaches to white. The whole body is covered with very minute scales. The manner of taking this fish is with nets, which are furnished with bait to allure the fish, and left for several days, till the fish are known to have entered.

CHARACTER OF SERVANTS.—It is customary to receive testimonials of a servant's trustworthiness and ability at the time of hiring them, and also to give servants that have formerly been in a person's service what is termed a character. Upon this point it is necessary to exercise a great deal of caution and discernment, in order to avoid being cheated with testimonials that are utterly false. For instance, it is not at all uncommon for dishonest persons—either servants who have sacrificed their good name for some previous indiscretion, or others whose sole aim is to obtain an introduction into a house with an evil design—to refer to some imaginary late employer, living at a distance, for a reference. The letter making inquiries respecting the servant is obtained possession of, and answered by some person in communication with the supposed servant, or even by the impostor himself. The testimonials given are of course the most flattering, and the unsuspecting employer unconsciously admits a thief, or even worse, into his house. Therefore no reference should be accepted unless it is a personal one. But even in these cases fraud is sometimes practised, and for the sake of a fee there are dishonest persons willing to vouch for the honesty and good qualities of persons of whom they know nothing. In these matters, therefore, an employer should exercise judgment and discretion, and if there is any circumstance that gives rise to suspicion in the most trifling degree, refuse to have anything more to say in the affair. With regard to the giving of characters by employers, it is established that an employer is not bound to give a servant a character; but if a character be given, it must be a true one; otherwise, if a servant is in a position to prove that he has sustained injury by a false and malicious character being given of him, an action for damages will lie against the person so giving it. But if the character be given without malice and to the best of his knowledge, no action lies.

It is customary with servants who have been in a particular employment at some distance of time previously, to return to their former employer, and ask him to give them a character, the idea being to impress persons into whose service they wish to enter with the belief that they have only recently left the employer whose testimonials they produce. Now, as it is possible that a servant may behave himself very well in one situation, and grossly misconduct himself in a subsequent one, an employer giving a character under the assumption before stated, clearly becomes a party to a species of fraud, and renders himself liable to very disagreeable consequences: at the same time the servant may have conducted himself properly, but owing to his last employers having left the country or died, or from some other cause, they cannot be personally referred to. In such a dilemma, therefore, it would be unjust to withhold the testimonials asked for; and in either case the servant may be obliged, and ill consequences averted, by simply stating the date when the servant left the particular employment, leaving the inquirer to act as he may think fit, with regard to the subsequent interval. In these transactions it behoves both the master and servant to speak truthfully, and to act in good faith, so that neither party concerned may sustain wrong or injury.

The penalties attaching to false characters are, that if any person falsely personate any master or mistress in order to give a servant a character; or if any master or mistress knowingly give in writing a false character of a servant, or account of his former service; or if any servant bring a false character, or alter a certificate of character, the offender forfeits upon conviction £20, with 10s. costs.

CHARADE. — A drawing-room entertainment both amusing and intellectual, in which any of the guests may become actors. For these performances a room with folding doors is the most suitable. At the further end of the room something like a stage is erected, with appropriate scenery contrived

from various household appliances. Characters dressed in costumes made up of handkerchiefs, coats, shawls, table covers, &c., then come on and perform an extempore play. This play is devised from a word of two or more syllables, each syllable expressing some familiar object, and the action and dialogue of the play are so ordered as to illustrate the word selected without actually uttering it.

By way of illustration, suppose that the word selected is *Band-age*. For the performance of this we may conceive the following characters:—Sir Anteek Yellowleaf, a rich old merchant from India; Lillie and Olivia, his nieces; Brown, Jones, and Robinson, their friends. The first scene represents a drawing-room, and Lillie and Olivia are discovered seated at table; they then enter into conversation, the gist of which is that they intend that night serenading their uncle, Sir Anteek, with the "waits," in celebration of his return to his native country, after an absence of fifty years. While thus discoursing, enter their three friends, Brown, Jones, and Robinson, dressed as street performers, and bringing in music-books and instruments (or where real instruments cannot be procured, suitable imitations of the voice may be substituted); the plan of serenading is then concerted, the performers go off to carry out the scheme, the young ladies retire, and the scene closes, having thus represented the word *Band*. *Scene* 2 represents an ante-room with a door at the back made to open and shut. *Enter* Sir Anteek Yellowleaf as from a bedroom, attired in dressing-gown, night-cap, and slippers, and carrying a chamber-candlestick. Sir Anteek appears very irritable, declares that the noise is so great that he cannot get a wink of sleep; and after denouncing everything and everybody, returns to his room. Lillie and Olivia then peep on from opposite corners, and stealthily approach. Sir Anteek disturbed by their footsteps, again comes out, and while he is doing so Olivia and Lillie steal off. Sir Anteek returns again to his room in a fury. At this juncture music is heard from without, faintly at first, and gradually louder; whereupon Sir Anteek rushes out in a great passion, with a water jug; after venting some of his spleen, he goes off at side; a crash is heard; the music ceases; and Sir Anteek returns looking pale and angry, thus representing the word *Age*. *Scene closes*. *Scene* 3 represents a breakfast parlour, Lillie and Olivia seated, and a vacant arm chair near the table; after a short conversation between the nieces, the uncle enters, who appears to be dreadfully alarmed by the supposition that in throwing the water jug out of the window he has sacrificed some person's life; while in this dilemma the servant enters, and announces the arrival of Messrs. Brown, Jones, and Robinson, who come on in their usual attire; but Brown has his head enveloped in a cloth, and is supported by his two friends; an explanation then ensues. Brown intimates that he is only slightly bruised, Sir Anteek apologizes; they all shake hands, and the end of this scene and the charade are both brought about, having thus illustrated the word *Bandage*.

The following is a limited list of words adapted for acting charades:—

Bag-dad	In-mate
Bar-gain	Key-stone
Boat-man	Kit-ten
Brace-let	Know-ledge
Break-fast	Land-lady
Bride-groom	Leap-frog
Broad-cloth	Life-guard
Bull-dog	Mag-pie
Car-pet	Mis-judge
Chair-man	Nan-keen
Cork-screw	Out-cry
Court-ship	Pad-lock
Death-watch	Pass-over
Ear-ring	Pick-pocket
Fare-well	Quick-silver
Fire-pan	Rid-dance
Foot-stool	Second-hand
Gun-powder	Thread-bare
Honey-comb	Toad-stool.

CHARCOAL.—A form of carbon obtained by burning wood with the imperfect access of air, or by heating or distilling it in iron cylinders so constructed as to allow of the collection of the volatile products. Charcoal, exclusive of its important use as a fuel, is possessed of some curious and valuable properties. It is a very bad conductor of heat; and hence powdered charcoal is used to surround tubes and vessels which are required to retain their heat. It is not injured by air and moisture, for which reason stakes and piles are superficially charred to preserve them. It is infusible; and provided air be carefully excluded, it undergoes no change in most intense heats. It not only absorbs air and moisture, but also the colouring and odoriferous parts of many animal and vegetable substances. Tainted flesh and putrid water are thus sweetened by the action of powdered charcoal. *Animal charcoal* is obtained by burning bone, or the clippings of hides, leather, &c. *Common charcoal* intended merely for fuel is prepared by cutting pieces of wood from one to three inches in diameter, into lengths of from one to three feet, forming them into a conical pile, and burning them to the required extent beneath a covering of turf or earth. *Cylinder charcoal* is obtained by distilling woods which are free from resin; this is employed in the manufacture of gunpowder. In *medicine* charcoal is principally used as an antiseptic or disinfectant, either in the form of a powder or made into a poultice. Used as a *dentifrice*, the teeth are rendered white and the breath sweet by it, where a scorbutic disposition of the gums exists.

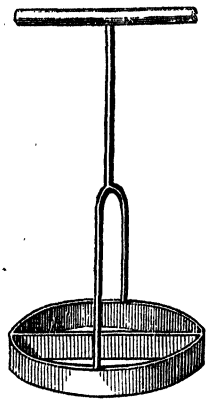
CHARCOAL, CAUTIONS RESPECTING.—Although charcoal is an economical fuel, it is by no means conducive to health, and is sometimes attended with dangerous consequences. Wherever charcoal is burnt a vessel of boiling water should be set over the burning fuel, the steam from which will counteract the dangerous fumes of the carbon. If a little vinegar be added, persons will be much less liable to headaches than they otherwise are. When a person has inhaled

the fumes of charcoal to such a degree as to become insensible, he should be immediately removed into the open air, cold water dashed on the head and body, the nostrils and lungs stimulated by harts-horn, at the same time rubbing the chest briskly.

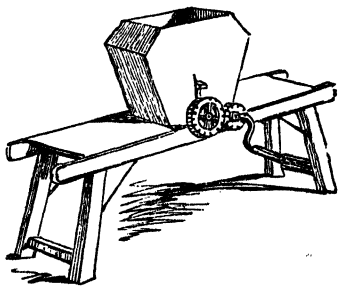
CHARITIES.—See CLOTHING CLUBS, INDUSTRIAL SOCIETIES, REFUGES FOR DESTITUTE, &c.

CHARWOMAN.—An occasional servant, usually hired for short periods, as the week, day, or hour. Although among this class of women there are many who are respectable and trustworthy, it is notorious that a large proportion of them are addicted to two besetting sins; pilfering and drunkenness. This may be partially accounted for by the fact, that their aid is generally called in when the household is disorganized, by the illness of the mistress, a domestic calamity, or some other distracting cause, which gives the charwoman opportunities for committing irregularities which servants generally, in a well ordered household, would never have. If occasion demand the assistance of a charwoman, therefore, the best way is to apply to some householder long resident in the neighbourhood, or to a respectable shopkeeper, such as the grocer, cheesemonger, or baker. The terms usually asked by charwomen are from one shilling and sixpence and upwards per day, together with their food and drink.

CHEESE.—The process of cheese-making in England differs somewhat in particulars, but the general principles and mode of manufacture do not vary essentially. The *utensils* required in cheese-making are a tub in which the milk is coagulated and the curd broken; a curd cutter; a curd breaker; a drainer to lay across the tub while the whey is straining from the curd; vats for forming the cheese; a cheese press; a furnace and pot for heating water and milk. Previously to commencing the process of making cheese, besides the milk, two materials must be ready for use—the rennet for coagulating the milk, and the substance for colouring the cheese, if the latter is to be employed. A calf's stomach is usually recommended for rennet; but as they are not always obtainable, a pig's stomach will answer the purpose. Let the inside skin of the stomach be taken out, any entrails on it removed, and the skin wiped clean with a cloth, but not washed. When the rennet is to be used, a brine of salt and barley-water, sufficiently strong to float an egg, is made, strained through a cloth, and left to cool. One skin is allowed to remain in three pints of brine in a jar, tied down for three or four days, when the coagulating strength of the brine is tested by pouring a drop or two into a teacupful of lukewarm milk; and when considered strong enough, the skin is taken out, bottled, and tightly corked for use. Half a teacupful of liquid rennet will coagulate as much milk as will make a cheese of 15lbs. weight. The *curd-cutter*, as seen in the engraving, is held by either one or both hands, and, on the instrument being used in a perpendicular direction and pressed down, it cuts the curd into as small pieces as are wished in the tub. The *curd-breaker* is represented in the following figure:—On using this machine, the curd cut in slices is placed in small tubs on the boarding and

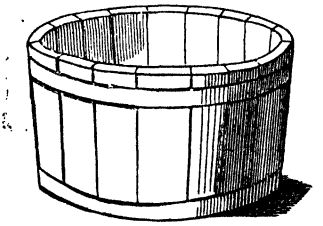


on a slice being put into the hopper, the winch-handle is moved round, and the curd is cut in pieces by the teeth, not exceeding a quarter of an inch in size. A tub is placed below the hopper to receive the cut curd as it descends. In this way one person may

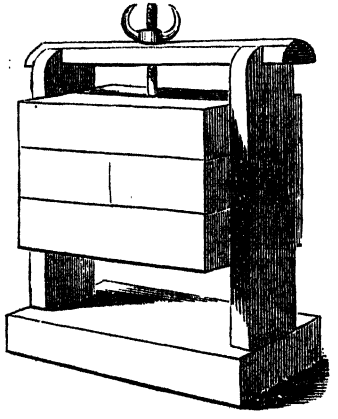


feed the slices into the hopper and drive the machine; but the process of curd-cutting is much expedited by one person feeding the hopper with slices, while another drives the handle of the machine. The curd, being reduced small enough, is salted to please the taste, with salt finely ground. After being salted the curd is put into a cheese-cloth, spread over a cheese vat, and firmly packed into the vat above its edge, and on the curd being covered with the remainder of the same cloth, the vat is placed in the cheese-press and subjected to pressure; upon which a quantity of whey exudes by the holes in the bottom of the vat. In the course of two hours or more, the cheese is turned out of the vat; a clean dry cheese-

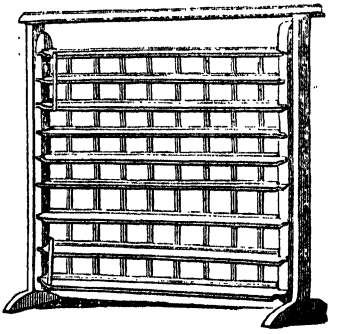
cloth put in; the cheese replaced into it upside down, and again subjected to increased pressure in the press. Should whey continue to exude, the cheese must again be taken out of the vat, a clean cloth substituted, and frequently renewed, and the pressure increased, as long as any whey exudes; but if the previous operations have been properly performed, the exudity should cease in about twelve hours, after which the pressure is continued until the press is wanted for a new cheese on the second day. The common *cheese-vat* or *chessart* is shown



in the accompanying illustration, the form varying according to that designed for the cheese. It is made of elm staves, hooped with iron, and the bottom pierced with holes, to allow the whey expressed to flow away. A wooden cover to fit the vat exactly is also a part of the utensil. In Cheshire, cheese-vats are made of tin pierced both at the bottom and the side. Of the *cheese press* the varieties are very numerous, but the old stone press, and the combined lever press, are those most commonly in use. The common stone cheese-press is shown in the



annexed figure; where presses of this kind are used, the cheese is subject to three degrees of pressure, the first being a quarter of a ton, the second half a ton, and the third and last, one ton. The cheese is then put into the cheese-room, and protected from excessive heat, drought, or damp at first, heat causing new cheeses to sweat; drought dries them too quickly and induces them to crack; and damp prevents them hardening, and induces a bitter taste. Exposed to a cool, dry, and calm air upon the shelves, the cheeses will dry by degrees and obtain a firm skin. The cheeses should be wiped with a dry cloth to remove any moisture, and turned daily. Some cheeses burst and throw out a serous-like fluid, in consequence of whey fermenting, which ought to have been pressed out. A cheese that changes its shape indicates some organic change going on within; but if it do not crack so as to admit the air, it will soon become ripe, and probably of fine flavour. The *cheese turner* is an invention designed to save much of the labour required



in the daily turning of a large number of cheeses in the drying-room. A cheese turner may be constructed to stand alone; or be fastened to the floor at the bottom and the joisting overhead. The moveable frame or rack is formed by two interior posts, and upon these, twelve shelves are framed, each fourteen inches broad, or more, according to the sizes of the cheeses manufactured. The shelf-frame thus formed is provided with two strong iron pivots fixed in the side posts at mid-height, and these are received into corresponding holes in the outer posts, so that the shelf-frame swings poised upon two pivots; it is further provided with an iron latch at top and bottom by which it may be tilted and secured with either the top or bottom shelf uppermost. The *colouring of cheese* is a general custom, but not a necessary operation; annatto is chiefly employed for this purpose. The usual mode of application, is to dip a piece of the requisite weight in a bowl of milk, and rub it on a smooth stone, until the milk assumes a deep-red colour. This infusion without the sediment, which is separated by standing a little, is to be added to the milk of which cheese is intended to be made, in such quantity as will impart to the whole a bright

orange colour. The addition of annatto in no way effects the smell or taste.

The *milk intended for making cheese* should be carefully passed through the sieve placed on the ladder over the cheese-tub, and, for the very best cheese, that produced at a single milking is preferable. The degree of heat most favourable for coagulation by rennet is from eighty-five to ninety degrees: if it is below eighty-five degrees, the milk must be brought to that temperature by artificial means. The proportions of rennet and colouring must be regulated by experience and practice. If there is too little rennet, the milk will not turn; if there is too much, the cheese will be apt to heave and to be rank and strong. A handful or two of salt added previously to mixing the rennet will promote coagulation. After all the materials are put into the tub, the whole is well stirred together, a wooden cover is put on the tub, and over that a woollen cloth is thrown. The usual *time of curdling* is from one to two hours, during which time it is to be frequently examined; the point of coagulation may be determined by gently pressing the surface with the back of the hand.

The next process is *salting the cheese*. For this purpose it is taken out of the press, and placed nearly mid-deep in the salting-tub for three days, its upper surface being uniformly covered over with salt; or instead of this, the sides and edges of the cheese may be rubbed with finely powdered salt. The precise amount of salting must be regulated by the size of the cheese.

CHEESE BOILED.—Put a tablespoonful of milk into a saucepan, with an ounce of butter, and a quarter of a pound of prime cheese finely grated; stir the whole over a slow fire until it boils, then add an egg well beaten; stir all thoroughly together, turn it into a dish, brown it with a salamander, and serve hot.

☞ Milk, 1 tablespoonful; butter, 1oz.; cheese, ¼lb.; egg, 1.

CHEESECAKE.—Beat eight eggs thoroughly while a quart of milk is boiling, and when it boils, put in the eggs and stir them till they come to a curd; then pour it out, and when it is cold, add a salt-spoonful of salt, two teaspoonfuls of rose-water, and three-quarters of a pound of currants well washed; put it into a puff paste and bake it. If tin patties are used for baking, they must be buttered; but if they are baked in glass or china, only an upper crust will be necessary.

☞ Eggs, 8; milk, 1 quart; salt, 1 salt-spoonful; rose-water, 2 teaspoonfuls; currants, ¼lb.

CHEESECAKE BREAD.—Slice a half-quartern loaf as thin as possible, pour on it a pint of boiling cream, let it stand for two hours; then take eight eggs, half a pound of butter, and a nutmeg grated, beat them well together, add half a pound of currants, and bake in patty-pans.

☞ Bread, half-quartern loaf; cream, 1 pint; eggs, 8; butter, ¼lb.; nutmeg, 1; currants, ¼lb.

CHEESE, BRITISH PARMESAN.—Heat the day's milk to a temperature of from seventy-five to seventy-seven degrees, and after it has settled, put in the rennet. When it has stood for an hour or more, place the coagulated milk on a slow clear fire, and heat it till the curd separates of itself. When separated, throw in cold water to reduce the temperature, and quickly collect the curd in a cloth, gathering it up at the corners. When drained, press it as other cheese. Next day it will be firm enough to turn. Let it dry slowly and gradually, often (at first about every hour) changing the wrapping-cloths. Rub it with a little salt daily, for three weeks, or plunge it in pickle for a few days. The curd for this, or any other cheese, may be coloured with a little saffron, or annatto, by putting a tincture of them, extracted in milk, to the milk when to be curdled.

CHEESE BRAISED.—Melt some slices of any rich mild cheese in a small dish, over a lamp or steam. Add butter and pepper, and mustard if chosen. Have ready a soft toast in a hot-water dish or cheese dish with a hot water reservoir, and spread the cheese on the toast.

CHEESE CRAB.—Cut some thin slices of any rich cheese, as Cheshire, double Gloucester, &c., and press them well with a knife, until it can be spread like butter. Then mix with it mustard, common and chili vinegar, cayenne pepper, salt, essence of anchovies, and any other sauce to taste. Mix all together thoroughly to a thick pulp.

CHEESE CREAM.—Put five quarts of the last of the milk into a pan with two tablespoonfuls of rennet. When the curd is produced, strike it down a few times with the skimming-dish, to break it. Leave it to stand for two hours, then spread a cheese-cloth on a sieve, put the curd on it and let the whey drain; break the curd a little with the hand, and put it into a vat, with a two pound weight upon it. Let it stand for twelve hours; take it out, and bind a fillet round. Turn it from one board to another every day, till it is dry; cover with nettles or clean dock leaves, and put it to ripen between two pewter plates. If the weather is warm, it will be ready in three weeks.

CHEESE CREAM, AMERICAN.—Melt a tablespoonful of butter in a quarter of a pint of cream: mix with it a pound of good cheese finely grated; beat all well together, and pour it over buttered toast; brown with a salamander and serve hot.

☞ Butter, 1 tablespoonful; cream, ¼ pint; cheese, 1lb.; buttered toast, sufficient.

CHEESE CREAM, WITHOUT RENNET.—Put any quantity of thick cream into a wet cloth. Tie it up, and hang it in a cool place for seven or eight days. Then take it from the cloth and put it into a mould (in another cloth) with a weight upon it, for two or three days longer. Turn it twice a day, when it will be fit for use.

CHEESE FRITTERS.—Pound good cheese with bread crumbs, raw yolks of eggs, rasped ham, and butter. Make this into

small oval balls; flatten, dip in stiff batter, and fry them.

CHEESE MELTED.—Grate two ounces each of good Cheshire and of Parmesan cheese; add the yolks of three eggs and four ounces of melted butter; mix them well together, add pepper and salt to taste, and then put to it the white of the eggs, which have been beaten separately; stir them lightly in, and bake the whole in a deep dish, but half full, as it will rise very much. Serve when quite hot.

☞ Cheese, Cheshire and Parmesan, 2ozs. each; eggs, 3; butter, ¼lb.; seasoning, to taste.

CHEESE POTTED.—Add to a pound of grated Cheshire cheese, three ounces of fresh butter, half a tablespoonful of sifted mace, and a teaspoonful of mustard. Mix all thoroughly in a marble mortar, put it into small pots, cover it with clarified butter, and set the pots in a cold, dry place.

☞ Cheshire cheese, 1lb.; butter, 3ozs.; mace, ½ teaspoonful; mustard, 1 teaspoonful.

CHEESE, PRESERVATION OF.—The portions of cheese in immediate use should be kept in a cool or rather damp place, and deposited in a covered pan. The other portion of the cheese not in use should be wrapped up in buttered paper, with an outer covering of brown paper. Dried pieces, when they cannot be presented at table, may be grated down, and employed in any of the preparations of the preceding receipts. Cheese may be ripened and made mellow by cutting a large hole in the centre, and filling it with good port wine or genuine porter.

CHEESE, PROPERTIES OF.—As an article of food, cheese is more wholesome when partaken of in small quantities, and accompanying other diet, than when eaten in large quantities or made a meal of. It is a generally received notion that cheese eaten at the conclusion of a dinner promotes digestion, its effects are however, of a negative kind, that is, by acting as a temporary stimulant on the stomach; and even this is the case only with sound old cheese, which is neither too fat nor too far advanced in the process of putrefaction. Decayed cheese and new cheese are both very unwholesome.

CHEESE PUDDING.—Grate Cheshire or any mild melting cheese, in the proportion of half a pound to two beaten eggs, with a little oiled butter, cream, and a tablespoonful of finely grated bread. Bake in a small dish lined with puff paste.

CHEESE PUFFS.—Strain some cheese-curd from the whey, and beat half a pint of it fine in a mortar, with a tablespoonful and a half of flour, the yolks of three eggs, and the white of one. Add two teaspoonfuls of orange-flower water, quarter of a nutmeg, and sugar sufficient to render slightly sweet. Lay a little of this paste, in small round cakes on a tin plate. Bake in a quick oven for fifteen or twenty minutes.

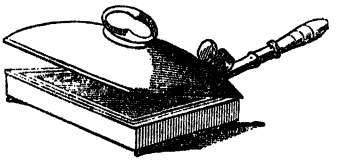
☞ Cheese-curd, ½ pint; flour, 1½ tablespoonful; eggs, 3 yolks, and 1 white; orange-flower water, 2 teaspoonfuls; nutmeg, ¼ of 1; sugar, to taste.

CHEESE SANDWICHES.—Take two parts of grated Parmesan or Cheshire cheese, one of butter, and a small proportion of made mustard; pound them in a mortar; cover slices of bread with a little of this, and lay over it slices of ham or any cured meat; cover with another slice of bread, press them together, and cut into mouthfuls that they may be lifted with a fork.

CHEESE SOUP.—Have ready some good stock; then take half a pound of new Gruyère cheese; grate half, and cut the remainder into thin slices. In an earthen pipkin put a thin layer of grated cheese with some bits of butter; cover this with thin slices of bread; then a layer of the cheese in slices; then bread; next grated cheese; continue this alternately till all the cheese is used. On the last layer, which ought to be sliced cheese, put some pieces of butter; moisten it with some of the stock; stew it till it adheres to the bottom, and the stock is all dried up; then add the remains of the stock with salt and pepper, and serve very hot.

CHEESE TOASTED.—This preparation is popularly known as *Welsh rabbit* or *rarebit*. Cut some double or single Gloucester cheese into thin shavings, and put it with a bit of butter into a cheese-toaster; place it before the fire until the cheese dissolves, stirring it occasionally. Serve with a slice of toasted bread divided into four, and the crust pared off. It is generally eaten with mustard, salt, and pepper.

CHEESE TOASTER.—A culinary utensil used for toasting cheese on the simplest an-



readiest principles; the cheese being put in the receptacle indicated, the toaster is placed before the fire and in a few minutes the operation is finished.

CHEMISTRY.—The study of chemistry in connection with every-day life, should form a part of the education of every person, moving in the most ordinary spheres. If properly pursued it will not only prove instructive, but most entertaining and attractive. Books: *Johnston's Chemistry of Common Life; Scoffern's Subject Matter of Ten Lectures; Normandy's Handbook; Francis's Experiments; Mrs. Marcet's Conversations; Liebig's Chemistry of Food; Baxter's Handbook; Sparkes's Introduction; Balmain's Lessons; Fownes's Manual; Scoffern's Chemistry no Mystery; Raspail's Organic Chemistry; Reid's Practical; Griffith's Recreations; Thompson's School; Francis's Student's; Donovan's Treatise; Accum's Chemical Amusements; Forsyth's First Lines; Davy's Chemical Philosophy; Joyce's Dialogues; Barrington's Elucidation; Henry's Experimental; Liebig's Letters; Topham's Chemistry Made Easy; Hoblyn's Manual; Gregory's Outlines; Weale's*

Rudiments; Chambers's Rudiments; Mackenzie's Theory; Ede's Practical; Solley's Rural; Reid's Student's Text Book; Faraday's Chemical Manipulation; Scoffern's Manual of Chemical Analysis for the Young; Carey's Chemistry Compared; Venables' Aphorisms; Griffiths' Chemistry of the Four Seasons; Gregory's Introduction; Liebig & Kopp's Progress; Bateman's Chemist's Library; Graham's Catechism; Rose's Chemical Analysis; Ure's Dictionary.

CHEQUE is an order drawn upon a banker for the payment of money. The receiver of a cheque has till the close of the banking hours on the following day to present it. A banker is bound to present a crossed cheque the day he received it, and to pay a cheque within a reasonable time after he has received sufficient funds belonging to his customer. The holder of a cheque is not bound to give notice of its dishonour to the drawer; it is sufficient if presented with due diligence that he should give notice to the person from whom he received it. The presenting of a cheque should not be delayed beyond the day following its receipt. The new law in reference to "crossed cheques" enacts, that whenever a cheque or draft on any banker, payable to bearer or to order on demand, shall be issued, crossed with the name of a banker, or with two transverse lines with the words "and company," or with any abbreviation thereof, such crossing shall be deemed a material part of the cheque or draft, and, except as mentioned, shall not be obliterated, or added to, or altered by any person whomsoever after the issuing thereof, and the banker upon whom such cheque or draft shall be drawn shall not pay such cheque or draft to any other than the banker with whose name such cheque or draft shall be crossed, or if the same be crossed without a banker's name, to any other than a banker. Whenever any such cheque or draft shall have been issued uncrossed, or shall be crossed with the words "and company," or any abbreviation thereof, and without the name of any banker, any lawful holder of any such cheque or draft, while the same remains so uncrossed, or crossed with the words "and company," or any abbreviation thereof, without the name of any banker, may cross the same with the name of a banker; and whenever any such cheque or draft shall be uncrossed, any such lawful holder may cross the same with the words "and company," or any abbreviation thereof, with or without the name of a banker, and any such crossing shall be deemed a material part of the cheque or draft, and shall not be obliterated, or added to, or altered by any person whomsoever, after the making thereof; and the banker upon whom such cheque or draft shall be drawn shall not pay such cheque or draft to any other than a banker with whose name the cheque or draft shall be so crossed. Further, the Act declares that persons obliterating or altering the crossing with intent to defraud shall be deemed guilty of felony. Bankers are not to be responsible for paying a cheque which does not plainly appear to have been crossed or altered.

CHERRIES BOTTLED. — Gather the fruit before it becomes too ripe, and put it into bottles, filling them up quite close; cork them tightly and seal the corks. Place the bottles in a *bain-marie*, and as soon as the water begins to boil, lessen the fire, and a quarter of an hour after take the bottles out.

CHERRIES DRIED.—Stone eight pounds of cherries, and boil them slowly with four pounds of sugar, for ten minutes; pour them into a large bowl or pan, and leave them for two days in the syrup; then simmer them again for ten minutes, and set them by in it for two or three days; drain them slightly, and dry them gradually. Keep them in jars or tin canisters when done.

CHERRIES IN BRANDY.—Choose Morello cherries, cut the stalks short, prick the cherries with a needle, and strew sugar over them. Make a sufficient quantity of syrup to cover them, scald them over the fire, and lay them away until the next day: then scald them again, and put them by in jars. The syrup is then to be boiled until very thick, and if the quantity is not sufficient, more sugar may be added; when boiled sufficiently, it is to be poured into the jar, with an equal quantity of brandy.

CHERRIES PRESERVED.—To every pound of fruit add three quarters of a pound of powdered loaf sugar; stone the cherries, and as they are done, strew part of the sugar over them; boil them fast with the remainder of the sugar till the fruit is clear and the syrup thick; take off the scum as it rises; when done, take them out, lay them on tins or plates to dry, and powder them with sugar. When dry put in boxes.

CHERRIES, USES AND PROPERTIES OF. —Although with many persons cherries are difficult of digestion, they are generally regarded as a wholesome and nutritious food when partaken of in moderation. In eating them, care should be taken to avoid swallowing the stones. Dried cherries are, in many diseases, an excellent article of diet, on account of their cooling and antiseptic properties. They are excellent in scurvy, putrid fevers, and dysentery; they correct the blood when inclined to putrescency, and remove obstructions in the intestines. Persons who are troubled with bilious and vitiated stomachs, may eat dried cherries with advantage, especially early in the morning.

CHERRY BRANDY.—Gather cherries when full ripe, pick them clear from refuse; mash them in a clean wooden vessel, and press out the juice through a horsehair bag. Let it stand two hours to settle; then strain the clear liquor through a flannel bag until it is perfectly fine: and to every quart of the juice put a quart of French brandy and three quarters of a pound of white sugar-candy, dissolved in as little pure cold water as possible. Mix them well, and put the whole into a clean stone jar, in which has been previously put the thin rinds of one or more lemons, according to the quantity; put in the cork, seal it, and let it stand in a warm room for two months. Strain it

through a fine flannel bag until it is perfectly clear; then bottle it, seal the corks, and keep it twelve months longer.

CHERRY CAKES.—Cut a pound of paste, as for tarts, in half, and roll it out thin, chop preserved cherries into small pieces and drop them on the paste. Egg them round carefully, turn the paste over them, and press them gently together. Cut them into half circles, prick them, and wash them over with egg. Bake them on a well buttered tin in a quick oven.

CHERRY CHEESE. — Bruise and boil the fruit until it is sufficiently tender to press through a sieve, which it will be in from twenty minutes to half an hour. Weigh the pulp, and boil it quickly to a dry paste, stir into it sugar in the proportion of six ounces to one pound of fruit, and when this is dissolved, place the pan over a slow fire, and continue stirring the preserve until it is so dry as not to adhere to the finger when touched; then press it immediately into small moulds or pans, and turn it out when wanted for table.

CHERRY CORDIAL.—Take a clean dry stone jar, wide at the mouth, measure its contents with water, and fit a bung to it very tight. Pick ripe black cherries, clear from stalks, making use of none that are in the least spotted or unsound. Deposit a layer of sifted loaf sugar at the bottom of the jar, then a layer of the fruit, and so on until the vessel is full, the last layer being of sugar, and an inch thick. Put a tin funnel two inches through the sugar, and for every gallon of fruit in the jar pour in half a pint of genuine spirits of wine, and putting in the bung immediately fasten it with wire; tie bladder over it, and pour hot pitch over that. Bury it two feet deep in dry earth, and at the end of six months take it up, strain the cordial through muslin until it is perfectly bright, and put it into half pint bottles, corking and sealing them well. It should be kept in a cool dry place for twelve months, and will then be excellent.

CHERRY, CULTURE OF. — There are many varieties of this fruit, the following of which are most recommended: The May-Duke, Morello, Arch-Duke, Black Heart, White Heart, Bigaroon, Harrison's Heart, and Kentish. The cherry is *continued* by grafting or budding on stocks of the black or wild red cherries. Sometimes it is grafted on the Morello for the purpose of dwarfing the tree, and rendering it more prolific; but the most effectual dwarfing stock is the Mahaleb. *New varieties* are obtained from seed. Cherry-stones, whether for stocks or new varieties, are sown in light sandy earth in autumn, or are preserved in sand till spring, and then sown. They will come up the same season, and should not be removed till the second autumn after sowing. They may then be planted out in rows three feet apart, and the plants one foot asunder in the row. The succeeding summer they will be fit to bud, if intended for dwarfs; but if for standards, they will require to stand one or more seasons, generally till four years old. They should be budded or grafted about six feet from the ground; the usual way is to bud in summer, and graft those which do not succeed the following spring. The cherry delights in a warm sandy soil and an elevated situation; but some sorts, as the May-Duke, will thrive in all soils and aspects, and all the varieties may be planted in any common mellow garden or orchard ground. To obtain fruit easily, some sorts, as the May-Duke, are planted against walls; but all the varieties will do well as dwarfs or espaliers in general situations, and most of them as standards. For final planting, full standards should be planted from twenty feet to thirty feet apart; small standards fifteen to eighteen feet. The proper season for planting is from the middle or end of October, or any time in November or December, if open weather, till February or March. For wall-trees, a summer *pruning*, to commence in May or June, is necessary, to regulate the shoots of the same year. Disbud the superfluous and fore-right shoots; or, if they have been suffered to spring, pinch or cut them off. Retain a competent supply of some of the best, well-placed, side, and terminal shoots, to remain for selection at the winter pruning. Nail or lay in the reserve close to the wall, at their full length, and so as to air them during the summer. The winter pruning may be performed at the fall of the leaf, or at any time in moderate weather, till February or March. Carefully preserve the sound productive branches and bearers in their full expansion; and reduce or remove such as are only regular in growth, too crowded, unfruitful, decayed, or cankery. Any branches extending out of bounds, prune into some good lateral shoot or fruit bud. The new laterals and terminals are to be trained in at full length, as far as room will permit. They will come into bearing the first and second year. In pruning cherry-trees in general, be careful to preserve the small clustering fruit spurs, except where, in wall trees, any old spurs project considerably, and present a rugged disorderly appearance; cut such clean off. In pruning standards, give only occasional pruning, to reform or remove any casual irregularity from cross-placed or very crowded branches, and take away cankery or decayed wood. As cherries in a ripening state are frequently attacked by birds, it is advisable to have choice wall-trees or espaliers defended by large nets in due time. Old fishing-nets may also be spread over the branches of dwarf standards. To protect other standard trees, scarecrows and clapboards should be set up. Wall cherry-trees are often infested with the red spider, but standards, generally speaking, are not much injured by insects. The most effectual remedy is a mixture of pitch with one-sixteenth part of powdered orpiment, and one-sixteenth part of sulphur, dissolved over a slow fire in a pipkin, until the ingredients are well mixed; when cold, divide it into small pieces of about the size of a hen's egg, and burn it under the trees with damp straw, directing the smoke as much as possible where the insects are *most* numerous. In an hour afterwards (if the state of the fruit tree will permit) give the tree a good washing

with the garden-engine. Washing with tobacco water and soft soap, early in the morning, or late in the evening, will also destroy every insect which infests the cherry-tree.

CHERRY JAM. — Stone and boil three pounds of fine cherries, bruise them, and let the juice run from them; then boil together half a pint of red-currant juice and half a pound of loaf sugar, put the cherries into them while they are boiling, and strew on them three quarters of a pound of sifted sugar. Boil all together very fast for half an hour, and put away in pots covered with brandied paper.

☞ Cherries, 3lbs.; red-currant juice, ½ pint; sugar loaf, ½lb.; sugar sifted, ¼lb.

CHERRY JELLY.—Take the stones and stalks from two pounds of fine clear ripe cherries; mix them with a quarter of a pound of red currants from which the seeds have been extracted; press the juice from these fruits, filter and mix it with three quarters of a pound of clarified sugar, and one ounce of isinglass; pour into pots.

☞ Cherries, 2lbs.; red currants, ¼lb.; clarified sugar, ¾lb.; isinglass, 1oz.

CHERRY MARMALADE.—Remove the stones and stalks from the cherries and rub them through a sieve; add to this a little red-currant juice, in the proportion of half a pint to three pounds of cherries; put the whole over the fire, stirring into it three quarters of a pound of fine white sugar to every pound of fruit, and boil it until it becomes a thick jelly; pour it into jars or moulds, and when it is cold spread on the top of each jelly a paper dipped in brandy; cover each jar or mould securely, and keep it in a cool and dry place until it is wanted.

CHERRY PASTE. — Stone the cherries; boil them gently in their own juice for thirty minutes; press the whole through a sieve; reduce it to a very dry paste; then take it from the fire and weigh it; boil an equal proportion of sugar to the candying point; mix the fruit with it, and stir the paste without intermission over a moderate fire, until it is so dry as to form a ball round the spoon, and to quit the preserving-pan entirely; press it quickly into small moulds, and when it is cold, tie it down and store it like other preserves.

CHERRY PIE.—Line the inside of the pie-dish with paste, and fill the dish up with fruit previously well picked and washed; sweeten well with brown sugar; place a small teacup, reversed, in the centre of the dish; cover with paste, and bake in a quick oven.

CHERRY PUDDING. — Make a paste with butter, or suet chopped small, rubbed into flour and moistened with water; line a basin well buttered with this, put in picked cherries, cover the top with a crust, tie it in a cloth and boil it.

CHERRY PUDDING, AMERICAN.—Into ten tablespoonfuls of flour break six eggs, with a teaspoonful of salt; stir the eggs and flour together until the whole is moistened with the eggs, and no lumps remain; then add gradually one pint of milk. Have ready a quart of ripe cherries, stoned and well dredged with flour, and when the other ingredients have been rendered quite smooth, put in the cherries, stirring them lightly; pour the whole into a pudding-cloth, previously scalded and dredged with flour, tie it up firmly, and put it into a saucepan of boiling water, with a plate at the bottom of the saucepan; let it boil for one hour; serve with sweet sauce.

☞ Flour, 10 tablespoonfuls; eggs, 6; salt, 1 teaspoonful; milk, 1 pint; cherries, 1 quart.

CHERRY WATER.—This is drunk as a summer beverage. Pulp one pound of Kentish cherries in a mortar, bruising the kernels as well as the fruit; turn the mass into a basin, add one pint of syrup, the juice of three lemons, and a sufficient quantity of water; pass it through a sieve, and it will then be fit for use.

☞ Cherries, 1lb.; syrup, 1 pint; lemon-juice of 3; water, sufficient.

CHERRY WINE, BLACK.—Pick forty quarts of fine ripe black cherries, bruise them with the stones in a tub, and pour on them ten gallons of cold soft water that has been boiled, stir them well, and leave the vessel closely covered until the following day. Press the fruit in a hair-bag, strain the liquor through a fine sieve, let it settle for two hours, and repeat the straining; then filter it through flannel, and put it into a cask with twenty pounds of moist sugar, stirring it well for twenty minutes. Leave the bung out for five or six days, and when it has ceased fermenting pour in a quart of French brandy, and bung it securely. In three or four months draw out a wineglassful, and if it is perfectly clear and bright, it may be bottled a month afterwards; if not, rack it off, filter the lees thoroughly, and return all that is clear into the cask. Secure the bung again, and in three months it will be fit to bottle; keep it in bottle six months, or longer.

☞ Cherries, 40 quarts; water, 10 gallons; sugar, 20lbs.; brandy, 1 quart.

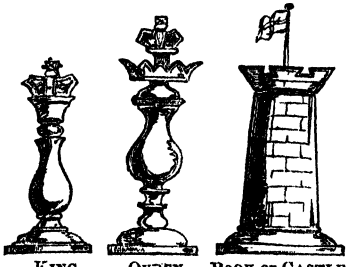
CHERRY WINE, RED.—Press ripe red cherries, breaking the stones amongst them, until you have obtained ten gallons of pure juice, to which add twenty-four pounds of moist sugar; mix it well, and let it remain for three days covered up, stirring twice daily. Press the fruit in a horsehair bag, and add the expressed juice, then mix them well, and strain the whole into a cask, adding five pints of French brandy, the rinds of six lemons thinly pared, and an ounce of isinglass dissolved in a little water. Bung the cask securely, and let it remain in a cool cellar for six months; then rack the wine off, filter the lees perfectly fine, and put all into the same cask again, with three ounces of sugar-candy. Secure the bung as before, keep the wine eighteen months, then bottle it. It will be in good condition after being six months in bottle, but the longer it is kept the better it will be.

☞ Cherries, to make 10 gallons of juice; sugar, 24lbs.; brandy, 5 pints; lemon rinds, 6; isinglass, 1oz.; sugar-candy, 3ozs.

CHERVIL.—A plant little known in England, but extensively used in France to

give flavour to soups, salads, and sauces; it is highly aromatic and stimulating, and should be used in small quantities. It is of two kinds; the common and the musk. The common chervil is used in cookery. It may be sown at any time of the year. Persons who like the flavour of this plant, and wish to introduce it into their kitchen gardens, should obtain, in the first instance, a little of the seed from France. The mode of using chervil there for salads, is to chop it very fine, and serve it in a plate separately from the salad, so that each guest may help himself according to taste. The leaves of chervil dried, and smoked as tobacco, are recommended for asthma.

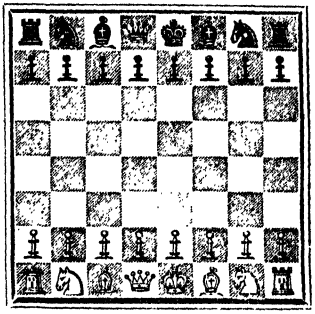
CHESS.—The game of chess is played (by two persons) on a board of 64 squares, 8 on each side. The squares are usually coloured black and white alternately, and the board is so placed that each player has a white square at his right-hand corner. This is not a matter of necessity, but of custom. The lines of squares from right to left are called *ranks*, those from one player to the other are called *files*, those running obliquely are called *diagonals*. Each player has eight pieces and eight pawns, and, for the sake of distinction, one set is usually white, and the other black or red. The pieces on each side are—a *king*, a *queen*, two *rooks* or *castles*, two *bishops*, and two *knights*, besides the eight pawns. The method of placing the pieces prior to beginning a game is thus: on each corner square of the side nearest the player is placed a rook; on the same side, and next to each rook, a knight; next to each knight, a bishop—leaving two squares for the king and queen.



KING. QUEEN. ROOK OR CASTLE.

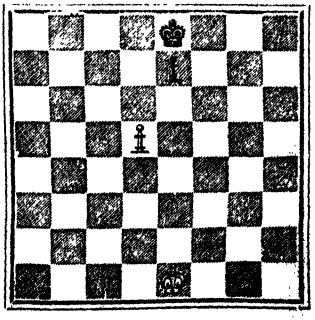
BISHOP. KNIGHT. PAWN.

The white queen is placed on a white square the black queen on a black square; the remaining square is occupied by the king. This method of placing the king and queen is not essential to the game, but it is the custom and law; for it is a part of the constitution of the game, that the kings and queens shall be exactly opposite each other. The eight pawns are placed on the squares in front of the pieces.



These eight pawns are distinguished as dependent upon the pieces before which they stand at the commencement of the game. Thus, the one standing before the king is called the *king's pawn;* the next to that the *king's bishop's pawn;* the next to that the *king's knight's pawn;* the next to that the *king's rook's pawn;* and so of the others respectively before the queen and her attendants. The following are the moves peculiar to each piece:—

The pawn moves along the file on which it is placed, straight forward,-but one square at a time, except on the first move, when it is allowed to move two squares; it is not allowed to move backward. It takes the adverse pieces diagonally to the right or left, one square forward, and continues on the new file until it captures another piece. A pawn has also the power of taking *en passant*, which will best be explained by an example:—



Suppose white has a pawn at his queen's fifth square, and black a pawn at his king's second square (as in the above diagram), if black plays now his pawn *two* squares, which he may, it being the first time the pawn is moved, white has the privilege of taking it *en passant*, that is, of taking it as if it had only been moved one square; he therefore would take the black pawn off the board, and place his own pawn on the king's sixth square, precisely as if black had played the pawn one square only, and white had taken it. Taking *en passant* applies to pawns only, not to the other pieces, and cannot happen after the pawn has once been moved, because he never afterwards *passe* over a square. A pawn that in its progress is not liable to be stopped or attacked by one of the adversary's pawns, is said to be a *passed pawn*; it follows, therefore, that the adversary must not have a pawn on the same file or either of the adjoining files. When two pawns of the same colour are on the same file, the more advanced pawn is called *a doubled pawn*. *To queen a pawn* means, to advance one of the pawns to its eighth square; when, as will be seen in the subsequent laws of the game, you are allowed to call it a queen, a rook, &c., in short any piece you choose, and it forthwith assumes all the powers of the piece you have named; by no means, however, can it *remain* a pawn.

The knight can move every way, either backwards, forwards, or sideways; it combines, therefore, the move of the rook and bishop, but is limited to one square of each. There is a very great peculiarity in this mode of making his step; it is this—he moves one square diagonally, and then one square forward. Perhaps the following method will explain more easily to the reader the move of the knight:—Place the knight on any part of the empty board, say the white king's fourth square, cover the eight adjoining squares with wafers, the knight may be played to any square adjoining those occupied by the wafers, and of a different colour from the one on which it stands; in this instance the knight, being on a white square, may be played to eight black ones. The knight is the only piece allowed to move over another.

The bishop can move any number of squares that are open, but only diagonally. He never can, therefore, be removed from the colour he is originally placed upon; for if he is placed on a white square, an inspection of the board will show that he never can be removed to a black one.

The rook, or *castle*, can move any number of squares which are not occupied, either backwards, forwards, or sideways, but never diagonally, and can take at any distance where there is nothing to interrupt it.

The king can move in any direction, but only one square at a time.

The queen, being the most powerful of all the pieces, can move any number of squares at a time, provided the road be clear, either forwards, backwards, sideways, or diagonally. She moves, therefore, like a king, and at the same time like a rook or a bishop.

All the pieces, except the pawns, capture in the direction in which they move; the method of taking is not, as in *draughts*, to pass over the piece, but to take up the piece of an opponent and put down your own in its place. Neither is there any obligation to take a piece which stands in the way—this is perfectly optional. The object of each player is to *checkmate* the adverse king; when this is effected, the party whose king is checkmated loses the game. It commonly happens that the game is given up when the player finds himself in a very bad position, or having lost one or more pieces, it is evidently of no use continuing the game.

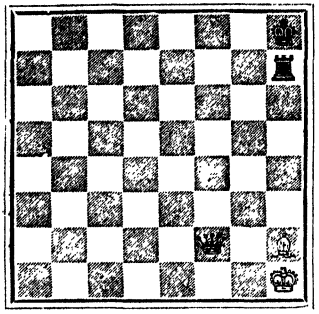
We now proceed to the *technical terms* of the game. *Checkmate* takes place when the king is attacked by one of the adversary's pieces, so that he cannot extricate himself either by taking the piece that attacks him, by interposing some piece, or moving to a square where he is not attacked. In all those cases the player who is checkmated loses the game. The game may therefore be finished when there are many or even all the pieces on the board.

To check means to attack the king. There are three sorts of check. A *simple check* is that in which the king is attacked only by the piece that is moved. A *discovered check*, or *check by discovery*, is when the king is *not* attacked by the piece that is moved, but by another, to which the king is exposed by the removal of that piece. A *double check* combines the former two; the piece that is moved attacks the king, and the piece that is removed by the removal of the other equally attacks the king. A *perpetual check* is an alternation of checks, in which the king only escapes one to be subjected to another.

Drawn game occurs when neither party can checkmate the other, which may happen in several ways. *First*, the force left on the board may be insufficient, as is the case when there is only a king and a bishop, or a knight, or even both knights, against an opposite king. *Secondly*, when there is a sufficient force, but the player is unable to checkmate with it. The rule is, that in such a case he must checkmate his adversary in fifty moves on each side at most. There are many instances for that, viz., if a player be left with a castle and a bishop against a castle; with both bishops, or with a knight and bishop against a king; with the queen against a rook, or against two knights, &c. In all those cases checkmate *can* be given, but only the experienced player will be able to do it in comparatively few moves. *Thirdly*, by a perpetual check. *Fourthly*, when both players act on the defensive, neither party choosing to attack his adversary. *Fifthly*, when both players have an equal but small force. And *sixthly*, when one of the kings is stalemated.

Stalemate is the name given to the termination of the game, when the king of one of the parties is so placed that, though not in check, he cannot move without going into check, and his player has nothing else to move. Upon stalemate being given, the

game is considered drawn. The following is an example of stalemate:—



In this position white has to move, and he cannot do so without his king going into check of the queen, or move his bishop without being exposed to the check of the castle —consequently, he is stalemated.

Castling is a combined move of the king and the rook, which is allowed to be made once in the game, and which is effected as follows:—First, with the king's rook. The rook must be placed at the king's bishop's square, and the king at the king's knight's square. Secondly, with the queen's rook. The rook must be placed on the queen's square, and the king at the queen's bishop's square. In order to be able to castle— First, the king must not be in check. Secondly, the space between the king and the rook must be unoccupied. Thirdly, neither the king nor the rook must have moved. And fourthly, the squares over which the king has to move must, *at the time*, be free from any attack of the adverse party.

To gain the exchange means, that a player gives a rook for a bishop or a knight, the former piece being more valuable than either of the latter.

Gambit is a corrupt word, derived from the Italian *gambetto*, signifying to trip up, or rather a tripping up of the heels. It is a peculiar mode of beginning the game, in which a pawn is sacrificed by the first player on the second move. There are two kinds of gambits — the king's gambit and the queen's gambit. In the king's gambit, each player begins by playing his king's pawn two squares, and the first player then moves his king's bishop's pawn two squares, which the second player may take with his king's pawn for nothing. The so-called *Muzio*, the *Salvio*, *Cochrane*, and *Cunningham* gambits, are varieties of the king's gambit. In all these openings the first player, after having moved his king's bishop's pawn two squares on his second move, plays his knight to king's bishop's third on the third move. The so-called *bishop's gambit* is, when the first player moves his king's bishop to the queen's bishop's fourth square at his third move, instead of king's knight to king's bishop's third square. The *queen's gambit* is begun in a similar manner, by playing, first, the queen's pawn two squares (on both sides), and then the queen's bishop's pawn two squares (on the part of the first player). The king's gambit is more attacking and entertaining than the queen's, but the *latter is generally considered a safer game* to play than the former. Besides, there are the *Scotch*, the *Evans*, and the *Lopez* gambits, in which a pawn is sacrificed by the first player, not on the second, but on the third, respectively on the fourth or fifth move. The following are instances of those openings:—

Scotch Gambit.

White.	*Black.*
1. Pawn to king's fourth.	1. Pawn to king's fourth.
2. King's knight to king's bishop's third.	2. Queen's knight to queen's bishop's third.
3. Pawn to queen's fourth.	3. Pawn takes pawn.
4. King's bishop to queen's bishop's fourth.	4. ——

Evans Gambit.

White.	*Black.*
1. Pawn to king's fourth.	1. Pawn to king's fourth.
2. King's knight to K. B. third.	2. Queen's knight to Q. B. third.
3. K. B. to queen's bishop's fourth.	3. K. B. to queen's bishop's fourth square.
4. Pawn to queen's knight's fourth.	4. Bishop takes pawn
5. Pawn to queen's bishop's third.	5. —

Lopez Gambit.

White.	*Black.*
1. Pawn to king's fourth.	1. Pawn to king's fourth.
2. King's bishop to queen's B. fourth square.	2. K. B. to queen's bishop's fourth square.
3. Queen to king's second square.	3. Pawn to queen's third square.
4. Pawn to king's B. fourth.	4. ——

The King's Gambit.

White.	*Black.*
1. P. to K. 4th.	1. P. to K. 4th.
2. P. to K. B. 4th.	2. Q. to K. R. 5th (ch.).
3. P. to K. Kt. 3d.	3. Q. to K. B. 3d.
4. K. B. P. takes P.	4. Q. takes P.
5. K. B. to K. Kt. 2d.	5. P. to Q. 4th.
6. P. to Q. 4th.	6. Q. to K. 3d.
7. P. to K. 5th.	

The position of the white pieces is better than that of the black, the second player having lost several moves by playing his queen out so early in the game.

The following is a variation on the second move of black:—

White.	*Black.*
1. P. to K. 4th.	1. P. to K. 4th.
2. P. to K. B. 4th.	2. P. to Q. 4th.
3. K. P. takes P.	3. Q. takes P.
4. Q. Kt. to Q. B. 3d.	4. Q. to K. 3d.
5. K. Kt. to K. B. 3d.	5. P. takes P. (ch.).
6. K. to K. B. 2d.	6. P. to Q. B. 3d.

White has the better game.

Minor piece is an appellation common to the bishops and knights. A piece that is attacked by another is said to be *en prise* of that piece. The lines of squares running from your side of the board to your adversary's, are called *files*; those from your right hand to your left, *ranks*.

As to the *relative value of the pieces*, it is considered as being estimated at the beginning of the game; for it often occurs that their importance may vary much at different stages. The best criterion of value is that of *the pawn*, which is less valuable than any other piece. The centre pawns are more valuable than those at the side. A pawn attains to the power of queen when it reaches to the last row of squares on the adversary's side; and it may then be exchanged for any other piece the player pleases. The *knight* is more valuable than three pawns, but less so than four. The *bishop* is, generally speaking, of the same value as a knight, but less valuable during the progress of the game, because the knight can move every way, whereas the bishop is confined to his own colour; but at the end of the game the bishop is more valuable than the knight, because two bishops can checkmate, while two knights cannot. The *rook* is equal in value to a knight, or a bishop and two pawns. The rook and the queen are the only pieces which by themselves can give checkmate. The *queen* is the most valuable of all the pieces, being worth more than two castles at the beginning of the game. She attacks all the pieces by which she is attacked, except the knight, and she draws the game by a perpetual check, or by stalemate, more easily than any piece on the board. The *king* may be said to be invaluable, for he can never be taken or exchanged. For this reason there must always be one square at least between the two contending kings. He alone is invested with the peculiar privilege of castling. In the beginning of the game he is of little use, but towards the conclusion his importance increases.

In the following we give a summary account of the pieces that can win or draw the game.

Won Games.

King and queen, King and rook, King & both bishops King, bishop, and knight,	Win against the king.
King and queen	Win against King and rook. King & two knights. King, bishop, and knight.
King, rook, and bishop,	Sometimes win against King and rook.
King, two bishops, and a knight,	Win against King and rook.

Drawn Games.

King and queen	Draw against King and two rooks. King, rook, and bishop, King, rook, and knight, King and two bishops, or three minor pieces.
King & two knights	Draw against king.
King and bishop, King and knight,	Draw against King and rook.

The following are the most important laws of the game of chess:—1. The chess-board must be so placed that each player has a white corner square nearest his right hand. If the board has been improperly placed, it must be adjusted, provided *four* moves on each side have not been played, but not afterwards. 2. When no odds are given, the players must take the first move of each game alternately. If a game be drawn, the player who began it has the first move of the following one. 3. The player who gives odds has the right of moving first in each game, unless otherwise agreed. Whenever a pawn is given, it is understood to be always the king's bishop's pawn. 4. A piece or pawn touched must be played, unless, at the moment of touching it, the player say, "*J'adoube*," or words to that effect; but if a piece or pawn be displaced, or overturned by accident, it may be restored to its place. 5. While a player holds the piece or pawn he has touched, he may play it to any other than the square he took it from, but, having quitted it, he cannot recall the move. 6. Should a player touch one of his adversary's pieces or pawns without saying "*J'adoube*," or words to that effect, his adversary may compel him to take it; but if it cannot legally be taken, he may oblige him to move the king; should his king, however, be so posted that he cannot legally be moved, no penalty can be inflicted. 7. Should a player move one of his adversary's men, his antagonist has the option of compelling him—1, to replace the king or pawn, and move his king; 2, to replace the piece or pawn and take it; 3, to let the piece or pawn remain on the square, to which it had been played, as if the move were correct. 8. If a player take one of his adversary's men with one of his own that cannot take it without making a false move, his antagonist has the option of compelling him to take it with a piece or pawn that can

legally take it, or to move his own piece or pawn which he touched. 9. If a player makes a false move, i. e. plays a piece or pawn to any square to which it cannot legally be moved, his adversary has the choice of three penalties; viz. 1, of compelling him to let the piece or pawn remain on the square to which he played it; 2, to move it correctly to another square; 3, to replace the piece or pawn, and move his king. 10. If a player touch a piece or pawn that cannot be moved without leaving the king in check, he must replace the piece or pawn, and move his king; but if the king cannot be moved, no penalty can be inflicted. 11. If a player attack the adverse king without saying "check," his adversary is not obliged to attend to it; but if the former, in playing his next move, were to say "check," each player must retract his last move, and he that is under check must obviate it. 12. Should a player say "check" without giving it, and his adversary in consequence move his king, or touch a piece or pawn to interpose, he may retract such move, provided his adversary have not completed his next move. 13. Every pawn which has reached the eighth or last square of the chess-board, must be immediately exchanged for a queen, or any other piece the player may think fit, even though all the pieces remain on the board. It follows, therefore, that he may have two or more queens, three or more rooks, bishops, or knights. 14. If a player make a false move, castle improperly, &c., the adversary must take notice of such irregularity before he touches a piece or pawn, or he will not be allowed to inflict any penalty.

CHEST, WATER ON, is not in itself a disease, but the result or after-effect of some inflammatory or chronic disease of the heart, lungs, or lining membrane of that organ. See DROPSY.

CHEST, PAINS IN, may proceed from several causes, though the most common are those resulting from an inflammatory action, as in pleurisy or disease of the heart and lungs. To afford relief, the true cause must be first discovered and removed, when the pain will of course subside. Pains in the chest, however, may proceed from accidents, falls, blows, or broken ribs; or it may sometimes arise from diseased liver, or the presence of indigestible food in the stomach. Besides these causes, severe cold, influenza, and bronchial affections, will produce acute pains in the chest, in which case they are often attended with cold chills or shiverings, the pain being either in the front of the chest, or darting through the side; coming on occasionally, or only experienced when drawing a deep inspiration. When proceeding from the last named causes, ten grains of Dover's powder, taken in a little gruel at bed time, and followed in half an hour by a warm drink, made of sweetened gruel, with a little rum, will generally be found sufficient to remove all inconvenience. But when pain in the chest is the result of any of the other causes the treatment must be sought for under the particular disease that may appear to produce it.

CHESTNUT, CULTURE OF.—The chestnut may be propagated either from nuts or by grafting, but the latter mode is preferable. The tree flourishes best in a shady loam with a dry subsoil, but it will grow in any soil that is dry. Distribute the plants towards the northern boundary of orchards; and in larger groups, over any vacant tracts in extensive pleasure grounds or parks, to form spacious avenues or row along any outboundary. A great number should not be placed close to a residence, as the smell of the flowers is offensive. Plant them at not less than from thirty to fifty feet distance. Permit the trees to branch out freely above, and to form large regular heads. Give occasional pruning only to very irregular and cross branches, and low stragglers. After they have attained some tolerably branchy growth, they will come into bearing; and when they have expanded into large full heads, they may be expected to yield considerable quantities of nuts. The nuts ripen from the end of September to the end of October. When the outer capsule containing the nuts begins to divide and the nuts appear of a brown colour, their full maturity is indicated. They may be gathered by hand, or beaten down with long poles.

CHESTNUT CUSTARD. — Take three pounds of well washed chestnuts, and reduce them to a pulp with a pound of fresh butter; when a smooth paste is produced, add three quarters of a pound of powdered loaf sugar, the yolks of twelve eggs, a saltspoonful of salt, and four tablespoonfuls of cream; whip these well together and bake in a moderate oven.

☞ Chestnuts, 3lbs.; butter, 1lb.; sugar, ½lb.; eggs, 12; salt, 1 saltspoonful; cream, 4 tablespoonfuls.

CHESTNUT SAUCE. — This is chiefly used for roast turkey. Scald a pound of sound chestnuts in hot water for five minutes, skin them, and stew them slowly for two hours in white stock, seasoned and thickened with butter and flour. Cut a pound of pork sausages into pieces of about an inch long; dust them with flour, and fry them of a light brown; lay them into the dish on which the turkey is to be served, and pour the chestnuts and sauce over them.

CHESTNUT SOUP.—Strip the outer rind from some fine large chestnuts, and throw them into a pan of warm water; when it begins to boil remove it from the fire, take out the chestnuts, peel them, and throw them into cold water. Wipe and weigh them; take three quarters of a pound for each quart of soup, cover them with good stock, and stew them gently for nearly an hour, drain, pound them smoothly, and rub them through a fine sieve, mix with them gradually the proper quantity of stock; add sufficient mace, cayenne, and salt, to season, and stir the soup frequently until it boils.

CHESTNUTS BOILED.—Make a slight incision in the outer skin only of each chestnut, to prevent its bursting, and when all are done, throw them into plenty of boiling water, with a dessertspoonful of salt to the half gallon. Some chestnuts will require to be boiled nearly an hour, others little more than half the time: the cook should try them occasionally, and as soon as they are soft through, drain them, wipe them in a coarse cloth, and send them to table quickly in a hot napkin.

CHESTNUTS ROASTED.—The best way of preparing these is to roast them in a coffee-roaster, after having first boiled them from seven to ten minutes, and wiped them dry. They should not be allowed to cool, and will require but ten or twelve minutes roasting. They may, when more convenient, be finished over the fire as usual, or in a Dutch or common oven; but in all cases, the previous boiling will be found an improvement. Never omit to cut the rind of each nut slightly before it is cooked. Serve the chestnuts in a napkin, very hot, and send salt to table with them.

CHICKEN BAKED IN RICE.—Cut a chicken into joints, season it well with pepper and salt, lay it into a pudding-dish lined with slices of ham or bacon, add a pint of veal gravy, and an onion finely minced; fill up the dish with boiled rice well pressed, and piled as high as the dish will hold, cover it with a paste; bake it one hour, and before serving, remove the paste.

CHICKEN BOILED.—When properly cleaned and trussed, put it in boiling water, and let it boil gently for half an hour. Serve with parsley and butter, or with the following sauce:—Melt in a teacupful of milk a large tablespoonful of butter kneaded in flour, beat up the yolk of an egg with a little cream, stir it into the butter and heat it over the fire, stirring continually.

CHICKEN BRAISED.—Bone and stuff chickens with forcemeat. Lay the bones and any other poultry trimmings into a stew-pan, and the chickens on them. Put to them a few onions, a bunch of herbs, three blades of mace, a pint of stock, and a glass or two of sherry. Cover the chickens with slices of bacon, and then white paper; cover the whole close, and put them over a slow fire for two hours. Then take them up, strain the braise, and skim off the fat carefully; set it on to boil very quick to a glaze, and brush the chickens over with it. Serve with gravy and ketchup.

CHICKEN BROILED.—Boil a chicken gently for five or ten minutes, leave it to become cold, then divide it, and dip it into egg and well-seasoned bread-crumbs, plentifully sprinkled with clarified butter; dip again into the crumbs, and broil over a clear and gentle fire from half to three-quarters of an hour. It should be served very hot, with mushroom-sauce or with good plain gravy thickened and flavoured. It should be opened at the back and evenly divided quite through; the legs trussed; the breast-bone removed, and both sides of the bird made as flat as possible, that the fire may penetrate every part equally: the inside being first laid towards it. The neck, feet, and gizzard may be boiled down with a small quantity of onion and carrot, previously browned in a morsel of butter to make the gravy; and the liver, after having been simmered with them for five or six minutes, may be used to thicken it after it is strained. A teaspoonful of lemon-juice, some cayenne pepper, and minced parsley, should be added to it, and a little arrowroot, or flour and butter.

CHICKEN BROTH.—Wash clean the half of a young and tender chicken, break the bones, cut it into pieces, and put them into a stew-pan with one quart of water; cover the stew-pan closely, set it upon a moderate fire, let it boil very gradually, then skim it well: add a saltspoonful of salt, cover it closely, let it boil for twenty minutes, strain it through a cullender and serve. If the broth is desired to be more nourishing, add a tablespoonful of washed rice when the liquor is put over the fire; stir well, and make the broth quite thick.

CHICKEN CURRY.—Remove the skin from a chicken, cut it up, and roll each piece in curry-powder and flour mixed together (a tablespoonful of flour to half an ounce of curry). Fry two or three sliced onions in butter, when of a light brown put in the chicken, and fry them together till the chicken becomes brown; then stew them together in a little water for two or three hours. More water may be added if too thick.

CHICKEN CUTLETS.—Skin and cut into joints one or two young chickens, and remove the bones with care from the breasts, merrythoughts, and thighs, which are to be separated from the legs. Mix well together a teaspoonful of salt, nearly a fourth as much of mace, a little grated nutmeg, and some cayenne; flatten and form into good shape the boned joints of chicken, and the flesh of the wings; rub a little of the seasoning over them in every part, dip them into beaten egg, and then into very fine bread-crumbs, and fry them gently in fresh butter until they are of a delicate brown. Some of the bones and trimmings may be boiled down in half a pint of water, with a roll of lemon-peel, and a little salt and pepper to make gravy, which, after being strained and cleared from fat, may be poured hot to some thickening made in the pan with a slice of fresh butter and a dessertspoonful of flour. Pile the cutlets high in the centre of the dish, and serve the sauce under them, or separately, in a tureen.

CHICKEN FRICASSEE.—Parboil chickens in a small quantity of water: let them cool; cut them up, and simmer them in a little gravy made from the liquor they were boiled in, together with a piece of veal or mutton, with onion, mace, and lemon-peel, some white pepper, and a bunch of sweet herbs. When quite tender, keep them hot while the sauce is being thickened in the following manner:—strain it off, and put it back into the saucepan with a little salt, nutmeg, flour, and butter; give it one boil, and just before serving beat up the yolk

of an egg in half a pint of cream, and stir them over the fire without allowing them to boil.

CHICKEN PANADA.—Boil a chicken in a quart of water till nearly done; then skin it, cut off the white meat, and pound it with a little of the liquor it was boiled in to a thick paste; season it with salt, nutmeg, and lemon-peel; boil it up all together for a few minutes.

CHICKEN PIE.—Cut up two chickens, season with white pepper, salt, a little mace, nutmeg, and cayenne pepper. Put into a dish in alternate layers, chicken, slices of ham, forcemeat balls, and hard-boiled eggs: with a little water. By the time it is taken from the oven, have ready, gravy made from knuckle of veal or scrag of mutton, seasoned with herbs, onion, mace, and white pepper; cover with a crust, and bake it thoroughly.

CHICKEN POTTED, WITH HAM.—Season some pieces of chicken, with mace, cloves, and pepper, and bake them for about three hours in a close covered pan with some water; then pound them quite small, moistening either with melted butter, or the liquor they were baked in. Pound also some ham, and put this with some chicken in alternate layers, into pots; press the meat down tight, and cover with clarified butter.

CHICKEN PUFFS.—Mince the breast of a chicken, some lean ham, half an anchovy, a little parsley, a few shalots, and lemon-peel; season with pepper, salt, cayenne, and beaten mace. Set them on the fire for a few minutes, in a little *bechamel sauce;* roll out some puff paste thin, cut it into squares, and lay in the square some of the above mixture; turn the paste over, fry them in boiling lard, and serve them on fried parsley.

CHICKEN ROASTED.—Draw and truss the chicken, and cover the breast with a slice of fat bacon; baste it first with butter, and afterwards with its own gravy. Cover the breast with a sheet of buttered paper; which must be removed about ten minutes before the chicken is done, that it may become of a good brown colour. A large chicken will require half an hour to roast, a small one twenty minutes.

CHICKEN SALAD.—Cut into fillets the meat of cold roast chicken; dispose them symmetrically, with a lettuce cut, at the bottom of a salad-bowl; arrange other lettuces cut, with fillets of anchovies; cover the whole with sauce made of oil, vinegar, mustard, and the yolks of hard-boiled eggs, rubbed smooth.

CHICKEN SCOLLOPS.—Mince the flesh of chicken very small, and set it over the fire for a few minutes, with a seasoning of nutmeg, pepper, and salt, and a little cream. Put it into the scollop shells, fill them with crumbs of bread, over which put some bits of butter, and brown them before the fire.

CHICKEN STEWED.—Draw and truss a chicken, and set it over the fire in an earthen pot with boiling water enough to cover it, and a little salt. After boiling the chicken slightly, put into a stew-pan a pinch of flour, a few oysters (if in season), and a seasoning of nutmeg, pepper, and salt; thicken this, put it over the fire, and when of a proper consistence and flavour, lay the chicken on a dish, and pour the sauce and oysters over them.

CHICKEN, TO CARVE.—See FOWL.

CHICKENS, TO PREPARE FOR COOKING.—For *Roasting:* pick the chickens carefully, and singe them well to remove all the hairs, &c.; then bruise the bone close to the foot, and draw the strings from the thigh. Cut a slit in the back of the neck, and take out the crop; then cut off the neck, leaving skin enough to fold over the back. Cut off the vent and take out the inside, being careful not to break the gall; break the backbone and the two bones leading to the pinions; wipe the chickens with a cloth, and put in a little pepper and salt. *Truss* as follows:—Turn the legs close down to the apron and run a skewer through; run another skewer in the joint of one wing through the body into the other wing; and having washed the liver and gizzard, place them in the pinions. To *truss for boiling:* the underneath part of the thigh must be cut and the legs placed under the apron, only letting the ends be seen. In both cases give the breast a full and plump appearance.

CHICKENS, TO REAR.—The mode of rearing chickens is very simple, and consists chiefly in bestowing a certain amount of care and attention, according to rules laid down. When chickens are just hatched, they may, if strong and lively, be removed from the nest, and placed with the hen in a coop, made to move upon wheels, and roofed and floored with thin wood, having clean straw laid at the bottom. After the lapse of a couple of days, provided the weather is warm and dry, the coop with the hen and chickens should be carried, after feeding, to some sunny spot in the garden, and left for

a few hours with the roof raised to admit a freer passage of air. It should not be moved, however, before the dew has thoroughly disappeared; and must not be placed on grass, unless it has been recently mown, and is also thoroughly dry. A handful of barley should be given to the hen while in the garden, a quantity of which she will break for the chickens. Before sunset begins to advance, the coop should be returned to the house, and, as evening closes, the last meal

given and the brood left for the night. Sometimes the hen is kept confined in this manner for a fortnight, the length of time, however, must be determined by the strength of the brood and the state of the weather. When the chickens have acquired sufficient strength to roam about, it is time for the hen to be allowed the liberty of the garden or the range of a field, where she will scratch up weeds and worms for her young. This should be continued until they are old enough to be taken into the poultry yard and fed along with other fowls. While thus rearing, pure water should always be left within their reach. This should be put into an utensil made for the purpose, which may be bought at any earthenware shop. By this means they are prevented from wetting their feet and feathers. The water should be changed frequently, for if suffered to remain till it becomes foul, it is liable to generate disease. Chickens are generally separated from the hen when about six or eight weeks old, but she does not entirely desert them until they are full-feathered and able to take care of themselves. The ordinary food for young chickens is a peculiar kind of small groats, which they devour with avidity, but it is very important, when they are in a state of confinement, to throw to them from time to time, small worms, grubs, and other insects. The coarse sand that they pick up materially aids digestion, and contributes to their strength; this may also be assisted by boiling an egg hard, pounding the shell up with it, and giving it to them occasionally for food. At six weeks old they may be fed upon corn, together with any scraps from the table. Barley meal mixed with milk should be frequently given, care being taken that too much milk is not used. Curds chopped small and the milk thoroughly squeezed out, form excellent additions to their food, and can easily be made by putting a piece of alum into a little boiling milk. If it is intended to fatten chickens, they cannot be too well fed, and should be kept upon barley meal and corn, with a little meat minced very small.

CHICKEN POX.—A very mild form of small pox, which it so closely resembles in its earlier features, as hardly to be distinguished from that more formidable disease. Chicken pox commences with chills, lassitude, loss of appetite and want of sleep, and the usual characteristics of fever, though generally of a very mild type. On the following day an eruption of small reddish pimples makes its appearance on the *back* and *shoulders*, which in the space of twenty-four hours become little vesicles or bladders filled with a clear colourless fluid, or else a yellow transparent liquid; these increase in size till the third day, when they burst and discharge, and a thin scab or pellicle is formed in the centre of each pock, which in the course of the next day, or by the end of the fifth day from the first attack, peels off without leaving any scar or mark on the skin. *Treatment.*—All that is necessary, is one or two doses of some mild aperient, such as the infusion of senna leaves, with a little manna; or a powder, consisting of two grains of gray powder, two grains of rhubarb, and five grains of scammony, for a child from five to seven years; and proportionately less to one younger. When the disease is confluent, it may be necessary to use the warm bath and a saline mixture, but this condition is so rare, as to render any special instruction almost unnecessary.

CHICORY.—A root belonging to the same natural family of plants as the dandelion, and resembling it very closely in its properties; the extract obtained from it is bitter and possesses diuretic and aperient qualities. The nutritive properties of this plant are inconsiderable, and its reputed wholesomeness is a matter of great doubt. Chicory is chiefly employed as a substitute and adulterant of coffee. In the preparation of chicory the older roots are selected; they are first cleansed in a very imperfect manner by washing, then cut into slices and dried in a kiln; it is then submitted to a rough kind of roasting process, and finally reduced to powder. The ground chicory of shops is almost universally adulterated—carrots, parsnips, mangold-wurzel, and beans, having some affinity to chicory, are all made use of; roasted grain, biscuit-powder, and burnt sugar, are also extensively employed in adulterating this article. Pigments are added to colour it, and especially an earth known as Venetian red. The adulteration of chicory may be detected as follows:—1. Powdered chicory thrown on water turns it reddish brown, and rapidly sinks, leaving light impurities either floating or diffused through the liquid. 2. The cold decoction tested with tincture or solution of iodine gives a brown colour; if it turn purple, blue, or black it indicates the presence of roasted beans, rye, or some other like substance containing starch. 3. The dry powder, when incinerated, should not leave more than 4½ or 5 degrees of ash, which should be of a grayish or fawn colour; the contrary indicates the presence of reddle, red clay, ochre, or the like. The adulteration of coffee with chicory is visited with heavy penalties, unless such mixture is properly labelled and sold according to the excise regulation.

CHICKWEED.—A low creeping weed, of which there are several varieties. The common chickweed has an annual, small, tapering root, flowering from March to December. Small birds and poultry eat the seeds and whole herb. Swine are extremely fond of it; and it is eaten by cows and horses. This weed grows in almost every situation, in damp or even boggy woods, and on the dryest gravel walks in gardens. The chickweed may be considered as a *natural barometer;* for if the flowers are closed, it is a certain sign of rain; while during dry weather, they are regularly open from nine o'clock in the morning till noon

CHIFFONIER.—One of the most useful articles of furniture in a sitting-room, as a receptacle for things in frequent use, more especially as most modern houses have neither cupboards nor sideboards fitted to the rooms as formerly. Chiffoniers may be obtained at all prices and of various dimen-

sions; but as this article of furniture is called into frequent requisition, it should neither be too slender in its structure, nor limited in its capacity.

CHILBLAINS are the effect of inflammation of the skin, resulting from the sudden application of cold to a part previously hot and moist; they are attended with redness, heat, and swelling, and an intolerable degree of itching. Chilblains when neglected or in bad habits of body, are very prone to pass from their simple form to the broken or ulcerated state, which is preceded by increased redness, changing to a dark purple, great enlargement of the swelling, and small pustules or bladders forming on the cuticle; which in time break, and discharge a thin serous exudation, till the part beneath becoming abraded, an open and often a deep seated ulcer is formed, very obstinate of cure, and entirely incapacitating the part on which it occurs from use. Though chilblains may attack any exposed part of the body, they are most frequently found on the hands and feet, the latter more especially. Chilblains more frequently attack the weak than the robust; youth and age, rather than midlife; and those of a delicate organization, before those of strong and vigorous health.

Treatment.—The following simple mode of treatment will be found sufficient in nearly all cases and conditions:—Soak the part on which the chilblain is situated for a short time in warm water, to relax and open the pores of the skin; gently dry with a soft cloth, and having well wetted a double fold of lint in the pure "extract of lead," envelope the chilblain entirely in it and as the lint becomes dry, let it be re-wetted in the same manner and re-applied two or three times, or oftener if requisite. One or two applications will remove all inflammatory action, and cause the absorption of the swelling in cases of simple chilblain; while for the broken or ulcerated form, after the first application, a dressing of the extract of lead night and morning will be sufficient to ensure the contraction and closing of the ulcer. The best preventative for chilblains is to accustom the part usually affected to as uniform a temperature as possible, and render the skin strong and hardy by frequently washing it with cold water, and using friction with the hand; avoiding sudden changes, and being careful not to approach a fire after coming from the cold, till the circulation has become uniform through the body.

CHILDREN, DISCIPLINE OF.—It is a duty which parents owe to themselves, to their offspring, and to society at large, to train and educate their children on such principles as will best conduce to their well-being and well-doing hereafter. The best means for effecting this is a system of firmness blended with kindness, and a course of conduct invariably truthful and consistent. Nothing can be more impolitic and improper than the irregular and capricious manner in which many parents rule their children: as for instance, allowing them to commit some glaring error without a word of reproof, and chastising them severely for some trifling fault, which might have been dismissed with a few words of deprecation and caution; or indulging in jokes and pleasantry one minute, and then suddenly, without any perceptible cause, assuming a stern and forbidding demeanour the next. It almost amounts to a certainty that all children who dishonour their parents will be disreputable members of society; and it is equally true that the crimes committed by men and women may, in a great measure, be traced to the neglect and mismanagement they have experienced as children; on the other hand, a child who loves his parents is, generally speaking, blameless and upright in every other relation of life. But a child's love for its parents must be founded on respect, and respect must be founded on an appreciation of those qualities which every parent ought to display, and which every child knows how to estimate. Books: *Taylor's Duties of Parents and Children; Morrison's Parent's Friend; Houston's Parental Duties; King's Mother's Help; Aikin's Letters from a Father to his Son: Mrs. Palmerstone's Letters to her Daughter; Searle's Companion; Bakewell's Mother's Guide to Training; Lenoir's Morals for Children; Williams's Parent's Catechism.*

CHILDREN, DISEASES OF.—Every stage of childhood, from infancy upwards, has diseases more or less appertaining to its age; thus, thrush, teething, remittent fever, and diarrrhœa, may be said to apply more exclusively to the infant, while croup, measles, scarlet fever, hooping cough, &c., belong to the progressive stages of childhood. Children, from their delicate organization, are more easily influenced by medicine than adults, and when depressed rally much sooner than those more advanced in life. All drugs that act powerfully on the stomach and bowels should be withheld from children, such as croton oil, Epsom salts, gamboge—in fact all violent purgatives; and though the bowels and stomach are the seat of nearly all the affections of childhood, no practice is so injudicious as that of strong aperient medicine. The symptoms of serious illness that a child will present at one hour of the day, and, after a mild aperient, laugh and play in perfect health a few hours later, is no less singular than confirmatory of what has been advanced as to the seat of the illness, and the best means to remove it. As purgatives are inadmissible in childhood, stimulants are equally uncalled for, the natural vivacity of youth generally rendering such means unnecessary. When, however, such remedies are demanded, they should rather partake of tonic than stimulant properties, such as wine and food. Cases, of course, occur in which it is necessary to give small doses of brandy or other spirits, but these instances will be found under their proper head. See CROUP, MEASLES, SCARLET FEVER, &c.

CHILDREN, MATERNAL MANAGEMENT OF.—The period of *childhood* is generally considered as beginning with the second year, and terminating with the eighth. The management of children has an all-important influence on the health and happiness

of after years, for at this period the foundation is laid, either for irremediable debility, or for mental and bodily vigour. Consequently children require constant care, and indefatigable personal attention. The chief points in the physical and moral training of children are cleanliness, clothing, diet and regimen, air and exercise, sleep, education, and amusements.

CLEANLINESS.—It is of the utmost importance that the child's skin should be well and thoroughly cleansed: and this should be done by sponging the child from head to foot in a tub of water. If the weather be very cold the water may be slightly tepid. Two handfuls of table-salt may be dissolved in the water, and the back and loins should be particularly well washed. The head should be wetted before the child is placed in the tub, and he should not be allowed to remain in more than five minutes. After washing, the skin should be carefully and thoroughly dried, and finally well rubbed with a flannel or by the hands, and the surface should be warmed and stimulated by the assiduous gentle friction made use of. It is especially necessary to be careful to dry the arm-pits, groins, &c., and if the child is very fat, it would be as well to dust over those parts with violet powder or starch, so as to prevent excoriation. It should then be dressed expeditiously, and suffered to run about.

CLOTHING. — The clothing of children should afford due warmth, and yet be light, and so made as to occasion no unnatural constriction. Too little clothing is frequently productive of the most sudden attacks of acute disease; and in the variable climate of England, croup and other dangerous affections of the air-passages and lungs are frequently brought about. Nothing can be more cruel and absurd than dressing children in the semi-nude state, with the legs, chest, and

shoulders bare, as shown in the engraving, and as so frequently seen in this country. On the other hand, too much clothing is also a source of disease, sometimes even of the same diseases which originate in exposure to cold, and often renders the frame more susceptible to the impressions of cold, especially of cold air taken into the lungs. Regulate the clothing according to to the season; resume the winter dress early; lay it aside late; for it is in spring and autumn that the vicissitudes of our climate are greatest, and congestive and inflammatory complaints most common. With regard to *material*, flannel should be worn next the skin during the day and put off at night. In summer, cotton may be substituted, and flannel resumed early in the autumn. If flannel should prove irritating to the skin, fine fleecy hosiery will in general be easily endured, and will greatly conduce to the preservation of health. In every article of dress the principle should be carefully followed of placing no restraint upon the motions of any part. For the boy, tight-waisted trousers or braces, and for the girl, stays and corsets of all kinds must be forbidden during the whole period of childhood. All the muscles should have full liberty to act, as their free exercise promotes both their growth and activity, and thus ensures the regularity and efficiency of the several functions to which these muscles are subservient. Children should not wear garters or any other ligatures calculated to impede the circulation. Tight boots and shoes should also be carefully avoided, as they not only occasion corns, bunions, &c., but are also productive of general derangement of the system.

DIET AND REGIMEN.—In the early part of childhood the diet of the latter months of infancy is still to be continued, *occasionally* varied by a dinner of mealy mashed potato and gravy, or a few crumbs of bread and gravy. Rice pudding or batter pudding may be given for a change. At *eighteen months* old, if the child has most of his teeth, there is no objection to his taking a small slice of mutton, or, occasionally, of roast beef, which should be cut into small pieces, and mixed with a potato, a few crumbs and some gravy. In the generality of cases meat may be given for the first few months every other day, and potato and gravy, or rice and batter pudding, on the alternate days. Fruit puddings and pastry are objectionable. The meals should be given at intervals of about four hours; thus—*breakfast*, between seven and eight o'clock, to consist of tops-and-bottoms steeped in boiling water, a little fresh milk added, a few grains of salt, and loaf sugar to sweeten; or pour upon some bread just enough boiling water to soften it, cover it up for a minute or two in the steam, then add the fresh milk, salt, and sugar. *Dinner* about twelve o'clock. The *afternoon meal* about four o'clock, the same diet as formed the breakfast. At *seven*, a little arrowroot, made with a very small proportion of milk, and a biscuit, or a crust of bread. As the child grows older the quantity at each meal should be increased, and the quality somewhat altered. Pure milk, boiled or not, as it is found best to agree, may with bread form the morning and afternoon meals; and at dinner, meat and bread, with a small quantity of vegetable, and toast-and-water

may be taken daily. One essential rule in connection with diet should be laid down, and that is, that a child should eat slowly and masticate thoroughly. The healthy state of the child depends greatly upon the observance of this rule, nor are the advantages temporary only; a salutary habit is established which will be of life-long benefit. The following articles of diet should never be given to a child: pork, cakes, new bread, sweetmeats, sauces, dried fruits, nuts, and butter in excess. Tea, especially when strong, is hurtful to children. Wine, spirits, or beer given to a healthy child is highly reprehensible, they ought never to be given but medicinally. Toast-and-water, or plain water is the proper drink for children, and one that will cause them to relish their food with unalloyed zest. •

AIR AND EXERCISE.—*Pure* air is essential to the health and growth of children, but it is erroneous to suppose that the colder the temperature of the open air, the more bracing it will prove. It is the temperate quality, not the coldness, which renders it pure and salubrious. Much caution, indeed, is necessary on this head in our unsettled climate. When children are taken out in the air, mothers should have those to whom they intrust their children under their immediate superintendence. Nursery-maids are notoriously careless and indiscreet, in keeping children too long in the air at a time, or in standing still or sitting down with them in a current of air. When children are out, they should be encouraged to play and run about, and to amuse themselves with any exercise calculated to promote the development and growth of the body. When the weather is wet and damp, or cold biting winds prevail, let the child run about a large room, or the hall. On no account suffer him to *sit* for any length of time, as it will induce an enervated and relaxed state of the frame, beyond the reach of remedy. The air within doors should also be carefully attended to. The nursery in which children generally pass the first years of their life should be large, lofty, and thoroughly ventilated. It should have a sufficient number of windows, and also a chimney, to ensure free admission of light, and an uninterrupted circulation of air. Whenever the child is out of the nursery, the windows should be thrown wide open, and the temperature of the apartment generally, should not exceed sixty degrees.

SLEEP.—From the second year up to the third and fourth, the child should be allowed to sleep for an hour or so before dinner; after this time it may be gradually discontinued. The child should be put to rest every evening between seven and eight; the definite number of hours that a child ought to sleep cannot precisely be stated, but if it is in good health, it will sleep on undisturbed until the following morning, and awake of its own accord. Keeping children up beyond their usual hours is very injurious. At evening parties, for instance, children generally become pale, jaded, and peevish as the night draws on; and the following morning, instead of awaking cheerful and lively as is customary, they sleep two or thee hours beyond their time, and are even then wearied and exhausted. The child's bed should consist of a mattress only, and the bed-clothes should not be so heavy as to cause perspiration. The bed should be open at the top and around, except where violent currents of air are to be guarded against. Children should not be allowed to sleep with persons in bad health, or who are far advanced in life.

EDUCATION. — Children should only be confined two or three hours a day, and what little they learn should be taught as an amusement rather than as a task. To accomplish this it is better to instruct a child by encouraging habits of observation on things around and about him, than by books; and on this principle every walk in the field or garden, while conducing to health, may also furnish its lesson.

AMUSEMENTS.—A child should be encouraged to engage in those amusements where the greatest number of muscles are brought into play, such as ball, hoop, skipping, running, &c. A child should never have toys given him that he can injure himself with, as toy-swords, knives, and bows and arrows; rocking-horses are also not wholly free from danger.

CHILI VINEGAR. — Put one ounce of ground chilies into a quart of good vinegar, let it digest for a fortnight, shaking the mixture once every day.

CHILLS.—By this term is meant that sensation of cold and shivering which usually follows the exposure to cold, or the application of damp or wet to the heated body. The symptoms that generally accompany chills are of a febrile nature, such as headache, lassitude, pain and sensation of cold in the back, sudden tremor or shivering, a white tongue, quick and often sharp pulse, drowsiness, and a desire for warmth. All severe colds, and all fevers and bronchial affections, commence with chills; and though Nature frequently cures herself by producing sleep, and an action on the skin during repose, these symptoms when neglected frequently merge into more severe indications of disease, and if unrelieved or curtailed, generally pass into some form of acute malady. Very often, however, the duration of chills is sufficiently long to constitute a stage, and allow time for some remedial means being applied to break their chain of symptoms, and possibly, in preventing their diseased action spreading, effect an entire cure. The most effectual means to ensure this desirable end is the immediate use of the hot bath, or the immersion of the feet and legs in warm water, going into a heated bed and drinking either a tumbler of cold water or some warm stimulating drink, such as half-a-pint of egg-flip with a little spirit in it. For ordinary cold chills, unattended with graver symptoms, either of these means may be employed, though it is more judicious to use the water draught in summer time, and the stronger potation in the winter. Should the lassitude, sense of cold and gaping, not yield to such means, ten grains of Dover's Powder should be taken at bed time in addition to the hot or foot bath, or a draught composed

of one ounce of camphor water, one and a half drachms of spirits of nitre, the same of ipecacuanha wine, and twenty drops of laudanum.

CHIMNEY, FIRE IN, TO EXTINGUISH.—Shut the doors and windows; throw some powdered brimstone on the fire in the grate, or ignite some on the hob, and then put a board in front of the fireplace to prevent the fumes from descending into the room. The vapour of the brimstone ascending the chimney, will then effectually extinguish the soot on fire.

CHIMNEY, SMOKY, TO CURE.—Smoky chimneys result from a variety of causes. The wind may be let in too freely above, or the smoke stifled below; the vent may also be too contracted, particularly where several open into the same funnel. The situation of a house may also affect the chimneys, especially if backed by higher ground or loftier buildings. In many cases the remedy for smoky chimneys is of the most simple kind, but the first step is to ascertain the cause of the defect. The following are some, among many others:—A single chimney is more liable to smoke than when it forms part of a stack. Straight funnels seldom draw well. A northern aspect often produces a smoky chimney. Large fire-places are apt to smoke, particularly when the aperture of the funnel does not correspond in size; for this a temporary remedy may be found in opening a door or window—a permanent cure by diminishing the lower aperture. When a smoky chimney is so incorrigible as to require a constant admission of fresh air into the room, the best mode is to introduce a pipe, one of the apertures of which communicates with the open air, and the other terminates underneath the grate; or openings may be made near the top of the apartment, if lofty, without any inconvenience even to persons sitting close by the fire. Where a chimney only smokes when a fire is first lighted, the defect may be guarded against by allowing the fire to kindle gradually; or more promptly by laying any inflammable substance, such as shavings, on the top of the grate; the rapid combustion of which will warm the air in the chimney, and give it a tendency upwards before any smoke is produced from the fire itself. Sometimes the fault lies in the grate not being placed *true* to the mouth of the chimney; this should be ascertained, and the grate set more backward or forward, as the case may be. The shortness of the funnel or the chimney may produce smoke; in this case the lower orifice must be contracted to as small dimensions as possible by means of an upright register. If a kitchen chimney overpowers that of the parlour, as is often the case in small houses, apply to each chimney a free admission of air until the evil ceases. When a chimney is filled with smoke, not of its own formation, but from the funnel next to it, cover each funnel with a conical top, or earthen crook; by means of which the two openings are separated a few inches, and the cold air or the gusts of wind cease to force the smoke down with them. If these remedies fail, it will be generally found that the chimney only smokes when the wind is in a particular quarter; the following is then the best remedy to adopt:—Put on the top of the chimney a box, in each of the sides of which is a door hanging on hinges, and kept open by a thin iron rod running from one to the other, and fastened by a ring in each end to a staple. When there is no wind these doors are at rest, and each forms an angle of forty-five degrees, which is decreased on the windward side in proportion to the force of the wind, and increased in the same ratio on the leeward side. If the wind be very strong, the door opposed to it becomes closed, whereby the opposite one is opened to its utmost width. If the wind shakes the corner of the box, it shuts two doors, and forces open those opposite. This scheme is infallible; the expense is trifling, and the apparatus simple.

CHINA WARE, TO CLEAN.—When china is very dirty and stained, clean it with moderately warm water in which finely powdered fuller's earth or soft soap is put: rinse well with cold water.

CHINA WARE, TO MEND.—When broken china requires riveting, the usual mode is to use a drill made of a splinter of diamond set into a handle, and this is an effectual mode; but as a diamond may not always be at hand for this purpose, the following substitute may be employed:—Procure a three-cornered file, and harden it completely by making the end red hot, and plunging it into cold water; then grind the point quite sharp on a grindstone, and afterwards on an oilstone. Then with the point of this tool, pick repeatedly on the spot to be bored, taking care not to use too much violence lest the object should break. In a short time a small conical piece about the size of a pin's head will be forced out, and the hole may afterwards be widened by introducing the point and working the file round; the wire may be then worked in, and fastened in the usual way.

CHINTZ, TO WASH.—Boil two pounds of rice in two gallons of water till soft, and pour it into a tub; let it stand until it subsides into a moderate warmth: put the chintz in, and wash it (without using soap) until the dirt disappears; then boil the same quantity of water and rice as before, but strain off the rice and mix it in warm water. Wash the chintz in this till quite clean; afterwards rinse it in the water the rice was boiled in; this will answer the end of starch, and dew will not affect it. After it is dried pass it through the mangle, but use no iron.

CHIVES.—The chive is a hardy perennial plant, sometimes found in meadows and pastures. The leaves are employed as an ingredient for salad in spring, being esteemed milder than onions. They are also used as a seasoning for omelets, soups, &c. Chives are readily propagated by parting the roots, either in autumn or spring, and they will grow in any soil or situation. They should be repeatedly cut during the summer, the successive leaves produced in this way being more tender. It will continue productive for three or four years.

CHLORIDE OF LIME.—This, with chloride of soda, are the substances now used as

the most convenient and effectual preparation for the purpose of disinfection. Upon chloride of lime being exposed to the atmosphere, it becomes decomposed by the lime taking carbonic acid from it, and consequently leaving the chlorine free to escape, which it does very slowly; the change is more rapid when the air is charged with putrid effluvia, because the carbonic acid then present promotes decomposition. Nothing more is necessary, therefore, than to put some chloride of lime, with forty times as much water, into dishes, and place them in the room which it is required to disinfect, to guard against contagion or to remove any offensive smells. A solution of chloride of lime in water may likewise be sprinkled over the apartment, to destroy disagreeable smells. A cloth wetted with it, and laid over a corpse for an hour or two where putridity has commenced, will prevent any effluvia from being perceived. Clothes worn by persons during pestilential diseases are disinfected by being washed in a solution of chloride of soda; and the linen of sick persons when there is any danger of infection, should be put into water with chloride of lime or soda as soon as it is taken off. This solution is also found extremely useful as an application to ulcers or putrescent sores. —See DISINFECTION.

CHLOROFORM.—A colourless fluid with a pleasant smell, somewhat resembling peach blossoms. Its power of producing insensibility to pain when inhaled, is universally known. It is, however, too potent an agent to be intrusted to non-professional hands, except under express medical sanction and direction in each particular case. In some of the more painful operations its use confers a great boon on the suffering patient, but in minor operations, such as tooth-drawing, its employment is hardly advisable. Fatal cases have followed the inhalation of chloroform, although the percentage is small; and cases do occur in which very disagreeable effects, such as headache, sickness, hysteria, &c., have succeeded the use of chloroform. On the whole, therefore, it is better not to employ this agent without being certain that no organic disease exists, to render its use dangerous and hurtful. Chloroform may be employed with perfect safety and much advantage as an external application in painful affections of the nerves, especially neuralgia and toothache. For this purpose, a piece of linen or lint of a size proportioned to the part affected, is to be soaked in the fluid and applied to the skin, covered with oiled silk, to prevent quick evaporation. A small portion of cotton wool soaked in chloroform will, sometimes, if placed in the affected cavity, allay the pain of toothache. Chloroform, taken into the stomach, is found useful in spasmodic diseases, asthma, hysteria, &c., and may be administered, in the absence of other remedies, in doses of from six to ten drops, along with a teaspoonful of brandy, in three tablespoonfuls of water.

CHOCOLATE.—Roasted cacao or chocolate beans or nuts, made into a paste by trituration, in a heated mortar, with sugar and aromatics. It is poured into tin moulds in a semi-fluid state, and left until cold. In this form it is called cake chocolate, or *chocolate paste*. When these lumps are reduced to coarse powder, by grinding, it is known under the name of *chocolate powder*. The chocolate commonly sold in England is prepared from the cake left after the expression of the oil, and this is frequently mixed with the roasted seeds of ground peas, and maize or potato flour, to which a sufficient quantity of inferior brown sugar or treacle and mutton suet is added to make it adhere together. Chocolate should never be made for the table before it is wanted, because heating it a second time injures the flavour, destroys the froth, and separates the body of the chocolate, the oil of the nut being observed after a few minutes, boiling, or even standing long by the fire, to rise to the top. This is one of the principal reasons why chocolate offends the stomach. *Chocolate for the table* is prepared by scraping the chocolate fine (from one to two squares to a pint, to suit the stomach), throwing it into boiling milk and water, and milling it well. It is served up with the froth. The sugar may either be put in with the scraped chocolate or added afterwards, at pleasure.

CHOCOLATE ALMONDS. — When the chocolate has been softened and mixed with an equal proportion of sugar, enclose singly in small portions of it some almonds, previously well dried, or even slightly coloured in the oven, after having been blanched. Roll them very smooth in the hand, and cover them with the comfits.

CHOCOLATE BISCUITS.—Put a quarter of a pound of chocolate into a tin and make it warm over the fire; then put a pound of powdered loaf sugar into a basin, and when the chocolate is quite warm and soft, add it to the sugar, and mix it well with eight whites of eggs; bring it to a paste, and roll it into masses the size of a walnut; put them into a moderate oven with three papers under them; bake them till they are crisp and firm, and when quite cold remove them from the paper.

☞ Chocolate, ½lb.; sugar, 1lb.; eggs, 8 whites.

CHOCOLATE CREAM. — Scrape two squares of chocolate and put them into a stewpan with two ounces of sugar, a pint of milk, and half a pint of cream; let it boil till a third of it is consumed, and when half cold beat up the yolks of six eggs with it, strain the whole through a sieve, and then put the small cups or dishes, in which the cream is to be served, into a pan containing enough boiling water to reach above half way up the cream; cover the pan and lay fire on the lid, boil it till done, and serve cool.

☞ Chocolate, 2 squares; sugar, 2ozs.; milk, 1 pint; cream, ½ pint; eggs, 6 yolks.

CHOCOLATE DROPS.—Throw into a well-heated metal mortar from two to four ounces of chocolate broken small, and pound it with a warm pestle until it resembles a smooth paste or very thick batter; then add an equal weight of powdered sugar, and

beat them until they are thoroughly blended. Roll the mixture into small balls, lay them upon sheets of writing paper or upon clean dishes, and take them off when they are nearly cold; cover the top with white non-pareil comfits. More or less sugar can be worked into the paste, according to the taste.

CHOCOLATE ICE CREAM.—Scrape a quarter of a pound of the best chocolate; place it in a stew-pan over the fire, with just water enough to melt it, keep stirring it, and when it is melted have ready a quart of boiling milk, mix this with the chocolate gradually, and add half a pound of sugar and six eggs well beaten, stir all well together, and when cold, freeze.

☞ Chocolate, ½lb.; water, sufficient; milk, 1 quart; sugar, ½lb.; eggs, 6.

CHOKING.—When any mass of food, such as a piece of meat, potato, or other substance, lodges in the fauces, or the base of the tongue, if in sight, but too far for the fingers to reach, it should be immediately grasped with a pair of pincers, or, what is better, a pair of curling-tongs, and dragged out. If neither are at hand, and as time is precious, press down the tongue with the fingers, and tickle all the surrounding parts with a feather, so as to induce heaving or vomiting, Nature by that action often getting rid of the obstruction. If, however, none of these means present a chance of relief, use the point of the curling-tongs as a probe, and push the obstruction into the gullet. However quickly these operations may have been carried on, the sufferer may have died before the obstacle has been displaced, or become so apparently lifeless as seemingly to render all further steps useless; this, however, is not the case, cold water must be dashed on the face and chest, ammonia applied to the nostrils, and the lungs inflated with air. When the lodgment has been lower down and taken place in the gullet proper—a fact that can be ascertained by an examination of the mouth, and also by the mute indication of the sufferer's fingers—the impediment to its descent to the stomach proceeds from some spasmodic action into which some of the muscular fibres are thrown, causing them to grip the body in its descent and retain it in that position, while its bulk pressing forward on the windpipe, causes the danger to life that results from the accident. Two or three sudden or sharp slaps between the shoulders, or water dashed abruptly in the face, will often, by producing a sudden gasp, release the spasm and cause the descent of the object; if not, a probe, flexible tube, or a quill, must be employed and the substance pushed past the constriction; when, however, the bulk is too large to be moved by such simple means, and while a messenger is sent for a surgeon to bring the proper instrument, endeavours should be made to keep up a partial supply of air in the lungs, by means of the bellows.

CHOLERA comprehends two distinct forms of the same disease, the English variety—or cholera morbus proper, and the cholera maligna, commonly called Asiatic or malignant cholera.

ENGLISH CHOLERA, or CHOLERA MORBUS.—*The symptoms* commence with nausea, pain, and a sense of distension in the stomach and bowels, succeeded in a very short time by violent vomiting and relaxation, at first of bile, and after a time of a mucous discharge; a quick, small, and often intermittent pulse, great thirst, heat, and cold sweating, prostration of strength, and considerable anxiety of countenance. In severe cases these symptoms are attended or followed by cramps and spasmodic contractions in the extremities, and sometimes universal convulsions, and in fatal cases with hiccough. The exciting causes are sudden transitions from heat to cold, great fatigue or muscular exertion in the sun, indigestible food, acid fruits, melons, cucumbers, or the inhalation of noxious gases. The diminution in the frequency of the vomiting, a soft moisture on the skin, and an inclination to sleep, are to be considered as favourable symptoms, prognosticating recovery.

Treatment.—As assistance is seldom sought till the most active symptoms have set in, the first and most important object to be effected is to suspend the preternatural action of the stomach and bowels; in some constitutions, and in mild cases, this may be achieved and the disease cured by a farinaceous diet and the total avoidance for several days of all solid food. But though this change of diet must be adopted in all cases, it will only occasionally act as a remedial agent. The vomiting must therefore be checked by other means, and for that purpose a small blister should be immediately applied to the pit of the stomach, and an effervescing draught of the following ingredients taken every quarter or half an hour:—In about the third part of a tumbler of cold water dissolve ten grains of carbonate of soda or carbonate of ammonia, with, for the first two or three draughts, seven or eight drops of laudanum. To this add ten grains of tartaric acid, and let the patient drink the whole while effervescing. The recumbent position on a sofa or bed must be preserved as much as possible, and the feet kept hot by heated bricks or bottles of water. As soon as the stomach has been partially tranquillized, or between the second and third draughts, give the patient a dessertspoonful of tincture of kino, which should be administered in a very small quantity of gruel, and can be repeated at the end of one or two hours, if the relaxation has not been materially checked. Should these means, however, not abate the action of the bowels, the following mixture must be employed, taking a tablespoonful every hour till the desired effect has been obtained.

Carbonate of ammonia	2 scruples,
Prepared chalk	4 drachms,
Decoction of logwood	6 ounces,

rub smooth in a mortar, and add tincture of kino three drachms—mix. When the diarrhœa is attended with cramps or spasms one of the annexed pills must be taken with each dose of the mixture.

Powdered camphor	4 grains,
Powdered opium	4 grains,
Rhubarb	4 grains,
Ginger	4 grains,
Extract of henbane	10 grains;

make into a mass and divide into six pills. As soon as the action of the bowels is suspended the mixture is to be discontinued, and so also with regard to the pills, as soon as the cramp or spasms are subdued. To restore the bowels to their natural action, a day or two after the choleraic discharges have been suppressed, the best aperient that can be taken is a dose of from six to eight drachms of castor oil. In mild cases of English cholera unattended with vomiting, but where the pains in the thighs are severe, the most simple treatment is half an ounce of castor oil, in peppermint water, with twenty drops of laudanum, repeating the same dose with either ten or twenty drops of laudanum in two hours after, according as the pain is subdued or remains unabated. Whenever the convenience of a hot bath can be obtained, it should be employed.

MALIGNANT CHOLERA, Asiatic, spasmodic, or epidemic, as this disease is variously denominated, is in all its general features precisely analogous to the cholera morbus of this country, with the special exceptions that all the symptoms are infinitely more severe, much shorter in their duration, there is a total absence of bile from the dejections, and the presence of the stage of lividity or collapse.

Symptoms.—Slight diarrhœa, quickly becoming excessive, and changing the character of the ordinary discharge till it assumes the appearance of thin gruel, and ultimately that *rice water semblance* which so remarkably denotes the disease; this is accompanied with short flying pains, and a sense of coldness in the bowels; the countenance is pale and anxious, and there is loss of appetite. Great agitation, prostration of strength, nausea, vomiting, and cramps in the legs and arms, commence the symptoms of the second stage; these are followed by increased pains in the loins and abdomen, small feeble pulse, cold clammy skin, and great thirst, with craving for cold water. The symptoms indicative of a fatal termination are intense lividity of the entire body and nails, absence of pulse at the wrist and temples, delirium, and a dark fur on the lips, tongue, and teeth. Those that prognosticate a favourable result; are the cessation of the cramps, a warm moisture on the body, the voice becoming firmer, and the restoration of all the secretions, especially the bile.

Treatment.—The patient should be supplied with frequent and copious draughts of water containing phosphate and carbonate of soda, potass, and other salines, or even cold water, or, what is probably better than either, abundant draughts of whey. The hot bath, by promoting expansion of the vessels, and a determination of blood to the skin, is an invaluable adjunct in every stage, and should be accompanied by friction, especially along the spine. Transfusion, and electricity are both efficacious means, more particularly the first. Opium, ether, ammonia, and all stimulants have been employed, and sometimes with benefit, though of all modes of treatment the most rational is that of the hot bath, whey and salines, with a suppositary of opium. In a disease that presents itself in so many forms, no regular course can at present be laid down, but the most formidable symptoms, as they present themselves must be met with energy and despatch, and either the whole or a part of the above mode of practice adopted, according to the emergency of the case.

CHOPS.—See LAMB CHOPS, MUTTON CHOPS, PORK CHOPS.

CHOWDER—A SEA DISH.—Cut off the fat part of a belly piece of pork, and lay it at the bottom of a kettle; slice some onions, and mix them with all kinds of sweet herbs, and strew them upon the pork; take a very fresh codfish, bone, slice, and flour it, and strew over it some pepper and salt; put a layer of cod upon the pork, then a thin layer of pork, then a layer of shipbiscuit, and so on until the kettle is nearly full; pour in a pint and a half of water, cover the whole with a paste, fasten down the top of the kettle very tight, put it on a slow fire for about four hours, laying hot embers on the lid of the kettle; when done, skim it well, and turn it into a dish, pour in a glass of Madeira wine, add stewed truffles and oysters, lay the paste over it and serve.

CHRISTENING.—This ceremony may be performed either in accordance with the rites of the Established Church or of Dissenting persuasions, or may be superseded altogether by the simple registration of the infant's birth, name, &c. The fees paid for christening vary with a variety of circumstances. Particulars should in each case be obtained of the clerk of the place of worship. It is usual to make a christening the occasion of festivity, but not in such a manner as to require special remark. The parents and sponsors of the child appear at the church at the appointed hour, the child being carried by the nurse. The dress befitting christenings is what is termed half costume, but the infant should be robed in the choicest manner that circumstances will allow. It is usual for the sponsors to present the child with a gift to be preserved in future years. Silver spoons, a silver knife and fork, a handsome bible, a silver cup, and other such articles are usually chosen. It is also usual to make a trifling present to the nurse.

CHRISTMAS.—The festival of the Christian churches in commemoration of our Saviour's nativity, on the 25th of December. In England, especially, this festival partakes of a universal interest. The houses both of the richest and the poorest are usually decorated with mistletoe, holly, and evergreens; the public entertainments are of a lively character, and the current literature is rendered congenial to the season.

CHRISTMAS PARTIES, ETIQUETTE OF.—Christmas parties are especially devoted to the reunion of relations and intimate friends; it is therefore customary, on these occasions, to throw aside the ceremony

and constraint which society ordinarily imposes, and for each person to determine upon being happy himself, and to contribute to the happiness of those around him. Young ladies, especially, should not display an ill-timed prudery at certain little freedoms which this season allows, such as kissing under the mistletoe. The youthful should not object to regulate their amusements for the convenience of the aged; nor should the latter disdain to enter into the sports of the young. The good things provided by the host and hostess should be more homely than upon other occasions; and there should be a marked heartiness in their demeanour towards those whom they entertain. Those who assemble may be freer in their intercourse than on ordinary occasions, the good wishes of the season being on every tongue. Dress should be less displayed now than at the fashionable parties that will commence about the middle of January; nor should the richer guests endeavour by a display of trinkets and jewellery to outshine their humbler relatives and friends; in a word, a Christmas party is supposed to level all grades and distinctions for the time being, with a view of contributing more certainly to the general happiness of the company assembled.

CHRISTMAS PUDDING. — Mix thoroughly one pound of finely grated bread, one pound of flour, two pounds of raisins stoned, two pounds of currants, two pounds of suet, minced small, one pound of sugar, half a pound of candied peel, one nutmeg, half an ounce of mixed spice, and the grated rinds of two lemons; mix the whole with sixteen eggs well beaten and strained, and add four wineglassfuls of brandy. These proportions will make three puddings of good size, each of which should be boiled six hours.

☞ Bread crumbs, 1lb.; flour, 1lb.; suet, 2lbs.; currants, 2lbs.; raisins, 2lbs.; sugar, 1lb.; candied peel, ½lb.; lemon rinds, 2; nutmeg, 1; mixed spice, ½oz.; salt, ½ teaspoonful; eggs, 16; brandy, 4 wineglassfuls.

Obs.—A fourth part of the ingredients given above will make a pudding of sufficient size for a small party: to render this very rich, half the flour and bread crumbs may be omitted, and a few spoonfuls of apricot marmalade well blended with the remainder of the mixture. Rather less liquid will be required to moisten the pudding when this is done, and four hours and a quarter will boil it.

CHRISTMAS TREE. — The custom of having illuminated trees at Christmas, laden with pretty little trifles, as mementoes to be presented to the guests of the Christmas party, is derived from Germany. A young fir is generally selected for the Christmas tree, and little presents of various kinds are bound on the branches, as, crochet-purses, bonbons, preserved fruits, alum-baskets, charms, dolls, toys in endless variety, &c., distributed over the tree according to fancy. The whole is illuminated by numerous little wax tapers, which are lighted just before the guests are admitted to inspect the tree. Before the tapers are quite burnt out the guests all assemble around the tree, and the *souvenirs* are taken off and presented to the guests whose names have either been previously appended to them, or at the discretion of the distributor.

CHRIST'S HOSPITAL.—A public institution, commonly known as the *Blue Coat School*, in which children are educated, clothed, and fed. The number of scholars on this establishment are, nine hundred at the town school in Newgate Street, and five hundred in a preparatory branch at Hertford (including seventy girls). No boy is admitted under seven or over nine years of age, and none can remain after fifteen, except the "King's Boys," numbering forty, or the "Grecians" and "Deputy Grecians" who have attained to the highest honours in the school. The education received at Christ's Hospital is of a first class, embracing the customary branches of learning, with Latin, Greek, French, German, mathematics, drawing, &c., so that if a boy choose to avail himself of the advantages which this institution affords, he cannot fail to lay the groundwork of future advancement in life. Admission into this school is obtained by means of presentation. These presentations are distributed among a certain number of governors annually, and the list of those governors is printed in the form of a book, which may be had at the counting-house attached to the school in London, on the payment of half-a-crown. It must be understood, however, that there is the greatest difficulty in obtaining a presentation, unless the applicant has some influence direct or indirect with the governor to whom the application is made. The value of a presentation is set down at £500, and a boon like this is naturally enough given by a governor to some one of his own connections, in preference to a stranger. Presentations are bespoken for years beforehand, so that a governor is, generally speaking, not only engaged as regards the presentation for the current year, but also for the one which is to follow three years after. It is therefore hopeless for a person who possesses no influence to apply for this privilege, the chances being that if every one of the governors on the list were written to, or waited upon personally, the answer in each case would be unsatisfactory.

CHRONOLOGY.—The art of measuring time, distinguishing its several constituent parts, such as centuries, years, &c., by appropriate marks and characters, and adjusting these parts in an orderly manner to past transactions, by means of eras, epochs, and cycles, for the illustration of history. Books: *Toone's Chronological Historian; Blair's Tables; Howlett's Tables; Boyle's Universal Chronologist; Alexander's Chronology of the World; Slater's Chronology, Ancient and Modern; Wade's Chronology of British History; Bickmore's Comparative Chronology; Maydwell's Epitome; Howlett's Metrical Chronology; Cuninghame's Scientific Chronology; Thomson's Chronology and History; Hale's New Analysis; Nicholas's Chronology of History Haydn's Dictionary of Dates; Weale's Rudimentary Chronology; Kennedy's Chronology of the World; Salmon's Chronological Historian; Hampson's Dates, Charters, and Customs; British*

Chronologist; *Annual Register*; *L'Art de Vérifier les Dates.*

CHRONOMETER.—A timepiece of peculiar construction, at present much employed by navigators in determining the longitude at sea. Chronometers are, in general, much larger than common watches, and are hung in gimbals, in boxes six or eight inches square; but there are also many pocket chronometers which, externally, have all the appearance of the better sort of pocket watches, and internally differ from those only in the construction of the balance. The balance and hair-spring are the principal agents in regulating the going of an ordinary watch, being to this what a pendulum is to a common clock; and this spring in the former, like the pendulum in the latter, is subject to expansions and contractions under different degrees of heat and cold, which affect the speed or rate of the machine; and the methods of correcting this inaccuracy mark the difference between the watch and the chronometer.

CHRYSANTHEMUM.—A flower that contributes greatly to the beauty of the garden, in the latter months of the year, when scarcely any other plants are in bloom, and therefore doubly welcome on that account. It is easily propagated and cultivated. The root may be divided, suckers taken off, or cuttings obtained at any season of the year and at any period of the plant's growth. The following is the usual practice:—In the beginning of April take cuttings from the top shoots of last year's plants, plant them in pots called "small sixties," in mould made up, one half of equal portions of loam, sand, and bog-mould, and one half sand. Take the cuttings off about three inches long, and smoothly cut across at a joint; one is put in each pot, and the pots are set in a frame on a gentle bottom-heat. In three weeks or a month they are well rooted, and then hardened in a cold frame till the beginning of June, when they are shifted into 48-sized pots, and placed in an open airy situation. Here they are watered with liquid manure, in which soap-suds has been mixed. Nip off the tops of the plants about this time to make them bushy, but no more side shoots are allowed to remain for flowering than the plants are calculated to support. For culture in the open ground, many of the sorts may be planted out in warm borders, or compartments, or against walls, and will flower well in fine autumns; but their roots require protection through the winter, and they should be renewed about every two years; for as they increase much in size by suckers from the roots, the plants if left for a longer period become unsightly, and produce small and imperfect flowers. The early flowering varieties, as the purple, changeable white, rose, and buff, are the hardiest and most suitable for borders. Chrysanthemums are liable to become mildewed, and when they are observed to be in this state, they should be separated from the rest and dusted over with flower of sulphur; two or three days after the operation, the plants should be well syringed, to wash this off.

CHUB, the scientific name of which is *cyprinus cephalus*, much resembles the carp, its large scales being of a rather more silvery brightness and its body somewhat longer in proportion to its breadth; it is sometimes called the "silvery bluish carp." The head and back are of a deep shady green, the sides silvery, but with a golden tinge when in good season; the belly white, the pectoral fins of a pale yellow, the ventral and anal fins red, the tail forked, of a brownish hue tinged with blue at the end. The chub has a large mouth without teeth, but his throat is provided with a bony apparatus which crushes his food and prepares it for digestion; he is one of the "leather-mouthed" species. The chub spawns at the end of April until the middle of May, on a shallow gravelly bottom, and recovers its condition more quickly after this effort of nature than any other fish; it will then be found until from the middle to the end of June in sharp, shallow streams; after which time it seeks shelter under weirs, or overhanging and shelving banks, under trees overhanging the water, amongst the roots of those growing on the banks, amongst the boughs of those growing in, or such as have fallen into, the water, and under and amongst beds of aquatic plants. The chub is found in most of the rivers of this country, its general size being from one ounce up to four pounds, although in the Ouse, in Bedfordshire, and in the Trent it has been taken as heavy as seven pounds weight. The baits for fishing for chub are numerous, indeed there is scarcely any bait that a chub will not take—worms, snails, gentles, wasp grubs, paste, cheese

cherries, greaves, bullock's pith, &c., at the bottom; minnows, small gudgeon, roach, and other fish in mid-water; and cockchafers, cockroaches, bees, wasps, grasshoppers, small moths, and all kinds of flies, both natural and artificial, on the surface, used either by casting or dipping or dapping. The best time for fishing for chub is from November to March, when he is also in the best condition and bites more freely: the best baits at this time are greaves and bullock's pith, using sheep's or bullock's brains for ground bait with the latter; for directions to prepare both these see "BAIT." The rod for chub fishing at bottom should be about twelve feet long, light and pliable; those made of deal for the first and second joints, and lance-wood or green heart for the third and top joints are perhaps the best. The reel, a full-sized wooden one; the line of fine twisted silk; the float, a swan quill or of cork made long and tapering, according to the depth of water and strength of stream; the bottom, three or four feet of fine round gut, and the hook No. 5 or 6. The books on angling treating of chub fishing are *Blaine*, *Daniel*, *Walton*, and *Ephemera*; but the best of all is *Bailey's Instructor*.

CHURCHWARDENS are parishioners chosen annually in Easter week, and being so chosen, are bound to serve the office (except peers, members of parliament, clergymen, Roman Catholic clergy, dissenting ministers or teachers, barristers, attorneys' clerks in court, physicians, surgeons, apothecaries and aldermen, who are exempt). They have the care and management of the repairs of the church, and the organ, bells, bible, and books, the making of church rates to repair the church, if the parishioners refuse to make one: also the ordering of sittings and enforcing good behaviour during divine service. They have the care of the benefice during its vacancy, and must see that the church is duly served by a curate; and they may not suffer a stranger to preach unless he appears qualified by producing a license. At the end of the year they are to render accounts of their receipts and expenditure.

CHURN.—See CHEESE.

CIDER.—A beverage made from the juice of the apple, and for which sour and rough-tasted apples are generally preferred. The process of making cider varies in different localities, but in every case essentially consists of the collection of the fruit, and the expression and fermentation of the juice. The *collection of the fruit* should not be commenced before it has become sufficiently mature; they should be picked by the hand, and any unsound fruit, or such as may have lain on the soil, should be rejected. The apples after being gathered, are usually left for fourteen or fifteen days in a barn or loft to mellow, during which time the mucilage is decomposed, and alcohol and carbonic acid developed. When this process is completed, the fruit should be looked through, the bruised and decayed apples placed in a heap by themselves for an inferior cider, from which to make vinegar, the remainder wiped perfectly dry, and laid ready for use. The *expression of the juice* is the next step in cider-making. The apples are ground to a pulp in a mill, consisting of two fluted cylinders of hard wood or cast iron working against each other. The pulp is afterwards put into coarse strong bags, and pressed with a heavy weight so as to squeeze out of them all their juice. The juice is placed in large open tubs, and kept at a heat of about sixty degrees. They are now constantly attended to, and kept quite full, in order that the yeast, as it forms, may froth over and be carried off from the surface of the liquor. After two or three days for weak cider, and eight or ten days for strong cider, or as soon as the sediment has subsided, the liquor is "racked off" into clean casks. The casks are then stored in a cellar, shaded barn, or other cool place, where a low and regular temperature can be ensured, and are left to mature and ripen until the following spring, when it may be re-racked for use. The pressed pulp is again sprinkled with one third or half its weight of water, and re-pressed. The resulting liquor, when fermented, forms a weak kind of cider, which is reserved for domestic use in the same way as table-beer. The refuse pulp is an acceptable food for pigs and store cattle.

Preparatory to *bottling cider*, it should be examined, to see whether it is clear and sparkling. If not so, it should be clarified, and left for a fortnight. The night previous to bottling, the bung should be taken out of the cask, and left so until the next day, and the filled bottles should not be corked down until the day after; as, if this is done at once, many of the bottles will burst by keeping. The best corks should be used. Champagne bottles are the best for cider. It is usual to wire down the corks and to cover them with tinfoil, after the manner of champagne. A few bottles at a time may be kept in a warm place to ripen. When the cider is wanted for immediate use, or for consumption during the cooler season of the year, a small piece of lump sugar may be put into each bottle before corking it. When intended for keeping, it should be stored in a cool cellar when the quality will be greatly improved by age. Cider for bottling should be of good quality, sound and piquant, and at least a twelvemonth old. When out of condition, it is unfit for bottling.

CIDER CHAMPAGNE.—Cider, eighteen gallons, spirit, three pints, sugar, five pounds. Mix and let them rest for a fortnight, then fine with skimmed milk, 1 pint. Bottle in champagne bottles: when opened, it will be found to approach very nearly to genuine champagne.

☞ Cider, 18 gallons; spirit, 3 pints; sugar, 5lbs.; skimmed milk, 1 pint.

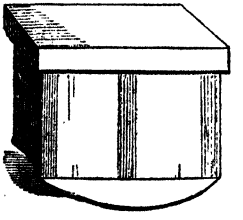
CIDER, PROPERTIES OF.—Cider is a pleasant and refreshing beverage, and with persons in good health is not unwholesome, when drunk in moderation. By persons suffering from indigestion, however, it should be carefully avoided; nor should it be drunk by persons when they are overheated, as it is apt to cause colic and other disagreeable symptoms. Cider has in some instances been found to contain lead, which it has probably imbibed from the leaden vessels in

which it is made or kept; under such circumstances, it becomes poisonous to a greater or less degree, according to the amount of lead taken up.

CIGARETTE.—A species of cigar made by rolling tobacco in thin paper; the implement for making them, and the suitable papers are usually sold at tobacconists. Cigarettes have economy to recommend them, as they do not cost more than a farthing each, whereas a good cigar is seldom to be purchased under threepence or fourpence; by many persons cigarettes are preferred to pipes.

CIGARS.—A form of manufactured tobacco extensively used for the purpose of smoking. The choicest kinds of cigars are those of foreign manufacture, such as Havanah, Cabana, Silva, Lopez, &c., and in imitation of these, British cigars are made bearing the same name. Generally speaking, cigars are not greatly adulterated; the fraud is chiefly confined to palming off home-made cigars as foreign, and in practising this, a number of petty artifices are used; the white spot, for instance, indicative of excellence in a genuine cigar, is produced by chemical agency in the spurious article; the square and sometimes almost flat shape which the foreign cigar attains after undergoing a long voyage in a closely packed chest, is counterfeited in the spurious cigar by pressing. So generally is this practised, that not more than one-third of the cigars sold are what they profess to be—namely, foreign made cigars. To a certain extent, however, the detection of this imposition rests with the purchaser; for notwithstanding the nicety with which the imitative article is made, it is next to impossible to deceive a person who has once been accustomed to cigars of foreign manufacture. A "patent self-lighting cigar" has lately been introduced, which is perfectly lighted by simple friction, thereby obviating an inconvenience which many persons experience, when they have omitted to provide themselves with matches; as well as doing away with the danger which carrying matches about the person is liable to entail. In order that no unpleasant flavour may be communicated to the cigar by this mode of lighting, a layer of pure tasteless matter is interposed between the cigar and the igniting compound.

CINDER SIFTER.—A domestic utensil



used for separating ashes from partially burnt coal. The ordinary cinder sifter is objectionable on account of the dust which it occasions whenever it is used. But an improvement has been introduced in the shape of an enclosed cinder-sifter, as shown in the engraving, and which may be employed without a particle of dust escaping. This sifter is agitated in the customary way, the ashes fall to the bottom and the cinders remain in the sieve, which rests on a ledge at a convenient depth in the box.

CINNAMON.—The inner bark of a tree which grows in the West Indies and in other warm climates; much used for flavouring dishes, pastry, beverages, &c. From the high price of this drug it has become the general practice to substitute the bark of cassia. Cassia is, however, not only thicker and coarser than cinnamon, but its fracture is short and resinous, and its flavour is more biting and hot, whilst it lacks the peculiar sweet taste of cinnamon. The thickness of cinnamon seldom exceeds that of good drawing paper. In addition to its culinary uses, cinnamon is also very useful in medicine, as an agreeable aromatic, and as a vehicle for the administration of other ingredients.

CINNAMON BISCUITS.—Half a pound of dry flour, one pound of loaf sugar finely sifted, one pound of butter, and an ounce of cinnamon powdered. Mix the whole with a wineglassful of brandy or rum, roll out to a thin paste, and bake in a quick oven.

☞ Flour, ½lb.; sugar, 1lb.; butter, 1lb.; cinnamon, 1oz.; brandy or rum, 1 wineglassful.

CINNAMON ESSENCE. Infuse oil of cinnamon in highly rectified spirits of wine, in the proportion of half a drachm of the former to an ounce of the latter.

CINNAMON TINCTURE.—Put three ounces of cinnamon, bruised, into a quart of the best brandy, and let it infuse for three or four days.

CINNAMON WATER.—Bruise an ounce of cinnamon, and put it into two quarts of brandy, with a pint of water, the rind of a lemon, and an ounce of liquorice root; after it has infused for three or four days, distil it, and add a pound of sugar dissolved in a quart of water.

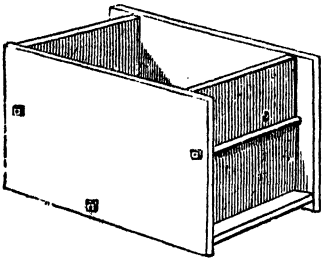
☞ Cinnamon, 1 oz.; brandy, 2 quarts; lemon, rind of 1; liquorice root, 1 oz.; water, 1 pint; sugar, 1lb.; water, 1 quart.

CIRCASSIAN CIRCLE.—A dance, as follows:—The company is arranged in couples round the room, the ladies being placed on the right of the gentlemen; after which the first and second couples lead off the dance. *Figure.*—Right and left set and turn partners—ladies chain, waltz. At the conclusion, the first couple with the fourth, and the second with the third couple, recommence the figure, and so on till they go completely round the circle, when the dance is concluded.

CIRCASSIAN CREAM.—Half a pint of almond emulsion, one drachm of essence of almonds, four grains of bichloride of mercury, and half a pint of spirits of wine, to which any perfume may be added.

CISTERN.—A receptacle for water, acting upon self-filling principles, and conveying water to various parts by means of pipes, &c. The best kind of cistern for the use of

a house is one made of slate. These are usually constructed from thin slabs of Welsh slate joined together with cement and by the aid of grooves. This kind of cistern is very durable, and not liable to get out of repair; nor does it, like lead, affect the taste of the water in any way. Every cistern



should be provided with a waste pipe, which tends to keep the cistern clean and the water pure. With some households the water is kept in butts and casks; before they are used they should be charred inside, as otherwise the water will imbibe an unpleasant flavour. They should be kept carefully covered and frequently cleaned out.

CITRIC ACID.—An acid peculiar to the vegetable kingdom, and found in the juices of several kinds of fruit, especially those of the genus *Citrus*. It is chiefly prepared from the juice of lemons. It is used medicinally in febrile and inflammatory complaints, and added to soda to form the ordinary effervescing draughts.

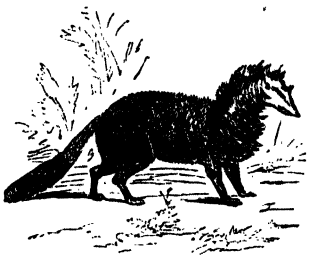
CITRON, CANDIED. — See CANDIED PEEL.

CITRON PUDDING.—Mix together a pint of cream and the yolks of six eggs, add a quarter of a pound of powdered loaf sugar, five ounces of citron shred fine, two tablespoonfuls of flour, and half a teaspoonful of nutmeg; place this mixture in a deep dish, bake it in a hot oven, and turn it out.

☞ Cream, 1 pint; eggs, 6 yolks; sugar, ½lb.; citron, 5ozs.; flour, 2 tablespoonfuls; nutmeg, ½ of 1 teaspoonful.

CITRON RATAFIA. — Pare seven or eight citrons very thin; cut the peel into small pieces, and put them into a jar with three pints of brandy, and let them infuse for three weeks; add half a pound of sugar boiled in half a pint of water and well skimmed; let it stand for a fortnight, and bottle it.

CIVET PERFUME.—This substance is procured from the civet cat, and was first brought to this country by the Dutch. In its pure state, civet has a very disagreeable odour, but when diluted it becomes agreeable. *Extract of civet* is prepared by rubbing in a mortar one ounce of civet with an ounce of orris-root powder, or any other similar material that will assist to break up or divide the civet; and then placing the whole into a gallon of rectified spirits; after macerating for a month it is fit to strain off. From a quarter of a pint to



half a pint is the utmost that ought to be mixed with a gallon of any other perfume.

CLARET.—One of the most wholesome of the light wines. It contains 15·10 per cent. of alcohol. Claret is useful in many cases of convalescence from febrile complaints, where heavier and stronger wines would be inadmissible.

CLARIFICATION.—The act of clearing or making bright, commonly applied to the process of clearing liquids by chemical means instead of by filtration. The substances employed in the clarification of liquids operate by either mechanically embracing the feculous matter, and subsiding with it to the bottom of the vessel, or by inducing such a change in its nature and bulk that it subsides by its own density, in each case leaving the liquor transparent. Albumen, gelatine, the acids, certain salts, blood, lime, plaster of Paris, alum, heat, alcohol, &c., serve in many cases for this purpose. The first is used under the form of white of egg, for the clarification of syrups, as it combines with the liquid when cold, but on the application of heat rapidly coagulates and rises to the surface, carrying the refuse with it, forming a scum which is easily removed. Gelatine, under the form of isinglass dissolved in water or weak vinegar, is used to fine white wines, beer, cider, and similar liquors. Sulphuric acid is frequently added to weak liquors for the same purpose. Bullocks' blood is used in the same way as isinglass or white of eggs, for fining red wines, beer, and porter. Lime, alum, alcohol, the acids, and heat, act by curdling or coagulating the feculencies, and thus, by increasing their density, induce their subsidence. Plaster of Paris acts partly like the above and partly like albumen or gelatine, by developing and forcing down the suspended matter.

CLARIFIED BROTH. — Put broth or gravy into a clean stew-pan, break the white and shell of an egg, beat them together, and add them to the broth. Stir it with a whisk, and when it has boiled for a few minutes strain it through a hair sieve or a napkin.

CLARIFIED BUTTER.—See BUTTER.

CLARIFIED SUGAR. Break into large lumps as much loaf sugar as is required, and dissolve it in a bowl, allowing a pound of sugar to half a pint of water. Set it over the fire, and add the white of an egg well whipped. Let it boil up, and when about to run over, pour in a little cold water, to check

it; but when it rises a second time, take it off the fire and set it by in a pan for a quarter of an hour. The foulness will then sink to the bottom, and leave a black scum on the top, which must be taken off gently with a skimmer. Then pour the syrup very quickly from the sediment, and set it by for use.

CLARIFIED SYRUP.—Break two pounds of double refined sugar, and put it into a stew-pan that is well tinned, with a pint of cold spring water. When the sugar is dissolved, set it over a moderate fire. Beat up half the white of an egg, put it to the sugar before it gets warm, and stir it well together. As soon as it boils, take off the scum, and keep it boiling till it is perfectly clear. Run it through a clean napkin, put it into a close stopped bottle, and it will keep for months.

CLARY.—A plant, the leaves of which are used to flavour soups, the flowers for making a fermented wine, and the whole plant, somewhat like the sage, is esteemed medicinal. Clary is *raised* from seed, and sometimes from cuttings and slips. A small bed will supply most families, and a quarter of an ounce of seed will suffice for a seed-bed, to be transplanted from two feet by two. Sow, in the latter part of March or the beginning of April, in any bed or border thinly, and rake in the seed. In summer, when the plants are advanced two or three inches, transplant a portion of the strongest from twelve to eighteen inches apart, to allow competent room for the leaves to spread in full growth, when they will be fit for use the same year, and in continuation through winter until the following spring and summer.

CLARY WINE.—Boil fifteen gallons of water with forty-five pounds of sugar, and skim it clean. When cool, put a little to a quarter of a pint of yeast, and so by degrees add a little more. In the course of an hour put the smaller to the larger quantity, pour the liquor on three gallons of clary flowers, picked when dry. When the liquor ceases to make a hissing noise, and the flowers are all in, stop it up for four months. Rack it off, empty the barrel of the dregs, and add a gallon of the best brandy. Return the liquor to the cask, close it up for six or eight weeks, and then bottle it off.

☞ Water, 15 gallons; sugar, 45lbs.; yeast ½ pint to ¼ pint; clary flowers, 3 gallons; brandy, 1 gallon.

CLEANLINESS, HOUSEHOLD. — There cannot be a doubt but that the comfort, health, and happiness of a home depend in a great measure on the exercise of cleanly and orderly habits. The best way to keep a house thoroughly and regularly clean is to apportion the process of cleaning the several parts of the house to certain days and hours. For instance, the apartments in use every day require daily cleaning, and this should be commenced and finished at an invariable hour. Other apartments that are less occupied will require seldomer attending to, but whether it be once, twice, or thrice a week, the days of cleaning should be perfectly understood and rigidly adhered to. Uncleanly and disorderly households are often the result of one unfortunate relaxation of the usual regulation. A housewife, for instance, starts in life with a determination to fulfil her domestic duties systematically and regularly. By-and-by a day arrives for cleaning a particular apartment, when on some frivolous pretext the process is postponed to another day; when that day arrives, instead of being devoted to the duties assigned it, it is interfered with by the back work, and matters become still more disarranged, until at length one day driven on to another, and one process confounded with others that precede or follow it, all arrangement and order are at an end, and everything is done how and when it can be. In addition to the moral and physical advantages of a cleanly dwelling, it also confers a species of rank on the promoters to whatever class in the scale of society they may belong. A dirty-looking house is naturally associated with careless and improvident inmates, whose lives are misspent in the indulgence of irregular habits, and vicious idleness. But a cleanly house, on the contrary, impresses the most superficial observer with feelings of respect for the occupants, and a conviction that their course of life is guided by proper principles.—See DUSTING, SCRUBBING, SWEEPING, WASHING, &c.

CLEANLINESS, PERSONAL. — Cleanliness has a powerful influence on the health and preservation of the body. Cleanliness in our garments and persons prevents the pernicious effects of dampness, bad smells, and contagious vapours arising from putrescent substances. Cleanliness keeps up a free perspiration, renews the air, refreshes the blood, and even animates and enlivens the mind.—See ABLUTION, BATHING, BEDROOM, SICK CHAMBER, &c.

CLEAR STARCHING.—See STARCHING.

CLEMATIS.—A hardy climbing plant, suited to trellis-work, and propagated by layers. It may be propagated by parting its roots, and from seed. It requires but little attention, and flourishes in any soil.

CLERK.—Under this head are comprehended persons who earn a livelihood by keeping books of accounts, making out invoices, conducting correspondence, and attending generally to the duties of commerce where writing and arithmetic are concerned. The situation of clerk varies in value and importance, according to the nature of the business, and the class of establishment. In London, for instance, there are clerks at a salary of £50 a year, and others at £1000. Merchants' clerks are, as a body, liberally paid, and not severely tasked, a salary of from £150 to £300 a year is an ordinary one for a young man between the age of twenty-one and twenty-five, and to a person in middle life £400 or £500 is commonly given. Warehouse clerks rank next, their salaries being almost as large as those just stated, but the duties are rougher and heavier, and the hours longer. Lawyers' clerks are ill-paid as regards junior hands, but when they have established a position, they frequently receive liberal remuneration. The qualifications for a clerk in general are, that

he should be a good penman and arithmetician, able to indite a letter readily and correctly, punctual, intelligent, and of good address. It would also be as well if he were acquainted with French, German, Italian, and Spanish; the first-named language especially, for our increasing commerce with France renders the knowledge of the language of that country indispensable in many establishments. The situation of clerk is generally obtained by means of introduction; the usual routine is for a boy to be taken from school and inducted into the duties of a junior, gradually rising step by step as he advances in age, and his services become more valuable. One objection to this kind of employment is, that it is too sedentary and mechanical, as a person is required to bend over a desk for many hours daily, occupied in a set round of duties which offer little or no variety. On this account persons of a delicate constitution, especially those of a consumptive tendency, should not be placed out as clerks, as the nature of the occupation is inimical to health, especially to young persons, and is calculated to foster and hasten diseases that might otherwise be eradicated.—See APPOINTMENTS.

CLIMATE.—Many diseases owe their cure or amelioration to the influences of climate. This is especially the case in such complaints as incipient consumption, and some other fatal diseases of the chest; scrofulous affections; rheumatism; disorders of the digestive organs; hypochondriasis; and a numerous train of nervous disorders. The selection of a temporary residence for invalids is a matter of great importance; for one, an elevated situation and a dry bracing air will be most proper; a sheltered residence with a milder air, will be suitable for another; while the sea-side may be the situation indicated for a third. Foremost among eligible situations for patients, both as a summer and winter residence, is *Madeira*; the mildness and equability of the temperature from day to day throughout the year making it excel every other situation in the south of Europe. *Pisa* and *Rome* are the best situations in Italy, and *Pau* and *Hières* in the south of France. But in England many suitable situations exist for the invalid; among these are Undercliff, and the exterior of the Isle of Wight, Penzance, Malvern Wells, Torquay, Clifton, Hastings, Brighton, &c. After the month of March, many parts in the interior have a higher temperature than those just mentioned, namely, Exeter, Honiton, Dorking, Tunbridge Wells; and to these it would be advisable for the patient to remove in spring.

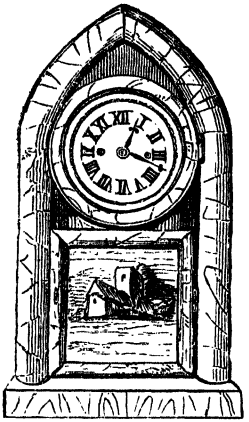
CLIMBING PLANTS are those which attach themselves to supporters by their natural appendages, as either by their tendrils or by their hooks. There is a great variety of them, and they are well adapted for covering walls, arbours, pillars and rafters of green-houses, trellis-work, &c. In order to give a pleasing variety to a garden, or to render an apartment picturesque, trellises of various designs, as seen in the engraving, may be introduced, and the plants trained to cover them according

to fancy.—See CLEMATIS, HONEYSUCKLE, JESSAMINE, WOODBINE, &c.

CLIPPING.—An operation performed on horses for the purpose of beautifying their coats. For this process three pairs of scissors are required—one pair straight, one crooked in the shanks, and one crooked in the blade: thin and fine combs are also needed which can be bent to any crook by holding them before the fire, the crooked shape being required for the hollow parts. Previously to clipping, a horse should be well sweated, and then dressed, to remove all dust. The operation may be commenced at any part of the horse. The operator will find it easiest to work *from* him; and it will also rest the arms to move occasionally from place to place, instead of continuing straight on from one spot. Great care is required in finishing off, by gradations, at the mane and tail. The hollows of the head just over the eyes, are very troublesome, and must be clipped with the points of the comb and scissors, taking very few hairs at a time. The parts upon which the saddle and collar press should be left comparatively thick, to prevent chafing; the legs also may be left similarly protected. The coat should not be cut closer than about half an inch in length, or the skin will appear through it. If a horse be extremely rough, it is advisable to clip twice during the winter, at the middle of October and the end of November. By this means he will look well all the winter, and be less liable to take cold than if his coat were removed in one operation. For two or three days after the operation, the horse should be kept warm and dry by means of an extra rug, a hood when exercising, &c.

CLOCK.—Every house should have a clock fixed in one or more of its rooms, in order that the various domestic duties may be regularly performed. Fancy clocks for the chimney-piece are very convenient, but generally expensive; they are usually of somewhat delicate construction, requiring

great care and to be kept constantly covered. Dutch or German clocks are mostly employed for ordinary use; they may be obtained for a few shillings, and, with common care, will perform remarkably well. Within the last few years, American clocks have been introduced into England. They keep



time extremely well, have a picturesque appearance, and are moderate in price. They are adapted either for the parlour, hall, stair-landing, or kitchen. Generally speaking, clocks do not require an extraordinary amount of care and attention; they only need being wound up at the proper intervals, occasionally oiled with the very purest oil, and cleaned once a year, or once in two or three years, according to the construction of the clock.

CLOGS.—A kind of shoe to protect the feet from damp or dirt. Clogs are easier to walk in than pattens, but they throw up more dirt. French clogs are the best, combining both patten and clog; having the cleanliness of one, and the firmness and flexibility of the other.

CLOTH, Choice of.—Particular attention must be paid to the firmness of the fabric and the closeness of the texture. If, on passing the hand lightly in a direction contrary to the nap, there be a general silkiness of feel, uninterrupted by harsh roughness, it is certain that the cloth is made of fine wool. The texture should not only be composed of fine threads, but it should have an even consistency, produced by the operation of felting, by which the fibres of the wool are so perfectly incorporated that they connect the tissue of the threads, and give the entire web the character of felt. The quality of cloth may also be tested as follows:—Take up a portion of the cloth loosely with both hands, press a fold of it between the thumb and forefinger of one hand, and give a sudden pull with the other; and according to the peculiar sharpness and vibratory clearness of the sound produced by the slipping of the fold, the goodness of the cloth is to be judged. The gloss on cloth should not be too satiny, as this causes it to spot with the rain.

CLOTH, Renovation of.—See Black Reviver.

CLOTH, Scouring of.—If black, blue, or brown, dry two ounces of fuller's earth, pour on it sufficient boiling water to dissolve it, and plaster the spots of grease with it; mix a pennyworth of bullock's gall with half a pint of chamber-lye and a little boiling water. Brush the spotted places with a hard brush dipped in this liquor, then immerse the article in a bucket of cold spring water. When nearly dry, lay the nap in its right position, and pass a drop of oil of olives over the brush to finish it. If gray, drab, or fawn, cut yellow soap into thin slices and pour water upon it, to moisten it. Rub the greasy and dirty spots. Let the article dry a little and then brush it with warm water, repeating, if necessary, as at first, and using the water a little hotter; rinse several times in warm water, and finish as before.

CLOTH, TABLE, Laying.—This is the first preliminary for a repast, and though fashion occasionally varies the details, the principles remain the same. Great care is required in opening the tablecloth to avoid rumpling it, and for this purpose it should first be placed lengthwise on the table, opening it only so far as to be still double. The double edge is placed exactly down the middle of the table, and then the upper half is smoothly turned over the still uncovered portion of the table, and gently smoothed down with the hand, but leaving the folds apparent, and the middle one exactly corresponding with the central lines of the table. The knives and forks should then be arranged round the table, the knives on the right and the forks on the left of each guest, the drinking glasses are set near these upon a d'oyley, and a table napkin tastily folded in the centre; at each corner the salts and other condiments are placed, and the tablespoons near them in an oblique direction. The mats are then arranged down the centre of the table, the larger size at each end and the smaller ones between; at the same time, or previously, the servants will place what is likely to be wanted on the sideboard—such as extra plate, knives and forks, glasses, &c.—and by way of making sure that all is done, the servant should finally walk round the table and satisfy himself that nothing is wanting.

CLOTHES BAGS.—The best material for these receptacles of soiled linen, is canvas, or strong unbleached calico. They should be about two yards long and the same in breadth. They require to be strongly sewn, and to have strings which will draw, run in at the top.

CLOTHES CLOSETS.—These small useful compartments should be lined with wood very closely fitted; furnished with shelves and pegs, on which to suspend ladies' dresses and other articles that are injured by folding. Glazed linen curtains should be made

to draw closely round the shelves, so as to preclude either dust or insects from entering.

CLOTHES LINES should never be left out of doors when not in use. When no longer needed, they should be carefully wiped, and, if wet, hung up in the open air to dry; after which they should be put away in a bag. Before they are used again they should also be wiped, to prevent them from soiling or marking the linen. *Clothes pegs* and *clothes props* should be treated in the same manner.

CLOTHES POSTS. — These should be fitted into sockets so as to be removable, and they will then last for years, but if left standing in the ground, they will soon decay at the bottom and become useless. A cover should be fitted into each socket, to keep earth and litter from falling in, when the post is removed.

CLOTHING CLUBS.—Societies formed, usually under the superintendence of benevolent individuals, for the purpose of securing a necessary supply of clothing to the poorer classes. The system adopted with these clubs is for the members to subscribe a certain small sum weekly, according to their means, and at stated seasons of the year, the aggregate amount saved, receives the addition of a contribution by the projectors of the club, and the whole amount is laid out in clothing for the members and their families. These associations are distinguished by the same excellent features that characterize kindred projects, namely, the encouragement of systematic savings however small, for the purpose of obtaining comforts which would not otherwise be attainable.

CLOVE.—The unopened flower-buds of a tree, native of the Malacca islands. These buds are carefully gathered and dried, and are thus exported. Cloves form one of our most agreeable spices, and are much employed in flavouring various dishes, preserves, liqueurs, &c. They contain a considerable quantity of essential oil, of a very pungent quality, in which their efficiency consists. Cloves are employed rather for their flavour than for their medicinal qualities; at the same time they are powerful stimulants to the stomach, and are used, but very sparingly, in conjunction with bitters.

CLOVE CAKES.—Beat six eggs with two teaspoonfuls of rose-water, half an ounce of cloves, quarter of a pound of sugar, and a pound of sifted flour; make it into a thin paste, divide into cakes, and bake them in white paper.

☞ Eggs, 6: rose-water, 3 teaspoonfuls; cloves, ½oz.; sugar, ½lb.; flour, 1lb.

CLOVE CORDIAL.—Put into a large stone jar, a quarter of a pound of cloves, half an ounce each of cinnamon, nutmeg, and coriander seeds; quarter of a pound of red currant jelly; ten ounces of sugar-candy; one ounce each of candied citron, orange, and lemon-peel, sliced; an ounce and a half of dissolved *isinglass*; three ounces of preserved ginger, sliced; two ounces of sweet and one ounce of bitter almonds, blanched and pounded; nine ounces of powdered loaf sugar; one pint of red cordial water; one gallon of proof spirit of wine. Stop up the jar effectually and shake it well daily for a month; then put it away in a dry room, and let it stand for twelve months. Strain and filter it into small bottles; cork and seal them. The cordial will be fit for use in two months, but further age will improve it.

☞ Cloves, ¼lb.; cinnamon, nutmeg, coriander seeds, ½oz. each; red-currant jelly, ¼lb.; sugar-candy, 1½ozs.; candied citron, orange, lemon-peel, 1oz. each: isinglass, 1½oz.; preserved ginger, 3ozs.; almonds, sweet, 2ozs.; almonds, bitter, 1oz.; sugar, 9ozs.; red cordial water, 1 pint; spirit of wine proof, 1 gallon.

CLOVE ESSENCE.—Infuse a quarter of an ounce of cloves in two ounces of proof spirit for a fortnight, then strain. This is used for sweets and mulled wine.

CLOVE PINK, CULTURE OF. See PINK.

CLOVE PINK EXTRACT.—This is used as a syrup for flavouring and colouring. Take three pounds of the petals of clove pinks, and, after removing the white claws, steep them in four quarts of boiling water for twenty-four hours. Leave it to cool, then strain and filter clear. Add a small quantity of spirit, just sufficient to preserve it, put it in small bottles and seal the corks.

CLOVER. — One of the most valuable species of artificial grass, and of which there are several varieties. The red clover, which will last four years if not allowed to seed, is the most valuable. Clover should never be sown except when the land is in the best condition, if possible, with the crop immediately following the summer fallow, or after turnips or potatoes. When sown on land on which grain has been sown, it is customary to roll the ground, to assist in covering the light seeds. The *choice of seeds* demands great care, as there are always many worthless sorts in the market. Surface applications may be employed for the purpose of rendering the crop more abundant. Soot is a favourite ingredient, and has uniformly the effect of strengthening and forwarding the crop. Saltpetre forms an excellent top-dressing for seedling grasses. Liquid manures are also extensively used, and are lasting in their effects. The first cutting in ordinary practice is delayed until the plant is in full bloom, and sometimes until after the bloom has begun to decay; but to ensure a good second crop, the first should be cut before the plant comes to bloom. After the clover is cut down, if it is placed together in heaps, a slight degree of fermentation which ensues, will cause the seed to leave the husk more readily when thrashed; and on the fermented heaps being spread out to the sun, the crop will soon be dry enough to lead home to the steading. When a *large quantity* of clover is cultivated for seed, the threshing-machine may be employed to separate the seed; but for a *small quantity* it is better to use the flail. Should the farmer raise clover seed only for his own use, the seed may be sown in the husk; a plan which prevents the land from becoming clover-sick. The quantity of seed to be sown must depend on the condition of

the land, the presence or absence of grass seeds, and whether the land is to be unbroken for one, two, or more years.

CLUB.—An association of gentlemen formed for the purpose of securing in a superior degree the comforts and pleasures of social and domestic life, at an economical rate, and on exclusive principles. Clubs are established in various parts of the country, but in London the advantages offered are more numerous, and the management vastly superior. The club-house generally comprises a library, public and private dining-rooms, dressing-rooms, bed-rooms, drawing-room, card-room, billiard, and smoking-room. One of the most important characteristics of a club-house is, that the viands supplied are of the best description, excellently prepared, and perfectly served; while the prices charged are most moderate. A person wishing to become a member of a club must be first proposed by some actual member, who thereby becomes responsible for his pretensions and eligibility; after due notice is given, the proposed member has to undergo the ordeal of the ballot-box, and is rejected or admitted in accordance with the established rules of election of the particular club. The entrance fee payable on admission into a club varies from ten guineas up to thirty; and the annual subscription from £5 to £10. Notice is given when the subscriptions fall due, and if payment is not made within a certain time, the defaulter's name is taken off the books of the club, and he is no longer privileged to partake of any of its benefits.

CLUB-FOOT. See FOOT, DEFORMITIES OF.

CLYSTER.—A medical instrument for administering internal applications to the body. Clysters are most commonly employed as aperients, but they are also used as anodynes, or antispasmodics for the purpose of dispelling wind, or as internal fomentations, or as styptics. The mechanical means used for the administration of clysters are very numerous; the most useful and convenient forms are the injecting syringe and the vulcanized India-rubber bag. The mode of application is simple and self-explanatory. Clysters, except in cases of obstinate constipation, should be rarely administered without the order or superintendence of a medical attendant. In cases of constipation, tepid water or gruel may be used. But it is extremely unwise to resort to this means of relief habitually, as the greatest injuries are liable to result. They should therefore be restricted to the accomplishment of temporary and occasional purposes; and as an assistant to the efforts of nature, not as a substitute.

COACH ACCIDENTS.—When the horses attached to a coach in which you are sitting run off in defiance of all restraint, you should prepare yourself for the possible upset that may follow. Keep your arms and legs from straggling, sit easily and compactly, and when the overturn does occur, instead of spreading abroad your arms, stretching out the body, &c., suffer yourself to roll over in the direction in which you are thrown, and in the majority of cases the hurt received will be comparatively trifling. If run away with in a vehicle that affords an escape behind, you may, when the threatened danger is great, scramble over the back, and hang on by the hands until a favourable opportunity offers of dropping to the ground. But under ordinary circumstances it is better to sit still and endeavour to be as calm and collected as possible. In many accidents of this kind persons lose all presence of mind and jump from the vehicle while it is moving rapidly. This is frequently attended with loss of life, and almost certainly with broken limbs and severe bruises.

COACH-HOUSE. A coach house should be constructed of such proportions as to hold the carriages which may be desired; it should be provided with a small fire, carrying a flue between it and the harness-room, so that both may be simultaneously provided with sufficient warmth.

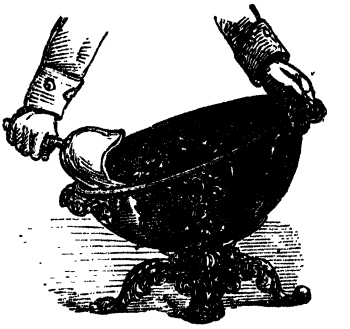
COACHMAN DUTIES OF.—A coachman, besides his skill in driving, requires complete experience of the stable of which he has the management. Where a single horse or pair only are kept, a man frequently engages to do the entire work; to perform this satisfactorily, he should be energetic and in the prime of life, as the care of a carriage and pair of horses will occupy seven or eight hours daily, independent of the driving. A coachman should be scrupulously neat and clean in his personal appearance when engaged in driving; and above all, he should observe strictly sober habits, otherwise he will be unfitted for his duties, and may jeopardize his own life, and that of his employers.

COAL.—Coal is found in several districts in a great variety of quality. *Newcastle* coal is generally esteemed for its superior value, having a greater power of sustaining heat, making less dust, and leaving a smaller residue than any other. Yorkshire, Staffordshire, and Derbyshire supply what is termed *inland coal*, which is lower in price and does not throw out so great a heat as the Newcastle. With a little management, however, this coal will be found to answer ordinary purposes sufficiently well, and perhaps the best method of burning it is, to mix Newcastle coal with it in the proportion of about one half. When coals are stored in the cellar, the men who bring them should be directed to mix them properly, so that all the large coal does not lie on the top and the dust underneath; for when this is the case the coal is not used fairly; that is to say, the large and small coal should be burnt in equal portions together. The most economical method of *purchasing coal* is direct from the wharf; if they are procured through a "coal agent," a certain per-centage, which is allowed him as commission, is charged to the consumer. Nor should coal be bought in small quantities of retail dealers, for independent of the extra price charged, the full weight is seldom if ever given. When coals are brought in, some one should watch while they are being shot into the cellar; noting if all the sacks are full, and count-

ing them when they are empty. If there is reason to suspect a deficiency of weight, the buyer should have each sack weighed before it leaves the waggon; coal merchants being bound by Act of Parliament to deposit weights and scales in their waggons for that purpose. The *economy of coal* is a great consideration, especially where a number of fires are kept burning at one time. The chief principles are, to make a good fire at once, not to poke it too frequently, and to burn the cinders that fall beneath, by throwing them on to the fire from time to time, instead of suffering them to accumulate, and ultimately perhaps to be thrown away. The *properties of coal*, when burning, are generally speaking not injurious to the health, especially when employed in open fire-places, or in stoves where there is a free egress for the sulphur and ammonia evolved; but if the chimney or stove smokes, the head and lungs may be seriously affected by the quantity of sulphur and ammonia confined in the room; and instances have been known where fatal consequences have attended imperfect draughts. When the price of coal is a consideration to the consumer, the following will be found an economical substitute:—Take fifty pounds of Newcastle coal in a state of dust, fifty pounds of dry sand, fifty pounds of powdered chalk, and twenty-five pounds of mineral pitch; melt the pitch in a large iron pan, and stir in the other articles; when the mixture is becoming cool, pour it into a sort of cake, and when quite dry and hard, break it into pieces of about the size of ordinary coal, and use it in the usual way.—See FIRES, MANAGEMENT OF.

COAL CLUBS.—Associations formed for the purpose of ensuring members a supply of coal during the winter season. The principles of management are, for the members to pay a certain sum weekly, proportionate to the quantity of coal they require; and the supply thus secured is delivered at a specified time. The simple recommendation of a coal-club is, that it encourages persons to make a provision for the winter, which, under other circumstances, they would probably neglect. So that by the outlay of a small sum weekly at a favourable season of the year, an important domestic comfort is secured, which in many cases must otherwise be dispensed with, or purchased at an exorbitant rate. At the same time, due caution should be exercised in joining a coal-club; some of them are merely speculations got up by unscrupulous persons, for the purpose of disposing of inferior coal at a high price; but the criterion in this, as well as every other association of a similar character, is to ascertain the general mode of conducting business, the names of the promoters, the length of time it has been established, and other corroborations of soundness and fair dealing.

COAL-SCUTTLE. — In this domestic utensil several recent improvements have been introduced. The most convenient form of construction is, that where the scuttle may be depressed obliquely when required for use, and swung back into its original position when not wanted; these scuttles are also fitted with a cover, and are otherwise ornamented, so that they may



occupy a corner of the room without appearing at all unsightly.

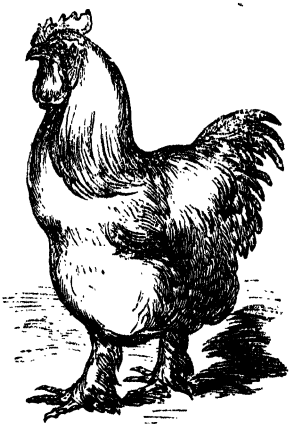
COAT. — As this article of male attire covers the most important organs of the body, it should be fashioned in such a manner as to afford a due amount of protection, without restraining the action of the members, or impeding the general organization. The fitting of a coat in connection with health, requires that it should be as easy when buttoned as when unbuttoned, so that without any unpleasant pressure upon the chest it can become closely buttoned up to the chin. The power of doing this, is a convenient provision against the sudden alternations from heat to cold; for this simple protection will prevent delicate persons from receiving many of those mischiefs which the inconstant climate of England occasions. In *choosing a coat*, whatever the prevailing fashion may be, the best plan is to order one from a respectable tailor, and to be measured for it expressly. The make of a coat, independently of the comfort or discomfort it imparts to the wearer, has greatly to do with the length of time that it will last, for if each section of the garment is made so as to adapt itself to that particular part of the body, every portion of it will wear uniformly; but if the coat is awkwardly cut and inartistically put together, there will be a greater stress upon one part than upon another, and the continual dragging thus kept up, will cause one-half of the garment to give way before the other is scarcely worn. The *preservation* of a coat depends upon the simplest observances of care. For instance, the coat that is worn out of doors, should not be worn in doors to lounge about or write in; an old coat should always be kept at hand, so that a change may be readily made without inconvenience. Coats are liable to become soiled at the collar, this may be remedied by applying a little gin with a piece of sponge or rag. Another defect in a coat that has been worn for some time is an awkward projecting at the elbows; to rectify this, the part should be pressed

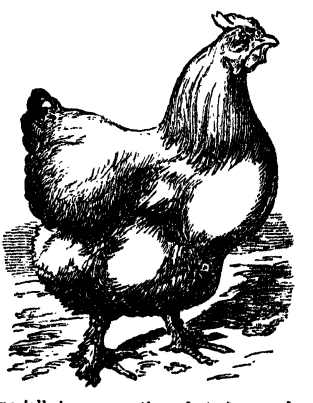
with a hot iron, and then hung up for a week with a weight suspended from the wrist. When coats are not in use, they should not be placed away in drawers or boxes, for it is almost impossible, even with the greatest care, to fold them so that they will not wrinkle when taken out, which gives them a very unsightly appearance; they should therefore be hung up in a closet or wardrobe, by which such consequences will be avoided. The *etiquette* in connection with the wearing of coats is extremely stringent; certain occasions and ceremonies requiring a dress coat to be worn, and others a frock coat, and a disregard of this custom in either case, would be considered as a solecism in good breeding. *Dress coats* are worn at dinners, balls, theatres, at all visits of ceremony, and in the evening generally. *Frock coats* are worn at weddings, breakfasts, morning-concerts, pic-nics, when walking or riding, and in the morning generally. In connection with this subject, it should be generally known, that at the Opera, a person is positively refused admission to the boxes, pit, or stalls, unless he is attired in a black dress coat.—See APPAREL.

COBWEB.—This well-known production of the spider will be found an excellent styptic for arresting bleeding from simple flesh wounds, leech-bites, &c. The web of the black spider has been used with much success as a medicine for ague.—See AGUE.

COCCULUS INDICUS.—The fruit of an East Indian tree. It contains a bitter principle, and is frequently used in this country in the manufacture of beer, as a substitute for hops, and to increase the intoxicating quality of the beverage. It is also used to poison fishes; a few handfuls of it ground into coarse powder, and thrown into a pond, bring the fish in the course of a few hours, to the surface, in an intoxicated or poisoned state; from which, however, they recover if quickly removed into fresh water.

COCHIN CHINA FOWLS.—The largest species of all domestic fowl. They derive their name from Cochin China, the place whence they are imported into England. The full-grown Cochin China cock weighs from nine to fifteen pounds, the hen from seven to ten. In height the male bird grows from twenty-two to twenty-five inches, the female from eighteen to twenty-two inches. Owing to the difficulty which this fowl has of ascending from and descending to the ground, the perches should not be raised much more than two feet. Where Cochin China fowls are kept in great numbers, a range of roosts should be erected: the first a foot in height, the second two feet, and so on, whilst the last should have an intervening space between it and the wall, sufficient to allow the birds abundant room when roosting. For obvious purposes of cleanliness, the perches should not be erected immediately one above another; they should be tolerably thick, because the great length of toe and weight of the body, characteristics of this fowl, render it absolutely necessary that their claws should retain a firm clutch, without too great an effort to maintain their equilibrium. Sometimes they are suffered to roost on the ground, and in that case the litter must be cleansed away daily, especially in summer time; but when perches are used, a thorough cleansing once or twice a week, according to the number kept, will be sufficient. The Cochin China hen is able to cover seventeen or eighteen eggs, but twelve or thirteen are a safer number, to





prevent her breaking any of them in the nest. The nest should be somewhat shallow, but of wide dimensions. The chickens are remarkably strong and hardy, thriving well from the moment of their birth until they arrive at mature growth. Rice is their natural and proper food; it should be prepared by boiling or steaming until the grain is considerably swollen, but on no account should it be mashed or broken up. This food, however, owing to its binding properties, should be occasionally changed. Barley well steamed and soaked for five or six hours will be found a beneficial and nutritious food. Sopped bread, bread and milk, boiled liver, and raw beef chopped fine, eggs boiled about twenty minutes and cut small, these may be given by turns in small quantities. Young Cochin China fowls are particularly fond of mangold-wurzel and turnips. When these are given, they should be cut in half, and suspended by a piece of string just above their heads; the pecking at this will afford them both amusement and exercise. The following *points and properties* characterize the better class of Cochin China fowls, and should be attended to in the choice of them. The beak must at its base be very thick, short, slightly curved, and of a deep yellow tint. The comb should be particularly erect, without inclining to curl or droop; it should be single, evenly serrated, of fine grain and texture, and of a bright vermillion colour. Their wattles—double, and of a vermillion tint also—must be moderate in size; from top-knots they should be entirely free. The eye should be both bright and gentle; not glaring, but strong, and without a propensity to blink; the colour of the iris corresponding with the prevailing tint of the entire feather. The head ought to be well shaped and small, and the ear should betray no trace of white. The breast should be capacious, full, and deep; the back rising in a gentle slope. The tail short and firm, and well covered with down. The neck can scarcely be too short; the neck-hackle should appear well trimmed, compact, and with a graceful fall upon the shoulder. The wings, short and of convex form, must fit closely to the sides. The body should possess a somewhat forward inclination, although the head itself cannot be too erect. The legs should be particularly firm, shanks short and thick, and the toes well spread. Among the *diseases* to which the Cochin is peculiarly liable, is the *white speckled comb*, the accompanying appearance of which consists of small white spots scattered in patches on the surface of the comb; the disease will then spread over the whole surface of the body, and if not remedied, the feathers will ultimately drop in bunches from the bird. For this complaint a teaspoonful of castor oil should be given, and green meat of any kind in a crude state will be found beneficial as a temporary diet. Apoplexy and paralysis are also diseases to which this bird is very liable; and the treatment of this disease should be similar to the preceding. *Rupture of the foot* is another disease which demands especial attention. When lameness betrays the existence of this disorder, the bird should be subjected to a strict examination, and if a wound is observed, the affected part should be for several days bound up in bran poultices until all inflammatory symptoms have subsided; bandages of dry linen should then be employed for five or six weeks, and these should be changed every three or four days. Cochin China fowls are particularly subject to attacks of *indigestion*, for, being hearty feeders, they occasionally eat too fast and voraciously. When this is the case, the succeeding meal should consist of a small quantity of soft food only, such as meal, &c., together with green meat, either raw or boiled; should this not suffice, ten grains of jalap may be administered in the form of a pill; but this latter remedy should only be resorted to in extreme cases. In *breeding* from young pullets, cocks about three years old should be invariably paired with them; and their "setting" their first clutch of eggs, which are generally very small, is not to be recommended. To breed from cockerels, they should be paired with hens about two or three years old. At two years old the hens are of mature age, whilst cocks are frequently three years arriving at that stage. The average *cost per week* may be set down at threepence per pair, including all expenses, hatching and so forth. *Where the space for keeping poultry is limited*, Cochin China fowls will be found the most convenient to keep, by reason of their being better able to bear confinement than any other species. Another recommendation in their favour is, that at a time when new-laid eggs are rare, and, from their scarcity, of much higher value, a regular supply may be relied on from this bird. The *flavour of the flesh*, although not generally esteemed, may, by attention and fair and full feeding, be rendered both tender and nutritious. One of the great aims is, to bring both the crop and digestive organs to a state of healthy vigour, so as to compel the food to pass through all its stages speedily. To accomplish this, the bird should be fed chiefly upon barley-meal, mixed occasionally with two or three grains of cayenne pepper. The quality and flavour of the flesh will also be considerably enhanced if, previously to killing, the bird is deprived of food for seven or eight hours, and kept at the same time in a state of darkness.

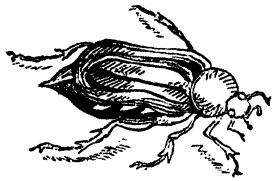
COCHINEAL.—An insect which yields the well-known colouring matter, "carmine." The insects are scraped from the plants into bags, killed by boiling water, and dried in the sun. Cochineal is sometimes adulterated by the admixture of a manufactured article composed of coloured dough. This is detected by the action of boiling water, which dissolves and disintegrates the imitation, but has little effect upon the real insect.

COCK-A-LEEKIE.—Boil from four to six pounds of good shin beef, well broken till the liquor is very good. Strain it, and put to it a large fowl, trussed as for boiling, and, when it boils, add about a dozen leeks blanched, and cut in inch lengths; skim carefully. In half an hour add another

dozen of leeks, and a seasoning of pepper and salt; and, after a slight boil up, serve in a tureen.

COCKATOO.—This bird is of a species similar to the parrot. They are not easily taught to speak, and there is one species that does not speak at all; but this is in some measure compensated for, by the facility with which they are tamed. The temper of this bird is remarkably mild, and its disposition affectionate. Though cockatoos, like parrots generally, use their bill in ascending and descending, they have not their heavy and disagreeable step, but, on the contrary, are very active, and hop about nimbly.

COCKCHAFER.—A well-known insect, extremely destructive to vegetation. The female deposits her eggs in the ground, where, in a short time, they change into young grubs; these, when full fed, are about an inch and a half long; they are soft and white, with a reddish head and strong jaws.



In this state the insect remains four years, during which time it commits dreadful ravages on the roots of grass, plants, and even young trees. It also feeds on the leaves of apples, pears, and roses, gnawing them full of small holes, and even transferring its attacks to the young fruit of the apple. The only method of reducing the numbers of these beetles is by searching for them during the evening, particularly beneath the grass which they have cut up, where they will be found lying on their sides within the mould.

COCKLE SAUCE.—Scald the cockles in their own liquor, and when it settles add a little water if necessary; strain, and season with mixed spice. For brown sauce put in a little port wine, garlic, and an anchovy For white sauce, use sherry, lemon-juice, and white pepper.

COCKLES, PICKLED.—Boil two quarts of cockles in their own liquor for half an hour, skimming them well; then take out the cockles, and strain the liquor through a cloth; take a pint of it, and add to it three quarters of an ounce of mace and half an ounce of cloves; boil these together once, and then add to it the cockles and remaining liquor; stir it well, add a tablespoonful of salt, three quarters of a pint of vinegar, and a quarter of an ounce of whole pepper. Let it stand until cold, then put the cockles into small barrels or jars as close as they will lie; pour the liquor over them, and as it becomes absorbed, add more. Cover them up close, and in a few days they will be fit to eat.

COCKLES, TO DRESS.—This fish should be procured a day or two before they are wanted, that they may be freed as much as possible from the grits. They are cleaned as follows: Put the cockles into a tub with plenty of water, and stir them up two or three times a day with a birch-broom. Change the water each day, and when they are properly cleaned, put them into a saucepan of hot water, and boil them. As soon as the shells open they are done.

COCKNEY DIALECT.—Persons native to London, or who have lived in it for some years, and have received only an imperfect education, commit a class of errors in speaking, which are popularly known as *Cockneyisms*. One of the most glaring blunders that Cockneys are guilty of, is the misapplication of the letters *v* and *w*, the word *werry* being used for very, *walk* for walk, *welvet* for velvet, *vater* for water, &c. The next most conspicuous error is in connection with the letter *h*, which is aspirated when it should be silent, and silent when it ought to be aspirated; as, for instance, "*H*edward, where's my 'at?" "'Elen, boil me a *h*egg." Another error consists of adding the letter *r* at the end of words; as *idear* for idea, *Maria* for Maria, and sometimes the sound is totally changed in this way, *winder* being used for window, *elber* for elbow, &c.; another blunder originates in the very opposite of this, namely, leaving out the *r* entirely, as *hoss* for horse. Other errors occur in making use of such phrases as "this here" and "that ere," instead of simply this and that. All of these blunders may be easily remedied by the exercise of the most common intelligence, and by a determination to pronounce the words correctly whenever it is necessary to use them.—See ASPIRATION, PRONUNCIATION, &c.

COCKROACH.—See BEETLE.

COCOA, ADULTERATION OF.—The adulteration of this article is not of a serious nature, being confined to flour, starch, potato farina, arrowroot, "*tous les mois*," and animal fats; the latter are used as a matter of necessity, to prevent the grain from burning. When pure cocoa is required, the "nibs" or "beans" are easily procurable, and only require to be ground.

COCOA, PREPARATION OF.—Directions for making this beverage are usually sold with the prepared or best quality of cocoa, which is merely mixed with boiling water in the proportions indicated on the packets. That which is prepared from the nibs requires several hours' boiling, and should be left until quite cold, that the oil which rises to the surface may be cleared from it before it is again heated for table.

COCOA, PROPERTIES OF.—Cocoa is made by grinding the roasted cocoa or chocolate beans together with the husks. It is prepared either from the cake after expressing the oil from the beans, or from a powder. Cocoa forms a wholesome and nourishing beverage, especially for breakfast, and, being in a greater measure deprived of its oil, is much more grateful to the stomach than chocolate; and many persons find it a very digestible beverage when neither tea nor coffee will agree with them.

COCOA-NUT.—The fruit of one of the palms which grow wild in the eastern parts of Asia, and the islands of the Indian seas. The fruit is covered externally by a thin tough rind, immediately within which, is a quantity of tough fibres, and in the midst is enclosed the nut itself, which consists of a very hard shell, containing a kernel of a white substance, being itself hollow. The kernel in its fresh state is very nutritive, containing a good deal of fixed oil; but when it arrives in England, it is generally dry and indigestible. While the nut is green, the whole of the shell is filled with the juice called the milk, which is agreeably sweet and refreshing. But by the time the nut reaches England, it will seldom yield more than half a pint of milk at the utmost. The kernel of the nut, when pressed, affords a most excellent oil. From the outer shell of the nut bowls, drinking cups, &c., are made, and from the fibre a species of matting.

COCOA-NUT CAKES.—Having washed and dried the nut, pare off the rind and grate it; dissolve a quarter of a pound of loaf sugar in a little water, then add the nut, and stir it till it boils; when nearly cold, add the yolks of three eggs well beaten. Mix thoroughly, and bake in patty-pans lined with a puff paste.

COCOA-NUT FIBRE.—This material is of modern introduction, and is now extensively used in the manufacture of mattresses, and in making matting for kitchens, lobbies, &c. For both these purposes it is extremely well adapted, is readily cleaned, and may be procured at a moderate cost.

COCOA-NUT PUDDING.—Break the shell of a moderately-sized cocoa-nut, so as to leave the nut as whole as possible; grate it, after removing the brown skin, mix with it three ounces of powdered loaf sugar, and half an ounce of lemon-peel; mix the whole with milk, and put it into a tin lined with paste. Bake it of a light brown.

COCOA-NUT SWEETMEAT.—Pare the nut and throw it into cold water; then grate it, and boil it in clarified sugar (in the proportion of a pound to each pound of cocoa-nut) until quite thick; stir it frequently to prevent it burning. Then pour it on a well-buttered dish or marble slab, and cut it into any form desired.

COD BAKED.—Take the middle piece of the fish, and skin it; make a stuffing with a little of the roe parboiled, a piece of butter, the yolks of two hard-boiled eggs, some grated bread crumbs and lemon-peel, pepper, salt, and nutmeg; bind it with the beaten white of an egg; put it into the fish, and sew it up. Place the whole in a tin dish with bits of butter over the top of it, and bake it for an hour in a Dutch oven; turn and baste it frequently. Garnish with fried roe or oysters, and serve with melted butter, or oyster or shrimp sauce.

COD BOILED.—Wash the fish and cleanse the inside, the back-bone in particular, with the most scrupulous care; lay it into the fish-kettle and cover it well with cold water, mixed with five ounces of salt to the gallon, and about a quarter of an ounce of saltpetre to the whole. Place it over a moderate fire, clear off the scum perfectly, and let the fish boil gently until it is done. Drain it well, and dish it carefully upon a very hot napkin with the liver and the roe as a garnish. To these may be added tufts of lightly-scraped horse-radish round the edge. Serve oyster sauce, and place melted butter with it, or anchovy sauce when oysters cannot be procured.

COD BROILED.—Having well cleaned the fish, cut it into slices of about an inch thick; dry them well with a clean cloth, then rub them with thick melted butter, and sprinkle a little salt over them. Place them on a gridiron over a clear fire, and when one side is done, turn them carefully to broil the other. Serve with melted butter and anchovy sauce.

COD CRIMPED.—Cut a fresh cod into slices, lay them for three hours in salt and water, with a glass of vinegar added; the fish may then be either boiled, broiled, or fried.

COD CURRIED.—Slices of cold cod may be dressed in this way. Fry the slices with sliced onions in butter, then stew them in white gravy thickened with a dessertspoonful of curry powder and a teacupful of cream.

COD FRIED.—Cut the middle or tail of the fish into slices an inch thick, season them with salt and pepper, and fry them of a light brown on both sides; drain them on a sieve before the fire, and serve them on a well-heated napkin with plenty of crisped parsley round them. Serve with melted butter and anchovy sauce.

COD PIE.—Take dressed cod and cold oyster sauce; put a little of the sauce at the bottom of a pie-dish, then a layer of flakes of cod, with a little of the liver cut in small pieces; season with pepper, salt, and nutmeg; repeat the layers until the dish is full, cover it with bread crumbs and pieces of fresh butter; bake for three quarters of an hour, and let the top be quite brown. A couple of sounds well soaked, boiled tender, and cut in small pieces, are a great improvement.

COD, SALT, BOILED.—Before cooking, soak it for some hours in cold water, and then boil it gently until it is tender. It is usually eaten with melted butter and egg sauce, and served with boiled parsnips.

COD SOUNDS.—This is the white skin of the belly, and is reckoned a great delicacy; it may be either boiled, broiled, or fried. Previous to dressing either way, it should be well soaked, washed, and parboiled.

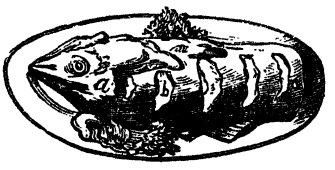
COD STEWED.—Cut four sounds of cod into slices, season them with pepper and salt, and put them into a stew-pan with half a pint of water, some good gravy, half a pint of wine, the juice of half a lemon, a dozen oysters, a piece of butter rolled in flour, and two or three blades of mace. The fish will be sufficiently stewed in about a quarter of an hour.

COD, TO CHOOSE.—This fish is best when thick towards the head, and the flesh cuts white and flaky. The gills should be very red, and the eyes bright; when dim and flabby the fish is not good. It is in its prime during the months of October and November; and if the weather be cold, from the latter end of March to May.

COD, TO PICKLE.—Cut the fish into slices and put them into boiling water, season with salt, pepper, sweet herbs, and spices. Let it *just* boil, but no more. Then take the slices out, and when they are cool lay them by closely in pairs. Boil half the quantity of vinegar that will be necessary to cover the fish with an equal quantity of brine, pour it over them, and when cold cover them well up.

COD WITH POTATOES.—Skin soaked dried cod, and hang it to dry; pare a dozen or more of fine large potatoes, wash them well, and put them into a saucepan. Lay as much cod as will be required on them, add hot water enough to cover all, close the saucepan, and let it boil for three quarters of an hour; then mash the potatoes with hot milk and butter; take out the bones from the fish, chop it fine, add them together and season to taste; lay slices of hard boiled eggs over, and sprigs of parsley around it.

COD'S HEAD AND SHOULDERS, TO CARVE.—Take off slices quite down to the bone, in the direction from *a* to *b*, and as low as *c*. With each slice of fish give a piece of the sound, which lies underneath



the back-bone and lines it, and which may be found by passing the slice under the bone. A few choice parts are in and about the head, as the soft part about the jaw-bone, and the palate and tongue; these may be removed with the fish-slice or a spoon.

COD'S HEAD AND SHOULDERS, TO DRESS.—This is considered the choice part of the fish, and is usually boiled. It will eat much finer if a little salt is rubbed down the bone, and along the thick part, if it be cooked the same day. To boil it, flour a cloth, tie it up securely, and put it on in cold water, into which put a handful of salt.

CODICIL.—A supplement or addition made to a will by a testator, adding to, explaining, or altering some part of his former disposition. It may be written on the same paper, or affixed to or folded up with the will, or it may be written on a different paper and deposited in a separate place. Though a man can properly only make one will, he may make as many codicils as he pleases, and the last is equally valid with the first, if not contradictory. If, by two codicils, the same thing is given to two individuals, the law enjoins that they must divide it between them. In general, the law relating to a codicil is the same as that regarding wills, and the like guarantees of signature and attestation are required.—See WILL.

CODLIN CREAM.—Pare and core a score of codlins; beat them in a mortar with a pint of cream; strain it into a dish, and add sugar, bread crumbs, and a glass of wine to it. Stir well, and serve in cups or glasses.

CODLIN TART.—Scald the fruit and take off the skin. Put a little of the liquor on the bottom of a dish, lay in the apples whole and strew them over with fine sugar. When cold, put a paste round the edges, and over the fruit. Moisten the crust with the white of an egg, and strew powdered loaf sugar over it.

CODLINS, TO PRESERVE.—This fruit may be kept for several months, if gathered of a middling size at Midsummer, and treated as follows:—Put them into an earthen pan, pour boiling water over them, and cover the pan with cabbage leaves. Keep them by the fire for some time, then pour off the water and leave them to cool. Then place the codlins in a stone jar with a small mouth, and pour on the water which previously scalded them. Cover the jar with bladder wetted and tied very close, and over that a paper tied again.

COD LIVER OIL.—A medicine that has recently acquired much reputation for its supposed remedial powers in consumption, scrofulous, and other glandular affections, chronic gout and rheumatism, certain skin diseases, and several other ailments. It is generally supposed that the *iodine* and *bromine* which are present in minute quantities in this fish are the substances to which it materially owes its efficacy. It may also be inferred that one of its most active constituents is *free phosphorus*; the marked action of this agent on the nervous, vascular, and secret organs being perfectly established. The difficulty of bringing it into a form for administration is removed by the employment of cod liver oil; and nature provides a remedy where art fails. The pale brown colour is the best; and when good, it has the odour of a boiled cod's liver, and is far from

being either rancid or nauseous. The best vehicle for taking cod liver oil in, is new milk; and the disagreeable flavour of the drug can easily be disguised by the addition of one drachm of orange-peel to every eight ounces of oil.

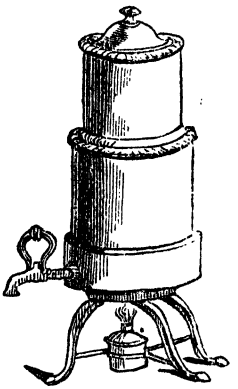
COFFEE, ADULTERATION OF.—The extensive adulteration of this article of consumption is betrayed by the fact that a much larger quantity of a substance *called* coffee is annually sold than passes through the Custom House. The chief articles with which coffee is adulterated are chicory, different kinds of grain, potatoes, and beans. In addition to these articles, another ingredient is used, known as the coffee colourer, and this consists chiefly of burnt sugar. When coffee is suspected, a portion of it should be placed gently on the surface of a glass of water; the genuine powder will remain swimming on the water, but the adulterants will sink to the bottom. The reason why the coffee floats upon the liquid is to be found in the quantity of essential oil which it contains, making it lighter than the water, which it at the same time repels. It will also be observed in repeating these experiments, that the water to which coffee alone has been added becomes scarcely coloured for some time, whilst that with the chicory, in less than a minute assumes a deep brown tint. The presence of roasted grain may also be detected by the blue colour produced on the addition of a solution of iodine to the cold decoction. These researches may be further aided by the use of a microscope, by which the difference in the grain of the coffee and other ingredients will be readily detected. Never buy *ground* coffee except of tradesmen of unquestionable integrity; some grocers make it a practice, in order to give their customers confidence, to grind the coffee while they wait for it. In such cases, chicory is frequently left in the mill to mingle with the coffee that is introduced, or a box of chicory nibs of about the size of coffee berries is kept upon the counter, a handful or so of which are adroitly thrown into the mill during the process of grinding. In choosing *whole* coffee, care should be taken that the berry is not too dark; for, if so, it has been too much roasted, and some of its active properties have necessarily been injured or destroyed. Above all, the coffee drinker should never buy the coffee contained in canisters, for he may be assured that it is even more adulterated than other coffee not so packed.

COFFEE CREAM.—Having dissolved an ounce of isinglass, boil it with two quarts of cream, and mix it with a pint and a half of very strong coffee; sweeten well, whisk it for ten minutes, put it into custard cups and let them stand in boiling water until they become firm.

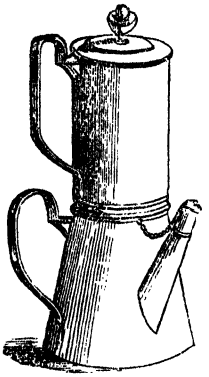
COFFEE ESSENCE.—Take two pounds of ground coffee; infuse one of the pounds in a quart of water, then let it stand to settle; when clear pour it off, and infuse the other pound of coffee in it; boil half a pound of sugar to caramel height, and put in the coffee to dissolve; then pour it into a pipkin with another half-pound of sugar; carefully close the lid of the pipkin, and let it simmer for eight or nine hours; then strain it, and when cold, pour it into bottles, cork them closely, and keep them in a cool place. When it is wanted for use put some of it into a cup with warm water, according to the strength the coffee is desired. This will be found very useful when travelling, or when there is not time or convenience to prepare the coffee in the usual manner.

COFFEE MILK.—Boil a dessertspoonful of coffee in about a pint of milk for a quarter of an hour, then put into it a shaving or two of isinglass, and clear it; let it boil a few minutes, and set it on the side of the fire to fine. Sweeten to taste.

COFFEE POT.—The vessel known generally as the coffee-pot has been objected to by many persons, as not being capable of producing the beverage sufficiently fine and clear, several improvements have therefore been introduced; one of these is the *percolator*, represented in the engraving. The size of the filter must be regulated by the number of persons for whom the coffee is to be prepared; for, if a large quantity of the powder be heaped into an insufficient space, there will not be room for it to swell, and the water will not pass through. Put three ounces of coffee into a percolator which will contain two pints and a half; shake the powder quite level and press it closely down; remove the presser, put on the top strainer, and pour round and round, so as to wet the coffee equally, about the third of a pint of boiling water. Let this drain quite through before more is added; then pour in more boiling water; and when that has passed down, add the remainder; let it drain entirely through, then remove the top of the filter, put the cover on the part which contains the coffee, and serve it immediately. Another species of coffee-pot is the *cafetière*, by which the coffee is made upon somewhat the same principles as the percolator, but is of a slightly different construction. One thing is essential with coffee-



pots, whatever their fashion may be; and that is, to keep them scrupulously sweet and clean. To this end the vessel should be washed out thoroughly, immediately that it



is done with, the lid taken off, and the vessel itself set by, with the orifice downwards.

COFFEE, PREPARATION OF.—To produce this beverage in perfection it is necessary to employ the best materials in its preparation; and the coffee should also be fresh roasted and fresh ground. The proportion of coffee used should be *at least* one ounce to a pint and a half of water; and when desired stronger, the quantity of coffee should be increased accordingly. The coffee-pot should be heated previously to putting in the coffee with a little boiling water, the coffee may then be put in, and the boiling water poured over it. This simple infusion is all that is required to make good coffee, for all the useful and palatable matter in coffee is so very soluble that it yields immediately to the action of hot water. If, however, boiling be insisted upon, the process should be performed as follows: Put the necessary quantity of water, into a pot which it will not fill by some inches; when it boils, stir in the coffee; the contents of the pot will then gradually rise to the top and afterwards fall; let it boil slowly for three minutes longer, then pour out a large cupful twice, *hold it high over the coffee-pot*, and pour it in again; then set it on the stove for ten minutes longer. It will be perfectly clear by this means without any fining.

Another method of making coffee is, to divide the water about to be used into two parts, and to set the coffee over the fire in one half of the *cold* water until it comes to a boil. After being set by the side of the fire for a few seconds, it should be poured off as clear as it will run. Immediately the remaining half of the water at a *boiling heat* should be poured on the grounds; the vessel is to be placed on the fire, and kept boiling for about three minutes. This will extract all the bitterness left in the grounds, and after a few moments' subsidence, the clear part is to be poured off, and mixed with the former liquor. This mixed liquor will contain all the qualities which originally existed in the roasted coffee in perfection, and will be as hot as any taste can desire it.

If, however, fining is necessary, it may be effected by adding a shred of isinglass, a small piece of clean eel or soleskin, or a spoonful of white of egg. Another plan is to place the vessel containing the made coffee upon the hearth, and to sprinkle over its surface half a cupful of cold water, which from its greater gravity descends and carries the foulness with it. Another method sometimes adopted is to wrap a damp cloth round the coffee-pot. The colour and flavour of coffee may both be improved by the addition of a single teaspoonful of port wine to a cupful of the beverage.

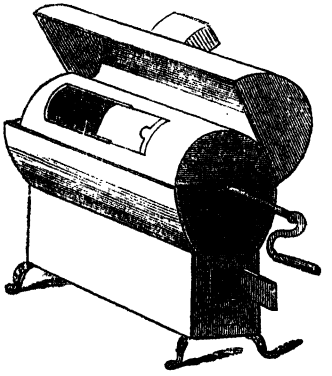
COFFEE, PROPERTIES OF.—Coffee, when properly prepared, and used in moderation, is to most persons an exhilarating, grateful beverage. With some persons, however, it is heating, and extremely difficult of digestion. If drunk in the morning for breakfast it should be of a proper strength, and well diluted with either cold or hot milk. Coffee is frequently employed after dinner as a digester; when thus employed a small cupful only should be taken, without milk, and sweetened with sugar-candy. In this guise it is also an excellent substitute for spirits or wine. Coffee taken at night generally prevents sleep, occasions the acceleration of the pulse, and produces increased vividness of ideas and hilarity. Persons, therefore, engaged in mental occupation at night will find this a far more agreeable and reliable resource than either wine or spirits. Difference of temperament may produce different effects on coffee-drinkers; but on the whole, it may be said that this beverage is one of the most wholesome articles of diet taken with prudence, and one of the most dangerous if indulged in to excess. The *medicinal* properties of coffee are various: persons who suffer from headache find relief from drinking coffee, and also in inhaling its fumes. It acts as a soother to the stomach after excess, corrects crudities, and removes colics and flatulencies. To both the nervous and the languid it is cheering and exhilarating, and repairs the injurious effects caused by excessive mental or bodily labour. As an opiate, it has an advantage *which opium and other drugs do not possess*; for it may be taken under any circumstances and in all conditions of the stomach without aggravating those congestions and obstructions which opium is known to increase. It is useful in allaying the irritating cough that often accompanies fevers. On the other hand, when drunk to excess it is prejudicial to health, and accelerates disease; it vitiates the blood, congests the liver, induces nervousness, and not unfrequently a species of palsy. It also occasions in some constitutions an eruption on the skin, and many other disorders. Coffee acts as an aperient if a glass of cold water be drunk immediately before it is partaken of. In cases of

poisoning by opiates, the use of very strong coffee with lemon-juice has also been found very beneficial. The mixing of brandy with coffee is very questionable, as the character of the beverage is thereby entirely altered, instead of being simply corrected, as is contemplated by the practice.

COFFEE RATAFIA.—A liqueur made as follows:—Best Turkey coffee ground, one pound; loaf sugar, twenty ounces; cinnamon and cloves, half an ounce each; nutmeg, three quarters of an ounce; sweet almonds beaten to a paste, one ounce; bitter almonds, half an ounce; isinglass dissolved in a little water, half an ounce; proof spirit of wine, one gallon. Cork up the jar immediately the spirit is added, seal, and tie bladder over it; put the jar in hot water for ten hours, then shake well, and set it in the sun for a month; at the end of that time it may be strained through a fine sieve, and filtered until perfectly clear; put it into small bottles, securely cork and seal them, and in a month the ratafia will be fit for use.

☞ Coffee, 1lb.; sugar, 20ozs.; cinnamon, ½oz.; cloves, ½oz.; nutmeg, ½oz.; sweet almonds, 1oz.; bitter almonds, ½oz.; isinglass, ½oz.; proof spirit, 1 gallon.

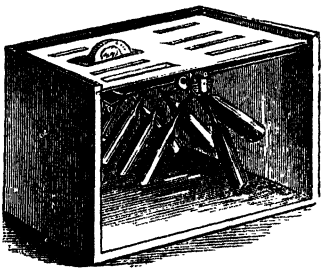
COFFEE ROASTER.—Persons who drink coffee habitually, and are very particular about its flavour and quality, should purchase the best kind in a raw state, keep it for some months, and have it roasted at home. This can be cheaply done in small quantities by means of the apparatus seen in the engraving; the cost of which does not exceed eight or ten shillings, and the supply of charcoal needed for it being very trifling indeed. The cylinder which contains the coffee should only be half filled, and it should be turned rather slowly over the fire, which ought to be of a moderate heat, until the aromatic smell is emitted; the movement should then be



quickened, as the grain is in that case quite heated, and it will become too highly coloured before it is roasted through. If slowly finished. When it is of a fine light brown, spread it quickly upon a large dish, and throw a thickly folded cloth over it. To ascertain whether it is sufficiently roasted, the door of the cylinder must be drawn back occasionally towards the end of the process, and the progress of the roasting noted. Let it remain on the dish until it is quite cold, then put it immediately into canisters or bottles, and exclude the air carefully from it.

COFFEE, SUBSTITUTES FOR.—Several substances have been made use of at different times as substitutes for coffee, and the imitations have proved tolerably successful. *Rye* is one of these articles, and the following is the process employed:—The rye must be well cleaned, and then boiled till it is soft; but care must be taken that it does not burst. It should be dried afterwards in the sun or in an oven, and then roasted like coffee; when ground it is fit for use. It may be infused or boiled in the usual way. This beverage is also greatly improved by mixing the powder with half its weight of genuine coffee. Peas, beans, and almonds are also used.—See ACORN, CHICORY, &c.

COIN DETECTOR.—A simple implement by which the genuineness of coin is tested. This apparatus is fitted with slits at the top,



for the various gold and silver coin, from a threepenny piece to a sovereign. The coin on being introduced into the opening is first of all submitted to the test of width, and after passing through this ordeal it has to encounter another, that of weight. If the coin is of proper weight it falls through the opening appropriated to it, on a scale plate beneath; but if it is short of its due weight, it is obstructed in its passage downwards and remains fixed.

COKE.—Coke is prepared from coal by depriving it of its hydrogen; consequently it can yield neither flame nor smoke. The chief part of this combustible used for domestic purposes is, that which remains in the iron retorts after the gas has been extracted from the coal for illumination. From the clearness with which it burns, and the intensity of its radiant heat, coke is excellent for certain culinary operations where a bright clear fire is wanted, as broiling, roasting, &c.; but it is difficult to kindle, and does not answer well in a grate without an admixture with coal; the two together

make the best of fires. Coke, when used in an ordinary grate, should be broken of the size of a goose egg, and laid on the top of the fire when it is already clear; the pieces will collect the radiant heat that would have escaped up the chimney, and soon themselves become red-hot, in which state alone they are effective. Care should be taken that the pieces of coke do not fall into the front of the fire before they are red-hot, as they will only obstruct the rays of heat. There is some difference in the density, and consequently in the strength of the coke, according to the kind of coal from which it is produced, or in the mode of preparing it. The heaviest, gives the most heat, and will last longest; but that which is shining and light will burn most readily. Coke burned by itself has all the bad qualities of charcoal, in giving out carbonic acid gas, which, if the current or draught up the chimney is not sufficient, will fall down into the apartment. But while it is burning in a well constructed fireplace there is no danger of this, as the current upwards carries the carbonic acid along with it. Coke, when properly managed, is an economical fuel; it is sold at from ten to twelve shillings per chaldron, and is best purchased at a gas factory.

COLCHICUM.—This is the well-known plant called meadow saffron, which grows wild in all the fields and rich soils of Europe. On man the plant acts in an overdose as a strong irritant poison, its juices being so acrid that no animal will crop it from the pastures. The bulb and seeds are the principal parts used for medicinal purposes, and these are gathered in August, from which the plant obtains its common name of *colchicum autumnale*. It acts powerfully on all the secretions, especially on those of the alimentary canal; hence its remarkable efficacy in gout and rheumatic gout, for which diseases it was long considered a specific. The forms in which it is most frequently administered are those of the powder, tincture, vinegar, and wine. The ordinary dose of the powder is from five to fifteen grains; and of the other preparations from one to two drachms.

COLD, ACTION OF.—The animated human frame is endowed with the power of maintaining a certain average temperature which, except in rare cases, is higher than that of the surrounding medium, and this power is adequate to resist all ordinary impressions of cold; but when from great intensity, or long continuance, the depressing influence of cold is much augmented, the powers of life sink, and disease or death is the consequence. The fatal effect is ascribed to the heated state of the body, and to the shock communicated to the stomach and its numerous nervous connections, while the system generally is exhausted. The effect of cold, not extreme, but long continued, especially if combined with moisture, is one of the most fertile sources of disease. The young and the aged are more peculiarly liable to suffer, and for this reason require especial protection. The partial application of cold, particularly by a moving current of air, most generally produces disease of a neuralgic or rheumatic character, incipien paralysis, or erysipelas. The partial application of cold and wet may produce inflammatory action in the immediate vicinity of the part exposed, or, as in the case of wet feet, in some distant organ. When, in consequence of long exposure to extreme cold, drowsiness comes on, both mind and body must be exerted to repel the influence, muscular motion must be kept up, and stimulants administered. Those who are likely to be exposed to great continued cold should provide abundant nourishment, particularly of a fat oily character, and should never be without a flask of spirits, which, however, should only be depended on as a last resource.—See FROST BITE.

COLD CREAM.—An unguent employed to cure chapped skin and skin wounds. It may be prepared from various ingredients as follows:—1. Take a quarter of an ounce of white wax, and shred it into a basin, with one ounce of almond oil. Place the basin by the fire till the wax is dissolved; then add very slowly one ounce of rose-water, little by little, and during this, beat smartly with a fork to make the water incorporate, and continue beating till it is accomplished; then pour it into jars for use. 2. Lard, six ounces; spermaceti, one ounce and a drachm and a half; white wax, three drachms; rose-water, three ounces; carbonate of potass, fifteen grains; spirit of wine, three quarters of an ounce; essential oil of bergamot, three drachms. Melt the lard, spermaceti, and white wax, then add the rose-water, carbonate of potass, and spirit of wine, stirring well, and when nearly cold, add the perfume. 3. Almond oil, four ounces; green oil, four ounces; juice of cucumbers, four ounces; wax and spermaceti, quarter of an ounce each; oil of neroli, five drops. Slice the cucumber very thin, and place the slices in the oil; after remaining together for twenty-four hours, repeat the operation, using fresh fruit in the strained oil; no warmth is necessary, or, at most, not more than a summer heat; then proceed to make the cold cream in the usual manner, adding the oil thus odorized, and the other ingredients in the usual way.

COLD IN THE HEAD.—This distressing affection may either be a primary symptom of a severe catarrh, or exist without any general constitutional disturbance. Cold in the head is attended with a sense of oppression and fulness in the head, hot and sometimes bloodshot eyes, with frequent effusion of tears, and constant running from the nose; these symptoms are usually attended with more or less of sore throat, slight deafness, and a contraction of the scalp. The *treatment* of cold in the head is generally very simple, and if not attended with shiverings and headache, seldom requires more than a hot bath for the feet, the following powder, and a copious drink of warm gruel; the whole being adopted at once, and about the usual hour of bed-time.

Take of Dover's powder ten grains, and antimonial powder four grains; mix.

COLD VICTUALS, ECONOMY OF.—A number of savoury dishes may be made from cold meat and vegetables, which will not only be favourable to economical housekeeping, but also afford a grateful variety to the dietary arrangements. The frequent recurrence of cold meat for dinner always creates repugnance and dissatisfaction in a family, and betrays an amount of ignorance and indifference on the part of the housewife perfectly inexcusable. For instructions for the conversion of cold edibles into savoury dishes, see BEEF, BUBBLE AND SQUEAK, BEEF COLD, BEEF FRICASSEE, BEEF HASH, BEEF MINCED, BEEF PATTIES, BEEF SANDERS, MUTTON HARICOT, MUTTON HASHED, MUTTON *with* ENDIVE, VEAL HASHED, VEAL MINCED, VEAL RAGOUT, VEAL RISSOLES, &c.

COLD WATER CURE.—See HYDROPATHY.

COLIC.—This is a disease that, unless greatly neglected, seldom proves fatal, and is caused entirely by some irritating substance in the stomach and bowels, or from the application of cold to the heated body. The most general exciting causes of colic are acrid and indigestible fruits, an excess of bile, powerful medicines, worms, wind, and cold to the extremities. Colic can always be distinguished from inflammation of the bowels by the peculiar twisting nature of the pain, and by its being relieved by pressure. The *treatment* of colic consists in removing the cause and allaying the pain: to effect the first object most speedily, the patient should take the two subjoined pills immediately, and two tablespoonfuls of the mixture every hour, till the pain is abated, using at the same time hot fomentations to the stomach. Should the pills not act freely within two hours, they are to be repeated. As a general rule, no other treatment is needed, with this exception, that when the colic proceeds in part or wholly from flatulence, the compound assafœtida pill is to be substituted for the colocynth ordered in the prescription.—*Pills:*

Compound extract of colocynth	6 grains.
Calomel	4 grains.
Croton oil	1 drop.

Mix and divide into two pills.

Mixture.—Take of thick mucilage and castor oil, of each one ounce; mix thoroughly, adding by degrees—

Peppermint water . .	4 ounces.
Spirits of nitre, Friar's balsam, }	of each 2 drachms.
Laudanum . . .	1½ drachm—Mix.

COLIC, PAINTER'S.—This is a much more serious disease than the former, as in this case it is the constitution that is first affected; and as it is the result of the absorption of mineral poison, the consequences it entails are serious. The disease derives its name from the frequency of its occurrence among painters, though it may occur in any one exposed to the same influence. This disease arises from the absorption into the body of white lead, but it may proceed from any other mineral poison getting into the system; and in cases of intentional poisoning by mineral drugs, it often supervenes after the dangerous symptoms have been subdued.

The symptoms of painter's colic only differ from the other form of colic in coming on more slowly, and being attended with pains in the limbs, shaking of the hands, and in severe cases, complete paralysis.

Treatment.—The hot bath or fomentations as in colic, with leeches when necessary to the abdomen, clysters of warm gruel and turpentine; and one of the following pills every four hours, and two tablespoonfuls of the above mixture, without the laudanum, every two hours, are the usual means employed.—*Pills:*

Camphor . . .	9 grains.
Powdered opium .	12 grains.
Calomel . . .	24 grains.

Extract of hemlock, enough to make into a mass, which is to be divided into twelve pills. When the pain and other symptoms are subdued, it may be necessary to give frequent doses of castor oil, so as to effect a perfect cleansing of the alimentary canal; or if the bowels are obstinate, the purgative pills ordered in simple colic.

COLEWORT.—This term is applied to cabbages cut young or previously to their hearts becoming firm. The varieties of cabbage principally employed for the raising o.

coleworts are the Large York, Sugar-loaf, Early York, East Ham, Battersea, Antwerp, and London Hollow. Sowings may be performed during the middle of June

and July, to be repeated at the end of the latter month; for transplanting in August, September, and October, for a continual supply in September until the close of March. A fourth must be made the first week in August for succeeding the others in spring; but if of sufficient extent, then various plantations may be made from the seed-beds of the cabbage crops made at these several periods, as directed under that head; the chief object of growing coleworts being to have a supply of greens sooner than can be obtained from the plantations of cabbages if left to form hearts. The observations upon transplanting, and the directions for cultivating cabbages, apply without any modification to coleworts; but the distance at which the plants may be set, is much less. The best mode of taking coleworts is to pull up or cut every other one; these openings are beneficial to the remaining plants, and some, especially of the August-raised plants may be left, if required for cabbaging.—See CABBAGE.

COLLARING.—A culinary process employed for the purpose of preserving meat, fish, &c., on the following general principles: Care must be taken that the article is properly rolled up and well bound together; it should also be thoroughly boiled, and be quite cold before being put into the pickle, in which it should lie for a night, when the binding may be taken off, and the preparation will be ready for use. The pickle may be water, in which as much salt is dissolved as the water will take up, to every pint of which add half a pint of vinegar; it should be sufficient to cover the article completely, and it will be desirable to add a fresh pickle to it occasionally, by which means the meat, &c., will keep much longer. — See BEEF, EELS, MUTTON, PORK, SHEEP'S HEAD, SALMON, VEAL, &c.

COLLEGE EDUCATION. — A superior class of instruction in connection with the universities, by which young men are prepared for the various professions, and are rendered fit to mingle with the higher and more intelligent orders of the community. The system of education pursued at the various colleges, although differing in detail, is essentially the same. The college education, in a restricted sense, is nothing more than a preparation for the public examinations; for it is upon the result of these examinations that the degrees (which are in some sort a certificate of efficiency) are either awarded or withheld. The every-day business of the college is conducted in a large hall, furnished with books, maps, mathematical diagrams, &c., and the students, generally from the ages of sixteen to twenty-one, are divided into classes of from five to fifteen members, and at the head of each class a master of arts presides and conducts the business. A certain number of tutors are also appointed to give lectures. Directions are given, as often as may be needful, respecting the mode of preparing for these lectures, the books to be consulted, method of analysis and illustration, and the like. When the lecture comes on, the several members of the class are called on in turn to translate, construe, or illustrate the subject-matter appropriately. The usual routine of attendance at the lectures is for each student to attend two, three, or even four lectures, each inculcating a different branch of literature or science. But the duties of the college tutor do not terminate with these class lectures. He from time to time has interviews with his pupils separately, for the purpose of ascertaining more exactly the individual's state of preparation for his public examination, consulting with him on the most effectual methods of removing his peculiar difficulties, and arranging his plans of study. In addition to these teachers connected with the university, a very numerous class also exists, denominated *private tutors*, whose business it is to superintend and assist the studies of scholars, without superseding or interfering with the operation of the college lectures; these are occupied rather in securing for the student the best use of the lectures, in so preparing him for attendance on them as to enable him readily to answer the lecturer's questions, and follow him in his remarks, and in giving him assistance, perhaps, in those portions of his studies in which accident may have precluded him from receiving the assistance of a college tutor. These private tutors, therefore, although not absolutely necessary to the student's progress, are still highly useful to several descriptions of students. The course of college and hall lectures closes, at the end of each term, with the formal examination of each member separately by the head of the college and tutors, who assemble for this purpose. Each student presents himself in turn, with the books in which he has been lectured during the term, essays, exercises, analyses, &c. In addition to these modes of direct instruction, other means of indirectly promoting the studies of the place are furnished by premiums, in the shape of *exhibitions*, *scholarships*, and *fellowships*, to which certain privileges and emoluments are attached. The examination statute requires that the candidate for the degree of B.A.—the *education* degree—be tried in translating from the original language of the Gospels. His acquirements in Latin and Greek must be proved by examination in at least three different authors. He is also examined in ancient history and philosophy. This applies to those candidates who aim at no more than barely to satisfy the requisitions of the statute. But a much higher standard of qualification is expected by a portion; and for these, honours additional to that of a mere degree are provided. It is provided, for example, that the names of those who are found deserving of these extra honours should be printed and arranged in four classes, according to a fixed standard of merit for each class. It will be seen that the examination for the degree of B.A. is the mainspring of college education. The degree of Master of Arts is obtained without any specific examination or exercise. The degrees in the higher faculties, as Bachelor and Doctor in Divinity, Law, and Medicine, are no further connected with education than as they

may be considered in the light of encouragements and inducements, which the university holds out for the attainment of a certain proficiency in the several studies to which they refer. The degrees in music are conferred without any reference to a previous degree, and are preceded by a trial in the public schools. Although the *expense of a college education* is seldom less than £200 or £300 a year, and oftentimes more, the ordinary college account for the year, including university and college fees of all kinds, boarding, lodging, washing, coals, and attendance, oftener falls short of £80 or £90 than it exceeds £100. But as the students generally belong to the richer classes, habits of extravagant expenditure are acquired; but these habits do not arise out of the demands of the university or of the several colleges and halls. In connection with this part of the subject it is much to be regretted, that a system of unlimited credit prevails at the university towns, which entices the students to an outlay far beyond their means, and in many instances inflicts much pecuniary inconvenience on the student's family. But it cannot be denied that on the whole, a college education confers a decided advantage upon a man in after life, and is a constant source of congratulation, even if it is not made use of as a means of advancement.

COLLEGE PUDDINGS.—1. Beat six yolks and three whites of eggs; mix them to a smooth batter with three tablespoonfuls of flour, half a nutmeg, and sugar to taste. Add four ounces of suet, four of currants, and one ounce of candied orange-peel. Bake in patty-pans, or fry them; serve with pudding sauce and sliced lemon. 2. Boil half a pint of cream, stir in a quarter of a pound of butter, beat the whites of two eggs and the yolks of four, and mix them with two ounces of flour, and one ounce of sifted sugar. When the cream is slightly cool, stir it into the flour and eggs; let it stand for a quarter of an hour before the fire, and then bake in a quick oven for twenty or twenty-five minutes. 3. Grate two pounds of the crumb of bread, shred half a pound of suet, and mix with half a pound of currants, an ounce of citron, and an ounce of orange-peel, a quarter of a pound of sugar, half a nutmeg, three eggs beaten, whites and yolks separately. Mix and make into the size and shape of a goose egg. Put half a pound of butter into a frying-pan, and when melted and quite hot, stew them gently in it over a stove; turn two or three times till they are of a fine light brown. Mix a glass of brandy with the butter, and serve with pudding sauce.

☞ 1. Eggs, 6 yolks, 3 whites; flour, 3 tablespoonfuls; nutmeg, ½ of 1; sugar, to taste; suet, ½lb.; currants, ½lb.; candied peel, 1oz. 2. Cream, ½ pint; butter, ½lb.; eggs, 2 whites, 4 yolks; flour, 2ozs.; sugar, 1oz. 3. Bread, 2lbs.; suet, ½lb.; currants, ½lb.; citron, 1oz.; orange-peel, 1oz.; sugar, ½lb.; nutmeg, ½ of 1; eggs, 3; butter, ½lb.; brandy, 1 wineglassful.

COLLOPS, A LA BECHAMEL.—Soak a slice of ham with a piece of butter, chopped parsley, shalots, and half a bay-leaf; simmer these on a slow fire for about a quarter of an hour; then add a tablespoonful of stock gravy, a tablespoonful of cream, and a sprinkling of flour and pepper; reduce the liquor till quite thick, and strain it through a sieve; cut the breast of roasted poultry into small pieces; put the meat into the sauce with the yolk of an egg, and boil all together; then cut thin pieces of paste to any form desired; put portions of the ragout between two pieces, pinch all round to secure the sauce, and fry them of a fine brown colour.

COLLOPS, AU NATUREL.—Mince finely a pound of tender rumpsteak, free from fat or skin; season it with a moderate quantity of pepper and salt, set it over a gentle fire, and keep it stirred with a fork until it is quite hot. Simmer it very slowly in its own gravy from ten to twelve minutes, and then, should it be too dry, add a little boiling water, broth, or gravy; stew it for two minutes longer, and serve it directly. This dish will be found peculiarly suited to persons in delicate health, or of weak digestion. It will also afford an agreeable variety to the customary repast, when a dish is required on an emergency.

COLLOPS, OF PRESERVES.—Roll out some puff paste very thin, wet it, and lay on it at intervals any kind of preserve; roll the paste over, press the ends together, and place them on a tin; just before they are wanted fry them lightly; drain them, and sprinkle them with sugar.

COLLOPS, SAVOURY.—Make a little thickening with about an ounce and a half of butter and a dessertspoonful of flour; when it begins to be coloured, shake into it a teaspoonful of finely shred parsley, or mixed savoury herbs, and a seasoning of salt and pepper. Keep these stirred over a gentle fire until the thickening is of a deep yellow brown, then add a pound of rumpsteak finely minced, and keep it well separated with a fork until it is quite hot; next pour to it gradually, a teacupful of boiling water, and stir the collops gently for ten minutes. Before they are served, stir to them a little ketchup, chili vinegar, or lemon-juice; a small quantity of minced onion or shalot may be added, if the flavour is not objected to.

COLLOPS, SCOTCH.—Cut small slices out of the fillet of any kind of meat; flour and then brown them in fresh butter in the frying-pan. Have a little weak broth or boiling water ready in the stew-pan, put the slices of veal into it, let them simmer very gently, and when they are nearly done, add the juice of a lemon, a teaspoonful of ketchup, a little mace, pepper, and salt; take out the collops, keep them hot in the dish they are to be served in, thicken the sauce with browned flour, pour it hot over the collops, and garnish them with curled slices of bacon.

COLOGNE WATER.—See EAU DE COLOGNE.

COLOMBO.—A plant growing on the east coast of South Africa, the root of which is held in high esteem as a mild tonic and

stomachic, having no astringent quality, and being but very slightly stimulant. When the liver is excited and produces an immoderate quantity of bile, colombo is an excellent remedy. When there is a loss of appetite, attended by flatulency, acidity, nausea, and the usual train of symptoms arising from a debilitated state of the stomach, colombo is of the greatest service, and agrees with the most delicate organization. The dose of colombo root in powder is from fifteen to sixty grains. The tincture is given in doses of two or three teaspoonfuls. The dose of the infusion, which is made in the following manner, is two or three tablespoonfuls, repeated three or four times a day:—

Colombo root sliced. . 5 drachms.
Boiling water. . . . 1 pint.

Macerate for two hours, and then strain through a linen rag.

Note.—This infusion should be kept closely corked, as it spoils if kept long.

COLOMBO WATER.—A specific employed to provoke appetite and promote digestion; it is made as follows:—Take four drachms of bruised colombo root, one drachm of bitter orange-peel, and two drachms of liquorice root; add a quart of cold soft water, and simmer as gently as possible over a slow fire, until half the water is evaporated, then strain the liquid and filter it; add to this about one-sixth of good brandy, and bottle it up for use. An hour before dinner take of this mixture the third of the contents of a wine glass, filling up the glass with water.

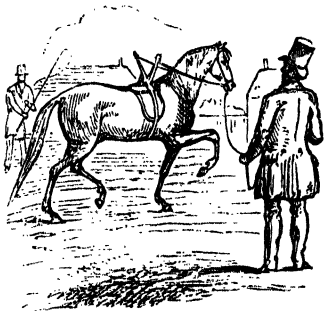
COLOUR, HARMONY OF.—See APPAREL, HOUSE DECORATION, &c.

COLOURED ARTICLES, TO WASH.—Boil a quarter of a pound of soap until nearly dissolved, then add a small piece of alum and boil with it. Wash the articles in this lather, but do not soap them. If they require a second water, put alum to that also, as well as to the swilling and blue-water—this will preserve them.

COLOURING, FOR CAKES, JELLIES, &c.—For a brilliant *red*, boil fifteen grains of cochineal in the finest powder, with a drachm and a half of cream of tartar, in half a pint of water, very slowly for half an hour. Add, in boiling, a piece of alum the size of a pea; or substitute beet-root sliced, and some liquor poured over. For *white*, use almonds finely powdered with a little drop of water, or employ cream. For *yellow*, yolks of eggs or a bit of saffron steeped in the liquor and squeezed. For *green*, pound spinach or beet-leaves, express the juice, and boil in a teacup placed in a saucepan, to take off the rawness. The mixture of *two coloured* jellies or of blanc mange, or cream with jelly, is made by allowing the first layer in the mould to harden sufficiently to bear the succeeding one of a different colour without intermixture; several colours may be added in this way.

COLOURING, FOR SOUPS, GRAVIES, &c. See BROWNING.

COLT BREAKING.—A species of training pursued with young horses, by which the natural wilfulness of their tempers is subdued, and they are brought into a state of subjection. This process is commenced in accordance with the constitution and temper of the horse, but generally speaking it is completed by the third year. *The application of the cavesson* (as seen in the engraving), is the first active restraint applied to saddle-horses, but before putting this on, it is prudent to boot the young horse's legs, to prevent them knocking against each other. Thus equipped the colt is led about the country, by the breaker on foot or mounted on a steady hack; and for a week he may be generally confined to soft turf, which will not require his being shod. *Shoeing* must be commenced as soon as the colt is in a state to be taken on the roads, but in this, great discretion must be exercised: the shoes should be nailed on very carefully, and they should be very neat and light in their make; the feet also should afterwards be regularly examined, and the shoes removed every three weeks. The next process is the *tying up in the stall*. To accomplish this effectually, the headstall should fit very closely and the throat-lash be sufficiently tight to prevent the colt from pulling it off in his efforts to free himself. All the ordinary stable practices may now be gradually taught, such as washing out the feet, dressing, hard rubbing the legs, &c. *Lounging* may now be commenced, which will require the aid of a second hand. The cavesson, boots, roller, crupper, &c., are all put on, and a long leading rein is attached to the ring in the noose of the cavesson. But instead of merely leading, the colt is made to walk round a circle on some piece of soft turf. As soon as he has gone round a dozen times in one direction, he may be turned and made to reverse it, so as not to cause giddiness or an undue strain on one leg. This process is repeated at various times throughout the breaking. *The saddling of the colt for the first time* requires caution; the girths should not be drawn tight at first, and care is required that the crupper be smooth, and that it does not press heavily on the back or tail; nor should the stirrups be left to hang loose from the saddle in early lessons. The bearing up of the bridle, likewise, must be gradual, and reining back by way of sup-



pling the shoulders and giving sensation to the mouth, must not be roughly or prematurely pressed on him. The backing of the colt should be proceeded with very cautiously, and it would be as well that it should only be attempted by one with whom the colt is familiar. An assistant is requisite, and the act of mounting must be gradual and gentle, the assistant bearing on the stirrup-leather of the off-side against the weight of the mounting rider on the near. During the course of breaking it is always safer to keep the colt rather underfed with corn, and until he is able to begin his cantering exercise he will scarcely bear an increase. Bad tempered horses especially, require light feeding during breaking, and extra time as well as care must be bestowed upon them. When all these points are accomplished, the breaking in of the colt may be said to have terminated. These are the chief features which have characterized the tuition of young horses, as universally practised up to the present day; it is, however, a subject to which the public attention has been specially directed of late. A system formed upon a totally distinct and novel treatment has been partially introduced into this country by Mr. Rarey, the celebrated American horse-tamer. This system, however, is as yet in its infancy, and but imperfectly developed; full particulars will therefore be found hereafter under the head of HORSE TAMING.

COLTSFOOT.—A herb of demulcent bitter qualities, slightly stomachic and tonic. It is much esteemed as a remedy for shortness of breath, and other affections of the chest. The leaves form the basis of most of the British herb tobaccos, and have been recommended to be smoked in asthma and difficulty of breathing. The decoction is made by infusing one ounce of coltsfoot in a pint of water. The dose—one or two wine glasses, according to circumstances.

COLTSFOOT SYRUP. — Coltsfoot, six ounces; maidenhair, two ounces; hyssop, one ounce; liquorice root, one ounce; boil these ingredients in two quarts of spring water, till a fourth part is consumed; then strain it, and put to the liquor two pounds of powdered loaf sugar; clarify it with the whites of eggs, and boil it till it is of the consistence of honey. A teaspoonful taken occasionally in cases of cough and cold will prove beneficial.

COLTSFOOT WINE. — Boil one gallon of water with two pounds and a half of moist sugar, and the beaten white of an egg, for three quarters of an hour; pour the liquor boiling upon a quarter of a peck of fresh gathered coltsfoot flowers, and a pound of raisins stoned and cut small; cover the vessel close, and let the ingredients infuse for three days, stirring thrice daily. Then add a tablespoonful of yeast; keep it well mixed and covered close, until it has worked freely; then strain into a cask upon half an ounce of the best bruised ginger, and the thin rind of half a Seville orange; let it remain open, covering the bung hole with a tile, until it has ceased fermenting. Add a gill of French brandy, stop it up securely and keep it for twelve months, then bottle it, and drink in six months more.

☞ Water, 1 gallon; sugar, 2½lbs.; coltsfoot flowers, ½ peck; raisins, 1lb.; yeast, 1 tablespoonful; ginger, ½oz.; orange-peel, ½ of 1; brandy, 1 gill.

COLUMBINE. — A perennial, growing two or three feet high, blowing a blue, red,

or variegated flower in June or July. It requires shade and a stiff soil to grow in; and may be propagated by separating the roots in autumn.

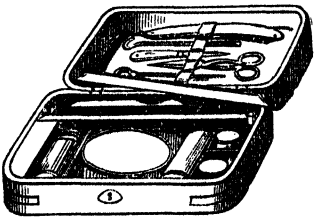
COMBS.—Well-known instruments for disentangling and adjusting the hair; they are made of various forms and materials, according to the particular use to which they are to be put. The combs used for fastening the hair are usually made of tortoiseshell. Those for disentangling the hair are more varied; for this latter purpose combs made of caoutchouc have recently been introduced, which are chiefly to be recommended for their plastic properties. Leaden combs are also used to impart an artificial dark tint to light hair, but the use of these is considered as somewhat injurious to the roots of the hair. Combs may be cleaned by working a piece of cardboard between the teeth, and then rubbing them with a flannel.

COMMA.—In punctuation, that point usually separating those parts of a sentence which, though very closely connected in sense and construction, require a pause between them. *Rule* 1. A short simple sentence generally requires no points till the end. But where the sentence is a long one, and the nominative case is accompanied by inseparable adjuncts, a pause may be admitted immediately before the verb; as, "The good taste of the present age, has not allowed us to neglect the cultivation of the English language." *Rule* 2. When the connection of the different parts of a simple sentence is interrupted by an imperfect phrase, a comma is usually introduced before the beginning and at the end of the phrase; as, "I remember, *with gratitude*, his goodness to me." *Rule* 3. When two or more nouns occur in the same construction, they are parted by a comma; as, "The husband, wife, and children, suffered extremely." There is an exception to this rule when two nouns are closely connected by a conjunction; as "Virtue *and* vice form a strong contrast to each other." *Rule* 4. Two or more adjectives, belonging to the same substantive, are likewise separated by commas; as, "Plain, honest, truth requires not artificial covering." But two adjectives immediately connected by a conjunction are not separated; as, "Truth is fair *and* artless." *Rule* 5. Two or more verbs, having the same nominative case, and immediately following one another, are also separated by commas; as, "In a letter we may advise, exhort, console, and discuss." Two verbs immediately connected by a conjunction, are an exception to the rule; as, "The study of natural history expands *and* elevates the mind." *Rule* 6. Two or more adverbs immediately succeeding each other, must be separated by commas; as, "We are fearfully, wonderfully framed." When two adverbs are formed by a conjunction they are not parted by a comma; as, "Some men sin deliberately and presumptuously." *Rule* 7. Relative pronouns generally admit a comma before them; as, "He preaches sublimely, who lives a virtuous life." But when two members of a sentence are closely connected by a relative restraining the general notion of the antecedent to a particular sense, the comma should be omitted; as "Self-denial is the sacrifice which virtue must make." *Rule* 8. A simple member of a sentence, contained within another or following another, must be distinguished by a comma; as, "To improve time while we are blessed with health, will smooth the bed of sickness." If, however, the members succeeding each other are very closely connected, the comma is unnecessary; as, "Revelation tells us how we may attain happiness." *Rule* 9. The words *however, nay, so, hence, again, firstly, secondly, formerly, now, lastly, once more, on the contrary, in the next place*, and words and phrases of a similar nature, must generally be separated from the context by a comma. *Note.*—In long sentences where two or more commas are employed, the best method of ascertaining if a comma be wrongly placed, is to read the sentence on, omitting that part of it where the commas are placed, and if the sense remains unbroken the points are rightly used, but if the sense is disturbed, the comma is wrongly placed.

COMMISSION.—In commerce, the allowance to a factor, agent, or broker, for transacting the business of others. It is generally charged at so much per cent., the amount being regulated either by stipulation or the usage of trade. A commission *del credere* is a higher rate charged in those cases where the factor, or other agent guarantees his dealings, or in other words, engages to be answerable. The charge for commission is recoverable by law, although no written agreement or instructions may exist to support the claim. Thus, if a person is verbally instructed by another to make a certain sale, upon the completion of such sale, the agent is entitled to claim a reasonable percentage on the amount; because the seller is supposed to have benefited by the transaction, through the medium of the agent's exertions and judgment.

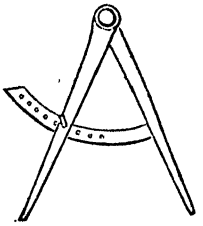
COMMITTEE.—A body of persons voluntarily bound together by certain laws and regulations, for the carrying out of some specific object; the general principles upon which a committee acts, being that they are the guardians of the interests of those on whose behalf they are appointed, and the administrators of affairs for the general good. A committee is usually presided over by a chairman, who is assisted by a secretary and other officers.

COMPANION.—Under this title, various portable cases are made to contain the usual



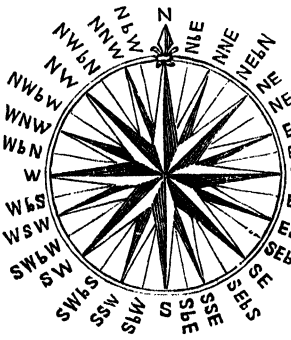
requisites of the toilette, &c.; that shown in the engraving is adapted for a gentleman's use, those for ladies being of somewhat the same construction, but supplied with different articles.

COMPASS, GROUND.—This is an in-



strument used in laying out a garden; for by employing them, the curvilinear parts of parterres can be described with perfect accuracy. The stationary foot is placed on a slip of board a few inches square, with a pin beneath to retain it in its place, and a leaden cap above for the point of the foot.

COMPASS, MARINER'S.—An instrument contrived to indicate the magnetic meridian, or the position of objects with respect to that meridian. The notation of the mariner's compass is as follows:—The circumference being divided into the four quadrants by two diameters at right angles,



the extremities of these diameters are the four cardinal points N., S., E., W. (north, south, east, west). Bisecting each of the quadrants, the several points of bisection are denoted by placing the two letters at the extremities of the quadrant in juxtaposition. Thus, N.E. (north-east) denotes the point which is half-way between north and east; and so with N.W., S.E., S.W. (north-west, south-east, south-west); these are again divided into N.N.E., E.N.E., and so on. These distances are again bisected; then each of the points so found is expressed by that one of the preceding points already named to which it is nearest, followed by the name of the cardinal point towards which its departure from the nearest point leads it, the two being separated by the letter *b* (by). Thus, the point half-way between N. and N.N.E. is N. by E. (north by east). The whole of the thirty-two points are thus distinguished as in the accompanying figure.

COMPENSATION for injuries may be recovered by an action at law by the party injured against the person through whose wrongful act, neglect, or default the injury is suffered, and in case of the death of the party injured, by his executors or administrators for the benefit of the wife, husband, parent, or child of the deceased; and the amount so recovered is divisible amongst the above-mentioned relatives in such shares as the jury shall direct. The compensation is confined to the pecuniary loss, and the mental sufferings of the survivors cannot be taken into consideration. A jury must be satisfied that there has been a loss of a sensible and appreciable pecuniary benefit, which might have been reasonably expected from the continuance of the life. Nothing can be recovered for the funeral or expenses of mourning.

COMPLEXION.—The beauty of the complexion is an interesting matter, especially among females. To insure this important boon, natural means are far better than any artificial ones that can be conceived. Painting the face is a most injurious habit as well as an unnatural one, for as it chokes up the pores of the skin and drives the humours back into the blood, its ill effects may be readily imagined. It totally changes the texture of the skin and produces pimples, attacks the teeth, destroys the enamel, and loosens them. It also affects the eyes, and renders them painful and watery. Lastly, it penetrates the pores of the skin, acting by degrees on the spongy substance of the lungs and inducing disease. Violet powder is no further injurious than by stopping the pores of the skin; but this is quite injury enough to preclude its use. The effect of painting and powdering the face is bad morally as well as physically; the former habit especially is always associated with immodesty and lax principles. Again, the object in view is thwarted rather than attained. A female subjects her complexion to artificial tints under the impression that they will be mistaken for the bloom of nature, and that she will be admired accordingly. But, although to her partial view the artifice may be hidden in the eyes of others it becomes palpable enough; and, instead of evoking admiration, only inspires disgust and contempt. Those who live temperately, keep regular hours, are actively employed, and take a due amount of air and exercise, will, generally speaking, have no cause to be ashamed of their complexions. But, if some insuperable defect does exist in spite of every precaution, all the nostrums that it is capable to conceive will not efface the defect; and it is therefore wiser and better to reconcile one's self to the misfortune, than to struggle fruitlessly against it.

COMPOSITION.—In literature the act of inventing or combining ideas, furnishing them with words, arranging them in order, and committing them to writing To express ourselves with perspicuity and propriety, it is necessary that the letters, words, and phrases in every writtten sentence should be placed in the order assigned to them by certain definite rules; and a writer, therefore, furnishes evidences of his ignorance or intelligence, according as he obeys or ignores these principles.

Books: *Graham's Art of Composition*; *Brenan's Composition and Punctuation*; *Irving's Elements*; *Johnson's Essays*; *Parker's Exercises*; *Bank's Guide*; *Carey's Introduction*; *Booth's Principles*; *Reid's Rudiments*; *Rippingham's Rules*; *Rice's Steps*; *Burnside's Theory*; *Williams's Treatise.*

COMPOST.—Composts are mixtures of several earths, or earthy substances or dungs, either for the improvement of the general soil under culture or for the culture of particular plants. In respect to *composts for the amendment of the general soil* of the garden, their quality must depend on that of the natural soil; if this be light, loose, or sandy, it may be assisted by the addition of heavy loams, clays, &c., from ponds and ditches, and cleansings of sewers. On the other hand, heavy, clayey, and all stubborn soils may be assisted by light composts of sandy earth, drift, and sea sand, the shovellings of turnpike roads, the cleansings of streets, all kinds of ashes, rotten tanners' bark, decayed wood, sawdust, and other similar light opening materials that can be the most conveniently procured. *Composts for particular* plants may be reduced to light sandy loam from old pastures; strong loam, approaching nearly to brick earth, from the same source, peat earth from the surface of commons and heaths; bog earth from bogs and morasses; vegetable earth from decayed leaves, stalks, cow-dung, &c.; sand, either sea sand, drift sand, or powdered stone, so as to be as free as possible from iron; lime rubbish; and lastly, common garden earth. There are no known plants that will not grow or thrive in one or other of these earths, alone, or mixed with some other earth, or with rotten dung or leaves. The *preparation* requisite for the heavy and light composts for general enrichment, and of the above different earths, consists in collecting each sort in the compost-ground, in separate ridges of three or four feet broad and as many high, and turning them every six weeks or two months for a year, or a year and a half before they are used. Peat earth or heath earth, being generally procured in the state of turfs full of the roots and tops of heath, requires two or three years to rot; but, after it has lain one year it may be sifted, and what passes through a small sieve will be found fit for use. The *compost-ground* may be placed in any situation concealed from the general view, but at the same time exposed to the free action of the sun, air, and rain. Its size will depend on that of the garden, and on the sorts of culture for which the moulds are adapted. It should generally form part of the enclosure used as hot-bed ground; and, where there are hot-houses, both the hot-bed and compost-ground should be situated as near them as possible.

COMPOTE. — A preparation in confectionery applicable to various fruits.—See APPLE, APRICOT, CURRANT, GOOSEBERRY, PLUM, RHUBARB, &c.

CONCUSSION OF THE BRAIN.—This is an accident that may arise from falls, blows, collisions in carriages, or from any cause that jerking the body may produce a concussion or shaking of the brain. Concussion may occur with or without injury to the head, or it may exist with fracture, ulceration, or compression, with which latter it bears a very remarkable resemblance, being only distinguished from it by the undilated pupil, and the absence of the stertorous breathing. Concussion is divided into three stages: total insensibility, marked by difficult breathing, intermittent pulse, and cold extremities; this is succeeded by partial sensibility, when the patient is for a moment or two, at a time, capable of answering questions put to him; but immediately relapsing into forgetfulness. In this stage the breathing becomes easier, and the pulse more natural, while a gentle warmth diffuses itself over the body. As the stupor and insensibility abate, the third stage of inflammation sets in, which is the most formidable condition of all.

Treatment.—In the first stage few or no active measures can be adopted; as bleeding, so necessary in the second and third stage, if practised in this, would destroy life. As reaction sets in, bleeding must be resorted to, strong purgatives given, heat applied to the feet, and a blister to the nape of the neck; perfect silence, a dark room, and cold lotions or ice constantly retained on the head, and the usual means of an antiphlogistic system unremittingly adopted.

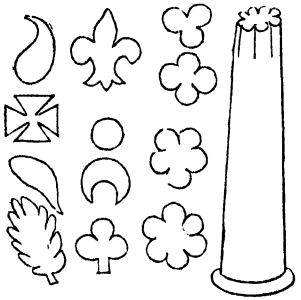
CONDIMENTS.—Substances taken with food, to season or improve its flavour, or to render it more wholesome and digestible. Most of them, in moderation, promote the appetite and digestion; but their excessive use tends to vitiate the gastric juice, and injure the stomach.—See GINGER, PEPPER, SALT, VINEGAR, &c.

CONFECTION.—Anything prepared with sugar; a sweetmeat, or candy. In *medicine*, the name is applied to substances, mixed up to a soft consistence, with powdered sugar, syrup, or honey. Confections should be kept closed up, and in a cool, but not too dry situation. Without this precaution they are apt to mould on the top. If at any time the mass ferments and swells up, the fermentative process may be arrested, by placing the jar in a bath of boiling water, for an hour or two, or until the whole becomes pretty hot; when it should be removed from the heat, and stirred occasionally until cold. Should the sugar crystallize out of the confection, or "candy," as it is called, the same method may be followed. As *remedial agents*, confections possess little value, and are chiefly useful as vehicles for the administration of more active medicines.—See AROMATIC, ORANGE FLOWER, ROSES, &c.

CONFECTIONERY, DIETETIC PROPERTIES OF.—Articles of confectionery are regarded generally as unwholesome, especially when mixed with much butter, made of bad materials, or mingled with deleterious ingredients. Baked confectionery, in which the butter and grease are of an acrid quality, by the heat employed in its preparation, is always liable to disagree, especially with weak stomachs. The introduction into confectionery of ingredients that are always hurtful, and sometimes positively poisonous, render an indulgence in such articles doubly hazardous. Several of the flavouring ingredients are actual poisons, such as the oil of bitter almond, peach kernel, and laurel flavouring. Other agents, as the "jargonelle pear" recently introduced, have been

known to produce the most serious consequences in children who have partaken of them. The colouring matter used is, in nearly every case, derived from deleterious substances; and even where no colouring is used, the sugar is somewhat freely mixed with plaster of Paris. The greatest caution, therefore, is necessary in partaking of confectionery, and especially in giving it to children.

CONFECTIONERY, PREPARATION OF. — The great difficulty, in general, in the art of confectionery, arises from the want of knowledge in preparing and boiling sugar and syrups. The various processes will be found under their several heads. The directions given ought to be most scrupulously attended to, much depending on the execution of them with exactness, as frequently the article is spoiled and irrevocably lost by inattention. The accom-



panying engraving illustrates a variety of *confectionery cutters*, suggestive as figures best calculated to please the eye.—See CANDIED FRUIT, CARAMEL, CLARIFICATION, NOUGAT, &c.

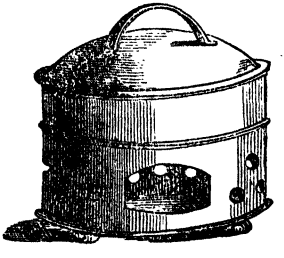
CONFIRMATION. — A religious observance in connection with the Established Church, by which persons who have arrived at years of discretion are received into the bosom of the church, and are thereby qualified to receive the sacrament, and to become partakers in other ordinances which their previous tender age debarred them from. Confirmations are held periodically by the bishop of the diocese; and consist chiefly of his placing his hand on the heads of the young persons who are brought before him: and who are thus *confirmed* as members of the church of Christ. Preparatory to this ceremony it is usual to undergo a religious examination from the clergyman of the parish, who thus ascertains and establishes the fitness of the candidates for confirmation. Although no precise costume is ordered to be worn on the occasion of confirmation, it is usual for females to be dressed in plain white materials, with neat caps, and for males to be attired as modestly and plainly as possible.

CONGESTION.—Any organ is said to be congested when it contains a larger quantity of blood than is necessary for its healthy function. The term defines no actual amount, but implies either a moderate excess, or a complete engorgement. The organs most frequently subject to congestion are the lungs, brain, and liver, resulting either in apoplexy, pneumonia, or inflammation. Partial congestion often takes place during or after disease; in any case it is a very formidable symptom, and requires to be energetically treated. When occurring in the head, it is indicated by flushed face, red eyes, ringing in the ears, sparks of fire flashing before the vision, headache, insensibility, coma, and stertorous breathing: in the lungs, by pain in the chest, great anxiety, and oppression of breathing, cold skin, a slow jerking pulse, and cold extremities: in the liver, by acute pain through the abdomen, a quick full pulse, and the usual characteristics of inflammation.

The *treatment* of congestion is by bleeding, blisters, purgatives, the hot bath, and what is called the depleting system; but though this is, as a general rule, the practice, cases of partial congestion sometimes occur, in which it is necessary to greatly modify this mode of treatment, as in the congestion of old age, when a stimulating system must be adopted.

CONJUNCTION.—In grammar, a part of speech, used to join words and propositions together. Conjunctions are of two sorts, *copulative* and *disjunctive*. The copulative not only joins words, but indicates that the objects are to be united; while it is the office of the disjunctive to unite the words, but to keep separate the objects. The difference between the two kinds of conjunction is illustrated in the following:—"Will you have an apple *and* an orange?" "Will you have an apple *or* an orange?" In the first case it is asked if you will have both these things—we therefore use a copulative conjunction; in the second, one of the two objects is offered only—we therefore use a disjunctive conjunction.

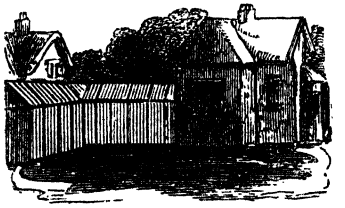
CONJUROR.—A culinary utensil which being compact and portable, becomes an excellent contrivance, for persons who



make long voyages or journeys. By this apparatus steaks or cutlets may be quickly cooked with a small quantity of lighted paper only. Lift off the cover and lay in the meat properly seasoned, with a small piece of butter under it, and insert the

lighted paper in the aperture shown in the engraving; in from eight to ten minutes the meat will be done, and found to be remarkably tender and very palatable; it must be turned and moved occasionally during the process. From the close fitting of the cover and the broad make, water is quickly boiled; a thing greatly to be desired on emergencies. The conjuror may be used in a carriage, and is excellent for a sick room or nursery, where ordinary cooks are not to be depended upon for the diet of invalids or children. It will also be found of the greatest service where the meals of any member of the family are irregular or interrupted.

CONSERVATORY.—Among the various appendages which it is desirable that a house should possess, few are more important than the conservatory, which, when appropriately placed, may be regarded as an extension of the drawing-room; or at least, if it is in the vicinity of the house, and properly connected with it, it is admirably adapted as a place for walking and recreation in all kinds of weather. If possible, it should be made contiguous to some one of the public rooms or the corridor, and should be easily accessible by the family without their leaving the house, or at most, passing along a glazed passage or veranda. When the conservatory enters into the original arrangements, one or the other of these expedients may generally be practicable; but if it is entirely an after-thought, it sometimes happens that a suitable site cannot be obtained. It has wants of its own. It requires free air and open sunshine, and cannot stand on the northern side of the house. There is nothing, however, in itself to prevent it occupying such a site, on any of the remaining three sides that will harmonize with the other buildings of the house, or will suit the internal arrangements and communications. In comparatively humble and economical residences, the conservatory may consist of a number of rectangular sashes, connected and supported by means of light iron rafters, as seen in the engraving.



In the beginning of summer the sashes may be removed and applied to other purposes in horticulture. The light iron framework may either be removed, or can remain and be disguised by annual creepers, or by vines of the narrow-leaved sorts. The internal arrangements of a conservatory should be simple, its passages of ample width, and its whole appliances such as to permit a free exhibition of the plants without the chance of their being crushed. The shelving and stages, when introduced, should be kept low, so that the plants may be conveniently situated for the view. Elaborate decoration in this department has a tendency to detract from the effect of the plants. Fine mouldings and carvings harbour insects, collect dust, and being difficult to clean, contract an untidy appearance in a very short time. The heating process is generally best accomplished by hot water pipes, and the boiler may be placed at a distance of more than a hundred feet, without any material disadvantage, provided the pipes are laid underground in a dry and double-cased drain, to prevent the escape of heat from the water in its passage to the conservatory. Wood and iron are generally employed for the frame work of conservatories Stone pilasters of slender proportions may be introduced, to give a somewhat architectural air to the structure. The glass used for the sashes should be good, and free from impurities and irregularities; it should also take the form of large squares, or in panes, long at least, if not broad, contracted squares of glass, with a multitude of overlaps, imparting a mean and contemptible appearance to the whole structure.

CONSERVES. — Literally, recent vegetable matter, as flowers, herbs, roots, fruit, and seed, beaten with powdered sugar to the consistence of a stiff paste, so as to preserve them, as nearly as possible, in their natural freshness. Conserves are chiefly used as a vehicle in medicine.

CONSIGNMENT. — An expression employed to designate any transaction by which an individual in one place transmits or consigns goods to an individual in another place, to be at his disposal under conditions expressed or implied. The person who sends the goods is called the consignor, he who receives them the consignee. The most ordinary description of consignment is that to a factor, who has to traffic with the goods for the use of his principal, and who may deal with third parties not warned of limitations to his power, as if he were the principal. Cargoes are sometimes consigned from debtors to creditors in satisfaction of debt, and sometimes as a fund of credit for advances, the consignor being entitled to draw on the consignee to a certain amount, or the latter advancing cash to the former. On failure of the consignor, the consignee has a lien on the goods in his hand for the advances made.

CONSOLS.—A term familiarly used to denote a considerable portion of the public debt of this kingdom, more correctly known as the Three per Cent. *Consolidated* Annuities. This portion of the debt originated under an Act 25 Geo. 2, whereby various perpetual and lottery annuities then outstanding, and which, from the time of their creation, had respectively borne an interest of three per cent., were brought under one head in the public accounts.—See FUNDS, PUBLIC.

CONSOMMÉ. — A kind of *stock* used in cookery, made as follows:—Take a proper tinned pot, heat slightly, and wipe it well; put in it a piece of buttock or shin of beef, a

neck of veal, a fowl, an old rabbit, hare, or partridge; add a little stock, and reduce it to a glaze, or till the meat coagulates; then fill it up with stock or water; boil quickly, and skim it; add to it three carrots, three turnips, three large onions, each stuck with a clove, and two or three heads of celery; set it by the side of the fire to simmer, having taken care to put in the meats in such a manner, that what requires the shortest time to cook may be taken out first, and so on, as all those meats are to be dressed for the table; strain the stock through a damp napkin. The napkin is wetted, to avoid waste and to prevent the escape of fat.—See GLAZE, STOCK, &c.

CONSTANTIA JELLY.—Infuse in a pint of water, for five minutes, the rind of half a Seville orange, pared extremely thin; add an ounce of isinglass; and when this is dissolved throw in four ounces of lump sugar; stir well, and simmer the whole for a few minutes, then mix with it four wineglassfuls of Constantia wine, and strain the jelly through a fine cloth; let it settle and cool, then pour it gently from any sediment there may be into a mould which has been laid for an hour or two in water.

☞ Water, 1 pint, orange-peel, ½ of 1; isinglass, 1oz.; sugar, 4ozs.; Constantia wine, 4 wineglassfuls.

CONSTIPATION.—A condition of the body, when, either from a natural sluggish state of the system, or from the previous relaxing influence of powerful medicines, the action of the bowels is unhealthily confined. This condition of the body is usually accompanied by a furred tongue, cracked lips, hot or fœtid breath, headache, and a dry rough skin.

Constipation is often hereditary in many constitutions, and very frequently an attendant of old age, becoming more obstinate with the increase of years. To the individual of a naturally costive habit, nothing is more injurious than the custom of resorting to the aid of medicine on every occasion, as active purgatives invariably produce an opposite effect, when the first influence has passed away. Persons so situated should endeavour to acquire a regular habit of body, by taking quick walking exercise, eating coarse bread, or bread made of flour in which a large proportion of the chaff or husk of the wheat is retained, by a more perfect mastication, or by taking a glass of cold water upon going to bed. For the constipation of old age one of either of the following forms of aperient may be taken early in the morning, twice or three times a week.

Aperient Pills, No. 1.—Take of
Compound colocynth pill, }
Ditto assafœtida pill, } of each
Extract of hyoscyamus, } 1 scruple.
Mix, and divide into twelve pills.

Aperient Pills, No. 2.—Take of
Compound rhubarb pill, }
Ditto colocynth pill, } of each ½ drachm.
Mix, and divide into twelve pills.

To females and persons of delicate habit the No. 1 pill will be found highly beneficial; or where there is an antipathy to pills, stewed prunes eaten warm will be found to possess gentle aperient properties; while a more powerful, but still mild, laxative will be obtained by taking a dessertspoonful of the confection of senna or lenitive electuary.

CONSUMPTION.—The persons most prone to consumption, are those of a sanguine or phlegmatic temperament, with long neck, sharp shoulders, narrow chest, slender fingers, clear skin, fair hair, and rosy complexion. The disease usually begins with a short dry cough, followed, after a certain length of time, by a gradual loss of strength, lassitude, and great fatigue upon small exertions; the pulse is quick and small, while the cough, at first confined to the day, begins to extend into and through the night; the breathing is hurried, with a sense of tightness at the chest, accompanied with shooting pains; the expectoration, at first frothy, becomes viscid, opaque, often tinged with blood; and very copious in the morning. As the disease advances, emaciation takes place, the cough, pain, and difficulty of breathing increase, the face is flushed, the soles of the feet and palms of the hands are affected with a dry burning heat, the tongue, formerly white, now becomes clean and red, the pulse is smaller and quicker, and hectic fever sets in, attended with profuse perspiration; generally occurring twice a day, and, as the symptoms grow more formidable, the appetite usually increases, filling the patient with delusive hopes of recovery. The final symptoms and those that indicate approaching dissolution, are the setting in of diarrhœa, night sweats, prominent cheek bones, hollow and cadaverous countenance, swollen legs, great emaciation, and curved finger-nails. The expectoration has at the same time altered its character with each stage of the disease; at first scanty and frothy, it becomes opaque, and presents a mixture of mucus and pus, occasionally streaked with blood, and finally becomes all purulent, sinking in water, and often combined with irregular pieces of green or yellow substances.

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Mix.—Where the sweatings are excessive, or there is spitting of blood with the cough, rom fifteen to thirty drops of the elixir of vitriol in a wineglass of water, is to be sucked through a quill every three or four hours. No practice is so fatal as the sending a confirmed consumptive patient to a warm climate, or even to remove him to a warmer residence in his own country, as the increased temperature only developes the worst symptoms more rapidly. To a patient only *predisposed* to consumption, change of scene and climate is highly beneficial, but with the disease on him, it is suicidal. The modern practice of deluging the stomach with rancid fish oil, is a very questionable procedure, as any good that can result from its use must depend upon the amount of iodine or nitrogen, the cod liver oil may possess; remedies that can be given in greater quantities, in a much less objectionable way. In every stage of consumption, but especially in the early part of the disease, the patient should exercise the lungs as much as possible, by drawing deep inspirations of air, and inflating the organ to its fullest extent, and then slowly expiring what he has imbibed, repeating the process for ten minutes at a time; and resuming it four or five times a day. For this purpose he can either stand at a window, on a hill, or wherever the air is pure: when the atmosphere is damp, the air must be drawn through a veil, folded three or four times. This makes an infinitely better respirator than the metallic one sold in the shops. As the natural stimulant of the lungs is air, no means are so likely to excite absorption of the tuberculous matter, as that which expands every air cell of its structure, and while healthily exercising the organ, stimulates it to increased action. That consumption is curable, is a theory now rapidly gaining ground; but this can only be effected by converting the acute into a chronic disease, and in that form following the admonitions of nature as a guide to the practice; and the most important of these is exercising the lungs themselves.

CONTAGION.—Contagious diseases may be communicated by actual contact of the body, by articles of clothing or furniture, and by the atmosphere. Peculiar atmospheric conditions favour the propagation of disease by contagion, and this especially applies to dirty and crowded places, whence noxious exhalations arise. Old and soiled furniture and clothing, are also much more favourable to the reception of the disease than when new and clean. Wool, cotton, and other loose textures seem particularly apt to attract and retain contagious emanations; whilst, on the other hand, polished surfaces and hard substances are with difficulty impregnated. Chambers in which persons afflicted with contagious maladies are, should be kept scrupulously clean, regularly ventilated, and fumigated two or three times a day. Attendants on the patient should be dressed in silk or other material having a glazed surface; and it will be found an excellent plan to put on a large apron made of oiled silk. The furniture should consist as much as possible of articles having hard and polished surfaces, and instead of being crowded with furniture, the room should contain only such articles as are indispensably necessary. When the patient quits the chamber in which he has lain, every article that has come in contact with his person, should be first fumigated with chlorine in a close apartment, then exposed to the air, and finally washed; the furniture and clothing should undergo an appropriate and thorough cleansing. The bed requires the greatest amount of care; if of wool, it is better destroyed altogether; if of hair or feathers, these should be exposed to a heat of at least 210 degrees by re-baking. With regard to the chamber itself, it should be thoroughly fumigated with the doors and windows shut, and then left open to the influence of the air for several days. And, as a last precaution, the walls, ceiling, wainscot, &c., should be re-washed, papered, and painted. Until all these precautions have been taken the furniture and clothes should not again be brought into use, and the apartment should remain unoccupied. — See CHLORIDE OF LIME.

CONTRACT.—An agreement or mutual bargain between two contracting parties entered into, either verbally or by writing. When reduced into writing, it is either subscribed with the hands and seals of both the contracting parties, or merely with one or both their signatures. Such contracts as are reduced to writing under hand and seal, are technically called *deeds* or *specialties*; and those which are simply by parol, or in writing not under seal, are denominated simple contracts. Contracts to a certain amount and under certain circumstances, in order to be valid, must be in *writing*; but, though written, they still continue, like all other contracts not under seal, to be considered simple contracts. In support of an action on simple contract, the creditor must prove that it was founded on a sufficient consideration; but in proceeding on a contract by deed, the want of consideration forms no defence to the action. The obligation of a deed can only be avoided by a release *under seal*, and not by parol. And, lastly, as a special contract is considered a more deliberate and solemn engagement than by parol, the party bound thereby is not allowed to plead against any stipulation it contains, that it was executed with a different *intent* to what the terms of the deed itself import.

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Such compound injuries are often attended with serious consequences, such as gangrene and sloughing; and, from the danger of erysipelas supervening, require considerable care in their treatment. Contusions are more serious when occurring over bones but slightly covered with muscle, such as the shin, head, and fore-arm; and of less importance when happening on well-defended parts. Contusions are generally characterized by discoloration, pain, and more or less of swelling, caused by the rupture of some vessels below the cuticle, and the effusion of blood into the cellular tissue; and when the force of the accident has been severe, by the partial or entire death of the parts injured.

Treatment.—In both conditions of contusion, the practice is precisely the same. If the cuticle is torn or drawn from its position, the parts are to be placed as smoothly as possible, and, if from a fall, any gravel or foreign substance removed. The part injured is then to be covered with a folded pledget of lint well wetted with the extract of lead, a warm bran poultice placed over the lint, and the whole secured with a bandage. This dressing is to be repeated every four hours during the first day, if the accident has been severe, but only occasionally for more trivial injuries. For contusions on the head, it may be necessary, in addition to the dressing, to extract blood from the arm, apply leeches, or give opium, where the symptoms demand a narcotic treatment.—See HEAD, INJURIES OF.

CONVERSATION.—The art of conversation is deserving of cultivation, as it forms one of the greatest charms of society. The following rules ought to be observed by those who wish to acquit themselves creditably in this department of etiquette:—Speak distinctly, neither too rapidly nor too slowly. Accommodate the pitch of your voice to the hearing of the person with whom you are conversing. Never speak with your mouth full. Do not whisper or talk in an under tone to any one person when others are present, it is extremely disrespectful to the company generally, and compromises the person whom you address as well as yourself. Dispense with superfluous phrases and vulgar ejaculations, such as "Well, I should think," "Don't you see," "I say," "You know," &c. Adapt the topics of your discourse to what you conceive to be the taste and capacities of those present. Avoid politics, theology, and all other matters involving strong differences of opinion, especially in the presence of ladies. Never interrupt any one while speaking, and if when about to make a remark, another person essays to speak, suffer him to proceed. A *gentleman* should render his conversation interesting and agreeable, by an even flow of language, and by occasional recitals and anecdotes, calculated to affect and impress the hearer. He should avoid long and tedious narratives, eschew quotations from foreign languages, and avoid pedantry generally. Punning is a low and offensive habit; and when jokes are made, others should be left to laugh at them. A gentleman should never assume an intellectual superiority over another, and should not betray impatience at, or signify dissent to the arguments of others, if not precisely in accordance with his own. The *lady* who wishes her conversation to be agreeable, will avoid conceit or affectation, and laughter which is not natural and spontaneous. Her language will be easy and unstudied, marked by a graceful carelessness, which, at the same time, never oversteps the limits of propriety. Her lips will readily yield to a pleasant smile; she will not love to hear herself talk, and her tones will bear the impress of sincerity. If these rules are borne in mind and acted upon, the members of both sexes cannot fail to render their conversation invariably agreeable, and their society consequently always welcome.

CONVOLVULUS. — Ornamental plants with trumpet-shaped flowers, which are great favourites in gardens. The best known are the convolvulus major, and the convolvulus minor. The colours of the convolvulus major are varied: deep purple, violet, light blue, white, pale rose, deep rose-

crimson, and blue and white striped. This convolvulus should be sown in April, in patches, around a post or pillar, at the foot of a tree, or in any situation where it can be accommodated with tall branchy stakes on which to twine. The plant will grow ten feet in height, and in season be covered with bloom. A characteristic of this plant is to close its flowers during rains, or in very cloudy weather, and at the approach of night. The varieties seed freely; but as the seeds soon shed after ripening, the pods must be watched narrowly. It may also be sown in pots in March, and kept in frames till May, thence to be planted out. The convolvulus minor is a suitable border-plant, and, where the beds are large, it is a good flower for masses. All of the varieties should be planted in a dry, well-drained situation, in good light garden soil. The half-hardy kinds chiefly need protection at the root against wet and cold.

CONVULSIONS. — Irregular muscular contractions, depending upon some cause of irritation affecting directly or indirectly the nervous system.

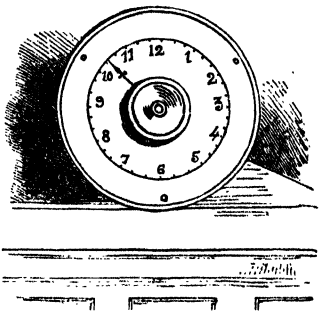
Treatment.—Convulsions must be treated according to the requirements of the disease that calls them into existence. For the convulsions of infancy, the warm bath and friction along the spine is the best and most certain remedy; and when teething is the cause, in addition, the gums should be lanced. When they proceed from worms, a strong aperient powder of jalap, scammony, and calomel must be given. When caused by indigestible fruit or other sources of gastric irritation, an emetic of sulphate of zinc and ipecacuanha; and from protracted labours, instrumental delivery; but in all cases, where it can be obtained, the hot bath and spinal friction forms the best and most certain means of benefit and cure.

COOK, DUTIES OF. — A cook who performs her duty well is sure to become a favourite domestic in the household. She should be scrupulously neat and clean, orderly in her habits, good tempered, obliging, and respectful. The kitchen should be kept tidy, and everything connected with it assigned to its appointed place. Before proceeding to her various operations, every duty should be pre-arranged, and a certain portion of time allotted to each, so that there need be no confusion or needless hurry. Never undertake more work than you feel quite certain you can do well; if you are ordered to prepare a larger dinner than you think you can send up with ease, or to dress any dish that you are not acquainted with, request your employers to let you have some help rather than risk the spoiling of a dinner, from a fear of confessing inability. If your mistress professes to understand cookery, follow her directions; and allow her to have all the praise. Do not intrust any part of your work to others without overlooking them, to ensure its proper performance. Never forget, while preparing a dish, that your produce has presently to be eaten, relished, or condemned, to your honour or to your discredit. Whatever can be tasted during the process of preparation, must be flavoured by the judgment of the palate. Whatever may not be tasted before serving must be done strictly and invariably by rule. Though certain methods of doing things may claim the merit of being long-established, there is no reason why improvement or advantageous changes should not be made. The combinations and changes in cookery by means of the same materials are endless, therefore *always think.* Cooks must not only please the palate, but likewise the stomach. The cook who attends to the niceties of the art is a superior servant; but if ignorant or neglectful, is worthless.

COOKERY, VARIOUS PROCESSES IN.—See BAKING, BOILING, BROILING, FRYING, GRILLING, ROASTING, STEWING, &c.

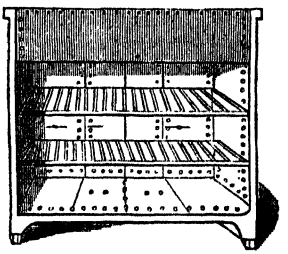
COOKERY BOOKS: — *Acton's Modern Cookery; Meg Dod's Cook and Housewife's Manual; Dolby's Cooks' Dictionary; Merle's Domestic Dictionary; Wife's Own Book of Cookery; Soyer's Modern Housewife; Dalgairn's Practice of Cookery; Cobbett's English Housekeeper; Eaton's Cook and Housewife's Dictionary; Hale's New Cookery Book; Modern Domestic Cookery by a Lady; French Cookery for the Unlearned; Kitchener's Cooks' Oracle; Hammond's Domestic Economy; Jenning's Recipes in Cookery; Bliss's Practical Cookery Book; Enquire Within; Corner Cupboard.*

COOKING CLOCK.—A simple contrivance on somewhat the same principle as the ordinary alarum; the progress of the cooking



is notified on the face of the clock, and when it is completed, the alarum strikes, and apprises the cook of the fact.

COOKING SCREEN.—This acts an important part in the roasting of meat, for, being lined with polished tin, it concentrates and throws back the heat. Its back and sides are also turned so as to keep out the draught from the door, &c. It is usually

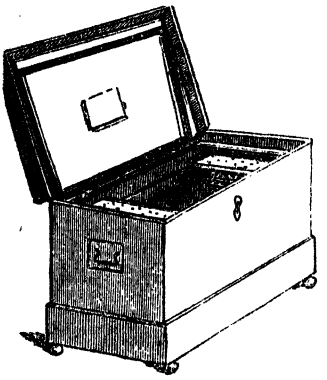


fitted up with shelves and sliding doors at the back, so that dishes and plates may be heated at the same time that the meat is being cooked.

COOKING UTENSILS. — See BAIN MARIE, CONJURER, CRADLE SPIT, CUTLET PAN, DIGESTER, GRIDIRON, POTATO STEAMER, STOCKPOT, &c.

COOLER.—In the summer months, especially when the heat is unusually intense, a receptacle for keeping wine, butter, and other articles, at a proper temperature, becomes a necessary adjunct to the household. They are best situated in some shady place, adjoining the wine cellar or ice cellar, and a quantity of ice should be put in for daily use. Coolers are made in every variety of form, and may be lined either with wood or

lead. Another kind of cooler made of earthenware, has recently been introduced, and is easily obtainable. Half an hour before



they are to be used, they are put to soak in cold water, of which they will imbibe a considerable quantity. When wanted for use, they are taken out of the water and the decanter of wine placed in them. The evaporation from the surface of the cooler, of the water which has been imbibed, abstracts the heat from the air of the interior, and consequently from the wine. Some have a duplicate form, with a space between for ice or ice water. When these coolers require cleaning, a hard brush and a coarse cloth, with *sand only*, should be used.

COPAL.—A resinous substance employed for making varnishes, and when applied in that form to pasteboard, wood, metals, &c., will take a better polish than any other varnish. It may be used on paintings with great advantage, and be found to considerably heighten their beauty.

COPPER ARTICLES, TO CLEAN.—Powder rottenstone very finely and sift it, then mix with soft soap and oil of turpentine, until it is brought to the consistence of stiff putty. First wash the articles with hot water, in order to remove all grease; then rub a little of the paste, mixed with water, over the metal; remove it briskly with a dry clean rag or leather, and a beautiful polish will be obtained.

COPPER PLATES, TO REMOVE GREASE FROM.—When the plates are designed for etching, being first finished with the burnisher, they should be well washed with clean water and then dried by the fire; after which they should be wiped dry with a linen cloth, and to ensure their freedom from grease, they should be rubbed over with the crumb of stale bread. Scraping very soft chalk over a plate, and rubbing the plate well, are also very sure means of preventing either any grease, bread, or other foulness remaining.

COPPER UTENSILS, CAUTION RESPECTING.—Many serious accidents have occurred through the injudicious use of copper cooking utensils. Fruit prepared in copper stewpans, coffee-grounds left in a copper coffee-pot and afterwards mixed with fresh coffee, and other similar processes, are highly injurious. The best antidote in such accidents, is to take immediately a large teaspoonful of powdered charcoal, mixed with honey, butter, or treacle; and within two hours afterwards, an emetic or a cathartic to expel the poison. It should be known that fat and oily substances, and vegetable acids, do not attack copper while hot, and, consequently, if no liquor were suffered to remain and grow cold in copper vessels, they might be used with safety. It is important, therefore, to clean and dry copper vessels before they become cold.

COPYING LETTERS.—Dissolve lump sugar in the ink ordinarily used, in the proportion of one drachm to one ounce of ink. Moisten a piece of unsized paper lightly with a wet sponge, and then lay it in soft paper to absorb the superfluous moisture. Put the moistened paper on the writing, place both between some soft paper, and pass an iron or other weight over it three or four times, when the copy will be immediately produced.

COPYING PRINTS.—Moisten a piece of paper with a solution of soap and alum, lay it on the print, and pass it under a rolling press. Impressions may also be transferred by mixing a little vermillion with linseed oil, dipping a pen in it, and tracing every line of the print accurately. The print should then be turned with its face downwards on a sheet of white paper, the back of the print wetted, another sheet laid on it, and both submitted to pressure, till the red lines are completely transferred.

COPYRIGHT.—The exclusive right which an author has of publishing or printing his own compositions, and every part thereof, for his life, and for seven years after, if the seven years shall expire before the end of forty-two years from the first publication; and when the work is posthumous, the copyright lasts for forty-two years from the first publication. If the proprietor of a copyright of a work, after the death of the author, refuse to republish the work, the judicial committee of her Majesty's Privy Council may grant a licence to publish it, subject to such conditions as they may think fit. Copyright may be violated even by a gratuitous distribution of the work. If a copyright has been violated, the author must commence legal proceedings within twelve months, and may recover damages for its infringement, with an account of the sales, and an injunction restraining any future sale. Where there are imported copies, they may be seized by an officer of Excise or Customs. No action or suit can be commenced without the previous registration of the title at Stationers' Hall, though an omission to register does not otherwise affect the copyright itself. An assignment of a copyright, if properly entered at Stationers' Hall, is as effectual as if made by deed. No copyright can exist of a work

which is published as the work of one who is not in truth the author

CORAL, ARTIFICIAL.—This may be employed for forming grottos, and for similar ornamentation. To two drachms of vermilion add one ounce of resin, and melt them together. Have ready the branches or twigs peeled and dried, and paint them over with this mixture while hot. The twigs being covered, hold them over a gentle fire, turning them round till they are perfectly covered and smooth. White coral may also be made with white lead, and black, with lampblack mixed with resin. When irregular branches are required, the sprays of an old blackthorn are best adapted for the purpose; and for regular branches the young shoots of the elm tree are most suitable. Cinders, stones, or any other materials may be dipped into the mixture, and made to assume the appearance of coral.

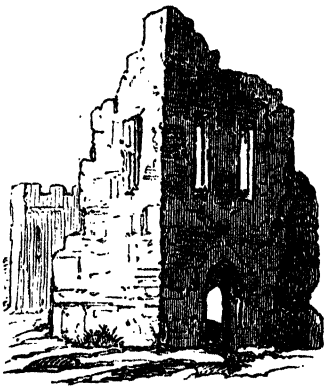
CORDIALS.—See ANISEED, CARAWAY, CORIANDER, CURACOA, CLOVE, LOVAGE, NOYAU, PEPPERMINT, RASPBERRY, RATAFIA, &c.

CORIANDER.—An aromatic plant, the seeds of which are much used in medicine, on account of the agreeable warmth they impart to the stomach. They are also employed in a variety of culinary operations.

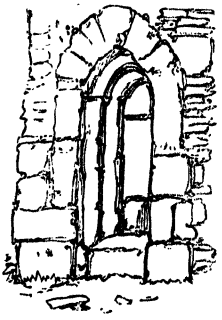
CORIANDER CORDIAL.—To half a gallon of spirits put half a pound of coriander seeds, quarter of a pound of caraway seeds, half a pound of sugar, and one drop of oil of orange. Make it up to three quarts with water. The coriander seed must be bruised and steeped in the spirit for ten or twelve days, and well stirred two or three times a day.

CORKING LIQUORS.—When bottles containing liquors are corked, they should be laid on their sides, so that the liquid by swelling the corks may render them quite tight. The corks should be driven by easy stages, and not at one blow. If the cork is forced down even with the neck of the bottle, it is too small, and a larger one should be substituted. When a bottle of ketchup, anchovy, or other sauce is opened, the original cork should be thrown away, and the bottle supplied with a new one.

CORK MODELS.—These, when fashioned with care and taste, form very interesting and elegant ornaments for the household. The cork used should be of particularly fine texture, and free from knots, holes, and other flaws. The cork may be cut with a penknife having a keen edge, which edge must always be maintained, otherwise the parts cut will present a rough and unsightly appearance. The corks should be cut into long narrow slips, and then subdivided into little oblong cubes, care being taken that their sides are perfectly parallel to each other. The intended size of the model will, as a matter of course, regulate the dimensions of the cubes with which the model is formed. The mouldings round doors, windows, &c., may be made of thin strips of cork, glued upon each other, to imitate the different rows of moulding; and these should not be glued to the model until it approaches its completion. The same precaution is to be observed with all ornaments employed. The glue must be applied neatly and with care, so that no daub or smear may



appear on the surface. Ivy and other creeping plants, may be represented by moss. To attain to skill in making cork models it



would be as well to make in the first instance copies of old ruins, in preference to attempting to glue pieces of cork together with an indefinite purpose.

CORKS.—It is of the highest importance in domestic economy that the corks which are used should be of the best quality. Buying low-priced corks for the sake of saving a few shillings is short-sighted economy, inasmuch as it endangers the loss of some valuable article intended to be preserved. The best kind are those called "velvet corks," and are imported from France. None but these should be used for liquors destined to be kept any length of time. Corks may be rendered impervious to air, and other external influences, by the following method. Melt together two parts of white wax and one part of beef suet: dip the corks in this mixture, and immer-

diately dry them in a stove upon an iron plate; repeat this operation twice, and the corks will then be fit for use.

CORK WAISTCOAT.—A kind of garment used as a protection against drowning. It is composed of four pieces of cork, two for the breast and two for the back, each about the same size as the sections of a waistcoat; cover the whole with coarse canvas, leaving two holes to put the arms through. There must also be a space left between the two back pieces, and the same between each back and breast piece, that they may fit easier to the body. By this means the waistcoat is open only before, and may be fastened on the wearer by strings; or to render it still more secure, with buckles and leathern straps.

CORN.—The season for sowing corn extends from September to April, but ordinarily that succeeds best which is committed to the ground during October and November. It is desirable that the land be neither wet nor very dry, so that the precise time of sowing is determined by the weather; but it is well to proceed as soon after the first of October as the land is moist enough to ensure a regular germination of the seed. Over a large portion of England corn is the crop usually sown after clover or one year's seeds. In such cases the land is ploughed in the end of September, immediately harrowed, and wheat sown upon it by a drilling machine. The land from which potatoes, beans, peas, or vetches have been cleared off will next demand attention. When these crops have been carefully hoed, all that is required is to clear off the haulm, to plough and sow. If the land is not clean, recourse must be had to a short fallowing process before sowing wheat. For this purpose the surface is loosened by the grubber, the weeds harrowed out and raked off; after which the land is ploughed and sown. Great care should be taken to have the land so cleaned beforehand, that the sowing and harrowing may follow closely upon the ploughing, to prevent these operations from being interfered with by unseasonable weather. As the crops of turnips, mangold-wurtzel, or carrots arrive at maturity and are either removed to the store-heap or consumed by sheep where they grow, successive sowings of wheat can be made as the ploughing is accomplished, and as the weather permits. It is to be noted, however, that it is only on dry soils, and which are also clean and in a high state of fertility, that wheat sowing can be continued with advantage during the months of December and January. If the whole of these conditions do not exist, it is wiser to refrain until February or March. The *sowing of spring-wheat* is only expedient on dry and fertile soils with a free exposure. Unless the whole conditions are favourable, there is much risk of spring-sown wheat being too late to get properly ripened or well harvested. The *quantity of seed* employed, depends upon the method pursued, whether thick or thin seeding be adopted. The best crops are perhaps secured by using two bushels per acre for the sowing, made early in October, and by increasing this quantity at the rate of half a peck a week, until three bushels are reached, which may be held as the maximum. These are the quantities to be used in broad-cast sowing; when drilling or dibbling is resorted to, two-fifths less seed will suffice. The *method of sowing*, that is to say, broad-cast, in opposition to drilling, is next to be considered. Generally speaking, larger crops are secured by broad-cast sowing than by drilling. The latter mode is, however, to be preferred wherever the land is affected by annual weeds, which cannot be got rid of by hoeing. When clover and grass-seeds are sown with the grain crop, it is believed that the grain grows better from being sown in rows, owing to their freer exposure to light and air. It is believed also that in highly manured soils of a loose texture, grain deposited somewhat deeply in rows is less liable to lodge than when sown broad-cast and shallower. The *rolling of wheat* is always a process beneficial to the crop, especially where the plants have been loosened by severe frosts, or are suffering from the attacks of wire-worms. Corn should be reaped before it is what is called *dead* ripe. When the grains cease to yield a milky fluid on being pressed under the thumb-nail, and when the ears and a few inches of the stem have become yellow, the sooner it is reaped the better. Several distinct *modes of reaping* are in use. The practice of mowing has increased of late years, and would be more rapidly extended but for the greater difficulty of finding good mowers than good reapers. The chief recommendation of mowing is, that mown sheaves dry most quickly, and suffer least from a drenching rain. This arises from the stems being less handled, and so forming an open sheaf, through which the wind penetrates freely. Before the corn is *tied up in sheaves*, it is of great consequence to see that it is dry; also that the sheaves are not too tightly bound, and that every sheaf is kept constantly on foot. Rapid drying is to be aimed at, and for this purpose, the sheaves should be small individually, and set but four or six of them together. It requires no little discrimination to know when sheaves are dry enough to keep in a stack. On thrusting the hand into a sheaf sufficiently dried, there is a lightness and kindliness to the touch not easily mistaken when once understood. Whenever this is ascertained, the crop should be carried with the utmost despatch. *Carrying* is next accomplished by using one-horse carts, and by building the sheaves into round stacks of ten or twelve loads each. Corn is in a much fitter state to keep in small stacks than in large ones, and sooner gets into condition for market; the crop is more accessible for threshing in ten-load quantities than in huge ricks, and the crop of different fields and kinds of grain more easily kept separate. It is always desirable to have the stacks built upon frames or stools elevated eighteen or twenty inches from the ground. Besides the security from vermin thus attained, there is a free admission of air to every part, particularly when aided by a triangle of rough timber in the centre, which speedily ensures thorough dryness in the whole stack. As the stacks are built they should be thatched without

delay. For this purpose ample stores of thatch, and straw ropes should be provided beforehand. With proper machinery propelled by steam or water, the *threshing and dressing* of corn is a simple and inexpensive process. In *preparing a parcel for market*, it is a good plan to measure a few sacks very carefully, ascertain the average weight of them, and then fill every remaining sack to that weight exactly.

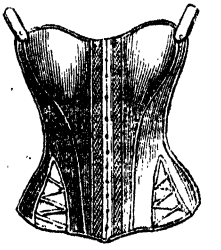
CORN BOX.—A receptacle for corn, oil-cake, and other substances, so that when standing in the open air it may be protected from the weather, and sheep may feed from it with impunity. The construction is simple, and self-explanatory.

CORN CHEST.—The most convenient form of corn chest is one about five feet long and four and a half feet high. A part of the front folds down with hinges, to give easier access to the corn as it gets low in the chest. Part of the lid is made fast to receive the spout for conveying the corn into it from the granary, and to render its moveable part lighter. To ascertain the quantity of corn at any time in the chest, the best way is to mark lines on the inside of the chest indicative of every quarter of corn which it contains. A certain quantity of corn being originally put in, and a certain quantity allowed each day, a check may thus be kept upon the current consumption. The key of the corn-chest should be confided to the custody of the farm steward, or to the person who gives out the corn where no farm steward is kept.

CORN SALAD.—A species of lettuce grown for winter and spring salads. It will thrive in any soil that is not particularly heavy; but the best is a sandy, moderately fertile loam, in an open situation. Sown in the months of February, March, and April, and once a month during the summer if in request. Lastly, during August and early in September, so that they may be ready at the commencement of spring, or during the winter, if mild. Three sowings are, in general, quite sufficient for a family, viz., one at the end of February, a second early in August, and a third early in September. Sow in drills, six inches apart. The only cultivation required is frequent hoeing, the plants being thinned to four inches asunder. In summer, the whole plant may be cut, as they soon advance to seed at this season; but in spring and winter the outer leaves only should be gathered. To *obtain seed*, some of the spring-raised plants must be left ungathered from. They flower in June, and perfect their seed during the two following months.

CORNS.—Horny indurations of the skin, with a central core, very sensitive at the base. The common cause of corns is continued pressure over the projection of the bones, from boots or shoes. They are of two kinds, hard and soft. The first grow on the exposed portion of the joints; the last, between the toes. *Prevention*:—This consists in keeping the feet clean, by frequently washing them in warm water, and in the use of easy boots and shoes. Without the latter precaution corns will generally return, even after they appear to have been perfectly removed. *Treatment*:—After soaking the feet in warm water for a few minutes, pare the corns as close as possible with a sharp knife, taking care not to make them bleed. Afterwards touch them over with a little lunar caustic; repeat the application every three or four days for a fortnight, accompanied by the use of soft loose shoes, and a cure will be generally effected. Soft corns may be removed by applying ivy leaf, previously soaked in strong vinegar, changing the piece every morning; or by placing a dressing of soap cerate, spread on a bit of lint or old rag, between the toes.

CORSET.—An article of female dress, for supporting and compressing the chest and waist. When corsets are tightly laced or fastened they give rise to many serious disadvantages. The proper development of the chest is prevented by the unnatural compression, and the functions of the lungs, the liver, and the heart are interrupted from the same cause. Other organs are also more or less interfered with, and the whole system thus becomes deranged. A new kind of corset has been recently introduced, and would seem to possess peculiar advantages. Its



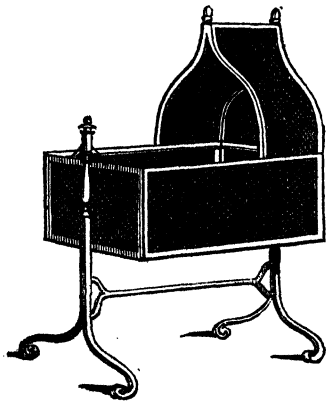
framework is constructed of pliable and elastic materials, and is so contrived that it yields with every movement of the body, and yet affords the required amount of support. Instead of lacing behind, as in the ordinary mode of stays, it fastens in the front with a species of stud and eyelet holes, and these are so situated as to allow of being loosened or tightened as required.

COSMETICS.—External applications employed for the purpose of preserving or restoring personal beauty.—See CARMINE; PEARL WHITE; ROUGE; VIOLET POWDER, &c.

COTILLON.—A dance which is practised with various distinctions, but all similar in general effect. The *March Cotillon* is as follows:—First couple promenade to the right, around the other three (who remain in their places) till they arrive at the place whence they started, but facing a contrary direction from first position; the third couple then promenade round the other three, and take their position directly behind the first, facing the same way; second couple promenade round, and take their places next to the third; fourth couple promenade round the whole, and take their position behind the second, each lady in the set taking the arm

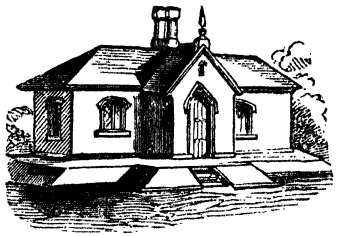
of her partner. *March.*—All march forward till they arrive at the end of the room; the ladies turn to the right and the gentlemen to the left, as fast as they reach the place where the first couple turned—the ladies march down on one side and the gentlemen on the other, till they arrive at the opposite end of the room—here the ladies meet their partners, and taking arms, again turn up the room to their places, where they stop or march again as the leader of the dance may direct. When there are a number of cotillons on the floor at once, after the promenade, and previous to the march, they may form a line, or number of lines, reaching the whole length of the room, without deranging the figure. When the march is ended, the two columns of ladies and gentlemen face each other—gentlemen standing directly opposite their partners. The figure generally terminates with the following dance: The couple at the top of the column balance to each other, turn partners twice round, take hands and promenade down between the columns till having arrived at the foot, the lady takes up her position on the ladies' side, and her partner opposite; after they have begun the promenade down, the second couple balance, and so on with the third and fourth until all have gone through; as fast as they leave the top, the column move up so that each couple starts from the same place. In the promenade down the centre the couples may use a promenade, march, dance, or walk. The dance being finished, both columns move forward and back—forward again—then all turn partners to places, in which movement, every one should be careful to take the same hand or side which they occupied previously to the promenade.

COT, FOR CHILDREN.—A kind of cradle raised from the ground, and made to swing

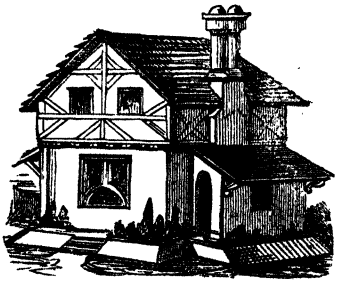


backwards and forwards with an easy and gentle motion. Although these places of repose are no doubt very gratifying to infants, and productive of slumber, they have nevertheless been objected to on account of their so accustoming children to the motion, that they cannot be induced to sleep without it.

COTTAGE.—A dwelling ordinarily occupied by the humbler classes of society. Their space is, in general, more contracted than the houses of the higher classes, the rooms being smaller and lower, and the passages, staircase, &c., being brought to the narrowest limits. Although the elegancies of life are not to be met with in a cottage, it is not precluded from administering to the social wants of the inmates generally; so much so that in England cottage life is habitually associated with comfort and domestic enjoyment. Cottages may be built in every variety of style and capacity, according to the requirements of the family. The accompanying engraving represents one of these buildings, capable of accommodating



a man and his wife. It contains a kitchen with two closets, a bed-room with a recess for a cupboard; a porch; a back room, in which there might be a boiler and an oven for baking, and also for heating water; a place for fuel, and other conveniences. The walls may be built of stone or brick; and the roof covered with slates or flat tiles projecting a few inches over the walls, so as to deliver the water which falls upon it into the gutter. The chimney tops are round, terminating with small capitals. The pediment over the entrance has a pinnacle formed of oak; a veranda between the tops of the windows and the eaves of the roof might be pro-



duced with pleasing effect. The cost of building a cottage such as this need not exceed £120 or £150. The next engraving re-

presents *a cottage for a married couple and one or two children.* It consists of three rooms in two stories; and contains on the ground-floor an entrance porch or lobby; a wash-house, with a place for an oven; a kitchen or living room; a large closet under the staircase; pantry, fuel-house, pig-sty, &c. The walls, as high as the bed-room floor, may be built of stone or brick, and above that of brick nogging. These walls should be plastered within and without. The chimneys may be built of brick and covered with cement, or be formed of cement only. The windows may have wooden mullions and wooden casements, if economy is particularly desired. The cost of erecting this cottage might be limited to £150 or £170. *A cottage for a married couple with a family of children* might be thus arranged:—The basement is a porch, staircase, and passage, kitchen, closet under the stairs, back kitchen, sittingroom, woodhouse, &c. The chamber floor contains a bedroom, two closets, a second bedroom, staircase and landing. The extra amount of material here required may be compensated for by cheapness. The walls may be built of brick stud-work, plastered outside; and the roof thatched with reeds or straw. The windows to have mullions of timber painted in imitation of stone. The chimney stacks to be formed of cement, and in short the most inexpensive materials to be employed at every point. The cost for erecting a cottage of this description need not exceed £180 or £200.

COTTAGE PUDDINGS.—Chop a pound of suet finely, add to it a pound of currants, well washed and dried, the same quantity of crumb of bread grated, quarter of a nutmeg, a wineglassful of ratafia, and two teaspoonfuls of orange-flower water. Mix the whole well together, and with ten eggs well beaten form a stiff paste; then rub the hands well with flour, roll the paste into small balls, and fry to a good colour, keeping them briskly moved about in the frying pan, to prevent their burning; when done, serve with sugar strewed over them, and sweet sauce.

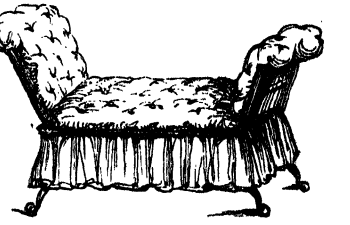
☞ Suet, 1lb.; currants, 1lb.; bread crumbs, 1lb.; nutmeg, ¼ of 1; ratafia, 1 wineglassful; orange-flower water, 2 teaspoonfuls; eggs, 10.

COTTAGE SOUP.—Fill an earthen pot with six quarts of water, add one pound of bacon, with carrots, turnips, cabbages, leeks, and onions; season with pepper and salt, and boil gently for five or six hours. This will make an excellent and economical repast for ten persons.

COTTON.—A vegetable down contained in the seed of the cotton plant, which is cultivated in America, the East and West Indies, and Egypt. After going through various cleansing processes it is woven into various fibres used for clothing and furniture. From its comparative cheapness, lightness, and the facility with which it can be cleaned, cotton forms a valuable staple article of dress, and is especially advantageous as an article of underclothing; being warmer than linen in low temperatures, and cooler in higher temperatures; and when changes of the atmosphere take place, the amount of heat abstracted from the body is regulated accordingly, and a steady equilibrium is thus preserved.

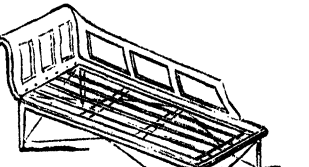
COTTON ARTICLES, TO CLEAN.—These may be cleaned by the ordinary washing process, or as follows:—Wash and brush some potatoes until they are thoroughly clean, then rasp them through a sieve into a pan containing a small quantity of water, let the mixture settle, and pour the water off; with the fecula that remains, and the water poured off, rub the articles, stretched on a clean board or table, frequently with a sponge on both sides, and rinse in clean water.

COUCH.—An article of domestic furniture which admits of the body reposing at full length. They are considered preferable to sofas, and especially in small apartments, as being less cumbersome and difficult of removal, and occupying a more limited space. Couches may be fashioned of any material, but when covered they should match with the other furniture of the room. They are made in every gradation of dimensions, and at prices varying from £1 to £20. A very convenient form of couch is that shown in the engraving, which is capable of



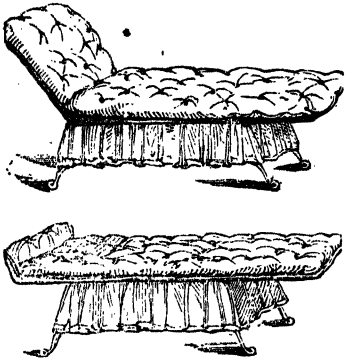
being converted into a settee, a couch, a bed, and finally folded up, into a compact and portable form.

A *couch for invalids* has also been invented



which is contrived to raise the back to any angle, and to conform to the position of the legs, by elevating part of the frame, through the medium of a winch, acting on levers by hands. *Swinging couches* for use in ships and carriages have also been introduced, to

counteract the effects of the uneasy motion. In these an elasticity is produced by the aid of swinging frames, and metal spiral springs.



COUGH.—A cough is an effort of nature to relieve the lungs and air passages from any obstruction of mucus, phlegm, pus, or other sources of irritation in the parts. There are, consequently, many varieties of cough, according to the nature and situation of the disease or affection that excites it: as the cough in consumption, that from bronchitis, the stomach cough of children, whooping cough, &c., beside which there is the common cough of an ordinary cold, which this article especially refers to. The ordinary cough is, in the first instance, generally hard and dry, becoming, after a day or two, more relaxed, and attended with free expectoration, which, after passing through some changes of character, as regards quantity, colour, and substance, usually cures itself. When the febrile symptoms that attend a cold and cough are too slight to demand treatment, the best cough-mixture that can be taken is one composed of equal parts of the syrup of squills, syrup of tolu, paregoric, and ipecacuanha wine, of which a dessertspoonful may be given every four hours. When the cough is attended with great difficulty and tightness, a "warming plaster" should be applied to the chest, and the following expectorant mixture, employed to promote relaxation of the parts:—Take of the

Milk of ammoniacum .	6 ounces.
Dover's powder . . .	½ drachm.

Mix in a mortar, and add

Oxymel of squills . .	1 ounce.
Spirits of sweet nitre and syrup of tolu,	of each ½ ounce.

Mix. One tablespoonful to be given three times a day, and two on going to bed.

COUGH ELECTUARY.—Oil of almonds, half an ounce; spermaceti in powder, two drachms; conserve of hops, one ounce; powder of ipecacuanha, ten grains; orris root in powder, one drachm; syrup of mulberries, one ounce; acid of vitriol (diluted), thirty drops; mix. A teaspoonful to be taken whenever the cough is troublesome.

COUGH MARMALADE. — Stone six ounces of the best Malaga raisins, and beat them to a fine paste with the same quantity of sugar candy; an ounce of conserve of roses, twenty-five drops of oil of vitriol, and twenty drops of oil of sulphur. Mix the whole well together and take two teaspoonfuls night and morning. For *children*, one teaspoonful is a sufficient quantity.

COUGH PILLS.—Mix one drachm of compound powder of ipecacuanha with one scruple of gum ammoniacum, and dried squill bulb; make it into a mass with mucilage, and divide into twenty pills. One to be taken three times a day.

COUGH SYRUP.—Boil one ounce of linseed in a quart of water till reduced to a pint; add six ounces of moist sugar, two ounces of sugar-candy, half an ounce of Spanish liquorice, and the juice of a large lemon. Simmer slowly together till of a syrupy consistence, and when cold put in two tablespoonfuls of the best old rum. Take a tablespoonful of this as occasion requires.

COULIS, A MADE GRAVY. —Put into a stew-pan two pounds of veal and a small slice of bacon cut in pieces; add two carrots, two onions, and two cloves. Place the stew-pan, closely covered, over a slow fire. When the veal is sufficiently stewed, and of a good colour, mix with it a quart of broth and a piece of butter rolled in flour. Then let it stew for six hours slowly; strain the liquor and reduce it if too thin.

COUNTRY DANCE. — First lady and bottom gentleman advance to centre, salute, and retire; first gentleman and bottom lady the same. Ladies promenade, turning off to the right down the room, and back to places, while gentlemen do the same turning to the left; top couple remain at bottom; repeat to the end of dance.

COUNTY COURTS are courts of record having jurisdiction for the recovery of debts not exceeding £50, and may order payment by instalments. They have also jurisdiction in suits for replevying a distress; for the recovery of the possession of land or tenements where the annual rent does not exceed £20; to settle disputes between members of a friendly society, at the option of either party; to summon and examine witnesses; and enforce the production of documents under the Joint Stock Companies Winding-up Acts; to arrest an absconding debtor; to exercise the same power as the Court of Chancery in certain suits relating to property of a less value than £500; and they have also jurisdiction in actions of debt above £50, or in which the title to land is in question, if the parties choose to submit thereto in writing. A demand exceeding £50, and reduced by a set-off below £50, is not within their jurisdiction unless the set-off be admitted.

Where a demand is above £50, and the plaintiff, for the purpose of suing in the county court, is willing to abandon the excess above that sum, he must state so in

writing upon the particulars of his demand at the time of his application for a summons.

In cases of debt above £5, either party may have a jury of five persons of the same standing as jurymen of the Courts of Westminster Hall, or may remove the cause into a superior court; or if dissatisfied with the judgment in the county court may appeal to any of the courts of common law at Westminster—two of the judges of which may decide the point.

In actions above £20 and under £50, the county courts and the courts of Westminster Hall have concurrent jurisdiction; but it a plaintiff sues in a superior court for a debt under, or obtains a verdict for a less sum than, £20, he does so at the risk of having to pay his own costs unless the defendant dwells twenty miles from his, the plaintiff's, residence, or where the cause of action did not arise within the jurisdiction of the court within which the defendant dwells. All the metropolitan county courts are for this last-mentioned purpose as one district.

Where an action of contract is brought in a superior court for a sum of less than £50, the judge may, on the application of the defendant, order the same to be tried in the county court; and where an action commenced in the Court of Chancery might have been commenced in a county court it may be transferred to the county court on the application of either of the parties to the suit.

All the county courts, except those in the metropolitan district, have sole jurisdiction in cases of bankruptcy.

In an action for malicious prosecution, illegal arrest, illegal distress, assault, false imprisonment, libel, slander, seduction, or other action of tort, the judge may, upon an affidavit of the defendant that the plaintiff has not the means of paying the defendant's costs, order that the case be remitted to a county court unless the plaintiff gives security for costs within a certain time.

In a case of debt or money demand, a party complainant must go into court prepared to prove either an admission by the defendant of, or a promise to pay, the amount sought to be recovered. If that is not possible, then, in case of the sale of goods, it is necessary to prove three things: first, that the order for them was given by the defendant; secondly, that the price charged for them was the agreed price at the time of sale, or that it is the fair market value of them; and, thirdly, the delivery of them to the defendant or to his order. Where the summons is for work done by the complainant, it must be proved that the work was done at the request of the defendant.

A county court must sit at least once in every calendar month in each district, and by the first day of every month must put up in the court-house the appointments of the sittings to the extent of the third month following.

If any bailiff or officer of a county court is assaulted while executing his duty, the offender is liable to a penalty of £5, and the bailiff may take him into custody; and any officer misconducting himself, upon complaint proved will be fined by the judge; and if he exact any reward beyond the fees allowed, he is for ever incapable of serving under the Act.

An attorney's fees in actions of covenant debt, detinue, and assumpsit, are as follows:

	£	s.	d.
Under £2	Nil.		
Above £2 and not exceeding £5 .	0	10	0
,, £5 ,, ,, £20 .	0	15	0
,, £20 ,, ,, £35 .	1	10	0
,, £35 ,, ,, £50 .	2	0	0

COURT PLASTER.—Take half an ounce of benzoin, and six ounces of rectified spirit, dissolve and strain; then take one ounce of isinglass, and half a pint of hot water; dissolve and strain separately from the former. Mix the two, and set them aside to cool, when a jelly will be formed; warm this and brush it ten or twelve times over a piece of black silk, stretched smooth. When dry, brush it with a solution made from four ounces of Chian turpentine and six ounces of tincture of benzoin.

COW, MANAGEMENT OF.—A good cow is a source of constant profit, provided it be properly managed. Cows intended for the dairy should be particularly well housed and fed; for this purpose a clean and warm cow-house is of the utmost importance, and also a sweet pasture. If cows be kept at grass, it is a good plan to allow them constant access to a little hay, which prevents scouring, especially at an early season; or, if they be kept within doors and fed on succulent artificial grasses, a little hay may be occasionally necessary, to prevent the purgative effects of green food. Cows kept at pasture will require from one to two acres of land each, to keep them during the summer; but if housed, the produce of half or three-quarters of an acre will be sufficient. The *best mode of feeding* is as follows:—From the first of May to the first of November, cows should be fed upon various successions of green food, and the more varied the better. When the various grasses have been mown for the last time and consumed, the fresh leaves of cattle-beet and cabbage (the latter in small quantities, lest they should flavour the milk) will supply them with food until the roots of mangold-wurtzel, &c., are ready for use. These roots are given with most advantage either steamed or boiled, or at least scalded with hot water, and chopped up and mixed with chaff, bran, &c., with a sprinkling of salt added to promote digestion. The quantity of roots given daily to a cow producing milk, from November to May, may be stated at forty-two pounds of mangold-wurtzel, sixty pounds of Swedish turnips, or twenty-eight pounds of potatoes. When roots are given to a cow in their raw state, they should be cut into small pieces, to prevent choking. Before clover, lucern, and similar food is given to a cow, it should be cut some hours previously, to allow the fixed air to escape; and it should also be given in small quantities at a time, for if these precautions are not observed the animal is likely to over-gorge

itself, and sometimes even burst. Turnips and carrots form excellent articles of food, and cannot be too strongly recommended, especially for winter sustenance. Of all vegetable productions, however, the *cabbage* is perhaps the most exuberant, particularly the drum-headed species, which will be found to afford a supply of milk superior to any other vegetable. Any disagreeable flavour which the cabbage is sometimes liable to impart, may be removed by dissolving an ounce of saltpetre in a quart of spring water, and mixing about a quarter of a pint of it with ten or twelve gallons of the milk as it comes from the cow. A cow kept in confinement requires much hand-rubbing, to keep her skin in a healthy state, and prevent the irritation which is always the consequence of high feeding and want of air and exercise; she should therefore be regularly curried and brushed. The labour thus bestowed assists in circulating the blood, and to exterminate the old hair in favour of the new. *The hours of milking* should be regular, and generally once in twelve hours, this being necessary for the due secretion of milk; some cows, however, have such a flow of milk for the first three months after calving, especially in the months of May, June, and July, as to require to be milked three times a day. When *a cow has been milked for several years, and begins to grow old*, the most advantageous treatment is to make her dry. To effect this, bruise six ounces of white rosin, and dissolve it in a quart of water. The cow having been housed, should then be bled, and afterwards milked; the above mixture should then be administered, and the animal finally turned into good grass. She is then no longer to be milked; but to be fattened on rich vegetables. *Cows intended for breeding*, should be carefully selected from those which give plenty of milk. During three months previously to calving, if in the spring, they should be turned into sweet grass; or if it happen in the winter, they ought to be well fed with the best hay. The day and night after they have calved, they should be kept in the house, and their drink confined to lukewarm water only. They may be turned out the next day, if the weather be warm, but regularly taken in for three or four successive nights; or if the weather be damp and cold, it is better to girt their bodies round with sacking, or to keep them wholly within. Cows thus housed, should be kept in every night, till the morning cold is dissipated, and a draught of warm water should be given them previously to their going to the field. If the udder of a milking cow becomes hard and painful, it should be fomented with warm water, and rubbed gently with the hand. Or if the teats are sore, they should be soaked in warm water twice a day; and either be dressed with soft ointment, or washed with spirits and water. When any such complaints exist, the milk had best be given to the pigs. To prevent cows from sucking their own milk, as some of them are apt to do, rub the teats frequently with strong rancid cheese, which will prove an effectual remedy.—See CALF and CATTLE.

COWHAGE.—The stiff hairs on the pods of the *dolichos pruriens*. Its chief employment is to expel the round worm peculiar to children. For this purpose the pods are dipped in simple syrup or molasses, and the whole scraped off with a knife until a confection is formed. A teaspoonful or two of this taken for three or four mornings successively will generally produce the desired effect.

COWHEEL BOILED.—Scrape and clean it well, and boil it gently for five or six hours with two quarts of water and a quart of milk; together with four or five large onions and a sprinkling of salt. Serve with the onions and liquor.

COWHEEL FRIED. — Cut them into small bits; dip them into the beaten yolk of an egg; roll them in bread crumbs, seasoned with pepper, salt, and minced parsley; fry them in butter. Cut into thin slices a good dish of onions, fry them in butter and serve them hot, with the fried heel laid upon them.

COWHEEL POTTED. — Boil them in fresh water till the bones can be easily removed; cut them into small pieces, and add just a sufficient portion of liquor to moisten it; mix with it a tablespoonful of vinegar, with a seasoning of pepper, salt, and mace; put it into a mould and turn it out when cold. It is usually eaten with vinegar and mustard.

COWHEEL SOUP.—Boil two cowheels; cut off the meat into moderately small pieces, and set them by separately in a plate; put the trimmings and bones into a stew-pan with three quarts of water, together with an unboiled cowheel cut into quarters; add to this, two onions and two turnips pared and sliced, the red part of two large carrots, two shalots cut in half, a bunch of lemon-thyme, and two bunches of parsley; set this by the side of a slow steady fire, keep it closely covered, and let it simmer gently for six or seven hours; during which, take care to remove the fat and ecum, that will rise from time to time to the surface. When done, strain the liquor through a sieve, and put two ounces of butter into a clean stew-pan; when it is melted, stir into it as much flour as will make a stiff paste, add to it by degrees the soup liquor, give it a boil up, strain it through a sieve, and put in the thinly pared peel of a lemon, a couple of bay leaves, and the meat of the boiled heels. Let it simmer for half an hour longer; add the juice of a lemon, a gill of wine, and a teaspoonful of mushroom ketchup, and serve in a tureen.

COW-POX.—The slight febrile symptoms that follow vaccination, and which seldom if ever amount to what may be called a fever, constitute what is popularly known as cow-pox. It is nothing more than the artificial disease established in the infant's body by vaccination. Cow-pox usually takes from seventeen to twenty days to run its course, though at the end of the eighth day the disease, so far as the pustule on the arm is concerned, is at its maturity, and the lymph then taken from the pock is in a condition to propagate the disease in others. In general,

the system is so little disturbed as not to call for any medical treatment, and the most that is ever required is a little aperient powder before and after the vaccination; and when the inflammation in the arm is severe, a small poultice when the pustule has been opened.—See VACCINATION.

COWSLIP.—There are several varieties of this flower, varying in colour from almost white to a very deep yellow; some are single and others double. For the mode of cultivation, see AURICULA.

COWSLIP WINE.—To every gallon of water put three pounds of loaf sugar; boil the quantity half an hour, taking off the scum as it rises. When cool, put to it a crust of toasted bread dipped in thick yeast, let the liquor ferment in a tub for thirty-six hours; then put into the cask, for every gallon, the peels of two lemons and the rind of one, together with the peel and rind of a Seville orange, and one gallon of cowslip pips. Pour the liquor on these, stir every day, carefully, for a week; then to every three gallons put a pint of brandy. Stop the cask close, and leave it undisturbed for six weeks, at the end of which time the wine may be bottled off.

CRAB CURRY.—Remove the flesh from a good-sized crab in as large pieces as possible; put into a stew-pan two onions sliced, with an ounce of butter, fry them of a light yellow colour, then mix in a tablespoonful of mild curry paste; add a pint of good broth, and boil over the fire until it becomes somewhat thick. Put in the crab, stir the whole round, and cover the stew-pan closely; then set it in a moderate oven for twenty minutes, by which time the curry will be of a proper consistence, and the crab delicately tender; add the juice of half a lemon, and serve rice with it in a separate dish.

CRAB DRESSED.—After the crabs are boiled, break the claws, and extract all the meat carefully from them, and also from the breast; taking the red part along with a portion of the inside. Keep the shell whole; mince the meat, season it with grated nutmeg, pepper, salt, a little white wine, and vinegar; mix in a few bread crumbs and about two ounces of butter; put it into a saucepan to heat, stirring all the time; when thoroughly heated fill the shells, previously washed clean, with or without puff paste round the edge. Brown them in an oven, and serve.

CRAB MINCED.—Extract the meat from the shell, mince small, and place it in a saucepan with a gill of white wine, pepper, salt, nutmeg, cayenne pepper, and two tablespoonfuls of vinegar. Stew it for ten minutes, melt two ounces of butter with an anchovy and the yolks of two eggs; mix the whole well together, and thicken with stale bread crumbs. Garnish with strips of thin toast and sprigs of parsley.

CRAB POTTED.—Cut the meat of a crab, parboiled, into small pieces; put a layer of these into a potting can, or any deep tin dish; sprinkle salt, pepper, cayenne, and pounded mace over; add a layer of the spawn and coral, then a layer of the cut meat, and so on, till all is used. Press it down, pour melted butter over it, and let it stand for half an hour in a slow oven. Take it out, leave it to cool, and then remove the butter, and turn the meat into small pots; pour clarified butter over them, and set by for use.

CRAB SAUCE.—Pick the meat from the large and small claws, and with a little of soft inside, when not watery, stir into melted butter; season with pepper, salt, and cayenne; and add a tablespoonful of ketchup or anchovy.

CRAB, TO CHOOSE.—When stale, a crab will be of a dusky red colour; the joints of the claws limber, and being loose may be turned any way with the finger; from under the throat also an unpleasant smell will issue. When fresh they are quite the reverse.

CRABS, SIBERIAN, STEWED.—Make a rich syrup with sugar, the juice and rind of lemons, a little brandy, and cloves. When this boils throw in the fruit, which should be perfectly ripe. Let it simmer for a few minutes, then remove from the fire; and leave it to cool. Boil again, and continue doing so until the crabs become quite soft. Serve cool in the syrup.

CRABS, SIBERIAN, PICKLED.—Gather the apples while they are still very hard. Remove the eyes, peel them, and put them into a brine of salt and water that will float an egg. Let them stand for six days, then change them into another brine, in which they must stand for six days more. Put them into a jar with a little mace. Boil some double distilled vinegar with sliced horseradish, a sliced nutmeg, some allspice, and a few cloves, and pour it boiling hot upon the apples. When quite cold put a cork into the jar. Boil the vinegar again every alternate day for ten days, and pour it each time boiling hot over the apples. When cold, cork the jar, and tie it down with bladder. The pickle will not attain perfection till it has lain by for three months.

CRACKNELS.—Mix with a quart of flour half a nutmeg grated, the beaten yolks of four eggs, and four teaspoonfuls of rose water, convert these into a stiff paste with cold water; then roll in one pound of butter, and cut the paste into cracknel shapes; put them into a kettle of boiling water, and boil them till they swim; then take them out and put them into cold water; when hardened lay them out to dry, and bake them on tin plates.

CRADLE.—A well known receptacle for infants during the day-time. They are usually made of wicker-work and are sometimes provided with rockers. The practice of rocking, however, owing to adverse medical opinions, has of late fallen a good deal into disuse. For, independently of its accustoming children to a bad habit, it is frequently an expedient resorted to by nurses to get infants off to sleep when they ought to be carried about in the open air. Cradles should not be placed in a confined position nor overladen with clothes. When children are placed in them, they should be laid on their side, and directly they begin to cry they should be taken up.

CRADLE SPIT.—A culinary utensil used in roasting, which has the advantage of enclosing any delicate matter to be dressed, without piercing the flesh.

CRAMPS.—Are an irregular spasmodic contraction of one or more muscles, in which the fibres are forcibly drawn into knots and constrictions, rendering the muscle or part affected incapable of use, while the pain that attends this unnatural state is acute and almost intolerable. Cramps are not confined to any one part, but may occur over the whole body; though the thighs, feet, and abdomen are the situations most frequently affected. The cause of cramps, is either the sudden application of cold to the heated body, wet clothes, damp feet, the consequence of some mineral poison, such as lead; or a continued source of irritation in the alimentary canal; from affections of the nervous system, or from wounds. The *treatment* of cramp consists in overcoming the contractions into which the muscles have been drawn, by constant friction with the hand or flesh-brush, rubbed in the direction of the muscular fibres; or in severer cases by using with the friction brandy, turpentine, or dry mustard, though, when procurable, the most immediate benefit will always be derived from the hot bath. To those subject to cramps in the leg, an embrocation composed of an ounce of camphorated oil, half an ounce of laudanum, and two drachms of sal volatile, well rubbed along the limb, will afford immediate relief. The cramps consequent on diarrhœa and cholera, must be treated by a dose of opium, either as a suppositary; or a draught, with forty or fifty drops of laudanum, according to the urgency of the pains. For the cramps induced by bathing, the hot bath or hot bricks to the spine are indispensable, while for those that arise from stagnation of blood or other causes during sleep, extension of the leg while the foot rests on the cold hearthstone, and enveloping the limb in a wet towel, will be generally found to yield immediate benefit.

CRANBERRIES, TO PRESERVE.—Gather the fruit in clusters before it is quite ripe. Pick away any dead leaves and injured berries, and keep the clusters in strong salt and water in jars well covered. Look to them occasionally, and when the pickle begins to ferment, change it. Cranberries thus preserved will retain their flavour and quality for many months.

CRANBERRY, CULTURE OF.—A plant bearing a small berry, requiring a moist soil for favourable cultivation. The most suitable situation for this plant is the margin of a pond. All that is necessary is, to drive in a few stakes two or three feet within the margin, and to place some old boards within these, so as to prevent the soil of the cranberry bed from falling into the water; then to lay a heap of small stones or rubbish at the bottom, and over it peat or bog earth, to the depth of about three inches above and seven inches below the usual surface of the water. In such a situation the plants grow readily, and if a few be put in, they entirely cover the bed in the course of a year or two, by means of thin long runners, which take root at several points. From a very small space a very large quantity of cranberries may be gathered, and they prove a remarkably regular crop, without being subject to atmospheric influences, or the attacks of insects.

CRANBERRY JELLY.—To one quart of cranberries add one pound of sugar and half a pint of water; simmer them together for half an hour. Strain through a sieve, and when cool put by in pots.

☞ Cranberries, 1 quart; sugar, 1lb.; water, ½ pint.

CRANBERRY SAUCE.—Pick and wash one quart of cranberries, put them into a stew-pan with three gills of water; cover the pan, and when they have become tender stir in three-quarters of a pound of sugar; mix all well together till the sugar is dissolved; then take the sauce from the fire, dish it, and serve.

CRANBERRY TART.—Place the fruit, picked and washed, into a shallow pie-dish, raising it high in the middle by inserting a teacup or small gallipot. Put in a sufficient quantity of sugar, cover with a rich short paste, and bake of a light brown colour.

CRANBERRY WATER.—Pour boiling water upon bruised cranberries, let them stand for a few hours; strain off the liquor, and sweeten to taste. This forms an agreeable and refreshing beverage for invalids.

CRAPE, BLACK, TO RESTORE.—Make scalding hot, skim-milk and water, with a small piece of glue in it. Immerse faded and rusty black crape in this for a few minutes; then take it out, clap it in the hands, and pull it dry, and it will look equal to new.

CRAPE, CHINA, TO WASH.—If the fabric be good, this material may be washed as often as required, and no diminution of the texture or colour will be perceptible. The method is as follows:—Make a strong lather of boiling water, suffer it to cool; when cold, or nearly so, wash the crape quickly and thoroughly, dip it immediately into cold water, in which a little salt has been thrown; rinse, squeeze, and hang it out to dry in the open air; pin it by its extreme edge to the line, so that it may not in any part be folded together; the more rapidly it dries, the clearer it will be.

CRAY FISH.—A shell-fish resembling the lobster in appearance and flavour, but coarser; the shell is more irregular, with *projecting points*, and *the flesh is harder*. For modes of dressing, see CRAB and LOBSTER.

CRAYON DRAWINGS, TO FIX.—Prepare the paper by washing it with a strong solution of isinglass; when quite dry, the drawing may be made upon it, after which it should be inverted, and held horizontally over steam. The steam melts the size, which absorbs the charcoal or crayon, and the drawing thus becomes fixed. This process may be repeated several times during the progress of a drawing, the effect being increased each time.

CRAYONS FOR DRAWING.—To a pint of boiling water put three ounces of spermaceti, one pound of fine ground long ash

with the colouring matter, a sufficient quantity; roll out the paste, and when half dry, cut it into pipes.

CREAM, ARTIFICIAL.—Boil down a quart of milk to a pint, then rub a dessert-spoonful of the finest rice-flour completely down in a little milk; strain, add by degrees a few spoonfuls of the milk to it, and put it into a saucepan, with two or three lumps of sugar. Continue boiling till the flour is thoroughly done, and has attained the required consistence; the taste will regulate the quantity of sugar and flour. This cream will answer for the table as well as for tea and coffee. A small quantity of yolk of egg may be added, when it is partially cool, to impart a colour. Stir it till quite cold, to prevent its skimming.

CREAM, BURNT.—Boil a pint of cream with the peel of a lemon; sweeten it with pounded loaf sugar, beat the yolks of six eggs, and the whites of four, with one tablespoonful of flour, and the same quantity of orange-flower water and of ratafia; strain the cream, and when nearly cold, mix it with the eggs and other ingredients; stir it over the fire till it attains the consistence of a custard; turn it into a dish, strew sifted loaf sugar over it, and brown it with a salamander; serve it cold.

☞ Cream, 1 pint; lemon-peel, 1; sugar, 1lb.; eggs, 6 yolks and 4 whites; flour, 1 tablespoonful; orange-flower water, 1 tablespoonful.

CREAM CAKE.—Rub down five ounces of fresh butter into a pound of fine flour; then mix thoroughly with them half a pound of sifted sugar, a few grains of salt, and two ounces of candied orange-peel sliced thin; add half a pint of thick and rather sour cream mixed with two eggs well whisked; beat thoroughly with it half a teaspoonful of carbonate of soda, which has been perfectly blended with twice the quantity of sugar and flour, and reduced to the smoothness of powder in a mortar. Butter the inside of the moulds thoroughly, and fill them only two-thirds full. Bake it for three-quarters of an hour in a moderate oven. Turn it from the mould, and lay it on its side upon a sieve reversed, to cool.

☞ Butter, 5ozs.; flour, 1lb.; sugar, ½lb.; salt, a few grains; candied orange-peel, 2ozs.; cream, ½ pint; eggs, 2; carbonate of soda, ½ of 1 teaspoonful; sugar, 1 teaspoonful; flour, 1 teaspoonful.

CREAM CHEESE.—Put five quarts of the last of the milk into a pan with a tablespoonful of rennet. When the curd is come, strike it down two or three times with the cream-skimmer, just to break it. Let it stand two hours, then spread a cheese-cloth on a sieve, put the curd on it, and let the whey drain; break the curd a little with the hand, and put it into a vat with a two-pound weight upon it. Let it stand for twelve hours, take it out, and bind it round with a fillet. Turn it every day from one board to another till dry; cover with nettles or clean dock leaves, and place it between two pewter plates to ripen. If the weather be warm, it will be ready in three weeks.

CREAM, CLOUTED.—Season a quarter of a pint of new milk with two blades of mace, and add to it two tablespoonfuls of rose-water; strain, and add to this the beaten yolks of two eggs. Stir the mixture into a quart of rich cream, and let it scald, stirring all the while.

☞ Milk, ½ pint; mace, 2 blades; rose-water, 2 tablespoonfuls; eggs, 2 yolks; cream, 1 quart.

CREAM JAR.—A vessel of stone-ware in which cream is kept until it is churned. It is about eighteen inches in height and ten inches in diameter, provided with a moveable top, having an opening in its centre, covered with muslin, to keep out impurities and admit air.

CREAM, NATURE AND PROPERTIES OF.—An oily substance of a yellowish colour, which separates from the milk, and floats on the top. The consistence of cream increases by exposure to air. In three or four days it becomes so thick that the vessel which contains it may be inverted without spilling the contents; and in eight or ten days it becomes a soft solid, and partakes of the properties of cheese. In order that cream may form in the most expeditious manner, and afford the largest quantity possible, the milk is put into shallow vessels, in which it does not stand above three or four inches deep, and the throwing up of the cream proceeds with the greatest regularity when the temperature of the dairy is from fifty to fifty-five degrees. To prevent acidity it is essential that the milk should be kept cool in warm weather; excessive cold, however, is unfavourable; and when the temperature is so low as forty degrees, the cream forms with difficulty. Cream, although exceedingly nourishing, is too rich in oily matter to be used to any extent as an article of food. With persons of delicate stomachs especially, it is extremely difficult of digestion; it may, however, be taken in small quantities mixed with other articles of diet, such as arrowroot, coffee, tea, &c.; all of which are rendered far more palatable than by an admixture of milk.

CREAM PANCAKES.—Mix two eggs well beaten, with a pint of cream, two ounces of sifted sugar, six ounces of flour, a teaspoonful mixed of cinnamon, nutmeg, and mace. Fry the pancakes thin with a piece of butter.

☞ Eggs, 2; cream, 1 pint; sugar, 2ozs. flour, 6ozs.; cinnamon, nutmeg, and mace, mixed, 1 teaspoonful.

CREAM PUDDING.—Mix together two tablespoonfuls of flour, and one ounce of sugar; add to them a pint of cream, and eight yolks of eggs; boil the whole in a basin, tied over with a cloth, for three-quarters of an hour.

☞ Flour, 2 tablespoonfuls; sugar, 1oz.; cream, 1 pint; eggs, 8 yolks.

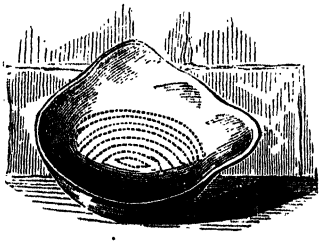
CREAM RATAFIA.—In a teacupful of thin cream boil two or three laurel or young peach leaves; after boiling three or four minutes, strain, and mix with it a pint of thick cream, add three whites of eggs well beaten, and sweeten it with pounded loaf sugar. Put the whole into a saucepan,

and stir it gently in one direction over a slow fire till it be thick. Turn it into a dish, and when quite cold, serve with sweetmeats and comfits strewn over the top.

☞ Cream, 1 teacupful and 1 pint; laurel or peach leaves, 2 or 3; eggs, 3 whites; sugar, to sweeten.

CREAM SAUCE.—Put into a stew-pan a dozen white mushrooms, two or three sprigs of parsley, a bit of butter, and a little salt; stir them over a moderate fire, and when the butter begins to fry and to look clear, dredge in a little flour, add some good consommé, and a sufficient quantity of cream; stir altogether, and pass it through a hair sieve.

CREAM SKIMMER.—A dish made of stone-ware, for taking the cream off the milk. It is thin, circular, broad, and shallow, having on the near side a smooth edge



to pass easily between the cream and the milk, and at the upper side an indentation for the thumb of the right hand to rest in, and a mouth on the right side to pour out the cream from into any other vessel. At the bottom are a number of small holes, to allow the milk to pass through, and leave the cream pure and thick in the skimmer.

CREAM SNOW.—Mix a pint of cream with three ounces of pounded loaf sugar, the whites of two eggs, and a tablespoonful of orange-flower water; whip the mixture, and as the snow or froth rises, taste it with a spoon, and place it into a cullender, that the liquid may run off. This is chiefly used to put on cakes, pastry, &c.

☞ Cream, 1 pint; sugar, 3ozs.; eggs, 2 whites; orange-flower water, 1 tablespoonful.

CREAM TOAST.—Cut French rolls into slices of about a quarter of an inch thick, lay them in a dish, and pour a mixture of equal parts of milk and cream over them; strew them with sifted sugar and pounded cinnamon; turn them often till they are soaked through, and remove them with a slice or skimmer. Have three or four eggs ready beaten, put the slices into this, and then fry them in clarified butter till they are of a good brown colour. Drain the butter thoroughly from them, strew sugar on them, and serve.

CREAM, TO PRESERVE.—Boil the cream for two or three minutes, add half its weight of powdered loaf sugar; stir the whole well together, and put by in bottles closely corked. It will thus continue good for many weeks.

CREAM TRIFLE.—Put into a shallow dish half a pint of white wine, the peel of a lemon rubbed in sugar and scraped, a pint and a half of cream, and a quarter of a pound of powdered loaf sugar; whisk the whole together in a dish, and take off the froth as it rises. Have ready a glass dish, in which are six sponge biscuits, twelve ratafias, and six macaroons steeped in wine. Pour a boiled custard over the biscuits, then cover the whole with the whisked cream.

☞ White wine, ½ pint; lemon-peel, 1; cream, 1½ pint; sugar, ½lb.; sponge biscuits, 6; ratafias, 12; macaroons, 6; custard, sufficient.

CREAM, WHIPPED.—Sweeten with powdered loaf sugar a quart of cream, and add to it a lump of sugar which has been rubbed upon the peels of two lemons, or flavour it with orange-flower water, or any other agreeable essence. Whisk the cream thoroughly in a large pan, and as the froth rises, take it off, lay it upon a sieve placed over another pan, and return the cream which drains from the froth, till all is whisked; then heap it upon a dish, or put it into glasses. Garnish with thinly pared citron, cut into any fanciful shape, and serve.

CREAM OF TARTAR.—A compound of potash with tartaric acid. In its impure state, in which it forms a gray or brown concretion, it is known by the name of argol or wine-stone, and is formed inside of the casks in which new wine is kept. The coloured, impure, crude tartar is purified and dissolved, and the solution gradually evaporated; in this process crusts form on the surface of the solution, which are successively skimmed off; hence the name of "cream of tartar."

CREAM OF TARTAR WATER.—Put a tablespoonful of the powder into a quart jug, with some thinly pared lemon-peel, and an ounce of gum arabic; pour boiling water upon it; let it stand for some hours, and sweeten to taste. Draughts of this beverage, taken two or three times a day, are found very beneficial in cases of dropsy.

CREAMS, VARIOUS.—See ALMOND, APRICOT, BARBERRY, CALEDONIAN, CHOCOLATE, COCOA, COFFEE, CURRANT, DAMSON, GINGER, ITALIAN, LEMON, ORANGE, PINEAPPLE, RASPBERRY, RICE, STRAWBERRY, TEA.

CREDIT.—The term used to express the trust or confidence placed by one individual in another, when he assigns him money, or other property, in loan, or without stipulating for its immediate payment. The party who lends it is said to give credit, and the party who borrows to obtain credit. The most usual way of obtaining credit is by purchasing commodities on the condition that they shall be paid for at some future time. When the produce is purchased it is usual for the buyers to give their "acceptance" to the sellers for the amount, payable at the period when the credit is to expire. This bill or acceptance is paid away by the receiver, or converted into cash by being discounted; by this means both parties have transacted a certain amount of business upon trust with the same facility as if it had been through

the medium of cash. Credit is one of the necessities of commerce, for if all trade were transacted for ready money only, the commercial operations of the country would be confined to the narrowest limits. On the other hand the facility with which credit may be obtained leads to many evils. Improvident and reckless persons frequently avail themselves of the privilege only to abuse it, and to enter into pecuniary obligations without the slightest intention of meeting them. In the ordinary course of commercial transactions, it is always possible for a person taking credit to make provision for payment at a stipulated time. And in order to effect this the more certainly he should regulate his payments in such a manner that they do not fall too heavily at one and the same time. Thus, for instance, if there be a bill falling due on the 4th of January for a large amount, no other bill should be made due upon that day, but a few days' interval allowed before the following payment falls due, to allow for any contingency, and to give breathing time, as it were, between one payment and the other. On the whole, credit is a material assistance to persons in business, especially young beginners; and a person who is in good credit is regarded in as favourable a light as though he actually possessed so much cash. But when from irregular payments or an uncertain mode of conducting business, further credit is denied to a trader, from any one quarter, the circumstance soon becomes generally known, and causes other creditors to withhold the same privilege, thereby fettering the operations of the trader and compelling him at last to relinquish his business altogether. Credit in connection with personal and household expenses will be found to be treated of under the head of CASH.

CREOSOTE.—A peculiar liquid, manufactured from wood tar. It is a colourless and transparent fluid, heavier than water, of an unpleasant odour, and a very pungent and caustic taste. It is employed as a medicine in several diseases of the organs of digestion and respiration, and in many other complaints, but with no very satisfactory results. Externally, it is applied in various chronic diseases of the skin, sores of different kinds, scalds, burns, and wounds. Dissolved in rectified spirit, it forms a useful and popular remedy for toothache ensuing from decay. It is also an antiseptic. A few drops in a saucer, or on a piece of spongy paper, if placed in a larder, will effectually drive away insects, and preserve the meat several days longer than it would otherwise keep. A small quantity added to brine or vinegar is commonly employed to impart a smoky flavour to meat and fish.

CRESS, CULTURE OF.—This plant which is known both as American and French Cress, is a small plant growing in almost every part of Great Britain. It is aromatic and pungent, but rather bitter, and is usually cultivated for winter and early spring salad. A small quantity of cress eaten with oil before dinner, is said to be an excellent digestive.—See AMERICAN CRESS and WATER CRESS.

CRESS VINEGAR.—Dry and pound half an ounce of the seed of cress, pour upon it a quart of the best vinegar, and let it steep for ten days, shaking it up every day. It will be found suitable for salads and cold meats.

CREST.—In heraldry, the highest part of the ornaments of a coat of arms. Crests were formerly considered great marks of honour, because they were only worn by heroes of known valour, or by such as were advanced to some superior military command, in order that they might be the better distinguished in an engagement. The crest formerly was placed upon the helmet *within* the wreath, not *upon* the wreath, as described in modern times; or might be issuant from a ducal or other coronet, or placed on a chapeau; and, although governed by the same laws as paternal arms with respect to hereditary masculine descent, it

does not necessarily have any allusion to, or derivation from the bearings upon the shield. The crest represented without the armorial shield is usually placed on a wreath, or from a coronet, as the case may be, without the helmet or lambrequin. In social practice, certain crests are significant of lineage, and are inseparably annexed to individual families, but, generally speaking, although they are hereditary, a greater latitude is allowed respecting them than any of the essential parts of armoury. They are looked upon somewhat in the nature of devices, and accordingly are varied by the caprice of individuals; so that the sons of the same family often wear different crests.—See ARMS, COAT OF; HERALDRY; MOTTO, &c.

CRIBBAGE.—A game with cards which is not only amusing, but also reckoned useful to young people, in advancing the science of calculation. It is played with the whole pack of cards, generally by two persons, and sometimes by four. The number of cards forming a hand for this game varies, but is usually either five or six.

METHOD OF PLAYING:—The progress of the game is marked by a board having sixty-one holes, he who can first succeed in counting these being the victor. The cards are cut for deal, the lowest dealing. Five cards are dealt to each player, out of which two are to be thrown by each player, to form the "crib," which always belongs to the dealer; next, the adversary is to cut the remainder of the pack, and the dealer to turn up and lay upon the crib the uppermost card, for which, if a knave, he is to mark two points. The eldest hand then plays a card, which the other should endeavour to pair, or find one, the pips of which reckoned with the first will make *fifteen*; then the non-dealer must play another card and try to make a pair or fifteen, provided the cards already played have not exceeded that number; and if so he should then endeavour to make *thirty-one*, or the nearest possible number under that.

When the party, whose turn it may be to play, cannot produce a card that will make thirty-one, or come under that number, he is then to say "go" to his antagonist, who, thereupon will be entitled to score one, or to play any card or cards he may have in his hand that will make thirty-one or under; if he can make thirty-one he scores two points, but if any number under, only one point. Such cards as remain after this are not to be played, but each party, having during the play scored his points gained, they must proceed to count their hands, the non-dealer first, and the dealer afterwards, who also reckons the crib, and both parties include the turned-up card. The points are counted as follows:—

For every fifteen	2	points.
Pair, or two of a sort . .	2	,,
Pair-royal or three of a sort	6	,,
Double pair-royal or four of a sort	12	,,
Knave of the turned-up suit	1	,,

Flush the same number of points as there are cards.

RULE 1. The opposing parties cut the cards, to determine who shall be the dealer; the lowest card secures it. The ace is the lowest. 2. In dealing, the dealer may discover his own cards, but not those of his adversary—who may mark two, and call a fresh deal. 3. Should too many cards be dealt to either, the non-dealer may score two, and demand another deal, if the error be detected previously to taking up the cards. If he do not wish a new deal, the extra cards must be drawn away. When any player has more than the proper number of cards in hand, the opponent may score four, and call a new deal. 4. If any player meddle with the pack after dealing, at the period of cutting it for the turn-up card, then his opponent may score two points. 5. If any player take more than he is entitled to, the other party should not only put him back as many points as are overscored, but likewise take the same extra number for his own game. 6. If any player neglect to count what he is entitled to, the adversary may take the points so omitted. 7. The non-dealer in five-card cribbage, scores three points as an equivalent. 8. Flushes and sequences reckon according to the number of cards forming them.

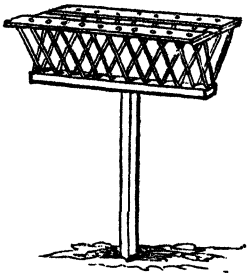
Maxims for laying out the crib-cards.—In laying out cards for the crib, it is requisite that every player should consider not only his own game, but also that of his adversary, and he should therefore throw out such cards as will leave him a good hand, and embarrass his opponent. When any player possesses a pair-royal, such as three twos, three threes, &c, it is generally advisable to lay out the other cards for crib, unless it belongs to the adversary. A player should generally lay out close cards for his own crib, with the hope of making a sequence, *i.e.* cards that follow each other consecutively, as one, two, three, four, five, &c. He may also throw out two of a suit, in expectation of a flush; or any that of themselves amount to fifteen, or such as combined with others will make that number, except when the antagonist be nearly home, when it is expedient to keep such cards as will prevent him from gaining at play. A method directly opposed to this, should be pursued in respect to the adversary's crib, which each player should endeavour to baulk, by laying out those cards that are likely to prove to advantage, unless such a stage of the game has arrived, when it is of more consequence to keep in hand cards likely to tell in play, or when the non-dealer would be either out by his hand, or his reason for judging the crib of little moment. *A king is the best card to baulk a crib*, as none can form a sequence beyond it. Low cards are generally the most likely to gain at play; the flushes and sequences, particularly if the latter be flushes as well, are generally eligible hands, as thereby the player will often be enabled either to assist his own crib or to baulk his opponents.

Terms used in Cribbage.—Crib: The cards thrown out by each player, which belong to the dealer. *Pairs:* Two similar cards, as two aces, or two kings. *Pairs-royal:* Three similar cards, as three tens, or three knaves. *Double pairs-royal:* Four similar cards, as four fives or four sixes. *Fifteens* are reckoned in a variety of ways and from any number of cards; thus nine and six,; four, three, and eight; one, five, seven, and two, or any other combination by which fifteen can possibly be made. *Two for his heels:* Is when the knave of any suit is turned up by the dealer, who thereupon scores two points. *One for his nob:* Is when a hand possesses a knave of the same suit as the turned-up card, and for which one point is scored by the person who holds it.

CRIBBING MUZZLE. — Many horses, from a deranged state of the stomach or other causes, contract a bad habit of biting and chafing at the crib. This species of disease not only destroys the horse's teeth but interferes with his system generally, and renders his disposition restless and fretful. Many methods are adopted for restraining this injurious propensity, but the most efficient is the cribbing muzzle. It consists of a kind of rack, with two iron spurs joined at each extremity, and curved to receive the muzzle. The spurs are about three-fourths of an inch broad, the space between them is wide enough to receive the lips, and let them seize the corn and hay, but so narrow that it will not admit the teeth. The horse can eat well enough; he can reach his food with his lips, but cannot waste it with his fore-teeth. This muzzle is better than a strap, which disposes the horse to swelling of the head, and shortens the animal's wind.

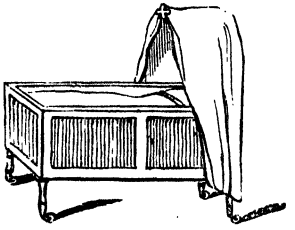
CRIB FOR CATTLE.—A receptacle for fodder, of the form represented in the engraving. Cattle cribs are mounted on posts, which turn round on a pin, so that when the cattle have well trodden the litter on the two opposite sides, in standing to eat from the crib it is turned half round, for them to tread

and manure the ground in an opposite direction; so that by this simple contrivance not



only are the cattle fed but the earth enriched and renovated at the same time.

CRIB FOR CHILDREN.—A kind of bedstead almost universally used in the present day for children. Cribs are usually supported on feet of such length that the height of the crib may be the same as the mother's bed, close to which it is placed in the night; one side being made to slide out



in a groove in the uprights. The sides are frequently filled in with cane-work, or small balustrades; but care should be taken to have the crib also lined inside, to prevent the child's fingers from being hurt by fixing them in the crevices. They are put on castors, to render them easily moveable from place to place, and may be made to take to pieces, so as to pack up easily for travelling.

CRICKET.—A well-known out-of-door amusement, of great antiquity, and essentially Anglo-Saxon in its origin. The object of the game is to gain the greatest number of runs, and this is done by the strikers. Each side having been once in, and once out, the first innings are calculated; but in most matches other innings are played. The scorers keep the account of runs to each striker, separately for each inning. The side that succeeds in obtaining the greatest number of runs wins the game. The players consist of the "in" party and the "out" party. When the preliminaries have been settled the in party sends the batsmen to the wicket, and the out party takes the field with the bowler to give the balls. When, from the ball being caught, or from the wicket being struck down, or from any other cause, according to the rules of the game, batsmen are in succession thrown out, those of the opposite side take their places in exactly the same manner. When each side has had two innings, the runs are counted, and the party having the greatest number is declared the victor.

Cricket is played in two distinct forms: one is called single wicket and the other double wicket. *Single wicket* is played by any number of persons, but generally five are on each party or side. Three straight rods or *stumps*, twenty-seven inches high, are stuck in a row in the ground; on the top of the stumps are laid two pieces of wood called the *bail*, and so placed that they will readily fall off, if the stumps be hit by the ball. This apparatus is called the *wicket*. At the distance of four feet four inches in front of the wicket is a mark on the ground called the *popping crease*. In a straight line with the wicket is a mark on the ground called the *bowling crease*. A person is selected from the party as a bowler, and must now begin to play. The "striker," with his bat, is the protector of the wicket; the opposing party stand in the field to stop or catch the ball, and the bowler, who is one of them, takes his place by the side of a small baton or stump, set up for that purpose twenty-two yards from the wicket, and thence delivers the ball, with the intention of beating the wicket down. If the ball is struck by the bat, and down into the field beyond the reach of those who stand out to stop it, the striker runs to the stump at the bowler's station, which he strikes with his bat so as to throw off the bail, and then returns to his wicket. It is in these particulars that single wicket forms a distinct mode of playing. *Double wicket* is the more general and popular form of playing this game, as it admits of a larger number of persons partaking of the sport, and excites a more lively and interesting contest. At this game the number of players should be twenty-two, eleven on each side. The two parties toss up for first innings, and two players of the winning party go in, one at each wicket. The out party disperse in various directions about the field, to catch or stop the ball when struck by the batsman. One of the bowlers commences bowling either four or six balls (as may previously have been determined), his object being to bowl down the wicket; if he succeeds in this, the batsman retires from the game, and another of his party takes his place. If, however, the batsman strikes the ball, he and his partner commence running to each others' wicket and back again, until the opposite party gets possession of the ball, and one run is scored towards the game every time they change wickets. The field is in charge of the party to whom the bowlers belong, and their duties are to catch the ball when either struck or missed by the batsman, and to recover it when struck, as quickly as possible, and throw it in. If the ball be missed by the batsman, he remains at his wicket and the ball is returned to the bowler. If the ball be struck, and to such a

distance that the batsman thinks he could run to the bowling crease, touching it with his bat, and return to the popping crease before the ball can touch the wicket, he does so, and this is called a *run*, and counts one towards the game, and for each run that is made one is counted.

The following are the chief *laws of the game*:—If the bowler in delivering the ball raise his hand above his shoulder, the umpire must call "no ball," and this is not reckoned accordingly. If he toss the ball over the head of the striker, or so wide that it cannot be played at, the umpire shall allow one run to the in-party, and it shall be put down to the score of wide balls. When the umpire cries "wide ball," one run only is reckoned, and the ball is considered dead. If the bowler deliver a "no ball," the striker may play at it, and get as many runs as he can, and shall not be put out except by running out; if no run be obtained by any other means, then one run must be scored; in the event of a change of bowlers, two balls only can be allowed for practice. If a bowler bowl one ball, he shall be compelled to bowl four. The batsman is out if the ball be bowled off; or if a stump be bowled out of the ground; or if, when striking, or at any time when the ball is in play, both his feet be over the popping crease, and his wicket put down, except his bat be grounded within it; or if, when striking, he hit down his wicket; or if, under pretence of running, or otherwise, either of the strikers prevents a ball being caught, the striker of such ball is out; or if any part of the striker's dress knock down the wicket; or if he touch or take up the ball while in play, unless at the request of the opposite party; or if, with any part of his person, he stop a ball which, in the opinion of the umpire at the bowling wicket, would have gone straight to the striker's wicket and hit it. If the players have crossed each other, he that runs for the wicket which is put down is out. When a ball is caught, no run is reckoned. When a "lost ball" is called, the striker is allowed six runs; but if he can run more than that number before "lost ball" is called, he may count all that have been run. After the ball is in the wicket-keeper's or bowler's hand, it shall be reckoned dead; if, when the bowler be about to deliver the ball, the striker at his wicket goes outside the popping crease, the bowler may put him out. If the striker be hurt, he may retire from his wicket, and return at any time during that inning; or some other person may stand out for him, but not go in. No substitute is permitted to bowl, keep wicket, stand at, or cover the point, or stop behind in any case. If a fieldsman stop a ball with his hat, it shall be reckoned dead, and the opposite party may add five to their score. When the ball has been hit, the striker may guard his wicket with his bat, or any part of his body except his hand. The wicket-keeper must not take the ball for the purpose of stumping out, until it has passed the wicket; if any part of his person be over or before the wicket, should the ball hit it, the striker shall not be out. The umpires must stand at six yards from the wickets; all disputes are settled by them, each at his own wicket. The umpires shall pitch fair wickets, and the parties toss for innings. They must allow two minutes for the striker to come in, and fifteen minutes between each inning. When the umpire calls "play," the party refusing to respond loses the match. If one of the bowler's feet be not entirely behind the bowling-crease, within the return-crease when he delivers the ball, the umpire must call "no ball." If, in running, either of the strikers fail to ground his bat over the popping-crease, the umpire shall deduct two runs for every such failure. When four balls have been delivered, the umpire must call "over," but not until it is in the wicket-keeper or bowler's hand; it shall then be considered dead. The umpire must call "no ball" instantly upon delivery; "wide ball" as soon as it passes the striker. In playing the game of cricket, each person engaged has his especial duty to perform. The *batsman* should stand as close to the block-hole as possible, and as

near the popping-crease as he can, so as to be on his ground. When the word "play" is called, he should take up a firm position on his right foot, with his left shoulder for-

ward, and the left elbow well up. He should endeavour to hit any ball that comes within his range, noticing particularly how the ball pitches, so that he may guess how far it is

likely to rise, and judge whether it is worth while to hit it hard, and so get a run, or to block it. When blocking, never allow the tip of the bat to come before the handle, as in that case the ball will rise in the air, and probably cause the bowler to catch it. One of the most effective defences of the wicket is called the draw, which is adopted when a ball pitched some feet short in length comes within the line of the leg stump. In this the bat is drawn up with its point to the ground in a perpendicular line, and the top of the ball caught a little above its centre. In striking generally, keep the bat as nearly perpendicular as possible, by doing which more of the wicket is covered than when bearing either to the right or the left. In forward play, it is not safe to play

the bat above four feet from the pitch of the ball. Concurrently with observing these precautions, the general aim of the batsman is to strike the ball in such a manner as to send it to a distance in the field.

The *bowler* should have a quick eye, a strong arm, and a dexterous hand. The ball should be delivered with a run, with one foot in; and should be held with the seam across, so that the ends of the fingers touch it. The object of the bowler being to get out the striker by sending the ball through the wicket, he should from time to time change his style of bowling, now swift and now slow, according as his judgment dictates. It is best to bowl slowly at first, then twisting, then straight, then quick, then quick and twisting, then quick and straight, and so on. In slow bowling, the ball should be pitched about three yards and a half from the wicket; in quick bowling, about five yards. The *wicket-keeper* is placed about a yard and a half behind the wicket, and stands with his left foot forward, and with his eyes and hands ever ready for action. It is the wicket-keeper's office to see that all the fieldsmen are at their proper posts, and also to direct their motions, so as to guard against the peculiar play of each batsman. Should the batsman leave his wicket unguarded, in running, it is the especial duty of the wicket-keeper, having the ball returned to catch it, and knock down his wicket. *Short-slip* stands within three yards of the wicket-keeper on the right side. His duty is to secure the ball when it passes on one side of the wicket-keeper, and to take his place when he runs after the ball. *Long-slip* stands about twelve yards from the wicket, and a little behind it, and covers both slip and point. He must be extremely apt at catching the ball; for, if it passes him, there may be a run for it, and many runs gained. *Long-field on*, and *long-field off*. These stand opposite to each other on different sides of the field, and sometimes vary their places. They must be able to throw the ball up quickly and straight to the wicket-keeper. *Mid-wicket* should stand about ten yards from the bowler's wicket off-side, but a little in advance. This is the most important post in the field, and ought to be well kept; he takes the bowler's place if necessary. *Cover-point* should stand between point and mid-wicket off-side, a little removed backwards, so as to cover point. *Point* is placed about seven yards from the striker, in a line a little in advance on the off-side. He should be very nimble and active; able to catch well, and not backward in jumping a few feet into the air to catch the ball. *Long-stop* stands twelve yards behind the wicket, to throw up the ball when it has passed the wicket-keeper. He should be active and able to throw the ball a long distance. *Leg* stands a little beyond the wicket, and about fifteen yards from it. It is his duty to back up balls from the off-side, from whatever direction they may be thrown.

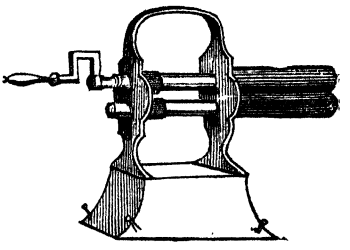
Attention to the following hints in connection with the principal operations of the game will be found advantageous:—*Hitting.*—In striking the ball, the hands should be pretty close together, and yet free from each other; the ball should be struck about six inches from the end of the bat, and sent backward over the field, if possible beyond mid-wicket, long-field off, or long-field on. Practise well the method of hitting upright, and keep the handle of the bat well inclined towards the bowler. When balls come five or six inches wide, cross your left leg over without moving your right, and you may hit all such balls. Never step on to strike if you can possibly avoid it. The best balls to meet are those that come fast within the popping-crease; these should be struck promptly and with vigour, and sent in the right direction. *Bowling.*—The bowler should endeavour to discover the weak stump of the batsman, and play against it. He should give fair balls; a contrary practice being considered ungentlemanly play. *Running.*—When the ball has been struck in such a direction as to appear probable to the striker that a run can be made, he should be ready to run immediately—his partner watching his eye and intention at the same instant,

and with the same purpose. Both should then start off with the bats kept outside of the opposite partner. Look towards the wicket it is your intention to save from the returned ball, and ground your bat by a long reach as soon as you can. Run rapidly the first time, and try to get a second, but in this be extremely cautious, and do not act precipitately, for it is better to sacrifice a run than endanger the wicket. Do not be in too great a hurry to run as soon as you take your inning, but play a little first, and wait till a favourable opportunity occurs. *Catching or stopping.*—Step well to the ball in catching, and receive it easily, by yielding to rather than opposing it. Stop the ball, by meeting it full; if it be coming swiftly put down the hands quickly; if with a bound, wait, step in, or draw back, as may be necessary. Throw up the ball to that wicket from which the striker is farthest, at about the height of the ball, so that the wicket-keeper may catch it easily. It is a great loss of time to run with the ball in the hand. The *dress* to be worn when playing cricket is a matter of some importance, both as regards personal comfort and appropriateness for the sport. A light cap with a peak which shades the eyes, without intercepting the sight, is the best for the head. A Guernsey jacket may be worn when playing, and a flannel one provided to slip over that when the game is finished, to prevent taking cold. A pair of woollen trousers, made moderately tight but free for running, and kept up by a belt at the waist. The feet should be encased in worsted socks, and the shoes have hard soles, with a few spikes let in, to prevent the feet from slipping. Books:—*Lillywhite's Guide*, 1s. 6d.; *Wykhamists' Practical Hints*, 1s. 6d.; *Tyas's Handbook*, 1s.; *Denison's Companion*, 2s. 6d.; *Nyren's Guide*, 1s. 6d.

CRICKETS.—For destroying these well-known and noisy visitants of the household, there are several methods. If dishes or saucers with the grounds of tea or beer in them are dispersed about the floor where they usually appear, large numbers will be found dead the following morning. Scotch snuff dusted upon the holes and cracks whence they come out, will also have the effect of driving them away.

CRIMPING FISH.—This process is performed as follows:—When the fish is alive or newly caught, and before the muscles are stiffened by the rigid contractions of death, cut as many transverse sections across the body as are desirable, and throw it into cold and hard water. The contraction commences in about five minutes, but if the fish is large it will take half an hour to complete. If the fish is newly caught and very lively, it should be stunned by a blow on the head. Gashes across the cheek are frequently made in crimping, which improves the appearance of the fish when served up, and facilitates the carving. The object of crimping is to retard the stiffening of the muscles, and then, by the immersion, to excite it to the greatest possible degree; by which means the fish becomes firmer, and keeps longer.

CRIMPING MACHINE.—An implement employed in the laundry in the getting up of delicate and fragile textures, which require plaiting or fluting. This simple operation consists of placing the articles between



the grooved rollers seen in the illustration, when by turning the handle, the desired effect is produced with great rapidity and regularity.

CRINGLES.—Rub a quarter of a pound of butter in one pound of flour, and two ounces of sugar; set sponge with half the flour, two spoonfuls of yeast, and a quarter of a pint of milk; when risen, add the other to it, with two eggs and a second quarter of a pint of milk, to bring it to a light dough; roll it out the thickness of your finger, make in the shape of the figure 8, let it rise on the tins before baking; when baked, moisten them over with milk and sugar mixed.

☞ Butter, ¼lb.; flour, 1lb.; sugar, 2ozs.; yeast, 2 tablespoonfuls; milk, ½ pint; eggs, 2.

CRINOLINE.—A species of stiff petticoat recently adopted by females, for the purpose of amplifying the skirts of their dress. The practice of wearing crinoline has been greatly ridiculed in many quarters, as being inconvenient and extravagant, and failing to add a single grace to the person. It is certain that this style of costume does not become all figures; short stout females, especially, appearing very ungraceful in it. Several diseases are also laid to its charge, such as rheumatism, paralysis, cramp, &c., induced by the warmth being kept away from the lower part of the person, and the cold draughts of air admitted. Several accidents have also originated with its use, and many ladies while passing the fire, have set their dresses alight and been dreadfully burned. With regard to the latter, however, the discovery has just been made that the mixing of a little alum with the starch or other material used for stiffening the crinoline, will prevent its ignition.

CROCHET-WORK.—Books: *Mee's Crochet Explained*, 1s. 6d.; *Lambert's Crochet Sampler*, 4s.; *Ronaldson's Crochet Work*, 2s.; *New Crochet D'Oyley Book*, 1s.; *Designs for Crochet Work*, 5s.; *New and Elegant Crochet by a Lady*, 2s. 6d.; *Riego's Crochet Book*, 1s.; *Warren's Instructions*, 1s. 6d.; *Ladies' Book of Crochet*, 2s. 6d.; *Cooper's Crochet*, 1s.; *Branchardieres's Crochet Book*, 1s.

CROCUS. — A dwarf hardy bulb, with grassy leaves and showy flowers. The crocus is popularly known as a spring flower, peeping up almost from amongst the snow. The spring crocuses come into bloom some time in February, and continue more or less in bloom until the beginning of April; this succession of bloom being obtained by earlier and later planting, and placing them in different positions and aspects. No flowers are more easily cultivated; they grow in any ordinary garden soil, and multiply abundantly by off-sets. The bulbs should be planted in October or

November, about two inches below the surface, in rows or patches. They are suitable as edgings for flower-borders, or they may form beds by themselves; in either case, the bulbs should not be inserted singly, but are far more effective if put in groups of six, twelve, or even more, the groups being proportionally distant. There is another species of crocus, the "autumn-bloomers," comprising some very beautiful kinds. They bloom at the end of October and through November, and are equally useful as ornaments with the spring crocuses, in consequence of their blooming when other flowers are closed. They should be planted in June and July, and in other respects require a similar treatment to the ordinary crocus.

CROTON OIL. — The expressed oil of the seeds of the *croton tiglium*, a plant growing from fifteen to twenty feet high, and common to most parts of India and the East. The oil is of a yellow amber colour, of a dull, rank, and heavy smell, and an acrid burning taste, which clings to the tongue and gullet for many hours after. In small doses, croton oil is a powerful drastic purgative; and in larger ones, an irritant poison, producing severe vomiting and inflammation of the coats of the stomach and bowels. When applied to the skin, beside its purgative action which it produces by absorption, it excites irritation, pustules, and even blisters. The full dose of croton oil is from one to two drops, and it is considered a highly valuable drug in all cases requiring an immediate action on the bowels. Its antidotes are, emollient drinks, opium, ammonia, and the hot bath.

CROUP, or inflammation of the lining membrane of the trachea or windpipe, is, both from the rapidity with which the disease runs its course, its situation, and from the singular characteristic developed in its career, one of the *most* fatal of all the maladies to which childhood is subject. Croup, though occasionally attacking adults, may in general be considered as a disease almost peculiar to early youth, and more especially to children between the ages of three and ten years, though not unfrequently it attacks infants at the breast. Those most subject to croup are children of a fat, dull, and sluggish temperament; and those most exempt from the disease, the thin, spare, and vivacious.

Symptoms. — Croup generally commences with a hoarse wheezing noise in the throat, at first heard during sleep, and followed soon by restlessness and a short dry cough, with tightness about the throat, indicated by the child's involuntarily placing its hands there. As the difficulty of breathing increases, the face becomes flushed and anxious, and the veins of the throat stand out, knotted and large; the voice grows shrill, and has a peculiar metallic sound, and ultimately assumes that *crowing* noise that has given the name to this disease. The cough, at first dry, is after a time attended with a tough ropy expectoration that hangs to the fauces, and causes great inconvenience and pain to expel; with these symptoms there is great heat, thirst, and considerable fever; the disease almost always proving fatal — when unrelieved — within three days. The peculiarity of croup over every other disease, is the formation in the windpipe of a "false membrane" of coagulable lymph, which gradually closing up, prevents all passage of air, and the child dies from suffocation; the false membrane hanging in the trachea like the finger of a glove.

Treatment. — The symptoms being so urgent and the disease so rapid, the treatment must consequently be immediate and energetic; this consists in the first place of the hot bath, which is to be repeated several times during the rest of the treatment, followed, in the first instance, by an emetic of equal parts of antimonial and ipecacuanha wines, and a hot poultice of a mixture of flour and mustard, applied for about five minutes to the throat. One of the following powders is next to be given every hour; the mustard removed and a blister placed on the spot; and three or four leeches, according to the age of the child, applied along the windpipe, and below the blister. Take of

Lump sugar .	1 scruple—powder.
Calomel . .	12 grains.
Tartar emetic	4 grains.

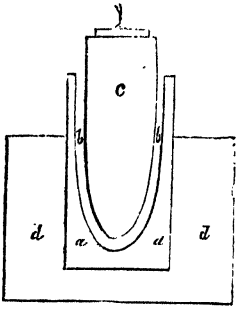
Mix thoroughly, and divide into twelve powders, one to be placed on the child's tongue as directed. Every five or six hours the bowels are to be acted on by a dose of senna-

tea sweetened, and when the blister rises, it is to be kept open by a dressing of savine, or issue ointment. Where the symptoms are severe, it may be necessary to repeat the emetic every hour, for two or even three times, before resorting to the powders, and even to repeat the bleeding, which is occasionally done by opening the jugular vein. In extreme cases, and when medical aid is powerless to arrest the disease, the only means that offers a chance of saving the child's life, is by opening the windpipe and inserting a tube, through which the patient can breathe, till nature has an opportunity to excite absorption, and the medicines time to work a beneficial action on the system.

CROWDED ASSEMBLIES.—The foundation of many painful and fatal maladies, date their origin from attendance at some crowded assembly. This is particularly the case with balls, which are attended by ladies thinly clad, and who, after overheating themselves by dancing, recklessly expose themselves to draughts, or go out into the open air without any other covering than that worn in the assembly. The shock which the system receives under these circumstances, is frequently productive of those violent colds which are in every case difficult of remedy, and which in some instances lay the foundation of consumption and other incurable complaints. These evil consequences may be avoided by a little care and attention. When persons become heated in crowded assemblies, they should never go near open windows and doors to cool themselves, but gently promenade up and down the room, until the blood has been restored to its equable temperature. And on no account should ladies, barely clad as they are, walk even from the door of the assembly to their carriage, without enveloping their shoulders in a warm shawl or mantle, covering their heads, and holding a pocket-handkerchief to their mouths. These simple precautions will, under ordinary circumstances, prevent the ill effects alluded to.

CROWDS, TO PREVENT ACCIDENTS IN.—The greatest danger to be feared in a crowd, is from the excessive pressure on the chest, which stops the action of the lungs and viscera, and produces what is known as suffocation. To avoid this danger, therefore, persons should keep their arms straight down, and present the *sides of their bodies* towards that quarter whence the pressure comes from, and by this means the chest will be effectively protected. It is especially necessary for persons to preserve their presence of mind, and also their tempers; and instead of struggling with the crowd and vainly attempting to ward off the pressure, it is much better to go with the throng, and thus as it were to be carried involuntarily onwards. All persons who have a weakness of the chest, or who are timid in any way, should never mingle with a crowd under any circumstances.

CRUCIBLE.—A conical-shaped vessel made of clay, employed to hold substances while they are submitted to a strong heat. There are two ways of making crucibles; one method is by forcibly shaping the ingredients in a double mould, as seen in the engraving: *a a*, is the external steel mould. *b b*, clay or composition for forming the crucible; *c*, internal steel mould; *d d*, wooden stand; *e*, cord or chain to withdraw the internal mould or plug. Another crucible is made



by pouring the "*slip*," of the consistence of cream, into porous moulds made of a species of stucco. As soon as the crucibles, formed by either of these methods, have become perfectly dry, they are ready for baking in a potter's kiln. For the manufacture of crucibles, a clay should be chosen which is free, or nearly so, from lime.

CRUET STAND.—A receptacle for the usual condiments of the dinner table, which is a more convenient form of placing them on the table, and prevents the cruets from being upset and broken. They are made in every variety, from the simplest to the most costly. When they are plated or made of silver, they may be cleaned with a little damp whiting, a brush, and a leather.

CRUMB CAKES.—Keep a bowl or pitcher with some milk in it, and from time to time throw in the crumbs of bread which break off when it is sliced, and also the dry pieces left on the table. When a sufficient quantity have been collected, break the mixture into a mass, add an egg, a little salt and soda, and a few tablespoonfuls of flour; form into cakes, and bake till brown.

CRUMB CLOTH.—A covering put over carpets to preserve them and to prevent any dirty or greasy particles from penetrating and soiling the fabric. Although a crumb cloth does partially fulfil the purposes for which it is adopted, its employment is somewhat anomalous, as it is senseless to buy a handsome carpet first, and then cover it over afterwards so that it should not be seen; it also imparts a sensation of coldness and discomfort, bordering on inhospitality, which few visitors like to encounter.

CRUMB PUDDING.—Save all the crumbs left upon the table during the week, and add to these any waste pieces of bread. Put them into a basin with two ounces of treacle mixed up with them. Soak them in enough water to make them swell. Then tie them in a cloth and boil for half an hour.

CRUMBS FRIED.—Put into a frying-pan or saucepan a piece of butter; oil and skim it, pour it from the sediment, return it to the pan, throw in two or three tablespoonfuls of grated bread, keep stirring them constantly till of a clear yellow, and drain them before the fire.

CRUMPETS TO MAKE.—To a pound and a half of flour, add three pints of milk, two tablespoonfuls of yeast, and two eggs; mix the milk lukewarm with it, beat it into a batter, and let it stand till it rises in bladders on the top, then bake them on a polished iron with tin rims.

CRUMPETS, TO TOAST.—Warm both sides first, then toast them to a light brown colour on each side; lay them in a plate, and spread butter over them lightly on each side. When they are served, too many should not lie on each other, as it causes the undermost ones to eat like dough, and renders them more difficult of digestion.

CRUST FOR PIES, TARTS, &c.—The paste with which pies, tarts, &c., are made or covered. 1. (*Fine.*) From flour, 1lb.; sugar, ¼lb.; melted butter, ¼lb.; eggs, 3; milk sufficient. 2. (*Raised crusts for meat pies, &c.*) Flour, 1lb.; sugar, ¼lb., lard, 6ozs.; eggs, 2. 3. (*Short.*) Flour, 1lb.; butter, 2ozs.; sugar, 2ozs.; eggs, 2, made into a stiff paste. If there is not a very cool larder where crust can be made, particularly in summer, the cellar, or some place of equal temperature, should be chosen; for while coolness is absolutely necessary, extreme cold is equally hurtful. Therefore, when the weather is hot, let every ingredient of which the crust is to be made be carried the night before into the place assigned for the operation. A feather brush ought to be used in making every description of crust, as it is impossible to spread flour over paste, either with the sifter or with the hand, as delicately as it ought to be done. When the flour is sifted, dust it slightly and nicely off with the brush; and if still too much, pass a wet feather over it, as nothing destroys the look or deadens the crust more than an unequal and heavy flouring. The state of the oven should be particularly attended to. Almost every oven has a temperature of its own. This should be ascertained, and bakings regulated accordingly, as too low or too high a temperature is almost sure to spoil even the best made crust.—See MACARONI PASTE, POTATO PASTE, PUFF PASTE, RICE PASTE, SUET PASTE, VENISON PASTY, PASTE, &c.

CRUSTS, TO GRILL.—*For cheese.*—Pull rough pieces from a new loaf, and brown them in the oven or before the fire. *For soup.*—Put the cut crusts upon a small wire gridiron over hot cinders, to crisp. When done, wet the inside with top-fat, and sprinkle a little salt over them. They may be served separately or added to the soup.

CRYPTOGRAPHY.—A Greek word signifying *secret writing.* Cryptographs are used by persons wishing to correspond with each other in a language that none but themselves can understand. For this purpose a form of *cipher* is devised by the aid of the alphabet and of figures, and arranged according to the preconcerted method of the parties concerned. One of these methods may be easily illustrated, thus:—Supposing the English alphabet, omitting the letter *j*, to consist of twenty-five letters; let them be arranged in a square thus:—

	1	2	3	4	5	
	a	f	l	q	v	1
	b	g	m	r	w	2
	c	h	n	s	x	3
	d	i	o	t	y	4
	e	k	p	u	z	5

Place figures over and at the right hand; represent every letter by two figures, by the intersection of a vertical with a horizontal row; and thus we find that 11 represents *a*; 34, *o*; 52, *w*; 14, *d*; and so on. Another method consists in writing a sentence in good English, but with an intention that only a few of the words shall convey the desired message, thus:—"I shall feel obliged to you, as reading alone engages my attention at present, if you will send me any one of the ten numbers of the *Dictionary of Daily Wants.*" The recipient, by the aid of some sort of key or clue previously agreed upon, selects the words, "I shall be . . . . alone . . . . at . . . . ten," as conveying the meaning, rejecting the rest. This is considered an excellent method, because, if the sentence constructed be really a sensible remark in good English, there may be no suspicion that any secret is involved. Another, of somewhat similar character, consists in writing a letter or paragraph, conveying the secret information, in a narrow column of several lines, and then increasing the column to double the width by adding to each line additional words which, though destroying the original sense, shall impart a new one. The following has been given as the postcript to a letter written on this principle:—

"Pray throw off those vain fears; expose not yourself to scorn, when there is no imminent danger."

Taking the left-hand part of this only, there is the warning,—"Pray expose not yourself to imminent danger." An infinite number of ciphers, in which figures, letters, and words are employed and transposed, may be devised. But it should be known that however ingenious the plan may be, a practised cryptographer can solve these mysteries by certain rules which he has laid down for his guidance; or, in other words, it is impossible for human ingenuity to invent a secret which shall not be discovered by another, who possesses the same kind of talent in a greater degree.

CRYSTAL PALACE.—This truly national exhibition is erected at Sydenham, in the county of Surrey. It may be approached either by the road or by the rail, the former occupying about an hour and a half from London, the latter from twenty minutes to half an hour. The building is divided into the lower story, the level of the floor of the main building, and the galleries. In the lower story are to be met specimens

of machinery in connection with the arts, manufactures, agriculture, &c. Ascending a flight of steps from these, the visitor finds himself in the main building. Here are to be seen numberless objects of interest and curiosity, sculptures trees, flowers, and birds. In the centre is the great transept, where the interest of the building is chiefly concentrated; on one side of this is the large organ, and on the other the orchestra. Some thousands of seats are provided at this point, so that the visitor may admire at leisure the beauty of the building, and at the same time enjoy the music. On either side of the nave are situated the various courts. Amongst these are the Egyptian Court, containing the remains of Egyptian architecture, and many interesting selections associated with sacred history. The Greek Court, containing many beautiful specimens of Grecian art, and constituting in itself a school where the fundamental principles of architecture and every line of grace and beauty may be studied. The Roman Court, presenting a view at once instructive and interesting, of the domestic conveniences, costume, arms, &c., of the Roman people. The Alhambra Court succeeds to this; it is supposed to represent the interior of a Moorish palace, and is one of the most gorgeous and enchanting specimens of interior decoration which it is possible for the imagination to conceive. On every side exquisitely wrought and enriched surfaces meet the eye; the walls and ceiling are covered from end to end with rich arabesque work, the floor is adorned with mosaic pavements, and in the centre marble fountains are playing, surrounded by the most beautiful flowers. The Assyrian Court next claims attention, and is chiefly interesting as a collection of architectural and decorative specimens which have been recently dug out of the earth, where they have lain buried for many centuries. The visitor next proceeds to the Byzantine Court, in which are to be seen specimens of architecture extending from the fourth to the fifteenth century. The German Mediæval Court is devoted to examples of Gothic art and architecture in Germany during the Middle Ages. The English Mediæval Court, and the French and Italian Mediæval Courts have a similar object in view. The Renaissance Court affords many charming specimens of architecture and ornamentation, and represents the revival of the antique in Italy at the commencement of the fifteenth century. The Elizabethan Court presents us with examples of architectural beauties of the era indicated, and includes many monuments and effigies of an historical interest. The Italian Court affords an insight into the architectural specimens of a comparatively recent period. The Pompeian Court represents the interior of a villa in detail, giving a representation of the various apartments then in vogue. Each of the courts enumerated are arranged with an amount of care and accuracy, and at the same time on so simple a plan, that the meanest capacity cannot fail to comprehend the scope and intention of the various scenes represented. Having gone through these various courts, two flights of stairs take the visitor into the gallery assigned to paintings and photographs. Many pictures of excellence are displayed along the walls, while the gallery of photographs representing with remarkable fidelity scenes and faces more or less known and interesting to the spectators, becomes an especial point of attraction. Many other attractions, such as groups of figures, and exquisite specimens of sculpture, are scattered about the building. The park and gardens, increasing in verdure and beauty year by year, will alone repay the visit. The tower, from which the country for many miles round may be distinctly seen, is also a favourite resort for the young and active. Many amusements and pastimes are from time to time devised, in which the visitors have the privilege of taking a part. Concerts are also given, in which some of our most celebrated vocalists and instrumentalists perform; while as a staple attraction the fountains, designed on a magnificent and picturesque scale, send forth their streams whenever circumstances permit. The ordinary charge of admission is one shilling, but by an arrangement with the Railway Company, the public may enter the palace and travel there and back for the sum of eighteenpence. Season tickets are also issued at moderate charges, admitting the holders to all the privileges of the establishment. Refreshments of every kind and description are furnished to meet the requirements of the visitors, of such a quality and at such prices, as to leave no room for dissatisfaction. In a word, the liberality of the arrangements, combined with the attractions afforded, fairly entitle this place of universal resort to the appellation it is popularly known by, "The People's Palace."

CUCUMBER, CULTURE OF.—This, like other plants, will grow in any soil, though not with the same degree of vigour as when the culture depends on artificial heat and protection from the atmosphere. For this esculent it is usual therefore to prepare a compost made of one-third of rich earth, one-half of vegetable mould, and one-sixth of decomposed horse dung, mixed with a small quantity of sand. The end of January or the commencement of February is a good time for *commencing to force the earliest crop.* In the subsequent months both main and secondary crops may be started as required; and will come forward more freely. The *seed-bed* should be made up three and a half feet high at the back, and from two feet and a half to three feet high in the front, and on a dry bottom. The frame should be put on as soon as the bed is formed, and the seed should not be sown until the heat of the bed is sweet and healthy, to which state it may be hastened by its surface being stirred once or twice daily, together with plentiful watering and the admission of air. The *seeds may be sown* either in small pots or in pans, and the seedlings to be moved, from one to three plants in a pot. If sown in the pots so as not to need shifting, the pots may be crocked and about three parts filled

with earth, with three seeds in each covered half an inch deep. When the plants come up, they may be thinned either to one or two in each pot, and as the plants advance in height, so the pots may be filled up with rich light earth, which should be kept in the frame for the purpose; a small pot of water should also be kept in the frame for moistening the earth, or sprinkling the plants when required. The plants should be kept within three or four inches of the glass. In the winter months the seed beds should be protected from the winds by thatched hurdles on the north, west, and east sides. When the plants have been raised about five weeks, *transpose them to a ni ger hot-bed.* For this, the dung after being well worked is made up into a bed about four or five feet high, and the frames and lights set upon it. It is afterwards suffered to stand a few days to settle, and until its violent heat becomes somewhat abated. When in a fit state for the plants to grow in, the surface is made level and a hill of mould laid in, just under the middle of each light, and when the mould gets warm the plants are "ridged out" in it. After this, if the bed has become perfectly sweet, and there be heat enough in it, and the weather prove fine, the plants will soon arrive at perfection. Cucumbers are cut and gathered when they are from four to twelve inches long, according to their kinds.

Cucumbers may also be *propagated by cuttings*, which should be five or six inches in length, taken from the tops of bearing branches of vigorous plants, about the end of September or early in October, planted in pots of rich mould and plunged in a hot bed; these, if regularly watered, will take root in less than a fortnight, and may then be planted in a hot bed for fruiting, which they will do as soon as the roots can support them, perfecting the fruit before Christmas.

Cucumbers may also be *grown under hand-glasses* as follows: Sow the seed about the middle of April in a cucumber or melon bed, and when the plants come up, pot them out into small pots, two or three in a pot, keep them properly watered, and stop them at the first or second point. About the middle of May dig a trench where the situation is warm and the mould rich, of about two feet deep and three feet broad, with the length proportioned to the number of lights about to be used. Fill this trench with good warm dung, which when arrived to its full heat, cover with rich mould from eight to twelve inches deep. Then set the glasses about three feet distant from each other, and when the mould gets warm under them, turn the plants out of the pots with their bulbs whole; plunge them into the mould under the glasses, give them a little water, settle the mould about their roots, and draw the glasses over them. On fine days, after they have begun to grow, raise the glasses a little on one side to admit the fresh air, and as the weather increases in warmth, admit the air more freely to harden the plants, so that they may be able to bear the open air and run from under the glasses. When the plants begin to fill the glasses, train them out horizontally, and raise the glasses upon bricks to remove them from the plants. After this, the plants require no further attention but to be supplied with water when the weather is dry, to stop them when they run too thin of branches, and to thin them of leaves or branches when they threaten to become overcrowded. In warm summers and favourable situations the plants will, by this mode of culture, leave plentifully for about two months. For the *production of seed*, some fruit must be left of the earliest forced sorts. The fruit selected for this purpose, should grow near the root and upon the main stem, not more than one being on a plant. They must remain as long as the seed can obtain any nourishment from the plant, which it continues to do whilst the footstalk remains green. When this withers, and the rind of the cucumber has attained its full yellow hue, they may be gathered and reared in the sun until they begin to decay. The seed being then scraped out into a vessel, allowed to remain for eight or ten days, and frequently stirred until the pulp attached to it is decayed, may be cleansed by frequent agitation in water; the refuse rises to the top and passes away with the liquid. Being thoroughly dried by exposure to the air for three or four days, it is then fit for stirring. Seed three or four years old is found to be best for use, producing less luxuriant but more fruitful plants.

There are *various sorts* of cucumbers. The *early short prickly* is often preferred for the first crop, as being a very plentiful bearer, quick in coming to production, and the hardiest of all the varieties. *The early long prickly* is a hardy, abundantly bearing variety, but tardy in coming into production. *The late long prickly* is a hardy good bearer *The early green cluster* is a hardy good bearer, and characterized by the fruit growing in clusters. *The white Dutch prickly* has an agreeable and peculiar flavour, and comes quickly into bearing. *The Nepaul* is one of the largest kinds, often weighing twelve pounds, and having a diameter of eight inches. There are other varieties of local reputation, but those just enumerated are best calculated for general culture.

CUCUMBER FRIED.—Pare and slice young cucumbers and dredge them lightly with pepper and flour; put them into a pan ready heated with butter or clarified dripping, sprinkle salt over them when nearly done, and so on as they are quite tender; lift them out with a slice, drain them well, and place them lightly over any hashed or minced meat.

CUCUMBER KETCHUP.—Pare some large old cucumbers, cut them in slices, and mash them; add some salt, and let them stand until the next day. Drain off the liquor, boil it with lemon-peel, mace, cloves, horseradish, shalots, white pepper, and ginger. Strain it, and when cold put it into bottles, with the mace, cloves, and peppercorns. A little of this ketchup will impart an agreeable flavour to almost any kind of gravy and sauce

CUCUMBER, PICKLED.—Lay twenty-four firm, young, and very small cucumbers on flat dishes, having first rubbed them with salt; keep them covered for eight or ten days, turning them occasionally; then carefully drain them, put them into a jar in which vine leaves or cabbage leaves are laid, and pour scalding vinegar over them; add more leaves, and keep them covered by the fire. On the following day strain off the vinegar, boil it up, and pour it hot over the cucumbers, again putting fresh leaves to them above and below. When the colour becomes tolerably good, boil up the vinegar once more with a quarter an ounce of white pepper, the same of sliced ginger, one drachm of cloves, and half of a bruised nutmeg. Let these boil for a few minutes, and when cold, pour it over the cucumbers, which have been previously put into bottles or jars. Tie the bottles down, and put them by in a dry place.

CUCUMBER, PROPERTIES OF.—This esculent is chiefly characterized by its cooling and aperient qualities. For persons with strong stomachs they are not unwholesome; but where the organs of digestion are at all impaired, they are most injurious, as they lie cold and heavy on the stomach, and cause frequent and violent eructations and flatulency. In any case they should never be eaten without plenty of pepper, and an admixture of vinegar and oil. When cooked and stewed with gravy, they are much more wholesome than in their raw state.

CUCUMBER SALAD.—Pare the cucumbers, and cut them in long thin slices, shred these slices again into shreds, pour vinegar over them, and let them lie for an hour; then add oil, pepper, and salt.

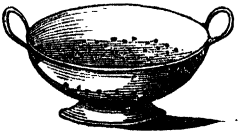
CUCUMBER SAUCE.—Pare a small fresh cucumber, cut it in neat pieces, and put it in a stew-pan, with a little sugar, and half an ounce of butter; set it on a slow fire, stirring occasionally; add twelve tablespoonfuls of brown sauce, and eight of broth; let it simmer till tender, skim the butter off, remove the cucumber, and serve the sauce in a boat.

CUCUMBER, TO DRESS.—Pare cucumbers, and slice them into a dish as thinly as possible; this is best performed by passing the surface dexterously over the edge of a sharp knife. Sprinkle cayenne and salt over them, and leave them to drain for a quarter of an hour, then pour off the water that is thus drawn from them, and dress them with vinegar, oil, and pepper. Onions shred finely may be added or not, at pleasure.

CUCUMBERS, TO PRESERVE.—Take large and fresh gathered cucumbers, split them in two, and take out all the seeds; lay them for three days in a brine of salt and water that will float an egg. Set them over a fire in cold water, with a small piece of alum in it; boil them till tender, drain them, and pour over them a thin syrup. Let them lie two days, boil the syrup again, and put it over the cucumbers; repeat this twice more, then add to it some clarified sugar, which has been boiled till little bladders have appeared, put it in the cucumbers, and simmer it for five minutes. Set it by till next day, boil the syrup and cucumbers again, and put them by in jars for use.

CUCUMBER VINEGAR.—Pare and slice fifteen large cucumbers, and put them into a stone jar, with three pints of vinegar, four large onions sliced, two or three shalots, a little garlic, a tablespoonful of salt, three teaspoonfuls of pepper, and half a teaspoonful of cayenne. After letting it stand for four days, give the whole a boil; when cold, strain and filter the liquor through blotting paper. Put it by in small bottles, and use it for salad, or with cold meat.

CULLENDER.—A vessel used in culinary operations, having the bottom pierced full of holes, for straining or separating the more liquid from the solid part of the sub-



stances. Cullenders should be washed each time after they are used, so that the subsequent contents may not be disagreeably flavoured with the preceding contents.

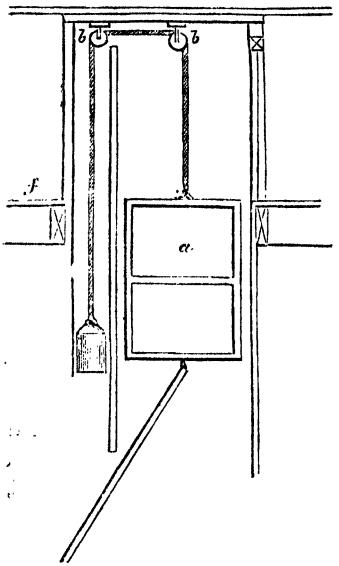
CULLIS.—In cookery a gravy made as follows:—Lay over the bottom of a stew-pan as much lean veal as will cover it an inch thick, cover the veal with thin slices of gammon of bacon, add two or three onions, bay leaves, sweet herbs, two blades of mace, and a few cloves; cover the stew-pan, and set it over a slow fire: when the meat is of a fine brown, fill the pan with good beef broth, boil and skim it, then simmer for an hour; add a little water, mixed with as much flour as will bring it to a proper consistence; boil it for half an hour, and strain it. It will keep for a week.

CUMBERLAND PUDDING.—Mix six ounces of grated bread with the same quantity of currants well cleaned and picked, the same of beef-suet finely shred, the same of apples chopped small, and the same of loaf sugar; add six eggs, half of a nutmeg grated, a little salt, the rind of a lemon grated, and a tablespoonful each of candied citron, orange, and lemon-peel cut thin. Mix them thoroughly together, put the whole into a basin, cover it closely with a floured cloth, and boil it for three hours. Serve it with sweet sauce.

☞ Grated bread, 6ozs.; currants, 6ozs.; beef-suet, 6ozs.; apples, 6ozs.; sugar, 6 ozs.; eggs, 6; nutmeg, ½ of 1; salt, a few grains; lemon-peel, 1; candied citron, orange, and lemon peel, 1 tablespoonful each.

CUPBOARD.—An essential in kitchens store-rooms, and various other offices. Cupboards should be kept scrupulously clean, and with the contents orderly arranged, so as to prevent accidents and loss of time in looking for articles. In store-cupboards it is a good plan to have a sheet of writing paper fastened upon the inside of the door,

upon which to enter the articles as they are stored and taken away, with their quantities, date, &c. The cupboard represented in the engraving is a contrivance made to rise by



means of pulleys from the kitchen to the diningroom. By this means the viands are kept quite hot, and the dinner is served with greater comfort and ease.

CUP CAKES.—Mix together five cupfuls of flour, three of sugar, one of butter, one of milk, three eggs well beaten, one wineglassful of wine, one of brandy, and a stick of cinnamon. Bake in well buttered cups.

☞ Flour, 5 cupfuls; sugar, 3 cupfuls; butter, 1 cupful; milk, 1 cupful; eggs, 3; wine, 1 wineglassful; brandy, 1 wineglassful; cinnamon, 1 stick.

CUPPING.—A surgical process by which blood is extracted from the skin by means of an exhausted receiver, and may be employed in any case where local blood-letting is indicated. The cupping apparatus consist of a scarificator—a small square box armed with from seven to eighteen lancets, which, upon touching a spring, when the instrument is placed on the part, leap up, and passing rapidly over the skin, inflict a corresponding number of surface cuts on the cuticle; a few round or leech-shaped glasses to receive the blood, and a small spirit lamp. The mode of procedure is first to exhaust the air from one of the glasses, by inserting under it the flame from the spirit lamp, and immediately applying it to the body; when the skin is partly drawn into the exhausted receiver, and the vessel, from the atmospheric pressure, is firmly fixed. After remaining on for a few minutes the glass is removed, by inserting the nail under the rim, and permitting the air to enter, when it instantly drops off. The scarificator is then laid on the same part, and the punctures having been made, the air is again exhausted from the glass, which is placed immediately over the spot; the blood, from the power of suction exerted by the vacuum, and from the external pressure of the air, instantly bursts from every cut, at first in drops, and finally in a languid stream, and trickles down into the glass. As soon as the glass is half full it is removed, the part carefully bathed with hot water, and a fresh glass applied, and so continued till the amount of blood ordered to be withdrawn has been obtained, when the cuts are well washed, and a pledget of wet lint applied as a dressing. Some cuppers are in the habit of attracting blood to the surface by previously bathing or fomenting the skin with hot water, but this is not always needed; the great art in cupping well is, to know how to graduate the depth of the incisions made by the scarificator. In other respects the process is extremely simple and easy of performance.

CURACOA.—Boil a quart of water in a very clean stew-pan; add to it, bit by bit, a pound of dark brown sugar-candy. When the whole is dissolved, boil up the syrup, then pour it into a deep dish to cool. Into a quart of spirits of wine drop a hundred and twenty drops of oil of bitter orange; when this latter is dissolved, mix it with the syrup before mentioned, but not until it is cool; then filter and bottle the liqueur, and put it by for use.

☞ Water, 1 quart; sugar-candy, 1lb.: spirits of wine, 1 quart; oil of bitter orange, 120 drops.

CURATE PUDDING.—To one pound of mashed potatoes, when hot, add four ounces of suet and two ounces of flour, a little salt, and as much milk as will give it the consistence of common suet puddings. Put it into a dish, or roll it into dumplings, and bake them a fine brown.

CURD.—One of the component proximate ingredients of milk. When milk, either deprived or not of its cream, is mixed with certain substances, or allowed to stand till it becomes sour, it undergoes a change called "coagulation," dividing itself into a solid substance called curd. This change in milk may be produced by several agents, such as alcohol, gelatine, and all astringent vegetables; by acids and many neutral salts, as cream of tartar; by gum, sugar, and more particularly by the gastric juice, or a piece of rennet, or calf's stomach; the introduction of a piece of this latter, of the size of a half-crown, will coagulate a quantity of milk sufficient for making sixty pounds of cheese.

CURD CAKES.—Mix well together a quart of curds, the yolks of eight eggs and the whites of four, a little sugar and nutmeg, and sufficient flour to produce a proper con-

sistence; heat butter in a frying-pan, form the paste into cakes, and fry them brown.

☞ Curds, 1 quart; eggs, 8 yolks, 4 whites; sugar and nutmeg, a little; flour, sufficient.

CURD CHEESECAKES.—Boil in two quarts of cream the beaten yolks of four eggs and the whites of five; drain off the whey gently, and mix with the curd a teaspoonful mixed of grated nutmeg and pounded cinnamon, three tablespoonfuls of rose-water, a wineglassful of white wine, four ounces each of pounded loaf sugar, butter beaten to a cream, and pounded biscuit. Mix all these ingredients well together, and stir in a quarter of a pound of currants. Bake it in a large tin, or in patty-pans lined with paste; or it may be baked in a dish previously buttered.

☞ Cream, 2 quarts; eggs, 4 yolks, 5 whites; nutmeg and cinnamon mixed, 1 teaspoonful; rose-water, 3 tablespoonfuls; white wine, 1 wineglassful; sugar, 4ozs.; butter, 4ozs.; biscuit pounded, 4ozs.; currants, 4ozs.

CURD PUDDING.—Rub the curd of two gallons of milk, well drained, through a sieve, add to it six eggs, a quarter of a pint of cream, two tablespoonfuls of orange-flower water, three tablespoonfuls of bread crumbs, half a pound of currants, and half a pound of raisins. Let it boil for one hour in a thick cloth well floured.

☞ Curd, produce of 2 gallons of milk, eggs, 6; cream, ½ pint; orange-flower water, 2 tablespoonfuls; bread crumbs, 3 tablespoonfuls; currants, ½lb.; raisins, ½lb.

CURD PUFFS.—Drain dry the curd of two quarts of new milk, add to it the yolks of seven eggs and the whites of two; four ounces of sugar, two tablespoonfuls of rose water, a quarter of a nutmeg grated, and bread crumbs sufficient to bring the whole to a proper consistence; make it into a paste, shape it into any forms desired, fry them in boiling lard, and serve them with a sauce made of butter, sugar, and white wine.

☞ Curd, produce of 2 quarts of milk; eggs, 7 yolks, 2 whites; sugar, 4ozs.; rose water, 2 tablespoonfuls; nutmeg, ¼ of 1; bread crumbs, sufficient.

CURDS AND CREAM.—Turn two quarts of milk fresh from the cow, with half a tablespoonful of rennet; drain off the whey, and fill a mould with the curd; after it has stood an hour or two turn it out. Strew coloured comfits over it, sweeten some cream, mix grated nutmeg with it, and pour it round the curd.

CURDS AND WHEY.—Soak a small piece of rennet in half a teacupful of warm water, and let it remain for an hour or two. Then pour into a quart of warm new milk a dessertspoonful of the rennet liquor, and keep it in a warm place until the whey appears separated from the curd and looks clear.

CURLING FLUID, FOR THE HAIR.—Melt a piece of white beeswax about the size of a filbert in an ounce of olive oil, and add one or two drops of otto of roses.

CURLING.—A sport played on the ice, consisting of sliding from one mark to another massive stones of forty to seventy pounds weight, of an irregular hemispherical form, with an iron or wooden handle affixed to the top. The object of the player is to lay his stone as near the mark as possible, to guard that of his partner, which has been well laid before; or to strike off that of his antagonist. The game is played by a party forming rival sides, and each player in addition to a stone is armed with a broom to sweep the ice, and with "trampets" for fastening on his feet to steady him when taking his aim. A large long open space of ice, of from thirty to forty yards in length, and eight or nine feet across, being cleared and a mark being made at each end to play to, the contest takes place by each person causing his stone to slide towards the end opposite him. A certain number constitutes the game, and all play from end to end until it is ascertained which has the greatest number. To hurl the stones with precision in this species of sport is exceedingly difficult; much depending on the keenness of the frost, the tone of the ice, and the truth of the stone. Sometimes the best and oldest players are baffled by beginners, simply by their stones having taken a bias to one side or the other; and, frequently, after the best players have placed the best stones in a cluster round the mark, one rapid shot will disperse the whole in every direction.

CURRANT BLANCMANGE.—In three-quarters of a pint of clear currant juice, drawn from the fruit as for jelly and strain, dissolve an ounce and a half of isinglass; add nine ounces of sugar broken small, give the whole a boil, strain it, and stir it by slow degrees to three-quarters of a pint of thick cold cream; when it is less than milk warm pour into the moulds.

☞ Currant juice, ¾ pint; isinglass, 1½oz.; sugar, 9ozs.; cream, ¾ pint.

CURRANT CAKE.—Beat a pound of butter to a cream, sift in a pound of sugar, beat eight eggs thoroughly, yolks and whites separately; add them, and continue beating with the hand till smooth; sift in a pound of flour, half a pound of currants, a grated nutmeg, mace, and cinnamon; mix all thoroughly and put it into small buttered moulds; sift sugar over and bake them in a quick oven.

☞ Butter, 1lb.; sugar, 1lb.; eggs, 8; flour, 1lb.; currants, ½lb.; nutmeg, mace, and cinnamon to flavour.

CURRANT CAKE WITH YEAST.—To three-quarters of a pound of flour, add two ounces of powdered sugar and a quarter of an ounce of cloves, cinnamon, and nutmeg mixed; add the yolks of ten eggs and the whites of five; beat the yolks and whites separately, and then mix both with a gill of orange flower water, and a teacupful of cream. In the cream must be melted half a pound of butter made rather more than blood warm. Mix the whole together and add to it a gill of yeast. Set it in a warm place to ferment, and when it has properly risen mix it in a pound and a half of cur-currants and a quarter of a pound of candied

citron, orange, and lemon-peel together, sliced thinly. Bake it in a tolerably quick oven.

☞ Flour, ½lb.; sugar, 2ozs.; cloves, cinnamon, nutmeg, mixed, ½oz.; eggs, 10 yolks, 5 whites; orange flower water, 1 gill; cream, 1 teacupful; butter, ½lb.; yeast, 1 gill.

CURRANT COMPOTE.—Make a strong syrup, and have a pound of currants washed and drained; let them boil up two or three times in the syrup; take them off the fire, let them cool a little, and then put them in jars with the syrup over them.

CURRANT CREAM.—Squeeze three-quarters of a pint of juice from ripe red currants, and let it stand in a pan of cold water; boil it for two hours, strain the juice through a sieve, and sweeten it well with pounded loaf sugar. When cold, add a quart of cream to a pint of juice, and beat it with a whisk till thick. Serve in a deep glass dish.

☞ Currant-juice, ½ pint; sugar, sufficient; cream, 1 quart.

CURRANT CUSTARD.—Boil in a pint of clear currant-juice ten ounces of sugar for three minutes, take off the scum, and pour the boiling juice on eight well-beaten eggs; thicken the custard in a jug, set into a pan of water, pour it out, stir it till nearly cold, then add to it, carefully, and by degrees, half a pint of rich cream, and last of all two tablespoonfuls of strained lemon-juice.

☞ Currant-juice, 1 pint; sugar, 10 ozs.; eggs, 8; cream, ½ pint; lemon-juice, 2 tablespoonfuls.

CURRANT DROPS.—Mash half a pint of currants with a tablespoonful of water; boil, and strain through a flannel bag; wet half a pound of sifted sugar with the juice, together with twenty drops of the spirit of vitriol; make it hot over the fire, but do not let it boil, and in this state drop it from the point of the knife, on to paper.

☞ Currants, ½ pint; water, 1 tablespoonful; sugar, ½lb.; spirit of vitriol, 20 drops.

CURRANT DUMPLINGS.—For each dumpling take three tablespoonfuls of flour, two of finely minced suet, and three of currants; a slight pinch of salt, and as much milk or water as will make a very thick batter of the ingredients. Tie the dumplings in well-floured cloths, and boil them for an hour. They may be served plain or with sweet sauce.

CURRANT FRITTERS.—Thicken half a pint of good milk with flour, to the consistence of a stiff batter, add sugar and currants. Beat it up quickly, heat some lard in a frying-pan, and put in a large spoonful at a time, which when done, remove and put in another spoonful, and so on till the whole are dressed.

CURRANT ICE.—Pick two pounds of currants, and a pound of raspberries, and set them over the fire in half a pint of water; when boiled, strain through a hair sieve; add a pound of sugar, and proceed to ice it.

☞ Currants, 2lbs.; raspberries, 1lb.; water, ½ pint; sugar, 1lb.

CURRANT JAM.—Pick two pounds of currants, and put them into a preserving pan with a pound and a half of sugar; add the sugar after the fruit has boiled up a few minutes, boil all together, mashing the fruit with a wooden spoon, boil gently for half an hour, stirring and skimming continually the whole of the time; then pour into jars, tie them over with bladders, and set them by in a dry place.

CURRANT JELLY.—Pick ripe currants freed from the stalks and other impurities, and bruised with a wooden spoon into a preserving pan, and make them scalding hot, stirring them in the meantime to prevent their burning; press out all the juice gently and pass it through a flannel bag. To every pint of this juice add fourteen ounces of good sugar; boil it and skim it well, and reduce it to a proper consistence, which may be known by setting a little of it in a cold place, or in a saucer placed in cold water.

CURRANT MARMALADE.—To the juice of ripe red currants, add juice of raspberries, then put to this whole currants, boil them gently, and when they begin to break put in an equal weight of sugar boiled to candy height; boil them together, mashing them in the meantime; skim them, add a little rose-water, and when the mass becomes as thick as marmalade, put it into pots.

CURRANT PIE.—Wash and pick ripe currants, dredge them with flour, and put them into a pie dish lined with paste; spread over them four tablespoonfuls of powdered loaf sugar, dredge with flour, cover with paste, wet and pinch together the edges of the paste, cut a slit in the centre of the top through which the vapour may escape, and bake for forty minutes.

CURRANT PUDDING.—Roll out a thin suet crust, line evenly with it a quart, or any other sized basin, and raise the crust from an inch and a half to two inches above the edge; fill the basin with fruit piled up, cover it over with paste, moisten the edges of the two pastes, press them together firmly, and fold them over. Tie it up in a cloth, and drop it into plenty of fast boiling water; when it is done lift it out by the aid of a fork, cut a small hole in the centre of the top, and serve it immediately.

CURRANT RATAFIA.—Put in a jar two quarts of brandy, with two pints of currant juice, two pounds of sugar, a stick of cinnamon, and six cloves; shake all together occasionally; at the end of a month strain and bottle it for use.

☞ Brandy, 2 quarts; currant juice, 2 pints; sugar, 2lbs.; cinnamon, 1 stick; cloves, 6.

CURRANT SAUCE.—Boil an ounce of dried currants in half a pint of water for a few minutes, then add a teacupful of bread crumbs, six cloves, a glass of port wine, and half an ounce of butter. Stir the whole till quite smooth, and serve in a sauce boat.

☞ Currants, 1oz.; water, ½ pint; bread crumbs, 1 teacupful; butter, ½oz.; port wine, 1 wineglassful.

CURRANT SHRUB.—Strip some white currants, and prepare them in a jar as for jelly. Strain the juice, and to two quarts of it add one gallon of rum, and two pounds of

lump sugar. Strain the whole through a jelly bag; and when perfectly clear, bottle for use.

CURRANT SYRUP.—Put into a sieve six pounds of red currants, two pounds of white currants, and two pottles of strawberries; crush them, and press the juice into a pan, and leave it to ferment for a week. Then pass the juice through a straining bag, on to four pounds of clarified sugar, boil the whole together, skim it, and take it from the fire. Set it by to cool, and tie down in bottles or jars.

☞ Red currants, 6lbs.; white currants, 2lbs.; strawberries, 2 pottles; sugar 4lbs.

CURRANT TART.—To a quart of red currants add a pint of raspberries, strawberries, or cherries; sweeten them well with brown sugar; line the sides of a dish with light paste, place in the centre a small teacup, put in the fruit, and cover it with paste.

CURRANT VINEGAR.—Take any quantity of ripe fruit and bruise it to a mash, mix thoroughly with water which has been boiled and suffered to cool, in the proportion of three gallons of water to one of the mash; let it stand for twenty-four hours, then strain it through a cloth and add brown sugar in the proportion of one pound to each gallon of the strained liquor; mix well and put it into a cask. It will not be fit to bottle in less than nine months.

CURRANT WATER.—Squeeze a pound of currants into a quart of water; put in four or five ounces of pounded sugar. Mix well, strain, and let it stand till cool. This beverage, when iced and served up in glasses, affords a delicious summer drink.

CURRANT WINE.—To every two gallons of water put five quarts of currants and a pint of raspberries. Let them soak for twelve hours, then squeeze and mash them thoroughly. On the following day rub them well on a fine wire sieve till all the juice is expressed, and wash the skins again with some of the liquor. To every gallon of juice put four pounds of Lisbon sugar, tun it immediately, lay the bung lightly on, and leave the liquor to ferment. In two or three days, add brandy, in the proportion of a quart to every four gallons; then bung it close, but leave the vent peg out for a few days. Keep it in the cask for six months, and then bottle off.

CURRANTS, CULTURE OF.—The usual method of propagation for this fruit is by cuttings. For this purpose young shoots of the straightest and most vigorous wood are to be preferred. Shoots of this description should be preserved at the early autumn pruning, and all the immature portion at the point being pruned away, the best of the remainder must form the cutting, the length of which should be from twelve to fourteen inches. Blind all the eyes or buds below the surface of the ground, to prevent suckers springing up. Plant the cuttings in a somewhat shady situation, and fasten them tolerably firm in the soil. They should be planted in rows which are eighteen inches asunder, and the cuttings about eight inches apart in the rows. During the first summer they will produce two or three shoots; these should be pruned in the autumn back to about four to five eyes or buds on each, from which a selection must be made for the cuttings, the future form of the tree depending much upon this. Those buds should only be preserved which are well placed, both as regards their form and their distance apart. In forming the bush let there be no central shoot left, but let the whole, if possible, form either a triangle, if three, a square if four, or a bowl-like character, if more than four. When this end is attained, the trees will be ready to remove to their final destination, or they may be allowed to remain for another year. For *summer culture* the first step is to prepare a proper soil, which should be free from drought, and have a top-dressing of decayed manure, or other refuse, spread three inches thick over the roots of the tree. The next point is to remove all the watery wood, as well as to remove all shoots growing into the interior of the bush, to the exclusion of light and air; these may be cut back when about nine inches long, far enough to render the centre of the bush completely open. This should be performed about the middle of June. In about another fortnight the watery or wild-looking breast spray all round the exterior may be pruned back to within four inches of their base, leaving a tuft of foliage all around to shade the ripening fruit. *Winter culture* must be commenced by pruning immediately after the leaves are fallen. All the side shoots must be pruned back to within an inch or two of the main stem. An exception, however, must be occasionally taken, when gaps or blanks occur, taking care that the shoots left to fill their spaces are well placed, and low down. Every terminal point should then be shortened, in order to encourage a liberal production of side shoots in the ensuing summer. All dead or decaying wood must be cut away, and if there is a preponderance of this, the bush had better be totally destroyed and another planted in its stead. *Propagation by seed* is resorted to for the purpose of raising new varieties; to accomplish this successfully, sow the seeds in pots as soon as ripe, and in the following spring transplant them into a hotbed, and subject them to the artificial heat of a forcing house. By these means, together with subsequent attention, the plants will fruit as early as two or three years old. *The gathering of the crop* commences, under ordinary circumstances, at the end of June; the fruit advances to maturity in July, and continues in perfection till the end of August, but the fruit may be preserved and continue good till September or October. To effect this, the trees are enclosed with mats when the fruit is rather more than three parts ripe. These mats must be taken off at least once a week, on dry days, to dispel the damp. All decaying leaves and berries should at such times be also carefully removed. The ripening of the fruit is also materially retarded by training the trees against north walls, protecting them at the same time with nets. The fruit should always be gathered when dry, as in rainy weather they lose their flavour.

CURRANTS, TO CLEAN.—Currants, before being used, should be washed two or three times in a cullender, then wiped with a cloth, and set before the fire to dry. If used in a damp state, they will make cakes or puddings heavy, and just before they are used it is an excellent plan to dust dry flour among them.

CURRANTS, TO PRESERVE.—Gather currants, either white or red, in a perfectly dry state. To effect the object properly, hold wide-necked bottles under the bunch of fruit selected, cut each currant from the large stem, leaving only a small piece of stalk remaining, and let it drop gently into the bottle, so that the fruit is not in any way bruised; proceed thus till the bottles are filled, stop them with corks which fit tightly, and resin them down. If the fruit be bought, and not gathered for the purpose, all unsound currants must be rejected, and no moist or bruised ones be put into the bottle. When the bottles are filled and closed properly, dig a trench in the garden, or remove a brick or two in the cellar, and make a hole, in which place the bottles with their necks downwards, and cover them over with earth a foot and a half in depth. When the weather is severe, lay a little long litter over the part, or ashes about a foot deep. The spot may be marked with a stick, &c.

CURRANTS, USES AND PROPERTIES OF.—This fruit is gently acidulous, cooling, and generally wholesome; it may be also employed to stimulate the biliary secretions, and as an antiseptic. The jam and jelly are both used as a vehicle for medicine, and the jelly especially is eaten with venison, hare, &c., to counteract the putrescent tendencies of the meat. Dried currants are extremely unwholesome, and should never be partaken of by persons with weak digestions and disordered stomachs.

CURRY.—A form of cookery introduced into this country from India. The most important point in making this dish is to procure good "curry powder." There are a great many receipts for making this, a selection from the best of which will be given hereafter. The rice also forms a very important part of a curry, and great care is required in boiling it. The "Patna" rice is the best for this purpose. Curries may be made from every conceivable kind of fish, flesh, fowl, vegetables, &c. The general *directions for preparing a curry* are as follows:—Take fresh meat, free it entirely from bone, and cut it into moderately small pieces. To each pound of meat add a tablespoonful of curry powder, about half the quantity of flour, and a little salt; mix these together, and rub a portion of it on the meat. Fry the meat in a little butter. Fry onions a light brown; drain the fat from both the meat and onions; put them into a stew-pan, and cover them with boiling water; stew for twenty minutes, then rub the remainder of the powder smooth with a little cold water, add it, and let it stew for an hour, or according to the time necessary for the meat to be well done. If no other acid is used, stir in a little lemon-juice just before serving; place it in the centre of the dish, and arrange boiled rice around it. See also CHICKEN, CRAB, HARE, LAMB, LOBSTER, MUTTON, OYSTER, PORK, RABBIT, SALMON, TRIPE, TURBOT, VEAL, &c.

CURRY BALLS.—These are used for soups, made dishes, poultry, veal, &c., and are made as follows: Boil four eggs for ten minutes, and lay them in cold water; put the boiled yolks into a mortar, with the raw yolk of one egg; add a teaspoonful of flour, a little chopped suet, and a seasoning of curry-powder; mix all well together, and make it into small balls.

CURRY POWDERS.—*Bengal.* Coriander seed, 4ozs.; cayenne pepper, 2ozs.; turmeric, 2ozs.; black pepper, 1oz.; to be well dried, pounded, and sifted. Lemon juice to be used with this powder when used. *Delhi.*—Turmeric, 20 teaspoonfuls; cayenne pepper, 8 teaspoonfuls; cumin seed, 12 teaspoonfuls; coriander seed, 12 teaspoonfuls; dried cassia leaves, 12 teaspoonfuls. *Madras.*—Turmeric, ½lb.; cumin seed, 2ozs.; coriander seed, 2ozs.; caraway seed, ½oz.; cardamom seed, ½oz.; black pepper, ½oz.; cayenne pepper, ½oz.; fenugreek seed, ½oz.; cloves, ½oz.; cinnamon, ½oz.; mace, ½oz. The whole of the ingredients to be pounded separately, then thoroughly incorporated and to be kept dry. *Sir H. Pottinger's.*—Turmeric powder, 2ozs.; ginger powder, 1½oz.; white pepper, 1oz.; cardamom seed, ½oz.; coriander seed, 1½oz.; cumin seed, 1oz.; fenugreek, 2 drachms; cayenne pepper, ½oz. Mix well together and set by in a dry place. *Dr. Hunter's.*—Mustard seed, 1½oz.; coriander, 4ozs.; turmeric root, 4½ozs.; black pepper, 3ozs.; cayenne pepper, 1½oz.; cardamom seed, 1oz.; Jamaica ginger, ½oz.; cinnamon, cloves, and mace, ½oz. each. Powder finely, mix thoroughly, and put by in closed stopped bottles.

CURRY SAUCE.—Put into a pan four good sized onions, sliced, and two peeled apples, with a quarter of a pound of butter, the same of lean ham, a blade of mace, four peppercorns, two bay-leaves, and two sprigs of thyme. Stir them over a moderate fire until the onions become brown and tender, then add two tablespoonfuls of curry-powder, one of vinegar, two of flour, a teaspoonful of salt, and one of sugar; moisten it with a quart of broth, or even water, with the addition of a little glaze; boil it till it becomes a pulp and adheres rather thickly to the back of the spoon; pass all through a fine sieve, give it another boil for a few minutes, put it in a jar, and use when required. Any kind of meat, poultry, fish, or game, are excellent warmed in this sauce and served with well-boiled and dry rice. It will keep in a cool place in the winter for a month, boiling it now and then.

☞ Onions, 4; apples, 2; butter, ½lb.; ham, ½lb.; mace, 1 blade; peppercorns, 4; bay-leaves, 2; thyme, 2 sprigs; curry-powder, 2 tablespoonfuls; vinegar, 1 tablespoonful; flour, 2 tablespoonfuls; salt, 1 teaspoonful; sugar, 1 teaspoonful; broth or water, 1 quart; glaze, *sufficient*.

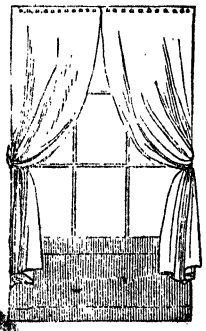
CURRY SOUP.—Cut four pounds of the breast of veal into small pieces; put the trimmings into a stew-pan with two quarts of water, twelve peppercorns, a stick of cinnamon, and two blades of mace; when it

boils, skim it clear, give it another boil for an hour and a half, and then strain it off. While it is boiling, fry the pieces of veal and the onions in butter till they are brown. When they are done, put the broth to them, and set the whole on the fire; when it boils, remove the scum, let it simmer for half an hour, then mix two tablespoonfuls of curry and the same of flour, with a little cold water and a teaspoonful of salt; add these to the soup, and simmer it gently till the veal becomes quite tender, when serve.

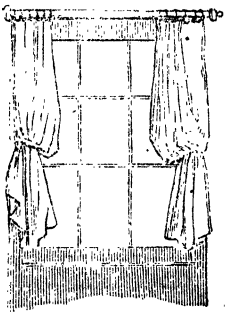
☞ Veal, 4lbs.; water, 2 quarts; peppercorns, 12; cinnamon, 1 stick; mace, 2 blades; curry-powder, 2 tablespoonfuls; flour, 2 tablespoonfuls; salt, 1 teaspoonful.

CURRYCOMB.—An implement used in grooming horses, to free them from the dirt adhering to the skin. A species of dandriff or scurf is being continually generated by the horse's skin; if this matter is suffered to accumulate, not only does it interfere with the general health of the horse, but also renders him restive and fretful, by the violent itching that it produces. The curry-comb is used as follows:—Begin at the neck of the horse, holding the left cheek of the headstall in the left hand, and curry him all along the neck to the shoulder, and so on downwards until the extremities are reached, then change hands and curry him on his breast; then join your right side to his left and curry him underneath; brushes and cloths are then called into operation, the brushes being freed from dust every now and then by rubbing them on the curry-comb.

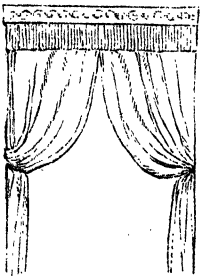
CURTAINS.—Window curtains add considerably to the comfort and elegance of apartments, and a certain amount of taste



and judgment is required to select the most agreeable forms and to adapt them to the several places for which they are destined. Window curtains are especially necessary in this country to exclude the cold air which presses in from without. Another reason why they are required is, that the warm air in the room, which always occupies the upper part next the ceiling, coming into contact with the glass, is cooled by it, and, immediately descending in consequence, diffuses itself through the lower part of the room; a cold current is therefore felt always coming from the windows, though none may have entered. Curtains check this, partly by preventing the warm air from reaching the glass, and partly by directing the current sideways. Curtains likewise hide the unsightly appearance of the shutters with their fastenings when closed. The simplest kind of window curtain for *bedrooms*, consists of two pieces of dimity, printed calico, muslin, or other material, of the proper length and width, nailed to the top of a piece of wood fastened up on purpose, as seen in the engraving, and kept back in the day by being looped up on each side by a cord fixed on the sides of the windows. This curtain may be quite plain, or have some kind of border or fringe at the top. Another simple mode is to have the curtain in one piece, to draw up by means of lines and pulleys. To effect

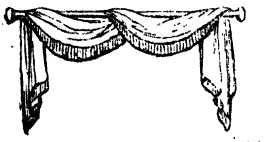


this, a pulley is fixed at each end of a flat piece of wood, as long as the window is wide, and another pulley is let into the wood, so as to divide the lath into two equal parts. The curtain is nailed to this wood, and pieces of tape are then sewed down the curtains at



the two sides, and also just under the middle pulley, and there a number of rings are fixed; through these rings are passed three cords, which go over the cords and are then fastened together; by means of these cords the curtains may be lowered or raised at pleasure.

The general mode of hanging curtains in *sitting rooms, drawing rooms*, &c., is by having rings at the top of the curtains, passing over a rod or pole stretched across, by which each half of the curtain is drawn to either side of the window. The rod or pole on which the curtain slides, is generally connected by a portion of the curtain called a valance; this gives richness and finish to the window; but when the rooms are low, they should not be deep, as they then hide much of the light. Valances are constructed to hang in a variety of modes; sometimes



they are made to form festoons, as shown in the illustration; and are constructed with fringes, tassels, and cords, in various ways.

The Materials for window curtains form a consideration of much importance. In order to secure graceful folds, pliability of material is essential, and for this purpose silk and fine cloth are the best substances. The drawing rooms have, of course, the richest materials assigned them. For other apartments in common use, a material of more substance is required, and for these moreen is generally used. *Muslin curtains* have a very pleasing effect, and may be used not only in summer, but at other seasons, in addition to the usual thick curtains. Curtains made of open netting are also very durable.

CURTAINS, TO PRESERVE.—When curtains are taken down, they must be well shaken and then carefully dusted; if they are washing curtains they must, immediately after dusting, be put into cold water to soak for a day or two, rinsing them and changing the water occasionally. They must then be washed out and rough-dried, and be put away for re-washing in the spring, a short time before they are required to be hung up. If the curtains should be of chintz or printed calico, then as they are taken down shake off the loose dust, and slightly brush them with a clothes brush, particularly between the folds; then wipe the curtains with clean flannels, and rub them well along the plaits and folds with dry silver sand and dry flannel, or with dry bran, particularly at the top parts of the furniture, which are generally more soiled than the other parts; then well shake them and wipe them again with a clean piece of flannel. If these directions are carefully followed, the curtains will look almost as fresh as when they were new, and last for years without washing. If the curtains should be of moreen, then, after having been shaken and brushed, they must be rubbed on a large table, with dry silver sand and a piece of dry clean flannel or a coarse cloth, scrubbing them thoroughly with the silver sand all over, particularly those parts where the dust has settled, or where they are soiled or stained. Then shake them and brush them carefully with a clothes brush, and again rub them with a clean towel or napkin, so as to remove every particle of sand; then fold them carefully up and put them away enclosed in linen wrappers. Damask, silk, and satin curtains may be cleaned by rubbing the stale crumb of bread over them. For these latter long curtain bags are frequently made to enclose them, when the apartment is not in use.

CUSTARD.—This dish is usually partaken of cold, and is either poured over fruit tarts, confections, &c., or served separately in custard cups. The flavouring may be given according to taste.—See ALMOND, APPLE, BISCUIT, GOOSEBERRY, LEMON, ORANGE, RICE, &c.

CUSTARD, BAKED.—Mix a quart of new milk with eight eggs well beaten, strain the mixture through a fine sieve, and sweeten it with six ounces of sugar; add a quarter of a saltspoonful of salt, and pour the custard into a deep dish, with or without a lining or rim of paste; grate nutmeg and lemon-peel over the top, and bake it in a very slow oven from twenty to thirty minutes, or even longer, should it not be firm in the centre. A custard, if well made and properly baked, will appear quite smooth when cut, and there will be no whey in the dish.

☞ Milk, 1 quart; eggs, 8; sugar, 6ozs.; salt, ½ saltspoonful; nutmeg and lemon-rind to flavour.

CUSTARD, BOILED.—Boil a pint of milk with lemon-peel and cinnamon, mix a pint of cream and the yolks of five eggs, or if cream be not used, more eggs must be added; strain the milk and sweeten it, and pour it on to the cream and eggs, stirring it well with a whisk, then simmer it off till of a proper consistence, *stirring it one way* all the time, to prevent its curdling. When the custard is removed from the fire, keep stirring it till cool, then put into glasses or cups. Rice flour, or arrowroot, rubbed to a smooth paste in a cup of cold milk, may be used for the thickening, if required.

☞ Milk, 1 pint, lemon-peel and cinnamon, to flavour; cream, 1 pint; eggs, 5 yolks; sugar, to sweeten.

CUSTARD CREAM.—Boil in half a pint of milk, a stick of cinnamon, the rind of a lemon pared thin, and two or three laurel leaves; strain, and add to it three pints of cream; stir into it the well-beaten yolks of eight eggs; sweeten with powdered loaf sugar, put it into a saucepan, and stir it constantly till it thickens; pour it into a deep dish, and stir it now and then till cold. Serve in glasses or cups.

☞ Milk, ½ pint; cinnamon, 1 stick; lemon-rind, 1; laurel leaves, 2 or 3; cream, 2 pints; eggs, 8 yolks; sugar, to sweeten.

CUSTARD PUDDING.—Mix by degrees a pint of milk with a tablespoonful of flour, the yolks of five eggs, a tablespoonful of orange-flower water, and half a stick of cinnamon bruised. Butter a basin just large enough to hold this batter, pour it in and tie a floured cloth over it. Put it in when the water boils, turn it about for a few minutes, to prevent the egg from settling on one side,

and boil it for half an hour. Serve it with currant jelly or sweet sauce.

☞ Milk, 1 pint; flour, 1 tablespoonful; eggs, 5 yolks; orange-flower water, 1 tablespoonful; cinnamon, ½ stick.

CUSTARD WITH APPLES.—Pare and core some apples, and bake or stew them in an earthen pan, with as little water as possible, and enough sugar to sweeten. When the apples are fallen, put them into a pie dish, and let them stand till cold, then pour over them an unboiled custard, and set the dish into an oven or before the fire, until the custard is fixed. This may be eaten either hot or cold.

CUSTARD WITH RICE.—Boil some rice in milk, till quite tender, with cinnamon and a very few bitter almonds; when cold, sweeten with powdered loaf sugar: form a species of wall round a glass dish, and pour a boiled custard in the centre.

CUSTARDS, TO ORNAMENT.—Whisk, for one hour, the whites of two eggs, together with two tablespoonfuls of raspberry or red currant jelly; lay it in any form upon a custard, to imitate rock, &c., and serve in a dish with cream round it.

CUSTOMS DUTIES.—A species of tax levied upon commodities exported or imported. The rate of duty varies with the particular commodity, and the mode of ascertaining the amount of duty to which it is subject may be by weight, measurement, tale, or per-centage on the declared value. The following articles are prohibited to be imported under pain of forfeiture, and to be destroyed or otherwise disposed of as the commissioners may direct:—

Books, wherein the copyright shall be first subsisting, first composed, written, or printed in the United Kingdom, and printed or reprinted in any other country, as to which the proprietor of such copyright or his agent shall have given notice in writing that such copyright subsists; such notice also stating when such copyright will expire. Extracts, essences, or other concentration of coffee, chicory, tea, or tobacco, or any admixture of the same. Snuff work, tobacco-stalks stripped from the leaf, whether manufactured or not, and tobacco-stalk flour. Persons may be searched, if officers have reason to suspect smuggled goods are concealed upon them. Obstructing officer, penalty £100. Persons denying having contraband goods about them, if such are afterwards found, are liable to forfeit treble their value. Persons concerned in importing prohibited or restricted goods, or harbouring or having such goods in custody, to forfeit treble the value or £100. Offering any bribe, reward, or recompense to an officer, penalty £200.

CUTLERY.—In order to preserve valuable articles of cutlery, they should be wrapped in zinc foil, or kept in boxes lined with zinc. They will thus remain spotless and perfect. —See KNIFE, RAZOR, SCISSORS, &c.

CUTLET.—See LAMB, MUTTON, PORK, SALMON, VEAL, &c.

CUTLETS, A LA MAINTENON.—Cut slices of meat about three quarters of an inch thick, beat them with a rolling pin, and wet them on both sides with egg; dip them in a seasoning of bread crumbs, parsley, thyme, knotted marjoram, pepper, salt, and a little grated nutmeg; then put them into papers folded over, and broil them. Serve them with melted butter mixed with ketchup.

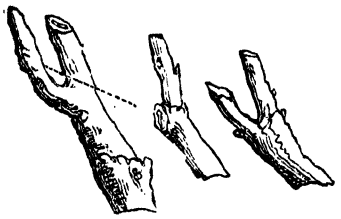
CUTLETS EN SURPRISE.—Take some paste, roll it out to a moderate thickness, and cut it into pieces of the form of hearts, lay some apricot marmalade on them, turn them over, press the edges together, place them on a tin and bake them. When the cutlets are done, sprinkle bruised mushrooms over them, and dish them in consommé.

CUTLET PAN.—A species of frying-pan made with deep and upright sides. It should be constructed of wrought iron, of a tolerable thickness at the bottom, and lined throughout with tin.

CUTS may be either jagged or even, as those made by a knife or a saw. For clean cuts nothing is required beyond bringing the two sides, or lips of the cut, in exact position, and retaining them in that state till the healing process is completed; for this purpose a strip or two of adhesive plaster, sufficiently long to bind the sides together, should be passed over the cut; a bit of lint laid on as a compress, and a narrow bandage passed round to retain both and protect the part from dirt or accident. When cuts are attended with much bleeding, and the closing of the wound, the compress, and bandage do not stop the discharge, a little "Friar's balsam" may be applied to the bleeding surface to check it, but in general such a means, as it gives much pain, is quite unnecessary, unless indeed some extensive vessel has been divided, when pressure must either be established on the main artery or the mouth of the vessel taken up, and tied; but for ordinary cuts, all that is necessary is to place the parts in close connection, and leave them in that position to heal. When a piece of flesh has been cut out, it should be as quickly as possible placed exactly in its place, strapped down, a pledget placed over it, and a warm bran poultice laid over all. In the same manner, fingers or toes cut off by accident, if applied to the bleeding stump and retained in their natural position, by a splint and bandage, with a moist warm poultice enveloping the whole, so great is the reproductive power of nature, that a perfect reunion will be established within a longer or shorter length of time.

CUTTINGS, CULTURE FROM.—Propagation by cuttings is a mode of culture requiring some delicacy and discrimination. It may be considered, as to the choice of cuttings, their preparation, their insertion in the soil, and their future management. The *choice of cuttings* should be directed first towards those branches of trees and shrubs which are thrown out nearest the ground, and especially such as recline, or nearly so, on the earth's surface, as these have always the greatest tendency to produce roots. The *proper time* for taking cuttings from the mother plant is when the sap is in full motion, in order that in returning by the bark it may form a callus or protuding ring of granular substance, between the bark and

wood, whence the roots proceed. As this callus, or ring of spongy matter, is generally best formed in ripened wood, the cutting, when taken from the mother plant, should contain a part of the former year; or, in plants which grow twice a year, of the wood of the former growth; or in the case of plants which are continually growing, such wood as has begun to ripen or assume a brownish colour. The *preparation of the cutting* depends on, or is guided by, this principle—that the power of protruding buds or roots resides chiefly, and in most cases entirely, at what are called joints, or at those parts where leaves or buds already exist. Hence it is, that cuttings ought always to be cut across with the smoothest and



soundest section possible at an eye or joint. It is a common practice to cut off the whole or a part of the leaves of cuttings; but the former is always attended with bad effects, as the leaves may be said to supply nourishment to the cutting till it can sustain itself. The *insertion of cuttings* may seem an easy matter, and none but a practical cultivator would imagine that there could be any difference in the growth between cuttings inserted in the middle of a pot, and those inserted at its sides; yet some sorts of plants if inserted in a mere mass of earth, will hardly, if at all, throw out roots; while, if they are inserted in sand, or in each of the sides of the pots, so as to touch the pot in their whole length, they seldom fail of becoming rooted plants. The art is to place them so as to touch the bottom of the pot, and afterwards plunging them in a bark or hotbed, and keeping them moist. The *management* of cuttings requires that they should not be planted too deep, though such as are large ought to be planted deeper than such as are small. Too much light, air, water, heat, or cold, are alike injurious. To guard against these extremes in tender sorts, they should be nurtured beneath a hand or bell-glass. Immersing the pot in earth (if the cuttings are in pots), has a tendency to preserve a steady uniform degree of moisture at the roots; and shading or planting the cuttings, if in the open air, in a steady situation, prevents the bad effects of excess of light. The only method of regulating the heat is double or single coverings of glass or mats, or both. A hand-glass placed over a bell-glass will preserve, in a shady situation, a very constant degree of heat. *Piping is a mode of propagation by cuttings.* This is effected by separating a shoot from a part of the stem, where it is nearly or somewhat ripened. The root end of the plant must be held between the finger and thumb of one hand, below a pair of leaves, and with the other pulling the top part above the pair of leaves, so as to separate it from the root part of the stem. These pipings, or separated parts, are inserted without any further preparation in finely sifted earth to the depth of the first joint or pipe, gently firmed with a small dibber; then watered, a hand-glass put over them, and their future management similar to that of cuttings.

CUTTLE-FISH.—The bone of the cuttle-fish is used to erase ink-marks from paper and parchment. Reduced to powder it forms a valuable dentifrice and polishing powder, and is used for forming the moulds for small silver castings.

CYCLAMEN.—A family of plants sometimes called sowbread, adapted for window culture, particularly one sort known as the Persian cyclamen. Of this there are four or five varieties, all of them gay and delicate flowers, and distinguished by various shades and marks. No plants are easier to manage, and none more free from insects; and out of half-a-dozen plants, one might always be retained in bloom from October to May, simply by bringing them in one at a time into a warm room. The form of the cyclamen is that of a solid bulb, much like a young turnip in shape, with the leaves and flowers growing together immediately from the crown of the bulb, without any branches. The size of the bulbs varies in the different kinds from that of a nutmeg to a large apple. To grow these plants so as to render them attractive ornaments for the window, it is only necessary to pot them in upright or bulb pots, using good rich soil. Any good garden mould will answer, if a little leaf mould, or rather dung in a dry state, be mixed with it. The pots must be very well drained; first with an oyster-shell, or hollow piece of potsherd, over the hole, and then an inch deep of small crocks over that;—potsherds, or crocks, are pieces of flower-pots broken small with a hammer. The bulb should not be entirely buried in the soil, like most bulbs, but only half its depth. The reason for leaving the crown of the bulb out of the soil, is that the leaves and flowers grow immediately from that part, and if it was buried, their foot-stalks would be in the soil, and get often injured by frequent waterings. Cyclamens do not require much water, but they should not be suffered to become too dry. They continue in bloom for two months—a fresh number of flowers rising up all the time, to succeed those that fade. As each flower drops off, the flower-stalk will begin to twist like a screw, holding the seed-pod in the middle, and by the time the seeds are ripe, the screw is hidden down among the leaves. Keep the soil moist as long as the leaves are green; when they fade, plunge the pot in a border in front of the house, so as to be an inch below the surface; and, if the soil of the border is heavy, put three or four little stones under the pot, which will assist the drainage in showery

weather. Thus the bulb will be kept in a uniform state during its resting time—neither too wet nor too dry. In September, as soon as the new leaves appear above ground, raise the pot till the surface of it is level with the top of the border, then water it, and leave it out as long as the weather is favourable. They must also be fresh potted, and the sooner this is done in the autumn the better. The Persian cyclamen, which is chiefly referred to here, may be purchased at any seed-shop for the ordinary price of a shilling.

CYPRUS WINE, IMITATIVE.—To four gallons of water put one gallon of the juice of white elderberries, pressed gently from the fruit and passed through a sieve, without bruising the kernels of the berries. Then add twenty pounds of loaf sugar, three-quarters of an ounce of sliced ginger, and half an ounce of cloves. Let the whole boil together for half an hour, taking off the scum as it rises; pour it into a pan or tub to cool, and ferment it with ale yeast on a toast for three days; afterwards put it into a cask which will just hold the quantity, and add to it one pound of raisins, stoned: and when the fermentation has ceased, add five pints of French brandy. In three or four months it will be fit to bottle.

☞ Water, 4 gallons; white elderberry juice, 1 gallon; sugar, 20lbs.; ginger, ½oz.; cloves, ½oz.; raisins, 1lb.; brandy, 5 pints.

D.

DAB.—A fish somewhat similar to the flounder. It is in season in the latter part of the autumn. It may be dressed either by frying plain, or stewing. It requires no sauce, and is best eaten simply with a squeeze of lemon.

DACE or DARE, called *cyprinus alburnus* from the silvery brightness of its scales, is an active, little fish, affording much

pleasing sport to the angler. It may be fished for at the bottom with paste, gentles, worms, the caddis bait, wasp grubs, malt, wheat, and various other baits, and at the top with all kinds of natural flies, grasshoppers, and winged insects, and also with the artificial fly; indeed, whipping for dace with the natural or artificial fly may not inaptly be termed the training school for the tyro in fly fishing. The dace spawns towards the end of March in gentle streams with sandy bottoms, and although it quickly recovers itself, should not be sought by the angler until April is far advanced, when it may be found in sharp streams with gravelly bottoms, to which it has betaken to scour and cleanse itself. The rod for dace fishing should be very light and twelve feet in length; the line fine twisted silk, the bottom part of one or two yards of fine round gut; the hook No. 8, and the float a swan quill, or of thin tapered cork, that will carry from four to six BB shot, according to the depth of water and the strength of the stream. The angler, whilst fishing for dace, either at bottom or top, must hold himself in readiness to apply his art to the capture of much larger and more highly prized fish; for the carp, the chub, and the barbel both take the baits used for, and frequent the places resorted to by dace, and the chub and the trout will frequently rise at the fly more specially destined for their smaller compeer. Books: *Blaine; Captain Williamson; Ephemera; Bailey.*

DACE FRIED.—Open them up the middle, cut the fins close off, scale them well, dry in flour, fry a light brown, and serve with melted butter.

DACE MARINADED.—Cut off the heads, clean the fish thoroughly, and rub the inside with plenty of pepper, salt, and allspice; place them in layers in a baking dish, with bay leaves between the layers, and add three parts vinegar and one of water, sufficient to fill the dish; add a little whole pepper, and a blade or two of mace. Bake slowly for about five hours. When cold, shift the fish, and marinade into another dish.

DAFFEY'S ELIXIR.—A specific for colic and spasmodic affections, which, as sold in the shops in the present day, consists chiefly of an infusion of aniseeds, liquorice, and jalap, in the coarsest and most fiery malt spirit, lowered with common water. If the Daffey's Elixir were mixed according to the following formula, it would be found efficacious as a remedy for the complaints alluded to. Mix five ounces of aniseeds, three ounces of fennel seeds, four ounces of parsley seeds, six ounces of Spanish liquorice, five ounces of senna, one ounce of Turkey rhubarb, sliced, three ounces of elecampane-root, sliced, seven ounces of jalap, sliced, twenty-one drachms of saffron, six ounces of manna, two pounds of raisins, stoned, and a quarter of an ounce of cochineal. Mix these ingredients well together in a stone jar, and pour upon them two gallons of the best Cognac brandy. Stir the whole well together, then close the jar, so that it shall remain air-tight, and let the elixir infuse during a fortnight. At the expiration of this time, strain it through linen, squeezing carefully out all the liquor which constitutes the elixir, which may then be put into half-pint bottles.

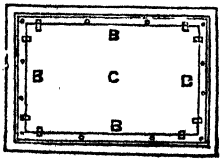
☞ Aniseeds, 5ozs.; fennel seeds, 3ozs.; parsley seeds, 4ozs.; Spanish liquorice, 6ozs.; senna, 5ozs.; rhubarb, 1oz.; elecampane root, 3ozs.; jalap, 7ozs.; saffron, 21 drachms; manna, 6ozs.; raisins, 2lb.; cochineal, ½oz.; brandy, 2 gallons.

DAFFODIL.—See NARCISSUS.

DAGUERREOTYPE.—The name given to a process introduced by Daguerre, a French artist, by which the images from the lens of a camera obscura are fixed on metal plates. The process is divided into five operations. The first consists in cleaning and polishing the plate, to fit it for receiving the sensitive coating on which light forms the picture. The second is the formation of the sensitive ioduret of silver over the face of the tablet. The third is the adjusting of the plate in the camera obscura, for the purpose of receiving the impression. The fourth is the bringing out of the impression, which is invisible when the plate is taken from the camera. The fifth and last operation is to remove the sensitive coating, and thus prevent that susceptibility of change under luminous influence, which would otherwise exist, and quickly destroy the picture.

First operation.—A small phial of olive-oil—some finely carded cotton—a muslin bag of finely levigated pumice—a phial of nitric acid, diluted in the proportion of one part of acid to sixteen parts of water, are required for this operation. The operator must also provide himself with a small spirit-lamp, and an iron wire frame, upon which the plate is to be placed while being heated over the lamp. The plate being first powdered with pumice, by shaking the bag, a piece of cotton dipped into the olive-oil is then carefully rubbed over it with a continuous circular motion, commencing from the centre. When the plate is well polished, it must be cleaned by powdering it all over with pumice, and then rubbing it with dry cotton. After this, the surface of the plate is rubbed over with a pledget of cotton, slightly wetted with the diluted nitric acid. Frequently change the cotton, and keep rubbing briskly, that the acid may be equally diffused over the silver, as, if it is permitted to run into drops, it stains the table. It will be seen when the acid has been properly diffused, from the appearance of a thin film equally spread over the surface. It is then to be cleaned off with a little pumice and dry cotton. The plate is now placed on the wire frame, the silver upwards, and the spirit lamp held in the hand, and moved about below it, so that the flame plays upon the copper. This is continued for five minutes, when a white coating is formed all

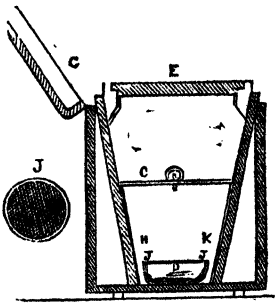
Fig. 1.



over the surface of the silver; the lamp is then withdrawn. The plate is now cooled *suddenly* by placing it on a mass of metal, or a stone floor. When perfectly cold, it is again polished with dry cotton and pumice. Care must be taken not to breathe upon the plate, or touch it with the fingers, for the slightest stain upon the surface will be a defect in the drawing. After the first polishing, the plate C is fixed on a board by means of four fillets B B B B, of plated copper. To each of these are soldered two small projecting pieces, which hold the tablet near the corners, and the whole is retained in a proper position by means of screws.

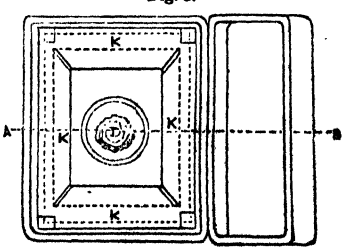
Second operation.—This operation is the most important of all, and requires a box to be provided similar to figs. 2 and 3. Figure 2 represents a section, supposed to pass

Fig. 2.



down the middle of the apparatus by the line A B in fig. 3, which represents the box as seen from above. C is a small lid which accurately fits the interior, and divides

Fig. 3.



the boxes into two chambers. It is kept constantly in its place when the box is not in use; its purpose being to concentrate the vapour of the iodine, that it may act more readily upon the plate when it is exposed to it. D is the little capsule in which the iodine is placed, which is covered with the ring J, upon which is stretched a piece of fine gauze, by which the particles of iodine are prevented from rising and staining the plate, while the vapour passes through it. E is the board with the plate attached, which rests on the four smaller projecting pieces. G is the open lid of the box, which is kept closed, except when the plate is removed or inserted. H represents the

supports for the cover C. K, tapering sides all round, forming a funnel-shaped box within. To prepare the plate:—The cover C being taken out, the cup D is charged with a sufficient quantity of iodine, broken into small pieces and covered with the gauze J. The board E is now, with the plate attached, placed face downwards in its proper position, and the box carefully closed. In this position the plate remains until the vapour of the iodine has produced a definite golden yellow colour, nothing more or less. The time for this cannot be fixed, as it depends entirely on the temperature of the surrounding air. It is necessary, from time to time, to inspect the plate, and this should be done in a darkened room, to which a faint light is admitted in some indirect way, as by a door a little open. When doing this, the board must be lifted from the box with both hands, the operator turning the plate towards him rapidly and observing the colour. If too pale it must be returned to the box; but if it has assumed a violet colour, the whole process must be again gone through.

Third operation.—This consists in fixing the plate at the proper focal distance from the lens of the camera obscura, and placing the camera itself in the right position for taking the view we desire. Figure 4 is a

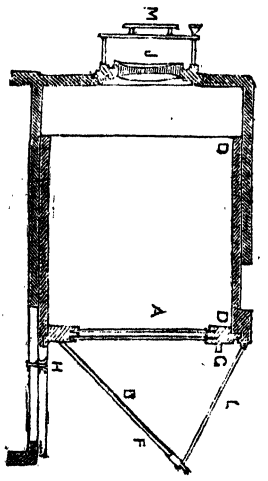
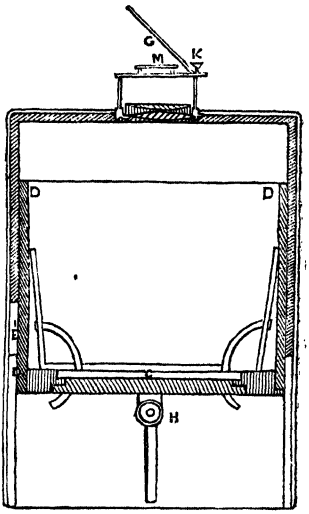


Fig. 4.

perpendicular section of the camera. A is a ground glass by which the focus is adjusted; it is then removed and the plate substituted as in C, fig. 5. B is a mirror for observing the effects of objects, and selecting the best points of view. It is inclined at an angle of 45°, by means of the support L. To adjust the focus the mirror is lowered, and the piece of ground glass A used. The focus is easily adjusted by sliding the box D out or in, as represented in the engraving. When the focus is adjusted it is retained in its place by means of the screw H. J is the object glass; its diameter is about one inch, and its focal distance about fourteen inches. M is a stop a short distance from the lens, the office of which is to cut off all those rays of light which do not come directly to the object to which the camera is directed. This instrument reverses the objects, that which is to the right in nature being to the left in the impression. This can be remedied by using a mirror outside, as K J in fig. 5. This

Fig. 5.

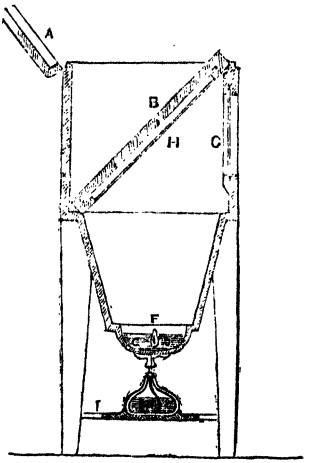


arrangement, however, reduces the quantity of light, and increases the time of the operation one-third. After having placed the camera in front of the landscape or whatever object we desire to represent, our first attention must be to adjust the plate at such a distance from the lens that a neat and sharply-defined picture is produced. This being satisfactorily arranged, the glass is removed, and its place supplied by the frame containing the prepared plate, and the whole secured by the screws. The doors are now opened by means of the half circles, and the plate exposed to receive the picture.

Fourth operation.—The apparatus required in this operation is represented by fig. 6. A is the lid of the box; B, a black board with grooves to receive the plate; C, cup containing a little mercury; D, spirit-lamp; F, thermometer; G, glass through which to inspect the operation; H, tablet as removed from the camera; I, stand for the spirit-lamp. All the interior of this apparatus

should be covered with hard black varnish. The board and the fixed plate being withdrawn from the camera, are placed at an angle of about 45° within this box—the tablet with the picture downwards, so that it may be seen through the glass G. The box being carefully closed, the spirit-lamp is to be lighted and placed under the cup containing the mercury. Heat is to be applied until the thermometer, the bulb of which is covered with the mercury, indicates a temperature of 60° Centigrade (140° Fahrenheit). The lamp is then withdrawn, and if the thermometer has risen rapidly, it will

Fig. 6.



continue to rise without the aid of the lamp; but the elevation ought not to be allowed to exceed 75° Cent. (167° Fahrenheit). After a few minutes, the impression begins to appear; the operator assures himself of the progress of this development by examining the picture through the glass G, by a taper, taking care that the rays do not fall too strongly on the plate, and injure the embryo images. The operation is continued till the thermometer sinks to 45° Cent. (113° Fahrenheit). After each operation the apparatus is carefully cleaned, the strips of metal which hold the plate rubbed with pumice and water; and the plate deposited in a box extended from the light until the last fixing operation is performed.

Fifth operation.—This process has for its object the removal of the iodine from the plate of silver, which prevents the further action of light. For this purpose, a saturated solution of common salt may be used, or a weak solution of the hyposulphite of soda. In the first place the plate is to be placed in a trough of water, plunging and withdrawing it immediately; it is then to be plunged into one of the above solutions. To assist the effect of the saline washes, the plate must be moved to and fro, which is best done by passing a wire beneath the plate. When the yellow colour has quite disappeared, the plate is lifted out, great care being taken that the impression is not touched, and it is again plunged into water. A vessel of warm distilled water, or very pure rain water boiled and cooled being provided, the plate is fixed on an inclined plane, and the water is poured in a continuous stream over the picture. The drops of water which may remain upon the plate, must be removed by forcibly blowing upon it, for otherwise in drying, they would leave stains in the drawings. This finishes the drawing, and it only remains to preserve the silver from tarnishing and from dust. The sketches will not bear the slightest rubbing, and must be preserved in cases of pasteboard, with a glass over them, and then framed in wood. The same plate may be employed for many successive trials, provided the silver be not polished through to the copper. It is very important, after each trial, that the mercury be removed immediately by polishing with pumice-powder and oil. If this be neglected, the mercury finally adheres to the silver, and good drawings cannot in consequence be obtained. Many improvements upon this discovery have been introduced from time to time.—See PHOTOGRAPH, STEREOSCOPE, TALBOTYPE, &c.

Books: *Daguerre's History and Practice of Photogenic Drawing*, 2s. 6d.; *Hunt's Photographic Manual*, 6s.; *the Daguerrian Journal*, 30s.; *Dictionary of Useful Knowledge, article Daguerreotype.*

DAHLIA.—This much-esteemed flower is propagated by cuttings, by grafting, and by seed. The period for *stocking the cuttings* extends from February to August. The young shoots that spring from the bulbs make the best cuttings, and are the most sure to grow; but the young tops taken off at a joint will strike root and form small bulbs even so late as August, and often are more sure to grow in the spring following, if kept in small pots, than roots that have been planted out late. If the shoots on the old bulbs are numerous, or there appear to be many buds ready to start, the shoots that have grown three inches long may be slipped off with the finger close to the bulb; but, if the shoots are few, or there is only one, they must be cut off so as to leave two buds at the base of the shoot to grow again. The cuttings or slips must be put in pots filled with light earth, with a layer of pure white sand on the surface, and placed in a gentle hotbed. If the pot of cuttings can be plunged in coal-ashes or other material, the cuttings will strike the sooner; water very moderately and carefully, and shade from bright sun. They will strike root in a fortnight or three weeks, and should be immediately potted in three-and-a-half-inch pots and kept close for some days, until they make a few more roots. They may then be placed in a cold frame, shaded from the sun, and protected from frost and wet. Pot them again into four-and-a-half-inch pots, before the roots become matted, then begin to give air daily, and

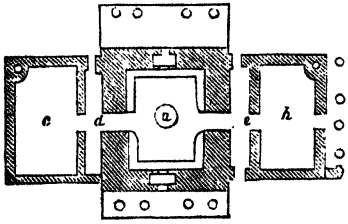
keep them well watered. In *propagating by grafting*, the cutting intended for the graft should be strong and short-jointed, having on it two or more joints or buds; it must be also procured as soon in the season as possible: when obtained, select a good tuber of a single sort, taking especial care that it has no eyes; cut off a slice from the upper part of the root, constituting the bottom of the part so cut, a ledge whereon to rest the graft. It is of advantage, though not absolutely necessary, that a joint should be at the end of the scion, for the scion will occasionally put forth new roots from the lower joint; the stem is pruned from the upper joint. After the joint has been tied, a piece of fine clay, such as is used for common grafting, must be placed round it, then pot the root in fine mould, in a pot of such dimensions as will bury the graft half way in the mould; place the pot in a little heat in the front of a cucumber or melon frame, if you chance to have one in work at the time. In about three weeks the root should be shifted into a larger pot, if it be too soon to plant it in the border, which will probably be the case. For *propagation by seed*, collect the seeds in September from the dwarf plants, where no preference exists on other accounts, and from semi-double flowers when double varieties are chiefly desired. Sow in March, or earlier, in a heat of fifty-five or sixty-five degrees; the young plants to be pricked out, if necessary, in pots, and kept in a temperature of fifty or fifty-five degrees till the end of April. Now plant out where they are to remain, covering each plant at night with an empty pot for some weeks, to prevent injury from spring frosts. If in a compartment by themselves, plant in rows three feet wide, and at two feet distance in the row: if in the flower border, plant in the back rows. In either case, they require to be staked. Seedlings thus treated will produce flowers in July, and continue in perfection till the autumn. The flowers may be preserved nearly all the winter, by planting the tubers in large pots and removing them early in the autumn to the greenhouse. The *best soil* for dahlias is a rich deep loam, with a good coating of well-decomposed dung. The *situation* should be a clear open one, neither sheltered by trees nor walls. *Tying* is a very important operation. As soon as the plants are high enough, they should be tied to the stakes with some rather broad shreds of soft bast matting; and the side shoots must also be secured by longer pieces of matting, to prevent the winds and heavy rains from breaking them off. It may sometimes be necessary to place three or four additional stakes at a certain distance from the central one, to tie the side branches to. The best kind of stakes are the thinnings of larch plantations. They should be stout, and six or seven feet long at least. No particular care is required after the plants have been tied, till they have been attacked by the frost; they should then be cut down, and in a very dry soil, the tubers may be covered with loam, old tan, or leaves. If this is done, they will blow full and early the next season. The most general and the safest way, however, with the valuable sorts, is to dig up the tubers with a portion of the stem attached, and to plant or bed them in pots or boxes among sand or dry mould, and keep them under the stage of a greenhouse, or in some dry airy place, free from the drip of water, or the access of frost till the spring. The *characteristics of a good dahlia* are, that the flowers should be fully double, always filling the centre; the florets should be entire or nearly so, pointed or

rounded, reflexed, and so forming a globular kind, regular in their disposition, each series overlapping the other backwards; they may be either plain or quilled, but never distorted. Any irregularity in the shape of the petals, such as their being notched, pointed, &c., detracts both from their beauty and their value. The peduncles ought to be sufficiently strong to keep the blossoms erect, and consequently well exposed to view, and long enough to show the flowers free from the leaves. The plant ought to flower early and abundantly, and retain its character until the end of the season. Bright and deep velvety colours are most admired.

DAIRY.—The proper construction and management of this department in domestic and rural economy, forms a matter of great importance. The dairy should, if possible, face the north. The window and door should be opposite each other, in order to have a current of air through the apartment. The flooring should be either brick, stone, or slate. The shelf also in which the pans are placed, should be made of slate or stone. Wood, by so quickly absorbing liquid is very objectionable for shelves or flooring; but should it form part of a dairy, plenty of soda must be dissolved in the water with which it is washed, or it will always retain a disagreeable smell. Tin trays and pans are also preferable to wooden ones.

A dairy for a private family may be constructed according to the plan seen in the engraving: *a*, is the milk-room; *b* the dairy-scullery with a copper fixed in the corner, and a pump communicating with a well, or having a cistern for water; the outer door opens into a covered place to hold the wes-

sels that are drying. c is the room for churning butter, and also for making cheese, having its copper, cheese press, various shelves, &c. These two rooms are separated by passages from the milk-room, *d e*, which is thus kept more cool and quiet, the entrance being into one of the passages, without going into either of these rooms. Space may be found in the ends of these passages for keeping butter, which will be then

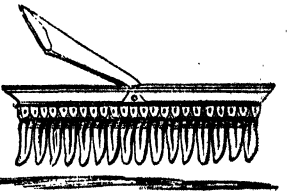


accessible without going into any of the rooms; and a room for keeping cheese at a distance from the butter may be placed over that for making it. Before and behind the milk-room may be verandas effectually to screen the walls from the sun, as well as for ornament. One great consideration in connection with the dairy and its appurtenances is cleanliness—the dairy itself and every utensil used, should be kept in a state of continued and unsullied sweetness; for without this, the milk will become sour, and the operations of the dairy be materially interfered with.

DAIRYMAID.—The duties of the dairymaid are well defined. She is a domestic servant, domiciliated in the farmhouse. Her principal duty is, as her name implies, to milk the cows, to manage the milk in all its stages, bring up the calves, and make into butter and cheese the milk obtained from the cows after the weaning of the calves. Should any lambs lose their mothers, the dairymaid has to bring them up with cows' milk until the time of weaning, when they are returned to the flock. The dairymaid also milks the ewes after the weaning of the lambs, and makes cheese of the ewe-milk. She attends to the poultry, feeds them, sets the brooders, gathers the eggs daily, takes charge of the broods until able to provide for themselves, and sees them safely lodged in their respective apartments, every evening, and sets them abroad every morning. It is generally the dairymaid, when no housekeeper is kept, who gives out the food for the reapers, and takes charge of their articles of bedding. The dairymaid should therefore be an active, attentive, intelligent, and skilful person. Finally, the dairymaid should be scrupulously clean in her person and dress, and especially when about to perform any of the operations of the dairy, on which occasions her hands and arms should be thoroughly washed before they are allowed to come in contact with the milk, butter, cheese, &c.

DAISY.—A well-known hardy perennial, of which there are many varieties; some white, others crimson, and many variegated. A more curious variety is the proliferous or hen and chicken daisy. They will all flourish in any moist soil, and in almost any situation. They bloom from April to June. Propagated by divisions; the smallest fragment of root almost enables them to grow. To keep them double and fine, they require moving occasionally. Planted as an edging round ranunculus and other beds, their roots tempt the wire-worm from those of the choicer flower.

DAISY RAKE.—A horticultural implement, having teeth sharpened on both edges like lancets; it is used for raking the grass,



in order to tear off the flower heads or buds of daisies, and other plants in grass lawns.

DALBY'S CARMINATIVE.—A medicine frequently administered to children, with a view of soothing and tranquillizing them. It has an opium basis; and it contains besides, tincture of opium, tincture of assafœtida, tincture of castor, oil of caraways, oil of peppermint, magnesia, and syrup. However efficacious this medicine may be in accomplishing the desired object, its effects on the system generally are injurious, and it should therefore never be resorted to.

DAMASK.—A fabric chiefly employed in furniture for hangings, chair and sofa coverings, &c. Linen damask is a twilled fabric of a similar structure to the silk fabric of that name. It is very generally used for tablecloths and napkins. Cotton damasks are made in imitation of linen damasks; though they answer the purpose pretty well, and are economical, they are not so durable as linen, nor do they preserve their whiteness unless they are frequently bleached.

DAMP, under any form, should be avoided. A humid atmosphere or situation is one of the commonest causes of agues, asthmas, rheumatism, and numerous other diseases. *Damp linen* is very injurious, and should be especially guarded against. When it is impossible to prevent the use of damp linen as articles of dress, the best way to obviate any ill effects is to keep constantly in motion, and avoid remaining near the fire, or in a warm apartment, or in a draught of cold air, until sufficient time has elapsed to allow of the escape of moisture. The effect of evaporation is the reduction of the temperature of the body, hence the depressing action of damp linen. *Damp walls* are also a cause of much discomfort and ill health. One of the best re-

wedies for counteracting the injurious effects thus occasioned, is to get some lead rolled very thin, and nail it over the damp wall, using small copper nails, as iron would corrode, and then cover with the paper; by this means, the damp will be effectually prevented from injuring the paper. It is said that ivy planted against the soddened wall of the house will exclude dampness. If a wall is already damp, ivy planted against it will, when grown up, cause it to become dry, provided the brickwork is sound, and the dampness does not arise from moisture attracted upwards from the foundation.

DAMSON CHEESE.—Bake or stew the fruit till tender, drain off the juice, skin and stone the damsons, pour back to them from a third to half of their juice, weigh, and then boil them over a clear brisk fire, until they form quite a dry paste; add six ounces of pounded sugar for each pound of damsons, stir them off the fire until this is dissolved, and boil the preserve again, stirring it incessantly, until it leaves the pan quite dry, and adheres in a mass to the spoon. If it should not stick to the fingers when lightly touched, it will be sufficiently done to keep along time; press it quickly into pans or moulds, lay on it a paper dipped in spirit; when it is perfectly cold, tie another fold over it, and store it in a dry place.

DAMSON COMPOTE.—To one pound of damsons, put four ounces of sugar and half a pint of water, and simmer them gently for ten or twelve minutes.

DAMSON, CULTURE OF.—This fruit is not difficult of culture. It is propagated by grafting, the mussel stock being the most suitable, and will succeed better than any other. If budded nine inches from the ground, upon vigorous stocks, they will grow five or six feet high the first year, and make fine standards the year following. The damson tree is peculiarly liable to attacks from the red spider; to get rid of this destructive insect, dust the trees with flower of sulphur, so shaking it beneath the leaves that it may ascend in a fine cloud, and lodge principally in the back of the leaves. Or make a solution of soft soap, three ounces to the gallon, and add four handfuls of sulphur to each gallon, then sponge the trees all over, especially the under side of the leaves. Under either of these modes of treatment, the spider will be exterminated.

DAMSON JAM.—Gather the fruit when it is quite ripe; split, stone, weigh, and boil it for forty minutes, then stir in half its weight of good sugar, roughly powdered, and when it is dissolved, give the mixture fifteen minutes' additional boiling, keeping it stirred, and thoroughly skimmed.

DAMSON JELLY.—To four pounds of damsons, put four pounds of fine sugar, and half a pint of water, boil them for half an hour over a gentle fire, till the skins break, then take them off, and set them by for an hour; place them over the fire again for half an hour more; then set them by for the same time; repeat for the third time: while they stand by the fire, put a weight upon them to keep down the syrup. The last boiling must be continued till they appear of a very high colour in the part where the skin is broken; then take them off, set them by to cool, and when they are cold, drain off the syrup, and proceed to make the jelly in the following manner:—Boil a good quantity of green apples, green gooseberries, and quince cores to a mash, and strain them through a hair sieve. Take an equal quantity of this jelly and the former syrup, and boil them over a gentle fire together, till they jelly; skim it well, and while it is hot, put it into skim glasses or pots.

DAMSON PIE.—Stew the damsons in a quantity of water just sufficient to prevent their burning; when tender, and while still hot, sweeten them with sugar, and let them stand until they become cold. Then put them into a dish lined with paste, drop flour upon them, cover them with the same paste, wet and pinch together the edge of pastes, cut a slit in the centre of the top, and bake for twenty minutes.

DAMSON PUDDING.—Make a batter with three well-beaten eggs, a pint of milk, four tablespoonfuls of flour, and four of brown sugar, stone a pint of damsons, and mix them with the batter; boil it in a buttered basin for an hour and a half.

DAMSON WATER ICE.—Boil the damsons whole, and when they have all burst open, put them into a linen bag; squeeze it well, mixing the juice with an equal quantity of syrup previously prepared, then ice it.

DAMSON WINE.—To every gallon of water put two pounds and a half of sugar, which boil for three-quarters of an hour, and skim. To every gallon of this mixture put five pints of damsons stoned; let the liquor boil till it is of a fine colour, then strain through a hair sieve; work it in an open vessel for three or four days; pour it off from the lees into a cask and allow it to work as long as it will; then stop it close and leave it undisturbed for six or eight months, when it may be bottled. In a year or a year and a half it will be in excellent condition for drinking.

DAMSONS BOTTLED.—Gather them on a dry day before they are ripe, when they have just turned their colour. Put them in wide-mouthed bottles, cork them close and let them stand for a fortnight; then carefully examine them, and if any of them are mildewed or spotted, take them out of the bottles and cork the rest close. Put the bottles in sand, and they will keep good till the spring.

DAMSONS DRIED.—Drain from preserved damsons all their syrup, cover the bottoms of sieves with them, and place them in a hot oven, change the sieves every day till they are dry, and while doing so, turn the damsons; when they are not sticky or likely to yield, take them out, paper a box and put them in, introducing a paper between each layer of fruit.

DAMSONS PRESERVED.—To every pound of damsons allow three-quarters of a pound of powdered loaf sugar; place in jars alternately a layer of damsons, and one of sugar; tie them over with bladder or strong paper, and put them into a moderately hot oven, letting them remain until the oven be-

comes cool. On the following day strain off the syrup, and boil it till it becomes thick. When cold, put the damsons one by one into small jars, and pour over them sufficient syrup to cover them. Tie them over with wet bladder.

DANCING, ETIQUETTE OF.—See BALL-ROOM.

DANCING, HEALTHFUL EFFECTS OF.—The exercise of dancing is exhilarating and healthful, when indulged in to a reasonable extent and with certain precautions. Its immediate effects are to cause the blood to circulate more freely, and to promote the action of the various organs of the body. The evil concomitants of dancing as practised in the present day, are unreasonable hours, and exposure to variable temperature through an insufficiency of clothing, both of which may be avoided by the simplest exercise of moral courage and common sense.

DANDELION. — A common and well-known plant which is employed for various uses. The root is washed and mixed with coffee and chocolate; a mixture which some persons prefer to the unsophisticated article.

The leaves, especially when they have undergone the process of bleaching, are used in salads, in the place of lettuce. As a medicine, dandelion acts both as a tonic and a diuretic; and in the form of extract and decoction, is frequently administered successfully in cases of dropsy.

DANDRIFF.—Scurf or dandriff, as it is indifferently called, is the result of a diseased action in the cuticle of the scalp, by which the epidermis or scarf-skin is thrown off in the form of fine scales, which accumulating about the roots of the hair, and preventing the natural perspiration from the scalp, causes partial baldness, or a general falling off of the hair. This cuticular affection is most common in persons of a scrofulous habit, and may be induced by inattention to cleanliness, wearing the hair too long or thick, or by any cause that permanently checks the insensible perspiration of the scalp. *Treatment.*—The hair should be at once cut and thinned, the head well combed and slightly stimulated by means of a brush; the roots of the hair are then to be washed twice a day, with a sponge, and a lotion made by dissolving one drachm of carbonate of ammonia—volatile salts—in a pint of cold water; or using a wash composed of two drachms of sal ammoniac in a pint of cold water, and by once a week washing the head with soap and water, and removing with a comb and brush all the dead cuticle that may adhere to the hair, before resuming the wash. Should these means, however, fail, a little creosote ointment must be rubbed into the roots of the hair at bed-time, and well washed off in the morning; at the same time a hot bath, by exercising a beneficial action on the entire cuticle, will be found efficacious on this affection of the scalp.

DARNING.—A method of mending socks and stockings which should be practised as follows:—Turn the stocking on the *right* side outwards; thread a small sewing needle with very fine cotton; pass the *fingers only* down the stocking, keeping the thumb outside, in order to preserve the edges of the hole in their places. "Fasten on" by darning backwards and forwards a few times at the end of the hole farthest from you; then, take on the needle two loops, both on one side, and draw the thread through; then take two on the other side of the hole, and draw them close; afterwards put the needle back into the last of the two loops or meshes, and take one additional loop, so that there are always to be two consecutive loops on the needle, yet only one of them is to be a fresh one; pass over to the opposite side and again put the needle back into the loop from which the thread issues, and take another (the next loop) on to it; thus continue drawing the edges close; and if this be done skilfully, which five minutes' practice will effect, the hole will be imperceptible. This is a case of simple dropping of stitches; a gigantic gap, however, is considerably contracted in its dimensions, and at least one-half of the consequent trouble of darning spared, by drawing the edges together, or so near as will allow the stock to be flat and unpuckered, with very fine cotton. In this case the hole will be made considerably smaller, and the regular darning afterwards, will entirely hide the original thread that has held the gaping edges in their places. When stitches drop in a stocking, the fabric will generally be found very weak; and by the plan of "taking up the stitches," instead of an unsightly darn appearing, and a large portion of time being wasted, nothing will be requisite but to thicken the fragile part on the wrong side, in the usual manner.

DATE.—A fruit imported into Britain in a dried state from Barbary and Egypt, and when in good condition they are much esteemed. An inferior kind has lately become common, which are dried hard, and

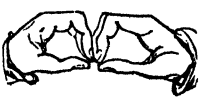
have little or no flavour. They should be chosen large, softish, not much wrinkled, of a reddish yellow colour on the outside, with a whitish membrane between the fruit and the stone.

DAUGHTERS, EDUCATION OF.—There are few subjects so intimately connected with individual happiness and national prosperity as the education of daughters. The system of female education in England is, with a few exceptions, unsatisfactory and defective. One branch of study, and that the most important of all, is almost universally neglected, namely, *Domestic Education*. By domestic education is not meant the sending daughters into the kitchen some half-dozen times, to weary the patience of the cook, and to boast of it the next day in the parlour, but two or three years spent with a mother assisting her in her duties, instructing brothers and sisters, and taking care of their own clothes. This will make them happy wives and good ones; for, an early acquaintance with the duties of life makes them sit lightly and gracefully upon those who afterwards practise them. But in the modern system of female education, no time or opportunity is allowed for the formation of quiet, domestic habits. Girls are sent to school until they are sixteen or seventeen, and this precious interval is, in the majority of cases, spent in acquiring the *elements* of numerous sciences, without being thoroughly acquainted with any; a smattering of French and Italian, a superficial knowledge of drawing, and the playing of half a dozen "show pieces" on the piano, form the sum total of instruction. As soon as they leave school they begin a round of balls and parties, and a series of visits to gay young friends; and in the midst of this whirl of excitement, all nobler and higher attainments are lost sight of, and nothing regarded as of consequence but parade and attraction. Thus three great evils are engendered, vanity, extravagance, and idleness; dispositions naturally good and affectionate, trained into heartlessness, and the whole course of life degraded and embittered. All this is mainly attributable to the neglect and mismanagement of the mother, who deems it the best policy to let her daughter "*enjoy herself all she can while she is single;*" and who, instead of representing domestic life as the gathering place of the deepest and purest affections—as the sphere of woman's enjoyments as well as of her duties—teaches her to regard matrimony as desirable because a "good match" is a triumph of vanity, and it is deemed respectable to be "well settled in the world." Marrying with these feelings a woman considers herself as a sacrifice made at the altar of freedom and gaiety, and thus the word *home*, instead of being associated with all that is happy and enjoyable, means to her a species of thraldom, in which she is doomed to hide herself away from the *world*. The course thus pursued is senseless and cruel from beginning to end. Every woman expects in the natural course of events to become a wife and a mother. And if her happiness or misery in this state, wholly depends—as in truth it does—upon her fitness for the duties she is called upon to perform, she surely ought to be instructed in those duties, by her seniors, who cannot fail to be impressed with their importance, nay, their absolute necessity. Every mother who thus neglects her daughter's education, is guilty of a great social crime, the consequences of which will not only fall upon her own immediate offspring, but may be entailed upon generations to come. Let daughters, therefore, receive as many attainments and accomplishments as their capacities will admit of. Let them have a reasonable amount of enjoyment, and intercourse with society, but do not allow these or any other considerations to interfere with domestic education; or prevent her from fulfilling woman's noblest and most sacred mission, that of becoming a good wife and a discreet mother.

DAY BOOK.—See BOOK-KEEPING.

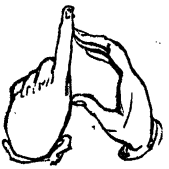
DEAF AND DUMB ALPHABET.—An invention by which deaf and dumb people are enabled to understand and communicate language, with almost the same facility as spoken words. The alphabet is expressed by the aid of the hands and fingers, each letter being formed as follows:—

A is expressed by touching the top of the thumb of the left hand with the forefinger of the right.



B. Join the forefinger and thumb of each hand, and place the back of the forefinger nails together.

C. Bend the fingers and thumb of the left hand, so as to form two points of a circle.



D. Bend the fingers and thumb of the right hand into a semi-circle, and then join them to the forefinger of the left, which keep in a straight line.

E. Touch the top of the forefinger of the left hand with the forefinger of the right.

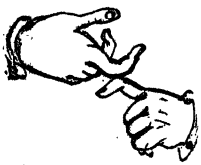
F. Place the forefinger of the right hand across the backs of the first and second fingers of the left.

G. Clench both hands, and put one fist upon the other.

H. Pass the palm of the right hand across that of the left, sweeping it along to the tips of the fingers, as if brushing something off.

I. Touch the top of the second finger of the left hand with the forefinger of the right.

J. Clench the hands together, as directed for the letter G.



K. Form a semicircle with the thumb and forefinger of the right hand, and join it to the forefinger of the left, which must then be kept straight out; both forefingers must meet at the second joints.

L. Place the forefinger of the right hand across the centre of the palm of the left, so that the top of the finger may be exactly in the middle of the palm.

M. Place three fingers of the right hand flat upon the palm of the left.

N. Place two fingers of the right hand flat upon the palm of the left.

O. Touch the top of the third finger of the left hand with the forefinger of the right.

P. Place the tops of the forefinger and thumb of the left hand in a semicircular form against the first and second joints of the forefinger of the right, which should be kept straight.

Q. Form a circle with the forefinger and thumb of the left hand, and then curve the forefinger of the right into the shape of a hook, and place it exactly where the other fingers join.

R. Bend the forefinger of the right hand, and rest it on the palm of the left.

S. Bend the little finger of each hand, and lock them together.

T. Fix the tip of the forefinger of the right hand against the middle of the lower edge of the left.

U. Touch the top of the little finger of the left hand with the forefinger of the right.

V. Place the first and second fingers of the right hand apart, upon the palm of the left.

W. Lock the fingers of one hand between those of the other.

X. Cross the forefingers at the second joints.

Y. Extend the thumb and forefinger of the left hand, and at the lower part of the fork so made, place the forefinger of the right hand.

Z. Elevate one hand towards the face, and rest the elbow upon the palm of the other.

The end of every sentence is indicated by snapping the second finger and the thumb of the right hand. This is requisite to avoid the confusion which might result from running the sentences into each other. *Numbers* are denoted by holding up one finger to represent 1, two fingers for 2, the open hand for 5, both hands for 10, and so on.

DEAFNESS—May proceed from many causes, such as a common cold; or as a consequence of fever; from mumps, or enlarged glands; sore throat, and swelling of the tonsils, and also from disease of the brain, or inflammation of the lining membrane of the ear. Besides these causes, deafness may be produced by accidental means, such as severe blows, or sudden and long continued noise; but as a general rule, deafness is symptomatic of some other disease, and usually subsides on the recovery of the patient from the illness that produced it. In fevers, deafness is always considered as a favourable symptom, and rarely fails of being a prognostic of recovery. Sometimes, without pain, or any assignable cause, the membrane of the ear will exude an unusual quantity of wax, or secrete a large amount of thin, discoloured matter, which, by blocking up the passage to the auditory nerve, causes partial or complete deafness.

Treatment.—Every case of difficult hearing proceeding from general or local disease

must be treated according to the seat and nature of the affection that induces it. When, however, it results from masses of indurated wax, the passage should first be expanded by means of a hot poultice placed for a few hours over the ear; after which it is to be syringed freely with warm soap and water, till the small collections of wax are washed out, which in some cases will not be effected till the operation has been repeated several times. For this purpose a good sized syringe should be used, and the jets propelled quickly. After each use of the syringe, which should not be used oftener than three times a day, a little wool, soaked in almond oil, with a drop of Friar's balsam, is to be placed in the ear, but neither tightly nor pushed in too far. When deafness is attended with a thin fœtid discharge, a small blister should be placed behind the ear, and kept open for some time by means of issue ointment, and the ears syringed twice a day with warm water; a little alterative medicine of blue pill and rhubarb is to be given once a day, and a saline draught twice a week. When deafness is attended with pains in the head and jaw, two or three leeches must be applied behind the ear, and a small blister placed on the temple. For the difficulty of hearing that follows chronic disease, or the absence of the natural secretion of the ear, deafness is often relieved by a small quantity of fine wool being placed lightly and carefully in the passage, which, by collecting the sound in its interstices, acts as an acoustic apparatus between the external ear and the brain. The deafness that proceeds from cold should be treated with the hot bath, and ten grains of Dover's powder in a little gruel at bed-time; and when from sore throat, by means of a gargle of sage tea and vinegar, or infusion of rose-leaves with alum.

DEATH—Is that condition of the animal body when all the functions which in operation constitute life have ceased to act, or when respiration, circulation, sensation, and those vital operations that make up the phenomenon of existence are permanently at rest. In man, the causes that lead to the cessation of life are extremely complex and numerous, and though in a state of nature it is probable mankind would die free from all disease, expiring only from the gradual attrition of the organs and the decadence of vital energy, yet from the state of polity in which all aboriginal races are found, such a condition, as a rule, is nowhere to be met with; and though the savage may occasionally live longer than his civilized brother, the same causes are in operation, and pestilence, famine, and war are, with him, equally destructive of life, and death, the result of the decay of nature, is equally as exceptional and unfamiliar in whatever state of man or condition of society we investigate the subject. Death is characterized by the universal coldness of the body, by a partially open mouth, closed eyelids, and sunken eyes, by an extreme pallor of the face, sometimes assuming a greenish yellow tone; with lividity of the orbits and great flaccidity of all the joints; this condition, however, only endures for a short time, as in a few hours after death, the *rigor mortis*, as it is termed, sets in, and the muscular relaxation is changed for that rigidity of the entire body so characteristic of the corpse of all animals, and which continues till decomposition once more relaxes the muscular tension.

DEATH, REGISTRATION OF.—A registrar or deputy registrar of deaths is required to dwell within the district of which he is such officer, and to put upon the outside of his dwellinghouse his name, with the addition of registrar or deputy registrar, as the case may be. He is bound to inform himself of every death in his district, and to register, as soon after the event as conveniently may be, the date of the death, with the name, surname, sex, age, rank, or profession of the deceased, with the cause of the death; and some person present at the death or in attendance during the last illness, or in default of such persons the occupier of the house in which such death has happened (or if the occupier be the person dead, then some inmate), shall give the above particulars to the registrar within eight days after the death, upon being requested so to do, and sign the same in the registrar's book. In case of an inquest, such information is to be conveyed to the registrar by the coroner. Any person causing a false entry to be made in a register of deaths is guilty of felony. An error in the entry may be corrected within one month after the discovery of the error, in the presence of two persons who were present at the death of the person registered. Searches for deaths may be made upon payment of 1s. for the first year and 1s. 6d. for every year after the first. For a single certificate the fee is 2s. 6d.

DEBILITY.—By this term is understood that state of the system which results from a loss of nervous energy and a consequent diminution in the force of the circulation, for though debility may be accompanied by an accelerated action of the heart, that accession is obtained at the sacrifice of vital tone. Debility may be either general or local; that is, the whole system may be in a state of greater or less prostration, or the weakness may appertain only to particular parts or organs, as illustrated by the constitutional debility that results from long illness or fever or the loss of power in the functions of the stomach, liver, kidneys, &c., and though in all cases the constitution must, to a certain degree, participate with the local debility, the loss of functional power is much more considerable than the bodily diminution of energy. Beside these conditions of local and general weakness, there is that state which may be called "chronic," the debility of age, or the consequence of a permanent malformation, or accident, where the general atony rises from the decadence of functional action.

Treatment.—When debility is the consequence of loss of nervous stamina, unconnected with organic disease, the principle of treatment lies in the adoption of such a system of therapeutic agents as will, by restoring the circulation to a healthy standard,

impart vigour to the brain, and give tone to the nerves of the entire body. This, in many instances, may be effected without the intervention of any medicine, and by a mere regimen of diet and exercise, and such accessories as prudence may dictate. In the first place the diet should be nutritious without being rich, the stomach never being left longer than four hours without food, during the day, and that food should in all cases be as solid as possible, and never permitted to pass into the stomach till well masticated. Whatever beverage is taken with luncheon or dinner, should be unadulterated by water, and when malt liquor is preferred, it should be the best of its sort, either stout or ale, but neither porter nor bitter beer. The exercise should be brisk walking; not a listless saunter, but an energetic walk with a predetermined purpose, varied, when obtainable, by horse riding in the afternoon, care being always taken to avoid any exertion till after digestion has taken place. The best accessories are going to rest and rising early, a bath once a week, and the daily use of the flesh brush over the whole body. To those whose debilitated constitutions require in addition some medicinal auxiliary to excite the torpid functions, one of the following mixtures may be taken in doses of two tablespoonfuls three times a day; the first being the most mild and the last the most stimulating; the patient selecting that one which the degree of his debility appears to demand.

No. 1. Dried hops . . . 2 drachms.
Bruised canella alba . 2 drachms.
Infuse in a pint of boiling water for 6 hours strain.

No. 2. Gentian root . . 1 drachm.
Ginger (bruised) . 2 drachms.
Cardamoms (do.) . 2 drachms.
Valerian root . . 1 drachm.
Carbonate of soda . 1 drachm.
Infuse in a pint of boiling water for 6 hours strain.

No. 3. Tincture of bark, compound 1 ounce.
Aromatic tincture . . ½ ounce.
Tincture of gentian . . ½ ounce.
Mix it in
Peppermint water . . 6 ounces.

No. 4. Aromatic confection . 3 drachms.
rub down in a mortar with
Mint water . . . . 8 ounces,
and add
Compound tincture of cardamoms . . . . 1 ounce.
Compound tincture of bark . 1 ounce.
Aromatic tincture . . . ½ ounce.
Spirits of sal volatile . 2 drachms.
Mix. Where much acidity exists in the stomach, and digestion is attended with flatulence, one of the following pills should be taken an hour before each meal. Take of the first
Barbadoes aloes . . . 12 grains.
Soap . . . . 12 grains.
Dried subcarbonate of soda ½ drachm.
Mix, and add enough extract of gentian to make a mass, which is to be divided into 12 pills. In cases where the debility is the result of a long organic disease, or a fever of a typhoid type, recourse must be had to mineral tonics; in which case any of the subjoined forms of mixture may be taken with advantage.

No. 1. Distilled water . . 1 pint
Muriatic acid . . . 30 drops.
Nitric acid. . . . 30 drops.
Mix, and take, through a quill, 2 tablespoonfuls three times a day.

No. 2. Hops . . . . 2 drachms.
Orange peel . . . ½ ounce.
Infuse in a pint of boiling water for 6 hours, strain, and add, when cold,
Nitric acid . . . . ½ drachm.
Mix; take one tablespoonful every four or six hours.

No. 3. Tincture of colombo . ½ ounce.
Tincture of orange . . ½ ounce.
Peppermint water . . 7 ounces.
Sulphate of zinc . . 4 grains.
Mix; a tablespoonful to be taken every three hours.

No. 4. Barley water . . . 1 pint
made thick, add
Syrup of ginger . . . 1 ounce.
Muriated tincture of iron 3 drachms.
Mix, and take one tablespoonful three or four times a day.

N.B.—In all cases where the pint or quart measure is prescribed, it is the imperial measure of 20 ounces to the pint that is signified.

DEBT is to be considered under two distinct forms, business debts, and domestic debts. *Business debts* are those which are incurred in obtaining possession of articles of which a profit is to be made. The articles may vary greatly in themselves; they may be ready-made goods; they may be materials to be used in any manufacture; tools which are requisite for the performance of work; or cash, as the general tool or instrument in the trade of buying and selling. They may, indeed, be anything, the use of which shall pay the expense of the credit given, and afford besides a fair reward for the labour undergone, and an adequate compensation for the risk and anxiety incurred. Business debts, therefore, are justifiable, not only on general principle, but as the grand stimuli to industry and energy. *Domestic debts* are distinguished from business ones by being incurred only for commodities that are to be consumed, without yielding any profit in return. Articles obtained in this way are therefore purchased upon disadvantageous terms, and in many instances, such as when a person buys goods just previous to taking some appointment or situation, he mortgages as it were a portion of his future earnings at a heavy rate of interest; and, generally speaking, feels the effects of it for many years afterwards. In as far as the revenue, which goes to the personal and domestic support of the man of business, is part of the profits of his capital and industry, it cannot be separated from these in the receiving. But it follows the general law in the expenditure; and therefore,

though such a person may, for the sake of more concentrated management, and sometimes in the case of a tradesman, for the reciprocating of business, mix up his domestic debts with his trade ones, yet he should never allow them to take the lead. If he does, he is apt to expose himself to greater danger than the man who has no business, and consequently no business debts, because under cover of his business credit he is enabled to carry them to much more ruinous lengths; and, as in his case, the ruin, if it come, falls on the business as well as on the man, it falls doubly, and upon a greater number; and if the failure is large, gives a check to the general confidence, the effects of which are often very extensive, and hurt many who are not immediately connected. When an individual not connected with business gets into personal debt, the question is between him and his creditors only; but a business-failure has always some pernicious effect upon the public.—See CASH, CREDIT, ECONOMY, &c.

DEBTOR AND CREDITOR are two persons between whom a contract has been entered into, whereby the right to a sum of money has been mutually lost and acquired. It is the duty of the debtor to tender payment at the proper time, that is, generally speaking, before demand made, or action brought against him. The duty of the creditor is, to receive the payment, if tendered at the proper time, and give a proper acquittance for it. A debtor is empowered to tender a blank receipt stamp at the time of payment, which a creditor is bound to fill up, and pay the amount of the stamp, under a penalty of ten pounds. Where a creditor has pointed out the mode of payment, it will be sufficient to follow his directions; thus, where he desires that a bill or note may be remitted by the post, if it be lost the loss will fall upon him. Payment of a debt is often made by bill or note, the taking of which amounts to an agreement to give a debtor credit for the time it has to run, and suspend a creditor's remedy in the meanwhile. It is, however, in general, no satisfaction of any debt or demand for which it is given, but only *primâ facie* evidence of payment, rendering it necessary that the creditor should account for it before he can be entitled to recover the amount for which it was given; but it will operate as satisfaction if the debtor's liability upon it be discharged by its loss. But if a creditor negotiate a bill or note, so as to render himself personally liable upon it, in that case it will not operate as payment, if dishonoured. A debtor may not pay a creditor of his creditor's except in a case of rent due to his superior landlord, if threatened with distress by him, or in case money is attached by process of law while in his hands. A debtor indebted in several ways to a creditor, may *at the time of payment*, direct to which of the debts it shall be applied in reduction; but if he neglect to do so, the creditor may apply it to which debt he pleases; thus a creditor has a right to appropriate a payment made generally to a debt barred by the Statute of Limitations. Where there is an account current between parties, in the absence of an express agreement, the law presumes they both intended to apply the first item on the credit side to the first item on the debit side, and so on.—See INTEREST; PAYMENT; TENDER.

DECANTERS, TO CLEAN.—Place a funnel in the decanter, and pour in it some raw unpared potato, cut into little square bits, or some pounded egg-shells or some fine shot, the first named of these being preferable. Have ready in a small tub some strong suds of white soap and cold water, with a little pearlash dissolved in it, or a few drops of muriatic acid mixed with the water will greatly improve the polish of the glass. Take out some of the suds, pour it into the decanter through the funnel, and shake it about with the cut potato or other cleansing agent, till all the impurities disappear from the inside of the glass. Then empty it out, put in some more suds, and wash round the inside with a bit of sponge tied on the end of a stick. After having thus washed the decanters, rinse them out twice with clean cold water. Next put them into the tub of clean soap-suds, and wash them well on the outside with a glass brush, afterwards rinsing the inside clean with cold water. Dry the inside with a piece of clean linen rag fixed to the end of a stick, and wipe the outside with a soft towel, finishing with a silk handkerchief or a chamois leather.

DECANTING LIQUIDS.—The pouring off clear fluid from the sediment without disturbing it, often requires great care and delicate treatment. It is commonly performed by gently inclining the vessel, and holding it in the same position with a steady hand until all the clear liquid has run out. Advantage may be taken of the adhesion of liquids to solids, and by it the former may be led into the required direction. For instance, if a teaspoon be dipped into wine, so as to become wetted with it, and then held perpendicularly with the bowl downwards, and the point over, but not touching the entrance into the decanter, and the edge of the glass be made to touch the back of the spoon, it will be found, on inclining the former, that the wine, having a perpendicular solid body to adhere to and run down, will do so in preference to trickling along the oblique or outer surface of the glass; and by this means a liquid may be poured steadily out of any similar vessel, with so little disturbance as not to agitate any sediment that may exist in it.—See SYPHON.

DECEMBER, GARDENING FOR. — The following are the operations for the *kitchen garden*. *Artichokes*, dress beds; plant to force; attend that in forcing. *Beans*, plant. *Beets*, (red) dig up and store. *Borecole*, earth up. *Brocoli*, lay in with their heads to the north. *Cabbages*, plant; earth up. *Carrots*, dig up and store. *Cauliflowers*, in frame, &c., attend to. *Celery*, earth up and protect when necessary. *Coleworts*, plant. *Composts*, prepare and turn over. *Dung*, prepare for hotbeds. *Earthing-up*, attend to. *Endive*, blanch. *Hotbeds*, attend to. *Kidney-beans*, force.

Leaves, fallen, remove. *Lettuces*, plant in hotbeds; attend to those advancing. *Mint*, force. *Mushroom-beds*, make; attend to those in production. *Parsnips*, dig up and store. *Peas*, sow, both in open ground and in hotbeds; attend to those advancing; protect them from frost, slugs, mice, and birds. *Plants*, to produce seed, attend to. *Potatoes*, plant in hotbeds. *Radishes* and *small salading*, sow in frames. *Spinach*, clean of weeds. *Tansy*, force. *Trench*, drain, &c, *Weeding*, attend to.

General Remarks.—In bad weather in-door work should be attended to. In dry mild weather, alterations, planting, and various pruning work should be done, and the cuttings gathered up and stacked for fuel, or burned, to put the ashes on the ground. Manures and soils should be collected, and the heaps turned over, to mix well. No weeds should be allowed to grow among the compost. The principal soils, so to collect, are road-scrapings, loam, cow-dung, horse-droppings, sand, turves, leaves of trees, &c.

Flower garden.—Anemones, defend in bad weather; plant if mild. *Auriculas*, defend in inclement weather. *Bulbs*, omitted, may be planted if the weather be mild. *Carnations*, defend in inclement weather. *Composts*, prepare. *Dig* borders, and dress all quarters generally. *Edgings*, plant. *Grass*, mow and roll occasionally, if the winter be mild. *Gravel*, roll and keep orderly. *Hedges*, plant and plash. *Hyacinths*, defend in inclement weather. *Leaves*, collect for composts. *Ranunculuses*, defend in bad weather, seedlings of all kinds, protect. *Stake* shrubs newly planted, and any others requiring support. *Tulips*, defend in bad weather. *Turf*, lay, if the weather be open.

DECEMBER. — THINGS IN SEASON.—*Fish.*—Carp, cod, crabs, gudgeon, gurnet, eels, halibut, John Dory, lobsters, oysters, pike, skate, smelts, soles, turbot.

Fruit.—Apples, dried figs, foreign grapes, medlars, nuts, oranges, pears.

Meat.—Beef, house lamb, mutton, pork, veal, venison.

Poultry and Game. — Capons, chickens, geese, grouse, Guinea fowl, hares, partridges, pheasants, pigeons, pullets, rabbits, snipe, widgeon, wild duck, woodcock.

Vegetables.—Artichokes, asparagus, beet, borecole, brocoli, cabbage, cardoons, carrots, celery, dried herbs, leeks, onions, savoys, shalots, spinach, truffles, turnips.

DECIMALS are fractions which have for their denominator 10, or some power of 10; as 100, 1000, &c.; the number of ciphers in the denominator being always equal to the number of figures in the numerator. Thus ·2, ·25, ·125 respectively represent $\frac{2}{10}$, $\frac{25}{100}$, $\frac{125}{1000}$. The denominator of decimals is never written, the dot placed before the first figure of the numerator expressing its value. Ciphers placed on the right hand of a decimal fraction do not alter its value; for ·5, ·50, ·500, are each equal to $\frac{1}{2}$; but ciphers placed on the left hand of a decimal diminish its value in a tenfold proportion; thus, ·3, ·03, ·003, respectively answer to the common fractions, $\frac{3}{10}$, $\frac{3}{100}$, and $\frac{3}{1000}$. Every figure on the left hand side of the dot or decimal sign is a whole number. *Addition* and *subtraction of decimals* are performed in the same manner as with common numbers, care being taken to place the numbers under each other according to their separate values; as, tens, under tens, hundreds under hundreds, &c. *Multiplication of decimals* is performed in precisely the same manner as with whole numbers, merely pointing off as many figures in the product as there are decimals in the multiplier and multiplicand put together. *Division of decimals* is performed as the preceding, but pointing off as many figures in the quotient as the decimal places in the dividend exceed those of the divisor. If there are not figures enough in the quotient the deficiency must be supplied by prefixing left-hand ciphers. Ciphers are also added to the right hand of the dividend, or to a remainder, when there are more figures in the divisor than in the dividend, by which the quotient may be carried on to any extent. *A vulgar fraction* is reduced to a decimal, by dividing the numerator by the denominator; thus, $\frac{1}{2}$ = ·5, $\frac{1}{8}$ = ·125, &c. The *value of a decimal* of any denomination is found by multiplying it by the number of parts in the next less denomination, and cutting off as many places to the right hand as there are decimals, and so on until the terms are exhausted. Thus, ·634 oz. =

·634
8

5·072 drachms,
60

4·320 grains,

or, 5 dr., 4½ gr. (nearly).

DECLINE.—A slow wasting of the body, which gradually undermining the health, prematurely cuts short life by a total prostration of the physical powers. This state is always the result of organic disease, superinducing hectic fever, and proves fatal through the injury inflicted on a vital organ, or the arrest of a function necessary to the due performance of life. Decline, properly speaking, means that pulmonary disease called consumption, or some other form of open or disguised scrofula, though next to pulmonary consumption. The most important disease coming under the appellation of decline, is that scrofulous condition of the glands of the bowels, called "mesenteric;" which from their enlargement, prevents the flow of chyle—or the nutritious part of the food—to the heart; while the blood, thus robbed of its renovation, reacts on the body, which gradually becomes emaciated, and life succumbs, from the loss of all aliment. The treatment of decline must depend entirely upon the organs diseased, the strength of the patient, and the character of the prominent symptoms.—See CONSUMPTION; SCROFULA, &c.

DECOCTION, or boiling, is employed to extract the mucilaginous or gummy parts of substances, their bitter, astringent, or other qualities, and is nothing more than boiling

the ingredients in a saucepan with the lid slightly raised. Be sure never to use an iron saucepan for astringent decoctions, such as oak-bark, galls, &c. The enamelled saucepans are very useful for decoctions, but an excellent plan is to put the ingredients into a jar, and set the jar into a pan of boiling water; thus preparing the decoction by what is technically termed a water bath.

DEED. — A contract or agreement in writing between two or more persons, acknowledged by their severally affixing their seals thereto. To constitute a deed, there must be persons able to contract, a subject-matter to be contracted for, and a contract reduced into writing and *sealed* by the parties to be bound thereby: thus in the lease of a house—a lessor or owner of a house, a lessee intending to become the tenant and the house itself. A deed must be written upon paper or parchment, for if it be written on stone, board, linen, leather, or the like, it is no deed. It must be between persons able to contract; thus it cannot be made by infants, married women, persons of unsound mind, and some others. No interest in land can be created, or pass, but by deed.

DEER-HUNTING. — The species of this animal generally hunted in this country, is the red deer. Hounds are now seldom employed in the chase—the hunter depending on his gun and his skill in approaching the animal noiselessly. This, which is called *deer-stalking*, is a sport requiring a vast deal of tact, knowledge of the animal's habits, and patience, as whole days are occasionally taken up in stealthily watching an opportunity for a shot. Such is their power of sight, scent, and hearing, that to approach unperceived on a plain is impossible. They must be approached down the wind, and behind hillocks and thickets. A telescope is required in these difficult manœuvres. When it is impracticable to reach them in this manner, attendants drive them into gorges among the mountains, and the sportsman singles out an object for his gun as it passes his concealed station.

DEFAMATION is an injury to a person's reputation, by scandalous and malicious words or actions; as where a man utters or implies anything of another which may either endanger him in law, may exclude him from society, or which may impair or hurt his trade or livelihood, an action may be maintained without proving any particular damage to have happened, but merely upon the probability that it might happen. Where the words upon the face of them do not import such defamation as will necessarily be an injury, the plaintiff must prove some particular damage to have happened to him; as if a man says of another "he is an unprincipled man and borrows money without intending to repay it," this is not actionable unless there be special damage; but if he say so to a person who is going to lend money to him or to deal with him, and he forbear to do so in consequence, he will render himself liable to an action for damages.

DEL CREDERE is an Italian mercantile phrase, signifying warranty or guarantee: thus, a factor or other person who sells goods by commission in the ordinary course of business, does not warrant the solvency of the purchaser to his principal; but sometimes he acts under a *del credere* commission, in which case, for an additional premium beyond the usual commission, he undertakes for the persons to whom he sells the goods consigned to him by his principal; thus, an insurance broker, for an additional premium, guarantees his principal against the failure of the underwriter. But a person selling under a *del credere* commission, is only a surety and not a principal debtor; therefore before he can be made to pay, it must be shown that the amount cannot be recovered from the principal debtor. — See AGENT; COMMISSION.

DELIRIUM.—A symptom of some form of disease, as of madness, inflammation of the substance of the brain, or of its coats, of fevers, erysipelas, disease of the bladder; or it may supervene after concussion or compression of the brain, injuries of the head, the result of surgical operations, or from many vegetable poisons. Delirium, though often the result of an excess of blood in the head, is by no means invariably so, as delirium frequently attends as a reactionary symptom after exhaustion; and from nervous irritation. There are many varieties of this distressing symptom, as the low muttering delirium of typhus fever, and the quick rambling chattering of other forms of cerebral disturbance. Delirium is generally attended with a quick jerking pulse, the face is flushed, the eyes red or bloodshot, with pain in the head, ringing in the ears, great antipathies to places, persons, or things, muscular exertions of the arms, or picking at the bedclothes, constant and incoherent talk, or low indistinct muttering. The body is often hot and dry, and the feet cold; and in cases of vegetable poisoning, the pupils are generally excessively dilated.

Treatment. — When delirium is attended with a full quick pulse and pains in the head, it will be necessary to bleed from the arm, apply four or six leeches to each temple, to place a blister on the nape of the neck, and a bag of ice on the head, or else cloths constantly wetted in an evaporating lotion; at the same time mustard poultices should be applied to the legs and feet, one drop of croton oil put on the tongue, followed in an hour by a black draught. The room is to be darkened, and the patient kept perfectly quiet. When delirium proceeds from low fever, and is attended with a small wiry pulse, the case must be met by palliatives, anodynes, and tonics. The feet are to be kept warm, the hair cut, and the head cool, the cupping glasses applied to the nape of the neck, the mental irritation soothed by an opiate, and the system roused by the careful employment of wine and arrowroot, and such other remedies as the concurrent symptoms at the time, and the original character of the disease, may seem to render expedient.

There is one precaution that should be observed in all cases of delirium, especially in the more violent kinds, and that is by moral suasion to obtain a mastery over the patient: this is to be effected by blending firmness with kindness, as nothing can be more injurious than intimidation or the threat of coercion, unless, indeed, that monstrous abuse, the strait waistcoat, an instrument of torment scarcely, if ever, called for.

DELIRIUM TREMENS. — Trembling delirium, or the drunkard's palsy, is a disease in which the mucous membrane of the stomach and bowels, as well as the lining membranes of the brain, are in a state of chronic inflammation, resulting almost always from intemperate habits and excessive indulgence in ardent spirits. This disease is manifested by a total want of sleep, and a quivering of the lips, hands, and muscles generally; every attempt at speech or motion increasing the tremor, rambling, and constant chattering; the skin is cold and moist, the pulse small and quick, and the tongue furred in its centre, with red edges, the countenance is anxious, the patient full of suspicion, and oppressed with dreams and frightful images.

Treatment.—The first step to be taken is to tranquillize the system, which may be effected by giving one grain of opium as a pill every four hours, with two tablespoonfuls of the following mixture every one or two hours.

Camphor water . . .	5½ ounces.
Brandy	2 ounces.
Ether	1 drachm.
Spirits of sal volatile .	1½ drachm.

Mix. In addition to the mixture and pills, it is sometimes necessary to give brandy and water, wine, or pure spirit. When the trembling is subdued, and the system tranquillized, the following mixture is to be given in the same dose and quantity as the former, but discontinuing the pills.

Infusion of rose leaves .	8 ounces.
Epsom salts . . .	½ ounce.
Syrup of red poppy . .	2 drachms.
Diluted sulphuric acid .	20 drops.
Tincture of opium . .	1½ drachms.

Mix.—When there is much congestion of the head, it will be necessary to apply a few leeches to the temples, but as a general rule, all depletion is injurious. During the whole attack, the patient is to be steadily watched, kept quiet, and as far as possible, amused and interested.

DENIZATION differs from *naturalization* only in degree; the latter conferring a few additional privileges. A denizen is a kind of middle state between an alien and a natural-born subject. He may take lands by purchase or devise, which an alien may not; but he cannot take by inheritance, for his parent, through whom he must claim, being an alien, had no heritable blood, and, therefore, could convey none to the son; and upon a like defect of blood, his issue born previously to his denization cannot inherit, but his issue born after may. A denizen is not excused from paying the aliens' duty, and some other mercantile burdens. No denizen can be of the privy council, or sit in either house of parliament, or hold any office of trust, civil or military, or receive any grant of lands, &c., from the crown.—See ALIEN and NATURALIZATION.

DENTRIFICES.—See TOOTH-POWDER.

DEPILATORY.—Any application for removing hair from the human skin, without injuring its texture. Depilatories act either mechanically or chemically. The former are commonly mere plasters of pitch or resin, which, by their adhesive property, bring away the hair from the surface to which they have been applied. The true depilatories act by penetrating the pores of the skin, and destroying the bulbous roots of the hairs. Of these there are several kinds; but the one known to be the most efficacious is as follows:—Mix two ounces of quicklime with half an ounce of orpiment or realgar (sulphuret of arsenic), boil the mixture in a pound of strong alkaline lye, then try its strength by dipping a feather into it, and when the flue falls off, the preparation is quite strong enough. It is *applied to the skin* by a momentary friction, followed by washing with warm water. Such a caustic liquid should be used with the greatest circumspection, beginning with it somewhat diluted. A *soap* is sometimes made, with lard, of the above ingredients, or soft soap is combined with them, to make a depilatory pomade. The causticity of this mixture may be tempered by the addition of one-eighth of starch or rye flour, which being laid upon the hairy spot for a few minutes, usually carries away the hairs with it. Depilatories should never be applied but to a small surface at the time, for, independently of the risk of corroding the skin, dangerous consequences might ensue from absorption of the arsenic. For ordinary purposes, however, a pair of tweezers is a safe and efficacious remover of superfluous hair.

DEPORTMENT.—The carriage of the body; the propriety and gracefulness of which is worthy of being sedulously studied by both sexes. An awkward carriage invariably gives a person a clownish appearance, and an ill-bred air; whether it be a stooping of the shoulders, a hanging of the head, a rocking of the body, a dragging of the legs, swinging of the arms, or shuffling of the feet. *In walking*, a person should hold the head and body erect, with the shoulders well thrown back, and the chest forward. The arms should hang easily by the side, accompanying the movements of the body by an appropriate action; the hand should be partially closed, neither clenched nor stuck out straight. The legs should be moved at a regular pace, and with a moderate stride, the feet lifted well off the ground, and the toes pointed outwards. In *sitting*, the body should be held erect, without having too constrained an appearance; and instead of leaning against the backs of chairs or other supports, it should be suffered to depend upon itself. Bashful persons, and others of a nervous disposition, are frequently betrayed into several awkward and ungainly tricks with their hands, such as continually twirling their hat about, twisting and untwisting their pocket-handkerchief, tapping

on tables and chairs with their fingers, rubbing their hands together, passing them over their face, &c.; then again, they are shaking their legs and feet, crossing and recrossing them every minute, turning uneasily in their seat, suddenly rushing from one spot to another; with numerous other antics, all of which are the more inexcusable and ridiculous, because they admit of being so easily cured. A person seeing these faults in others is soon made aware of the bad impression they give, and should therefore endeavour to avoid the like error himself. There are also affected gestures which persons adopt, with the idea that it gives them an air of importance and consideration, such as sitting with the arms folded across the breast, or placed what is called akimbo, that is to say, the knuckles resting on the hips, and the elbows forming an angle; or perhaps they are thrust under the coat-tails; or elevated by means of the thumbs being hooked into the armholes of the waistcoat; all of which are impertinences which degrade a man in the eyes of others, instead of exalting him. Females, generally speaking, seldom commit faults of this kind, their nature, habits, and education impressing them from their earliest years with the necessity of attention to this department of etiquette.—See BOW, CALISTHENICS, &c.

DERBYSHIRE PUDDING.—Mix two tablespoonfuls of flour with a pint of milk, by degrees, boil it till it becomes thick, and set it by till cold; then put to it three ounces of butter, melted, a quarter of a pound of loaf-sugar, two ounces of suet, half an ounce of lemon-peel, the yolks of seven eggs, and the whites of three; when thoroughly mixed, pour into a dish, put a paste round the dish and bake it; lay currant jelly on the top, and serve either hot or cold.

☞ Flour, 2 tablespoonfuls; milk, 1 pint; melted butter, 3ozs.; sugar, ¼lb.; suet, 2ozs.; lemon-peel, ½oz.; eggs, 7 yolks, 3 whites; currant jelly, sufficient.

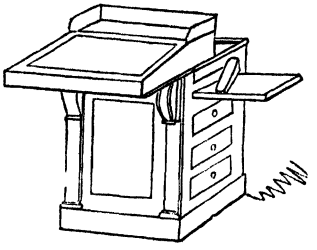
DESIGNS, in manufactures, being new and original, may be registered, and a grant of copyright obtained for periods of nine, twelve, and thirty-six months During the existence of such copyright, no person may apply the design or a fraudulent imitation thereof to the ornamenting of any article of manufacture, or any substance artificial or natural, being for sale, or publish, sell, or expose for sale any article of manufacture, or any substance to which such design or fraudulent imitation thereof shall have been so applied, after having received notice from the proprietor that his consent has not been given to such application, under a penalty to forfeit to the proprietor for every offence, a sum not less than £5 and not more than £30, and is further liable to an action by the proprietor for any damage he may have sustained by the piracy.

DESSERT.—The materials for this repast depend upon the season; they should be selected with taste and delicacy, and more choice than plentiful. Apples, pears, oranges, grapes, almonds and raisins, figs and filberts, generally compose the chief part of the dessert, and to these may be added light biscuits and cakes, and sweetmeats, according to taste. The wines should be of the choicest kind and of the very best quality. The *mode of arranging the dishes* must wholly depend upon the number. The principal dishes must always be at the head, middle, and bottom of the table, and the others disposed in order on either side. When the company consists of ladies and gentlemen, the wine decanters should be placed at the lower end of the table; but if it be composed of ladies only, the wine should first be placed before the lady who sits at the head. A tablespoon should be placed on each dish, and a knife on the dish containing the cake. At some tables a dessert plate, knife and fork, and wineglass, are placed to each person; at others, besides these, there are also a dessert spoon, an additional wineglass and a d'oyley, to each person. This, of course, may be regulated according to taste and fancy.

The *etiquette in connexion with dessert*, is for each gentleman to assist first the lady sitting next him, with wine, then himself, and finally to pass the decanter on; the gentleman should also consult the lady's choice as to what fruit she would like to take, and secure a supply for her plate. After drinking two or three glasses of wine, the ladies severally retire; this is done by the lady of the house rising, which is a signal to the other ladies; the ladies then pass out, the gentleman nearest the door holding it open and bowing to the fair guests as they retire, the rest of the gentlemen standing until all have quitted the room. The length of time that gentlemen usually remain over their dessert until they join the ladies in the drawing-room, varies according to the tastes and feelings of the master of the house and the assembled guests. Formerly, the interval was a lengthened one; but now it is considerably shortened, and in some establishments, the ladies and gentlemen retire from the table together. The signal for retiring devolves upon the host, who asks his guests whether it would be agreeable to join the ladies, which being answered in the affirmative, the whole company thereupon rise and proceed to the drawingroom. Should any gentleman however become tired of protracted sitting, and consider that it would be both more prudent and agreeable to retire, he may at any time steal out of the room unobserved, and join the ladies, without committing any breach of etiquette.

DEVONPORT.—An article of furniture, taking its name from the inventor, and which consists of a desk placed upon a pedestal filled with drawers. The desk is of the same width and depth as the pedestal, but is made to slide forward, when to be written upon, to give room for the knees, in the manner shown in the engraving. A sliding shelf may draw out at the side, to hold papers or other things; and over that is an inkstand that turns out and shuts in by a hinge at one end. The desk is covered with leather, and has a fence round the top; the drawers are placed at the end

instead of at the front, to render them more accessible when engaged in writing.



DIAMOND.—A crystalline mineral of unsurpassed lustre and hardness, and the most highly prized of precious stones. When perfectly pure, it is as transparent as a drop of the purest water, in which state it is known as "a diamond of the first water;" and in proportion as it falls short of this perfection it is said to be of the second, third, or fourth water, till it becomes a coloured one. Coloured diamonds are generally yellow, blue, green, and red or rose colour; of these the rose is esteemed the most valuable, and the yellow, the least so.

DIAMOND CEMENT.—See CEMENT.

DIAMOND, FACTITIOUS.—A material is made in imitation of diamonds as follows:—Manganese, one part; rock-crystal, two thousand eight hundred parts; borax, one thousand nine hundred parts; white lead, five thousand seven hundred parts. Mix in fine powder, then fuse in a clean crucible; pour it into water, dry, powder, and repeat the process two or three times.

DIARRHŒA.—A relaxation or looseness of the bowels, consequent upon a certain condition of the mucous membrane of the alimentary canal; that is, either a state of congestion, or stagnant state of the blood in the membrane; or else from an inflammatory condition of the same tissue; or it may proceed from ulceration of the bowels, the presence of indigestible food, or acrid substances in the stomach; it may also occur as a crisis of fever, and without any direct cause of irritation. The causes that produce diarrhœa are very numerous, and often of the most opposite nature; though the chief are, sudden cold applied to the body, checked perspiration, powerful stimulants, the inhalation of noxious gases, &c.

Symptoms.—Nausea, sickness, and vomiting, thirst, dry state of the mouth and skin, frequent and copious evacuations, and a furred or red condition of the tongue.

Treatment.—The first step in the treatment of diarrhœa is to check the vomiting; to effect this, the feet are to be plunged into hot water and kept constantly warm, and a small blister or one or two leeches applied to the pit of the stomach. The state of the tongue must decide the nature of the subsequent treatment. When this organ is coated either with a white or brownish fur, it indicates a congested state of the membrane of the stomach, and must be treated by the exhibition of an emulsive mixture of chalk, and when the symptoms are attended with pain, by an opiate pill, as in the following prescription.

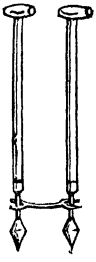
Prepared chalk . . .	1 ounce.
Honey	½ ounce.
Peppermint water . . .	6 ounces.

Mix into a smooth mass, of which give a tablespoonful every hour, and a one-grain powdered opium pill every four or six hours, till the pain is subdued. When, however, the tongue is red both on its surface and sides, it indicates inflammatory action, and must be treated by an opposite mode of practice and the following mixture administered; the opium, however, being employed when pain is present, in the same form and frequency as in the former state of the bowels.

Infusion of rose leaves . .	8 ounces.
Epsom salts	½ ounce.

Dissolve, and add diluted sulphuric acid, half a drachm; mix, and take a tablespoonful every hour. In all forms of diarrhœa, the feet should be kept warm, and a hot bath, if procurable, will, in every instance, be found beneficial. The diet should always be soft and nutritious, but not liquid; the best dietary consists of thick arrowroot, made with milk, blancmange, tapioca, sago, and semolina puddings, made with eggs, and eaten moderately cool; and when animal food is given, it should consist in the first instance of boiled meats, and the stomach very cautiously brought back to digest roast or hard substances.

DIBBLING.—A mode of sowing corn, much practised in some parts of England. It is found to answer best on the clover leys of the lighter description of land, and in rich loamy soils during showery weather. The process is performed by a man walking backwards with an iron dibble in each hand, with which he makes the holes on the furrow slice, into which the seeds are dropped—two seeds into each hole—by a person who follows him. An improvement on the common dibber is known as *Coggin's dibbling machine*, and consists of a box fixed on wheels, to which are attached two conical dibbling irons, as seen in the engraving; and the whole is to be moved forward by the foot of the operator, by which means much labour and time are saved. There are also the common garden dibber, the potato-dibber, and the forester's or planter's dibber. The last of these has a wedge-shaped blade, forked at the extremity, for the purpose of carrying down with it the top-roots of seedling trees.



DIET.—The substances that contribute to the support of life are remarkably numerous, and there are few articles, either in the animal or vegetable kingdom, which, if properly prepared and judiciously cooked, but may be made to minister, alone, or in combination, to the healthy preservation of life

The ordinary articles of dietary may be briefly stated to comprise all animal meats, vegetable substances, farinaceous preparations, fruits, saccharine compounds, and alcoholic, vinous, and acetous fermented beverages. The healthy state of the mind and body depends mainly on the nature and mode of preparing the various foods on which we live; and a proper knowledge of these facts constitute that branch of therapeutics called dietary. All articles of diet are divided into the nutritive and the digestible; by the first is understood those foods that yield the largest proportion of the elements of chyme, and by the other the degree of facility in which they are acted on by the digestive power of the stomach: hence the necessity of a combination of articles of food at each meal, as many aliments which yield the largest amount of nourishment are, unaided by other substances, the most difficult of digestion, while those most easy of digestion frequently afford the smallest percentage of chyme. The great secret of a healthy dietary is a knowledge how to combine the food taken so as to produce a perfect digestion, and a proper supply of nutriment or chyme from every meal; and this can only be effected by a due mixture of rich and poor aliment. The most nutritious of all foods, or those which contain in greatest abundance the elements of chyme, if long persisted in, will act as a poison on the body, and reduce it to a condition of atrophy, unless occasionally combined with some less nutritive aliment. When due attention has been paid to the nature and preparation of the food, the wholesomeness of the meal will be evidenced by the state of the tongue, which will then present a clean and healthy appearance, whereas, if the meal has consisted of improper or ill-cooked dishes, an excess of acidity will be generated in the stomach, and the tongue assume a more or less furred or coated character.

The most wholesome mode of dressing animal foods, so as to ensure easy and perfect digestion with the elimination of all its nutritious properties, is either by roasting, boiling, or baking: broiling is probably equal to the latter; and the most hurtful of all forms of cookery is that by frying, for by this process the surface of the meat is rendered hard and leathery, and extremely difficult of digestion—a fact that will be better understood by observing that the digestibility of all animal substances stands to each other in the following order:—First, muscular fibre or flesh; secondly, skin; thirdly, cartilage; fourthly, tendon or sinew; and lastly, bone; and that the facility in which animal food is digested, is shown by the sequence of the following articles:—Pork, mutton, veal (boiled and roasted), game, fish, cheese, and beef. There are several substances which, though they contain no nutritive properties, exert a powerful action on the stomach in promoting digestion and tending to the health of the system; and though not properly aliments, yet are absolute necessaries in all systems of dietary; these are called condiments, and consist principally of salt, vinegar, and spices. The mode of preparing, or, in other words, cooking the diet, has a greater effect on the vigour of the body and in preserving its stamina than is generally supposed; roast and baked meats being the most stimulating and supporting, and boiled and stewed the least exciting and less durable in their effects. The man who lives most frequently on roasted and baked meats requires no stimulating beverage to keep up the strength of his frame; while he who diets often on the same meats boiled or stewed, needs as a necessary, the occasional use of stimulating drinks to keep intact the vigour of the constitution. Variety of food with our meals, is as requisite to the perfect health and strength of the body as variety of occupation is to the intellectual vigour and integrity of the mind; consequently all sorts of vegetables and fruits should form a due proportion of the dietary, and if not equally partaken of at each meal, should be largely consumed in the course of each day; and in all cases of healthy digestion, vegetables should constitute not less than two-thirds of the entire bulk of the dinner, while of the fruits that follow, as much should be eaten as is consistent with appetite and prudence; any moderate excess being qualified by the beneficial effect of the acid, in promoting digestion. Though partaking at one meal of many artificial dishes is unquestionably injurious, a moderate combination of roast and boiled meats, fish, game, vegetables, bread, cheese, and fruits may *occasionally* be indulged in by robust constitutions without much injury. The vegetables containing the largest amount of *farina* and in themselves most strengthening, and the best correctives to the richness of the animal food, may be placed in the following order:—Bread, beans, cauliflowers, pease, potatoes, brocoli, greens, carrots, turnips, &c. It should be remembered in connexion with this subject, that vegetables have no effect in exciting the circulation, but, on the contrary, animal food acts as a stimulant to the heart; that warm drinks also accelerate the motion of the blood, while cold ones produce directly sedative effects on the system. Of the farinaceous articles appertaining to the subject of dietary, the number is large, and their usefulness as mild and wholesome aliments can hardly be over-estimated, especially as they admit of so many modes of agreeable preparation, as puddings, pies, and custards, while some of them simply boiled can be used as vegetables with the meat; the most important of the list are, rice (whole and ground), sago, tapioca, arrow-root, semolina, pease (split and ground), barley, prepared groats, oatmeal, biscuit powder, rusks, and baked flour. Among the beverages which form in the present state of society so large a part of every system of dietary, the most important in a therapeutic sense are undoubtedly the fermented liquors obtained from malt, such as ale, stout, and porter; and for the great bulk of the people, except in sickness or on special occasions, are the only stimulating compounds either required or necessary to the due preserva-

tion of the health of the body. It must be understood that these remarks, and what is advanced in this article as fact, have reference only to this country, as climate and soil materially modify or increase the effect of food on the human constitution. Malt liquor is both a stimulant and a tonic, and should be taken in the form most suited to produce the effect desired. When required as a simple beverage, porter is the preparation that should be employed; when tonic properties are needed, stout is the article best suited for the purpose; and when a stimulating effect is sought, it can be obtained either from ale or an equal mixture of ale and stout. When circumstances demand a lighter potation, cold rum or brandy and water without sugar will afford all the advantages required. Wine is unquestionably often highly beneficial to the system, but as a general rule, not being native to the climate, it is unnecessary as an article of diet to an English constitution. Of the thinner beverages that refinement and custom has now rendered so needful to our comfort, such as tea, coffee, cocoa, and chocolate, there can be no doubt that in themselves they are perfectly innocuous, and unless taken in extremely strong preparations, incapable of affecting the system injuriously; and that what stimulating and nutritious properties they possess are derived in a great degree from the cream and sugar usually taken with them, and from the heat imparted to the body by the temperature at which they are imbibed. It would be difficult to find out of the dietary list of the world, either ancient or modern, a set of articles possessing such negative nutritive properties, whose action is so beneficial on the system, or which, while affording so large an amount of comfort, have produced at the same time so moral or social a blessing on the people as the lighter beverages appertaining to tea and breakfast.

DIET OF CHILDREN.—One of the greatest mistakes committed by parents, is the idea that children require a large amount of animal food to enable the system to build up the growing frame. This is a serious fallacy, and not only tends to make the child gross, but to impair the healthy functions of the body; a child requires quantity rather than quality, and so the food is light and wholesome, and, according to the age and activity of the child, abundant, it matters very little of what it is composed; as from their quicker circulation, elasticity of mind and incessant motion, their digestion is not only rapid, but perfect. It is impossible to separate the healthy dietary of childhood from air and exercise, as these are nearly as necessary to their growth and well-being, as the abundance and wholesomeness of their food; indeed, so large a proportion of oxygen do all children consume in the development of their frame, that without much extravagance, they may be said in a great measure to live on air. Children should have three full meals a day, and the stomach should never be allowed to remain longer than four hours at a time without a supply of food. The breakfast should consist of bread and milk, or sop, the dinner of a large proportion of vegetables and bread, with a moderate proportion of meat, with an adequate quantity of fat; for, as this substance yields more nitrogen than the fleshy part, it is a great mistake to prohibit the child's eating so necessary a part of the aliment. But the main portion, not the whole of a child's dinner, should consist of farinaceous pies or puddings, apple dumplings, or plain suet dumplings. The tea should be a repetition of the breakfast, or bread and butter, with milk and water. The only restriction that need be placed on a child's appetite, is the avoidance of unripe fruit and the obnoxious trash sold as sweetmeats. Sugar is highly necessary, and twice a day should form a part of each meal; while, as a wholesome variety, some plain boiled rice with sugar may be substituted for pudding at dinner, and treacle or golden syrup spread on the bread instead of butter, at tea time. Children require no stimulants, and should neither be given wine nor malt liquor; cold tea, milk and water, or barley water, is the only beverage that children either require or, unless coerced, desire or care for.

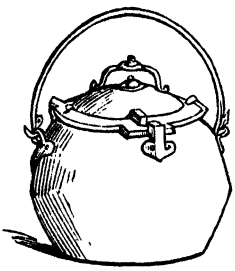
DIET OF INVALIDS.—The food of the sick and convalescent must, in a great measure, depend upon the age of the patient, and the nature and seat of the disease under which he labours, or from which he has recovered; and also whether the disease was acute or chronic. A difference is also necessary when the cause of illness has lain in the digestive organs, or when these are only symptomatically affected. In all cases, however, one general rule is to be observed, that nothing is to be put into the stomach that by its hardness or indigestibility can cause pain or inconvenience to the organ. All foods should be as light and easy of digestion as possible, consisting, for the most part, of farinaceous articles, jellies, custards; and when the stomach has been gradually restored to tone, animal foods are to be carefully and sparingly administered, selecting those substances most easy of digestion; such as a piece of lean pork and boiled mutton, rabbit, &c., and so on till the power of digesting more nutritive articles is restored. Care must be taken to avoid all vegetable substances, particularly those of a flatulent nature, bread or biscuit being employed as a corrective with the animal food taken; at the same time, all sloppy drinks should be strictly avoided, as weakening and injurious to the stomach, which should be supplied with food every three or four hours, and the meals given when the patient can eat them, not at conventional hours. The beverage of an invalid must depend upon his circumstances, and the disease also; sherry and water is in general the best drink of this character, or if unprocurable, a tablespoonful of brandy in half a tumbler of water must be substituted. Tea, cocoa, or bread and milk, should constitute the tea and breakfast, with cold buttered toast, or dry toast, if the butter is objectionable. But as so much depends on the state of the patient, and the amount

of debility, it is impossible to lay down stringent general rules for the dietary of invalids.

DIET-BREAD CAKE.—Put half a pint of water into a stew-pan, with one pound of sugar, stir it till it comes to a boil, then remove it from the fire, and stir in briskly the well-beaten yolks of twelve eggs, and the well-beaten whites of six eggs, with half a teaspoonful of salt; then stir in lightly one pound of sifted flour, pour the mixture into buttered tins, and bake for twenty minutes.

☞ Water, ½ pint; sugar, 1lb.; eggs, 12 yolks, 6 whites; salt, ½ teaspoonful; flour, 1lb.

DIGESTER.—A term applied to strong iron boilers used for making soups, &c. They have a lid that screws down tightly, so as to confine all the steam; and by this means the water may be heated several



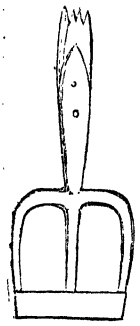
degrees above the boiling point; in order to prevent the vessels bursting, which they otherwise might do, a safety valve is placed in the lid, by which the heat of the steam can be regulated. Meat may be thus entirely dissolved, and bones reduced to jelly.

DIGESTION.—By this term is understood that process by which the food taken into the stomach is converted into nutriment, and, finally, into blood, to maintain the circulation and supply the wear and tear of the body. The internal coat of the stomach is dotted with numerous small glands, which secrete a very sour acrid fluid, called the gastric juice, which, as soon as food reaches the stomach, is poured out in great quantity. This gastric juice—which is composed of water, common salt, phosphate of soda, potash, and muriatic acid—immediately surrounds the mass of pulpy food, and the acid of the secretion acting on the alkaline ingredients of the saliva in the food, commences a gentle chemical action, from which a small amount of gas is liberated as the gastric juice gradually works its decomposing way into the mass, converting it layer by layer into a soft thick creamy substance. When a sufficient quantity of this has been collected, it finds its way to the lower mouth or door of the stomach, where its weight acting as a stimulant on the outlet or valve, the passage opens, and the first gush of digested food passes into the duodenum, followed, at short intervals, by further quantities, till the entire mass, that entered the upper end of the stomach as crushed and moistened food, quits the lower extremity in the form of a creamy nutriment, and takes up its place in the small intestines as chyme. The refuse blood, in its passage through the liver back to the heart, secretes, as it diffuses itself over the lobes of the liver, a bitter, acrid, heavy-smelling greenish yellow fluid called the bile, which, as secreted, is conveyed to the gall bladder; at the neck or duct of which, as it opens into the duodenum, it receives a salivary contribution from the pancreas, the object of which is to correct or modify the acridity of the bile. Upon the acidulated chyme in the small intestines, the combined alkaline secretions of the liver and pancreas is poured; the effect of which is directly to change and separate the chyme into two parts, one a thin rich white fluid, the concentrated essence of all the nutriment, called chyle, and the other, the gross solid impurities of the food from which all nutrition has been extracted. The chyle is then absorbed by the mouths of innumerable vessels, and carried to one centre or reservoir, from which a vessel or long hollow tube ascends, named the thoracic duct, terminating in the junction of the left subclavian and internal jugular veins, as the united branch enters the heart; along this narrow channel, collecting nutriment from the lymphatics in its course, this vital and vitalizing principle, this white blood, the chyle, proceeds from its reservoir in the glands and lymphatics of the bowels, till it empties itself into the heart.—See DYSPEPSIA.

DIGGING.—The spade is a thin wedge, with a lever attached in the same plane, and the operation of digging consists in thrusting in the wedge by the momentum (or weight and motion) of the operator, which effects fracture, a movement of the lever or handle next effects separation, whilst the operator, by stooping and rising again, lifts up the spitful, or section of earth, on the blade or wedge of the spade, which, when so raised, is dropped in a reversed position, and at a short distance from the unbroken ground. The separation between the dug and undug ground is called the trench or furrow; and when a piece of ground is to be dug, a furrow is first opened at that end of it where the work is to commence, and the earth carried to that end where it is to terminate, where it serves to close the furrow. In digging, regard must be had to retain a uniform depth throughout; to reverse the position of each spitful, so that what was before surface may now be buried; to break and comminute every part, where pulverization is the leading object; to preserve each spitful as entire as possible, and place it, separated or isolated as much as can be effected, where aeration is the object; to mix in manures regularly, when they are added; to bury weeds not likely to rise again, and to remove others, and all extraneous matters, as stones, &c., in every case. For all other purposes, a deep open trench is requisite; and, that this may not be diminished in width and depth in the course of the operation, it must never be increased in length.

if allowed to become crooked by irregular advances in the digging, it is thus increased in length, and necessarily diminished in capacity, unless, indeed, the dug ground is allowed to assume an uneven surface, which is an equally great fault. Digging for pulverization, and mixing in manures, is best performed in dry weather; but for the purposes of aeration, a degree of moisture and tenacity in the soil is more favourable for laying it up in lumps or entire pieces. The usual length of the blade of the spade is from ten inches to a foot; but, as it is always inserted somewhat obliquely, the depth of pulverization obtained by simple digging never exceeds nine inches, and in breaking-up firm ground it is seldom so much.

DIGGING IMPLEMENT.—Digging up or forking up is occasionally resorted to for taking crops of roots, as potatoes, carrots, &c. In performing this operation, the principal thing is to avoid cutting or bruising the roots with the spade or fork, and to separate the roots from the soil by first lifting up the spitful and then throwing it down in such a way as to break and scatter it, and to bring to light the roots or tubers. The digging implement seen in the engraving accomplishes these objects with greater ease and certainty than the ordinary spade or fork; the prongs of the fork are guarded so that they cannot injure the roots; whilst the spaces between the prongs arrest the separation of the roots from the earth.



DILL.—A plant strongly resembling fennel in many of its properties. It is an aromatic, stimulant, and carminative. Distilled dill water is chiefly employed to relieve the flatulence and griping in infants.

DINNER.—This is the principal meal of the day, and with some persons the only one when food in anything like quantity is partaken of. The food and drink indulged in at this meal, vary materially according to a person's means and the obligations of society; as a rule, however, it is better not to introduce too great a variety of things into the stomach at one and the same repast, as the different properties of the ingredients cause them to disagree, and to give too great an amount of labour to the digestive organs. If a person wishes to rise from the dinner table with pleasurable and gratified sensations, he should partake of one, or two dishes at the most, especially avoiding pastry, sweetmeats, highly seasoned dishes, &c. The same rule holds good with regard to drink, and the beverage first chosen should be continued throughout the repast. Although animal food may, generally speaking, form the chief part of the dinner, it may be omitted occasionally with benefit, and poultry or fish alone form the meal. Vegetables should be freely partaken of, as they assist in the assimilation and digestion of stronger foods, and are of a pleasant and cooling nature. While dinner is being eaten, the mind should be at ease, otherwise the digestive process will be materially interfered with, and the body will experience little or no nourishment from the food it receives. Persons engaged in business and professional pursuits are in the habit of snatching a brief interval from their avocations, despatching their dinner hurriedly, and resuming their occupation the instant it is eaten; a custom at once reprehensible and highly injurious. However much a person may be absorbed in his business or profession, he should consider that in order to attend to his duties properly, and carry out his views successfully, it is necessary that the body should receive nourishment sufficient to meet the demands made upon it, and as dinner is the chief meal of the day, some interval, the most convenient for the purpose, should be set apart, in which the dinner may be eaten leisurely and with enjoyment. The *proper hour for dinner* depends in a great measure upon a person's avocations; the most natural time is about one or two o'clock, but where it cannot be taken at this time, a light lunch may be had; at all events, the proper interval between dinner and the meal that precedes or follows it, should not exceed four or five hours. The contrary practice of eating nothing between breakfast and five or six o'clock in the evening, and then sitting down to a hearty meal, is highly injurious, as the lengthened fast has tended to enervate the powers of the stomach, and the excessive quantity of food introduced lies in an undigested mass for some hours; this unwholesome practice, repeated daily, soon tells upon the digestive organs, and at length occasions permanent disease. The rational summary, therefore, in connection with this subject is, that if two hours' relaxation from business can be obtained about five or six hours after breakfast, the best plan, unquestionably, is to dine then. But if this be impossible, and active exertion of mind or body must be continued for several hours longer, it will be far better to eat some light refreshment in the forenoon, and to postpone dinner not only till business is over, but till half an hour or an hour's repose have allowed its attendant excitement or fatigue to subside. By this means the stomach will enter upon its duties with vigour, and the dinner be digested with greater comfort and despatch, than when sitting down to table the moment work is finished. Another assistance to the moral enjoyment and physical benefit to be derived from dinner, consists of partaking of it under cheerful aspects. It would be as well, therefore, to eat this meal in the midst of pleasant and social companionship, instead of, as is too frequently the case, making it a solitary repast with the newspaper or a book for a companion.

DINNER, ARRANGEMENT OF.—Soups should be placed at the head of the table: if there are two, top and bottom; if four,

top and bottom and both sides. Fish should be placed at the head of the table; if there are two sorts, have fried at the bottom, and boiled at the top; if four, arrange the same as soup. In many families, however, the fish is served at the same time as the soup, in order that those persons who do not like soup may not be kept waiting. This is entitled the *first course*. The *second course*, when there are three, consists of roasts and stews for the top and bottom; turkey or fowls, ham, tongue, &c., together with small made dishes for corners, as curries, ragoûts, fricassees, and stews. The *third course* consists of game, confectionery, puddings, creams, jellies, &c. After the third course has been removed, cheese, salads, celery, radishes, &c., are introduced. *Waiting at table* also forms an important feature in a dinner, and applies more immediately to the attendants than to the master and mistress. When grace has been said, remove the dish covers, carefully turning them up so that no moisture can drop from them, and take your station at the carver's left hand, to serve the plates as they are filled. The lady at your mistress's right hand should be served first, then the lady opposite, and so in succession from right to left, till the ladies are all served; when the gentlemen should be waited upon in like manner. If there is time between the serving of the plates to supply the vegetables and sauces, do so, but take care not to keep the carver waiting. Bread, beer, vegetables, and sauces, when served, should always be held in the left hand, and taken to the left side of the person to whom they are offered. When the plate of any one of the company is empty, take it away immediately, with the knife and fork which has been used, and lay a clean knife and fork and another plate in its place: put the used knives at once into the tray brought in for the purpose, and the plates that have been eaten from into the plate basket, if there be one, but if there is not, put them in piles, passing the bones and fragments (without noise) all into one plate as you do so. When a person declines taking any more meat, place a small plate, small knife and fork, and dessertspoon for pie or pudding, if either are to be taken. When pudding or pie has been served, or else declined, place the cheese on the table, and put a small knife and small fork, with a cheese plate, before each person, whether there is a salad on the table or not. In serving this last course, the housemaid must take the plate with the pieces of cheese on, which have just been scraped off by the gentleman at the head of the table in her left hand, and the butter plate with the silver butter knife on it in her right, and pass first the cheese and then the butter to each person, who will take either or both, or decline them as they please, but serve both to the left hand of the company. As you change the things at dinner, put very gently all the knives that have been used into one tray, and the spoons and silver forks that have been used into another; and as the cheese is done with, clear away the remainder of the plates, and knives and forks, and collect all the pieces of bread into the bread basket. By this time you should have all the clean spoons and forks, the salt cellars and cruet stand, removed to the sideboard, ready for future use. Then sweep the crumbs from off the table with a brush into a plate. Take the cloth away carefully so as not to crease it, that it may be folded and put into the press for using the next day. Some families leave the tablecover on, but, generally speaking, it should be taken off, as well as the tablecloth.

DINNER, ETIQUETTE OF.—When it is determined to give a dinner party, such persons should only be invited as may prove agreeable to one another; and invitations, specifying the exact dinner-hour, should be sent several days previously. When the hour arrives, the lady of the house should be in the drawing-room, ready to receive her guests. The number of the guests should be regulated according to the capacities of the household, without occasioning any overcrowding or discomfort. If possible, an equal number of ladies and gentlemen should be invited, but if the numbers are not equal, two persons of the same profession should not be placed together, as the general interest of the conversation might suffer. At large dinner parties it is usual for the master and mistress of the house to sit at the top and the bottom of the table. On the right-hand side of the hostess, the gentleman of the highest rank is placed; the gentleman next in rank will occupy the left. The two most distinguished ladies, in like manner, sit on either side of the master of the house, who, of course takes the bottom of the table. When the guests are seated, the lady begins to help the soup, which she sends round, commencing with her guests on the right and the left, and continuing in the same order. No one should ask for fish or soup twice, because by so doing, part of the company are kept waiting for the second course. Neither ask anybody to take wine until the fish or soup is finished. Wine should never be pressed upon those known to be averse to it, nor should comments be offered upon any established rules adopted by individuals, with reference to meats or drinks. It is generally considered a mark of good breeding to take the same wine as that selected by the person who pays you the compliment, the choice, of course, pertaining to the highest in rank or age; should, however, the wine he is drinking be unpalatable to you, you are at liberty to select your own by courteously saying, "Will you permit me to take claret, or sherry?" &c.

Avoid all ungraceful habits, such as using a knife in eating, making a noise with the lips and mouth, bringing the face close down to the plate, making a rattling with the knife and fork, &c. Eat peas with a fork, and do not scrape up all the syrup or gravy on a plate, as though it were so precious that you could not possibly leave a drop of it. Do not pour sauce, melted butter, &c., over meat or vegetables, but put it on one side of the plate. If helping soup, one ladleful in each plate is sufficient. Fish should always be eaten with a fork aided by a piece of bread.

On no account pick your teeth after dinner; it is a most unseemly habit. Be careful not to sit so far from the table as to permit the crumbs to fall upon the carpet. Be attentive to those guests who sit near you, and anticipate their little wants, without appearing obsequious or obtrusive. Neither be wholly silent at the dinner table, nor too loquacious; during the first portion of the dinner, however, the conversation should be limited to an occasional remark, but towards the latter end, freer scope may be given for the discussion of topics of a light and pleasant nature. After you have assisted yourself to condiments, do not keep them opposite you, but pass them to your next neighbours, by doing this to spare persons the awkwardness of continually asking you to pass this or that. When you are asked by the carver which part you would like of any particular dish, name at once some part, without appearing selfish or too dainty. If the host or hostess pass a plate expressly for you, do not offer it to another person, as by doing so you will be questioning the host or hostess's good taste. Whenever you receive an invitation to dinner, answer it immediately, or at any rate within the next twenty-four hours. Arrive at the house within five or ten minutes after the hour named: the absurd fashion of being half an hour or an hour behindhand is fast wearing away. The most becoming costume for dinner-parties is, a black dress coat, black trousers, white or black waistcoat, and a white cravat; patent leather boots are also worn.

DINNER-WAGGON. — A convenient article of dining-room furniture, for the reception of dishes, usually made of mahogany, and running upon castors. By this means, joints of meat and other large dishes may be easily transported from one part of the room to the other, and may, in the meantime, be kept hot over hot-water wells.

DINNERS, Bills of Fare for.—These may be composed in endless variety, according to the taste and means of the host. The following selection, however, will be found to conform with the various seasons of the year, and if acted upon will furnish excellent dinners, without entailing any very extravagant outlay:—

Bill of Fare for January.

First course.

Small ham. — White soup. — Haricot mutton.
Mashed potatoes. — Soles. — Calf's head. — Brocoli.
Roast beef.
Turkey. — Turbot or cod's head. — Tongue or chine.
Mock turtle.

Second course.

Roast partridges.
Blancmange. — Larks.
Fancy pastry garnished with conserves.
Roast rabbits. — Sweetbread.
Capon garnished with cresses.
Mince pies.
Poached eggs on spinach. — Jellies.
Fritter of oysters.

Removes.

Sweetbreads. — Sausages.
Lemon pudding.
Tarts of preserved fruits.

Bill of Fare for March.

First course.

Gravy soup.
Joint of house lamb. — Tongue.
Capon.
Chickens. — Calf's head.
Oyster patties.
Haricot mutton. — Beef olives.
Rice soup.

Entrées.

Artichokes.
Cranberry tarts.
Cucumbers.
Fricaseed fowls.
Lettuces. — Spinach.

Second course.

Turkey.
Mushrooms, boiled. — Mince pies.
Marrow pudding.
Fricaseed rabbits. — Pigeons.
Prawns.
Almond tarts. — Strawberries in cream.
Ducklings.

Bill of Fare for June.

First course.

Turtle or green pea soup.
Jack or pike. — Fried soles.
Larded fowls.
Slices of salmon. — Carp.
Stewed giblets.

Removes.

Quarter of lamb. — Loin of veal.
Haunch of venison with red wine and currant jelly.

Entrées.

Sweetbreads, browned.
Stewed peas.
Lamb cutlets with spinach.

Second course.

Roast ducks.
Partridges. — Mushrooms.
Cabinet pudding.
Green peas. — French beans.
Savoy cake.
Macaroni. — Artichoke bottoms.
Neck of house lamb.

Bill of Fare for October.

First course.

White soup.
Salmon, trout. — Fried soles
Saddle of mutton.

Cauliflowers. Stewed spinach.
Two chickens, boiled and served with tongue.
Palates of sweetbread. Oyster patties.
Trout.

Second course.

Roast grouse.
Pheasants. Partridges.
Prawns.
Fruit tart, decorated. French beans in poulette sauce.
Custards.
Preserved ginger soufflée. Marrow pudding.
Roast rabbits.

DISCOUNT.—A sum of money deducted from a debt in consideration of its being paid before the usual or stipulated time. The circumstance on which its fairness is founded is, that the creditor, by receiving his money before it becomes due, has the interest of the money during the interval. Consequently, he should only receive so much as, put out to interest during the period in question, will realize the amount of his debt at the time when it would have become due. In commercial transactions it is customary to give bills for acceptance and promissory notes in consideration of certain debts contracted. These are converted into cash through the medium of bankers and others, who deduct a certain rate of discount according to the current value of money; handing over the difference to the person when he parts with the bill, and keeping the same until it arrives at maturity. Discounting bills is a great convenience in commerce, as it puts a person in the possession of immediate funds, and yields a profit rather than a loss as compared with cash payments.

DISGORGER.—An instrument used by anglers to disengage the hook from the mouth or throat of a fish; it is generally made of a strip of ivory or bone of from six to eight inches in length, and forked at the end. The forked end is pressed down upon the bend of the hook until the point is removed from its hold; the gut, gimp, or other substance to which the hook is tied is then tightened, still pressing the instrument on the bend of the hook, which brings the point of the hook against the stem of the disgorger, and allows the two to be withdrawn together without the hook again taking hold of the throat or mouth of the fish.

DISH-COVERS, TO CLEAN. — Having washed the block-tin articles quite clean in warm water, rub the inside with soft rags moistened with fine wet whiting; then rub the outside over with a soft linen cloth dipped in sweet oil. Next rub it all over with fine whiting, powdered and sifted, and put on dry; afterwards finish with a clean dry cloth. Dish covers cleaned in this way will preserve their polish, and continue to look new, provided they are always wiped dry as soon as they are brought from the table.

DISINFECTION. — Disinfection, in its limited signification, must depend upon the character of the noxious gases that have to be removed, and as these vary in their gravity and power of expansion, the means to remedy the one would be inoperative in the other. Nature has supplied us with two of the best disinfectants that we possess, air and water, though in certain conditions of the former, when too moist or too dry, it is defective; for then it carries the poisonous elements more quickly into the system, and renders it more susceptible of absorbing the deleterious particles. If the cause of foul air and noxious gases proceeds from faulty drains, disinfectants can only palliate the evil till the construction of the drain is altered; the best artificial means to neutralize and destroy the effluvium for the time being is the chloride of lime or the chloride of tin, which, dissolved in water, and poured down the sinks and drains, will, by decomposing the gases, at once arrest the offensive smell. But for the apartments into which the foul odours have entered, ventilation, by lighting a fire in the grate and opening the window, so as to produce a rapid and sweeping current of air, will be found the most effectual course. For the infection of fever, or the close air of a sick room, chloride of lime scattered occasionally over the floor, or the fumes of aromatic vinegar, obtained by pouring a few drops in a heated shovel; by burning the dried sprigs of lavender, or igniting a piece of camphor, are all useful and very effectual means. Tobacco smoke and the fumes of gunpowder are equally efficacious as disinfectant agents; among precautionary measures the carpets should be removed from the room of fever patients, and the boards kept constantly dry; the bedclothes, and everything that comes from the patient immediately placed in tubs of water containing chloride of lime, and the nurse and attendants should always stand in such a position that the breath and exhalation from the patient shall blow from and not to the nurse.

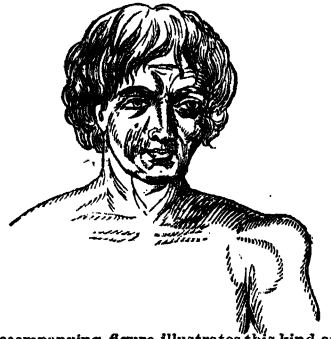
DISLOCATION.—An accident of very frequent occurrence, and generally the result of falls, though in some very weak and relaxed constitutions, dislocation often takes place from mere muscular action. Sometimes dislocations are accompanied with fracture, in which case, when the limb is broken near the head of the bone, it is impossible to reduce the dislocation till the fracture has been reunited, thus materially complicating the danger and the suffering. The joints most liable to dislocation are those which have the greatest play, as the shoulder, wrist, ankle, hip or thigh, fingers, and jaw.

Symptoms.—All dislocations are attended with disfigurement, and more or less of laceration of the subjacent parts, pain, immobility of the part, shortening of the member, and swelling; besides these, particular dislocations have special appearances, as the turning *in* or *out* of the foot in luxation of the thigh, and the position of the forearm in that of the shoulder. In all accidents of this nature, the bone should be reduced, or replaced in its natural state, as early as possible, for the longer it remains unrestored

the more difficult the process becomes, and the more unfavourable the result. A bone that has once been dislocated is very apt, from a trifling accident, to be again displaced.

The general mode of *treatment* may be expressed in a few words, though special dislocations demand more complicated management. In the first place, the body or the main member is to be made the resisting medium, and being held firmly as a counterpoise, the dislocated part is to be slowly and steadily extended or drawn out till the head of the bone reaches the outer rim of its cavity, over which it is to be assisted by the fingers of the surgeon or assistant, when, the extension being relaxed, the head glides into its place with a snap.

DISLOCATION OF THE SHOULDER.—This joint may be dislocated in almost all directions, except upwards, though probably the most frequent positions are forward and downward, the head of the bone resting in the armpit. In all dislocations of this bone there is an evident depression at the outer end of the collar bone, which stands out bold and sharp, great pain, and almost immovable state of the arm, the elbow turned from the body; the patient leans towards the affected side, and rests the forearm on his lap, or supports it in his other hand. The



accompanying figure illustrates this kind of dislocation, in which the want of roundness in the shoulder and the sharp end of the collar bone is clearly defined.

Treatment.—The reduction of this bone can be effected by seating the patient on the ground, fastening a jack-towel above the elbow, and throwing the fold over his neck; the surgeon places the heel of his foot in the patient's armpit, makes the extension by means of the pull over his neck, and the counteraction of his heel and leg, till, having drawn out the limb till the head is brought in front of the cavity, he allows the bone to sink back into its place. Or it may be effected by placing the patient in a chair, and having passed a jack-towel obliquely over the chest, and fastened the opposite end to a door or some fixed point, while one person slowly extends the arm, the surgeon standing behind and keeping the blade bone fixed, with his finger directs the moving head of the bone into its cavity. When the dislocation has been reduced, the forearm is to be bent on the chest and kept in a sling, and the limb preserved in perfect rest for several days. Should the shoulder remain weak it must be rubbed with some stimulating embrocation.

DISLOCATION OF THE THIGH.—This is probably the most serious of all luxations of the joints, and, from the careful manner in which nature has protected it from injury, it requires considerable force to displace the bone from its socket, such accidents being generally the result of heavy falls with the legs apart, or falling from a height upon the feet or side. When the dislocation is upwards, the limb is from one to two inches shorter than the other, the thigh bent, the knee overlapping the opposite leg, and the foot and toes pointed inwards, and resting on the instep of the sound limb.

Treatment.—A sheet is first folded lengthways, and passed between the legs, and over the opposite limb, the patient lying on the sound side, the ends are then made fast to the bedpost, or to some firm point; the strap of a pulley is fixed to the thigh just above the knee, extension is then to be made in an oblique inward direction by means of the pulley till the head is drawn on a level with the socket, when the surgeon, by dexterously turning the limb outwards, and by judicious pressure, is enabled to push the head into its socket. When the patient is young and muscular, or the dislocation has been some time unreduced, it is necessary, to overcome the strength of the muscles, to bleed, or give antimony and opium to cause relaxation of the parts.

DISSOLUTION OF PARTNERSHIP:—Where no term of continuance has been agreed upon, a partnership may be dissolved at any time by either party or by mutual consent. A dissolution may be effected by the aid of the Court of Chancery, in case of the partnership undertaking turning out impracticable, or one of the partners becoming an incurable lunatic, or being guilty of gross misconduct, such as refusing to account for his receipts, or to submit his dealings to the examination of his partners. A partnership is dissolved by operation of law by the bankruptcy, outlawry, conviction for felony, or death of any one of the partners, or marriage of a female partner. In all cases of dissolution of partnership, the entire firm is dissolved; the remaining partners, if any continue to carry on the business, form a new partnership. A dissolution of a partnership should invariably be published in the *London Gazette*, and notice of the dissolution should be given by circular to *every* person who has had dealings with the firm.

DISTEMPER.—The general term for a disease that affects animals under different forms, and is attended by a variety of symptoms. To ward off this disease as much as possible, animals should be liberally and nutritiously fed, and allowed a proper amount of air and exercise. The treatment of this complaint is regulated by the actual state of the disease; but the general principles are based upon blood-letting, and the administering of mild purgatives.—See DOGS, HORSE, &c.

DISTEMPER COLOURING.—An inferior kind of colouring used for both internal and external walls, but principally for the former, instead of oil colour, being a cheap substitute. It is composed of whiting mixed with size of a coarse quality, in the proportion of twelve pounds of whiting to one pound of size. The size is boiled and reduced to a proper working consistence by the addition of water, after which the colour is added, to form the necessary tint.

DISTILLATION.—The art of drawing spirituous and other fluids of a mixed body, and collecting and condensing them by cold. The process of distillation, as carried on at distilleries, is divided into four general operations, viz., the *mashing* or formation of a saccharine infusion from certain vegetable matters, as malt, barley, oats, rye, &c.; the *cooling* of this wort or liquor; the *fermentation*, or process by which the sugar of the cooled wort is converted into alcohol; and the *separation* of the spirit so formed by means of a still and refrigerator. The process of *distillation for domestic purposes* is very simple; it consists of a vessel placed over a fire, with a round or spherical top to collect the vapour in a larger body, a free opening for the vapour to escape, and a connecting pipe which runs into a vessel containing cold water, and there being formed into what is called a coil or worm, the vapour as it flows through this worm is condensed by the cold water, and passes into a receiver in a liquid state. Where the article to be distilled requires delicacy of process, the fire should never strike immediately upon the still, but there should be two vessels; that in which the liquid to be distilled is put must fit into a boiler containing water, and the heat which drives off the vapour is received from the water in a high state of ebullition, and not from the direct action of the fire. Another mode is to place the still or boiler in a bath of sand, which receives its heat from a fire, and acts upon the contents of the still.

DISTRINGAS is a writ issuing out of the Court of Chancery at the instance of persons claiming to be interested in stock transferable at the Bank of England, standing in the name or names of any other person or persons. The party applying for this writ makes an affidavit that he believes himself to be beneficially interested in certain stock, stating the description of stock, the amount, the names of the persons in whom the same is standing, and that he believes there is danger of such stock being dealt with contrary to his interest. The Bank of England, upon being served with such writ of distringas, will refuse to permit the transfer or withhold payment of the dividends, as the case may be, for eight days after an application by any other person to deal with them, during which time the party issuing the writ may obtain an order from the Court of Chancery declaring his rights in respect thereof. This is a very inexpensive proceeding, and a great protection to all persons interested in the principal of bank funds, where the dividends are payable to some other person. It should never be omitted to be obtained under such circumstances, inasmuch as it prevents the trustees selling out of the funds without notice to him.

DITCHING.—Ditch fences, in their simple and original state, were considered rather in the light of open drains than as fences. In a variety of instances ditches are made for this purpose only, where there is no intention to enclose the field. They are, however, sometimes meant as a fence, but in such cases they are made very deep and wide, and the earth taken out of them is sometimes formed into a bank, the height of which, when added to the depth of the ditch, forms a tolerable barrier. The form of ditches is various, some of them being of a uniform width at top and bottom; others are wide above, and have a gradual slope downwards; a third kind have one side sloping and the other perpendicular. For whatever purpose the ditch is meant, the sloping form is by far the best, as it not only costs less money in the digging, but is at the same time much more durable, and has a neater appearance. When open ditches are indispensably necessary for the drainage of the field, the sloping ditch is preferable to every other, as the sides are not liable to tumble in, or be undermined or excavated by the current of the water, when properly executed. The slope should be considerable, perhaps seldom less than three nor more than six times the width at top that it is at bottom.

DIURETICS are evacuants that act on the blood through the instrumentality of the kidneys. The medicines of this class are of two kinds, the saline and the vegetable. Of the former, the chief are the acetates, nitrates, and tartrates of potass, and the sweet spirits of nitre; and of the vegetable, squills, digitalis, tobacco, deadly nightshade, lettuce, meadow saffron, pomegranate, juniper, and cantharides.

DOGS, MANAGEMENT OF.—The best way to keep a dog healthy is to let him have plenty of exercise, and not to overfeed him. Let them have at all times a plentiful supply of clean water, and encourage them to take to swimming, as it assists their cleanliness. When they are washed, no soap should be used, as it prevents their licking themselves, and they may thus become habitually dirty. Properly treated, dogs should only be fed once a day. Meat boiled for dogs, and the liquor in which it is boiled, thickened with barleymeal or oatmeal, forms capital food. The distemper is liable to attack dogs from four months to four years old. It prevails most in spring and

autumn. The disease generally manifests itself by a dulness of the eye, husky cough, shivering, loss of appetite and energy, and occasional fits. During the prevalence of this complaint dogs should be allowed to run on the grass, their diet should be spare, and a little sulphur placed in their water. To administer medicine to a dog, place him, if of moderate size only, upright on his hind legs, between the knees of a seated person. Apply a napkin round his shoulders, bringing it forward over the fore legs, by which he is secured from resisting. The mouth being now forced open by the pressure of the forefinger and thumb upon the lip of the upper

jaw, the medicine can be conveniently introduced with the other hand, and passed sufficiently far into the throat to ensure its not being returned. The mouth should now be closed, and kept so until the matter given is seen to pass down. Chemists who dispense cattle medicines can generally advise with sufficient safety on the diseases of dogs, and it is best for unskilful persons to abstain from prescribing for them. With proper management, and firm yet humane treatment, a dog may be educated to a surprising degree of intelligence, and become at once a companion and a protector.—See BLOODHOUND, MASTIFF, NEWFOUNDLAND, SPANIEL, TERRIER; also HYDROPHOBIA, MANGE, &c. Books: *Blaine's Encyclopædia of Rural Sports*, 50s.; *Youatt on the Dog*, 6s.; *Johnson's The Dog, and how to Break 'im*, 3s.; *Hutchinson's Treatise*, 7s.; *Mayhew on Dogs*, 5s.

DOMESTIC ECONOMY.—For the various items connected with this subject, see BREAD, BREWING, BUTTER, CHEESE, CLEANING, COAL, LAUNDRY, MARKETING, MILK, SERVANTS, &c. Books: *Webster & Parke's Encyclopædia*, 50s.; *Donovan's Treatise*, 7s.; *Teetotmier's*, 1s. 6d.; *Merle's Dictionary*, 5s. 6d.; *Walsh's*, 10s. 6d.; *Eaton's Cook and Housekeeper's Guide*, 5s.; *Kitchener's Housekeeper's Oracle*, 7s.; *Enquire Within*, 2s. 6d.; *Corner Cupboard*, 2s. 6d.; *Housewife's Reason Why*, 2s. 6d.

DOMINOES.—This game is played by two or four persons, with twenty-eight pieces of oblong ivory, plain at the back, but on the face divided by a black line in the middle, and indented with spots, from one to a double six, which pieces are a double-blank, ace-blank, double-ace, deuce-blank, deuce-ace, double-deuce, trois-blank, trois-ace, trois-deuce, double-trois, four-blank, four-ace, four-deuce, four-trois, double-four, five-blank, five-ace, five-deuce, five-trois, five-four, double-five, six-blank, six-ace, six-deuce, six-trois, six-four, six-five, and double-six. Sometimes a double set is played with, of which double twelve is the highest. At the commencement of the game, the dominoes are well mixed, with their faces downwards. Each person draws one, and if four play, those who choose the two highest are partners, against those who draw the two lowest; drawing the latter also serves to determine who is to lay down the first piece, which is reckoned a great advantage. Afterwards each player takes seven pieces at random. The eldest hand having laid down one, the next must pair him at either end of the piece he may choose, according to the number of pips or the blank in the compartment of the piece; but whenever any party cannot match the part, either of the domino last put down, or of that unpaired at the other end of the row, then he says "*go*," and the next is at liberty to play. Thus they play alternately, either until one party has played all his pieces, and thereby won the game, or till the game be *blocked*; that is, when neither party can play by matching the pieces when unpaired at either end, then that party wins who possesses the smallest number of pips on the pieces remaining. In playing this game it is to the advantage of the player to dispossess himself as early as possible of the heavy pieces, such as a double-six, five, four, &c. Sometimes when two persons play, they take each only seven pieces, and agree to *play* or *draw*, that is when one cannot come in or pair the pieces on the board at the end unmatched, he then is to draw from the fourteen pieces in stock till he find one to suit.

DOORS, DEFECTIVE.—Much annoyance is sometimes experienced by the creaking of doors. This may be prevented by rubbing a little soap, or a mixture of tallow and blacklead on the hinges, or by applying to them with a feather a little sweet oil, once or twice a year. The trifling trouble and expense will be amply repaid by the noiselessness of the doors, and their greater durability. To prevent the noise of doors slamming, a piece of vulcanized India rubber, cork, or leather may be placed so as to receive the shock. Patent noiseless box staples and striking plates are ingenious.

DORY, JOHN.—A fish that affords very delicate eating; choose them from four to six pounds in weight, the thicker the better, and dress them as directed for BRILL.

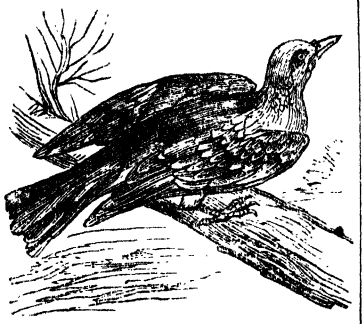
DOUGH.—See BREAD, CAKE, &c.

DOUGHNUTS.—Work smoothly with the finger four ounces of lard and four pounds of flour; add half a pound of fine brown sugar, two tablespoonfuls of allspice, one drachm of pounded cinnamon, half a drachm of cloves, two blades of mace powdered, two tablespoonfuls of fresh yeast which has been watered for one night, and which should be solid, add as much new milk as will convert the whole into a rather firm dough; let

this stand from an hour to an hour and a half near the fire, then knead it well and make it into balls about the size of a small apple; hollow them with the thumb, and enclose a few currants in the middle; gather the paste well over them, and throw them into a saucepan half filled with boiling lard; when they are equally coloured to a fine brown, lift them out and dry them before the fire on the back of a sieve. The lard should boil only just before the doughnuts are dropped into it, or the outsides will be scorched before the insides are sufficiently done.

☞ Flour, 4lbs.; lard, 4ozs.; sugar, ½lb.; allspice, 2 tablespoonfuls; pounded cinnamon, 1 drachm; cloves and mace, each ½ drachm; yeast, 2 tablespoonfuls; currants, at choice.

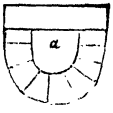
DOVE.—The smallest of the pigeon tribe. The male is about twelve inches long; the female smaller. The male bird is generally known by a white patch on the forehead, redness of the naked skin round the eye, bluish bill, and red feet. Doves are



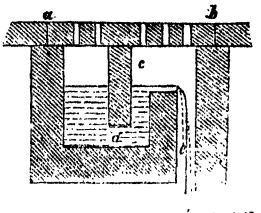
mild and gentle creatures, and although they are too shy to become domesticated, they very soon become tame in confinement. They should be kept in a warm and comfortable cage, with little rooms for them to retire to at night, and they may be fed with any kind of grain or pulse, as peas, beans, &c. They are also fond of bread, which should not be given them too new. Altogether they require to be treated with the greatest delicacy and attention, for, independently of their individual ailments, they become so attached to each other that if one dies, the other rarely survives.

DOVER'S POWDER.—This is perhaps as useful a preparation as any to be found in the pharmacopœia, and though its most important action is that of a diaphoretic, it may be made to act in various ways, according to the dose prescribed. The proper name of this preparation is that of the compound opium and ipecacuanha powder, and only acquired the name of Dover's powder from an eminent physician who very frequently used it. It is made by mixing one part of opium and one of ipecacuanha with eight parts of the sulphate of potass. Ten grains is a full adult dose, which contains one grain of opium.

DRAINAGE.—The drains of a building demand great attention from the architect who plans them in the first instance, and they also require to be kept in the most perfect order, to ensure the safety of the building, and the comfort and health of the inhabitants. It would be a wise provision if in every house, an accurate plan of all the drains were kept, with all the cesspools, traps, and sinks accurately marked, together with the cesspool, so that when repairs are needed, they may be made with considerably less expense and trouble than they ordinarily are. Small drains that require to be opened and cleaned out occasionally should be in the form of the engraving, with concave or arched bottoms and flat tops, covered with flag-stones or paving tiles set in cement. The concave bottom enables the water to collect better together and move more



freely than when the bottom is flat. It is of great importance that drains should be executed in a workmanlike manner, and a proper current given to carry off the water. If they are built in a careless and insufficient manner, the house is very likely to prove permanently damp and unhealthy. They should be constructed of sound bricks with Roman cement, and every precaution should be taken to make them perform their office with as little repairing as possible. When nothing prevents the foul air from coming out through the apertures by which the water goes down, the consequence is extremely disagreeable and even injurious to health, and to obviate this, *bell traps* should be fitted to every sink. This apparatus, however, is sometimes liable to be deranged by neglect or rough usage; and it is proper to construct another kind of brickwork. Somewhere in the course of the drain let there be sunk a small square well built round with bricks laid in cement, and be plastered on the inside with the same, so as to be completely watertight, and remain always filled with water. Across this well let there be



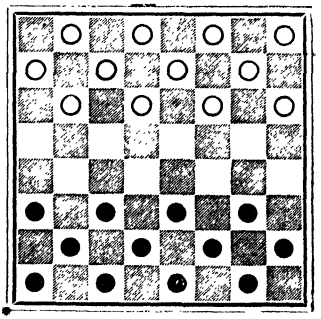
a piece of paving-stone so fixed that the top may touch the cover of the drain, and its lower edge dip below the surface of the water, in this trap or well. On the same principle as the bell trap, no air can pass along the drain, it being stopped by the

water below the stone. A cheap trap may be constructed of common red earthenware, to be used in places where any waste water goes down the drain. In the accompanying engraving, *a b c* represent a piece of coarse pottery, of which the horizontal part *a b* is about nine inches square, perforated with holes; from the under side of this piece *c* projects, and dips into the water that will always remain in the square receptacle *d*, and which will fall down and overflow by *e*, into the drain.

DRAINING LAND.—The necessity for draining land, in order to promote vegetation, is obvious. In undrained land, all the vacancies between the particles of earth being filled with water, air is necessarily absent, except that small quantity which is dissolved in the water. Under these circumstances, plants are deprived of the most essential part of their food. But when the water is removed, air takes its place and holds in suspension as much water as roots can thrive upon. The successful practice of draining, depends in a great measure on a proper knowledge of the structure of the various strata of which the earth is composed, of their relative degrees of capability of admitting and rejecting the passage of water, and of the modes in which water is formed and conducted from elevated situations to low or level ground. Where lands have a sufficient degree of elevation to admit of any over-proportion of moisture readily passing away, and where the soils of them are of such a uniform, sandy, or gravelly and uninterrupted texture as to allow water to percolate and pass through them with facility, they can be little inconvenienced by water coming upon or into them, as it must of necessity be quickly conveyed away into the adjacent rivers or streams in the vicinity. But where grounds are in a great measure flat, and without such degrees of elevation as may be sufficient to permit those over-proportions of moisture that may have come upon them from the higher and more elevated grounds, to pass rapidly away and be carried off, and when the soils of the land are composed of such materials as are liable to collect and retain moisture, they require artificial drainage. The drains should be cut about two feet wide, with the sides perfectly perpendicular, provided that, from the tenacity or hardness of the substances dug through, the sides will stand till the stones are put in. It is usual, however, to tread the ground somewhat wider at the top, and so to give it a slight slope to the bottom. In building the drain, it is usual to begin with small flat stones to construct the wall on each side of the bottom of the drain, nine inches broad and six inches high, so as to leave six inches for the conduit in the middle. When the bottom is wet, spongy clay, it is often necessary to pave the bottom of the conduit with very thin stones or slates.

DRAUGHTS FROM DOORS, WINDOWS, &c.—When from some defects in construction, or from long use, doors and windows will not close properly, the unpleasant current of air which they admit may be stopped by simple means. For doors, strips of list or ornamented leather, which may be obtained at leathersellers' shops, should be tacked on the extreme edge of the door all round, so that when it shuts, the vacuum is completely covered, and the apartment thus kept warm. Windows that admit the air through crevices in the sash may be rectified by sand bags made of cloth or moreen, being laid over the opening. Sitting in draughts is at all times a hazardous proceeding, and especially when the face and body are in a state of intense heat; under such conditions diseases are sometimes contracted which take months to eradicate. However heated a person may be, therefore, it is better to bear that, than to secure a few minutes' coolness at the expense of serious after consequences.

DRAUGHTS.—A game somewhat similar to chess, to which it is a good preliminary.



The draughtboard consists of sixty-four squares, black and white, and there are twelve men, or pieces, of a white colour, and twelve of a black colour to be used. The board should be placed with an upper white corner towards the right hand. The players select each twelve men of the colour they prefer. The pieces, or men, are to be thus placed on the board: the black pieces on the *first* twelve white squares, and the white on the *last* twelve white squares. When they are thus placed the game begins. The *pieces are moved* diagonally; and it is the object of the players to take the whole of each other's men; the player who has the black pieces taking the white, and the player who has the white men taking the black. The first player, say black, moves his piece diagonally to the first white square, and then, if nothing intervenes between his piece and that of his opponent, and there is a vacant square in his line left behind him, the white can pass his piece over him to the space so unoccupied and take his man, which is then withdrawn from the board. The same may be repeated by the adversary; and thus the players go on taking each other's pieces till one or the other cannot move, or all the pieces are taken. When a piece, however, arrives at the last row of the enemy's ground, it becomes a king, and is crowned, by another

piece being placed on it. It may then be moved backwards and forwards at pleasure, and can take both ways. When a player neglects to take a piece, he is what is called *huffed*, that is, he loses the piece that ought to have been moved. The *laws of the game* are—1. The moves are alternate, the first move being determined by lot. 2. The choice of men to be also decided by lot, but they should be changed every three games. 3. Whenever a piece is touched, it must be played. 4. No player can remain more than five minutes without playing; he may be warned at the end of five minutes. 5. Neither player must leave the room without permission of his adversary. 6. In case of huff, the opponent, in lieu of taking a piece for the omission, can insist on his being taken. 7. Each party must sit free, so as not to obstruct a view of the board, and no pointing at pieces is allowed. 8. When a false move is made, the piece must be moved to whatever square the opponent dictates. 9. All disputes between players to be referred to a third party. 10. Bystanders must not make any remarks respecting the play during the game.

Although the game of draughts does not require the same amount of judgment and skill as chess, it requires circumspection and caution, and especially demands calculation of the effects of the different moves upon the fortunes of the game. The moves should be calculated mentally, and the men should be kept as much in the centre of the board as possible. The following games will convey a good general idea of draughts, and may be practised with advantage previously to playing with an opponent:—

GAME 1.

No.	Colour.	From	To	No.	Colour.	From	To
1	B	11	15	28	W	30	25
2	W	22	18	29	B	29	22
3	B	15	22	30	W	26	17
4	W	25	18	31	B	11	15
5	B	8	11	32	W	20	16
6	W	29	25	33	B	15	18
7	B	4	8	34	W	24	20
8	W	25	22	35	B	18	27
9	B	12	16	36	W	31	24
10	W	24	20	37	B	14	18
11	B	10	15	38	W	16	11
12	W	27	24	39	B	7	16
13	B	16	19	40	W	20	11
14	W	23	16	41	B	18	23
15	B	15	19	42	W	11	8
16	W	24	15	43	B	23	27
17	B	9	14	44	W	8	4
18	W	18	9	45	B	27	31
19	B	11	25	46	W	4	8
20	W	32	27	47	B	31	27
21	B	5	14	48	W	24	20
22	W	27	23	49	B	27	23
23	B	6	10	50	W	8	11
24	W	16	12	51	B	23	18
25	B	8	11	52	W	11	8
26	W	28	24	53	B	18	15
27	B	25	29	&c.			

White loses.

GAME 2.

No.	Colour.	From	To	No.	Colour.	From	To
1	B	11	15	28	W	30	25
2	W	22	18	29	B	6	9
3	B	15	22	30	W	13	6
4	W	25	18	31	B	1	10
5	B	8	11	32	W	22	13
6	W	29	25	33	B	14	18
7	B	4	8	34	W	23	14
8	W	25	22	35	B	16	30
9	B	12	16	36	W	25	21
10	W	24	20	37	B	10	17
11	B	10	15	38	W	21	14
12	W	21	17	39	B	30	25
13	B	7	10	40	W	14	9
14	W	27	24	41	B	4	15
15	B	8	12	42	W	9	6
16	W	17	13	43	B	2	9
17	B	9	14	44	W	13	6
18	W	18	9	45	B	15	18
19	B	5	14	46	W	6	2
20	W	24	19	47	B	7	10
21	B	15	24	48	W	2	6
22	W	28	19	49	B	10	14
23	B	14	7	50	W	6	9
24	W	32	27	51	B	25	21
25	B	10	14	52	W	31	26
26	W	27	24	53	B	14	17
27	B	3	7	&c.			

Drawn.

DRAWERS.—Receptacles for clothes and other articles called, collectively, a chest of drawers. In order to render them more convenient and serviceable, each drawer should have apportioned to it a certain class of articles, one being confined to heavy articles, such as sheets, towels, &c., another to wearing apparel, another to lighter materials; so that there can never be any difficulty in finding any particular thing when required. In purchasing this article of furniture, it is always wiser economy to select them made of the best materials and of proper construction; the purchaser taking care not to trust alone to the mere outward appearance, by opening and shutting the drawers to test their fitness, examining and trying the locks, &c. Thus selected, drawers will last for many years, and never need repair.

DRAWING, ARTISTIC.—Books: *Burn's Prospective Drawing*, 27*s.*; *Harding's Drawing Book*, 24*s.*; *Child's Advanced Drawing Book*, 7*s.* 6*d.*; *Child's Elementary Drawing Book*, 7*s.* 6*d.*; *Harriet Bolton's Drawing Book*, 7*s.* 6*d.*; *Tate's Drawing Book for Boys and Girls*, 1*s.* 6*d.*; *Dibdin's Copies*, 2*s.* 6*d.*; *Howard's Human Figure*, 4*s.*; *Harley's Progressive Landscape*, 7*s.* 6*d.*; *Cooper's Animals*, 10*s.* 6*d.*; *Child's Figures*, 7*s.* 6*d.*; *Andrew's Flowers*, 9*s.*; *Grundy's Shipping*, 9*s.*; *Barnard's Trees*, 7*s.* 6*d.*; *Child's Objects*, 7*s.* 6*d.*; *Houlston's Exercises—Light, Shade, and Colour*, 3*s.* 6*d.*; *Weigall's First Principles*, 1*s.*; *Williams's Drawings from Models*, 3*s.*; *Miniﬁe's Geometrical Drawing*, 21*s.*; *Hassell's Drawing in Water Colours*, 5*s.*; *Krust's Inventive Drawing, parts*, 2*s.* 6*d.*; *Sopwith's Isometrical Drawing*, 12*s.*; *Harley's Drawings in Pencil and Chalk*, 1*s.*; *Taylor's Lineal Drawing*, 5*s.* 6*d.*; *Hullamandel's Drawing on Stone*, 7*s.* 6*d.*; *Robinson's Outlines*

7d.; *Deacon's Perspective*, 4s.; *Malan's Aphorisms*, 3s. 6d.; *Ruskin's Elements*, 7s. 6d.; *Binn's Mechanical and Engineering*, 9s.; *Burn's Ornamental*, 7s.; *Waagen's Collections*, 18s.

DRAWING-ROOM. — This being the ordinary sitting-room of the ladies, and what may be termed the state apartment of an establishment, much taste and refinement are required in decorating and furnishing it. The prevailing tone should be that of lightness combined with richness, and the carpets, curtains, hangings, and furniture generally should be contrasted so as to form a harmonious whole. The view from the drawing-room should be pleasing and picturesque, and will be considerably heightened through the medium of a bow-window. Settees, sofas, ottomans, &c., should be arranged round the room in the most convenient manner. A large round table should occupy the centre of the room, on which books, prints, &c., may lie, for the amusement of the company; card-tables, chess-tables, fire-screens, flower stands, &c., complete the decorations. The arrangement of the multitudinous furniture and ornaments must be left to the taste of the lady of the house. The chief thing to be avoided in the disposition of the articles is a vulgar, crowded effect; everything should seem to contribute to comfort or amusement, and there should be nothing superfluous.

DREAMS may be defined as those trains of ideas which occupy the mind, or those imaginary transactions in which it is engaged during sleep. Although the consideration of the phenomena in connexion with dreams has engaged the attention of some of the profoundest minds, it has not yet been satisfactorily accounted for, some slight connexion being established between cause and effect, and the remainder resolving itself into surmise and conjecture. One thing is certain, which is that, generally speaking, during perfect health dreams are but faintly remembered if at all, whilst in sickness they become intensified, and dwell upon the memory long after the waking sense has returned. It is also feasible to suppose that dreams are, to a certain extent, influenced previously by the state of the mind or the condition of the body: thus, if a person retire to rest immediately after quarrelling with some person, his dreams will, in all probability, be influenced by the event that immediately preceded sleep. Also, if a person eat a hearty supper, and retire to rest immediately afterwards, the chances are that he will experience frightful dreams. The powerful effects of terrible dreams both upon the mind and the body are frequently serious and lasting, whilst the sleep that accompanies them fails to effect its office of soothing the mind and nourishing the body, and gives a person upon waking that unrefreshed and languid sensation which every one must have felt at times. It is therefore important to secure, if possible, pleasant dreams, and although no absolute recipe can be given to secure this boon, still they may, in a great measure, be obtained by exercising a watchful care over the passions and appetites during our waking moments.

DREDGING.—1. Flour mixed with grated bread. 2. Sweet herbs dried and powdered. 3. Minced sweet herbs, butter, and claret, especially for mutton and lamb. 4. Water and salt. 5. Cream and melted butter. 6. Yolks of eggs, grated biscuit, and juice of oranges.

DRESS.—See APPAREL, APRON, BOOTS, COAT, HAT, TROUSERS, WAISTCOAT, &c.

DRESSES. — These articles of wearing apparel are best preserved in drawers and wardrobes, especially the latter, where they may be put away without rumpling and creasing. When they are taken off they should be well shaken, to free them from the dust, &c., contracted in the wearing. The dress that is worn out of doors should be exchanged for an older and easier garment to be worn indoors; a proceeding that will not only conduce to comfort, but tend to preserve the dress considerably longer than if worn indiscriminately.

DRESSES FADED, TO BLEACH.—Wash the dress in hot suds, boil it and rinse it, then dry it in the sun. Should it not be rendered perfectly white, let it remain in the sun for several days.

DRESSING-ROOM.—This apartment, as its name implies, is called into requisition when making the toilet; it should be furnished therefore with every imaginable convenience in connexion with the various operations of the toilet, and rendered as comfortable as possible. It should be situated as near the bed-room as the general arrangement of the house will allow, and if possible it should communicate directly with the sleeping apartment. Dressing-rooms are not only conducive to comfort, but to health, as the ablutions and frictions of the body must necessarily be more effectively performed in an apartment where there is fresh air than in one where the atmosphere is vitiated by the breath of the sleeper during the night.

DRESSINGS, SURGICAL.—These consist chiefly of lint, bandages of all sorts and lengths, some fine cotton or wool, adhesive plaster, oilskins to cover wounds, sponges, and a few simple instruments, merely sufficient for the purpose of dressing the ulcers or wounds that may call for attention.—See BANDAGE.

DRESS-MAKING. — When dresses are made by the wearer herself, or under her immediate supervision, they cost less than when given out to make; but at the same time so good a style and fit are seldom secured as professed dress-makers accomplish. Everything depends upon a lady's taste, and if she be very apt she may, by the aid of patterns, become an accomplished artist. Books: *Dressmaker and Milliner*, *Houlston's Industrial Library*, 1s.; *Howell's Dressmaking Handbook*, 5s.; *Ladies' Handbook of Dressmaking*, 1s.; *Adams's How to Make a Dress*, 1s.; *Adams's Dress for Ladies*, 1s.

DRIPPING.—This well-known article of culinary use may be considerably economized by judicious management. During the first hour of roasting, the dripping-pan may be emptied once or twice, and abundance left for basting. Dripping put aside in this manner will be much fitter for all culinary

purposes than that which has acquired a rank taste, either from burning cinders or being exposed to the action of a fierce heat. Dripping may be clarified as follows:—Put it into a pan with plenty of cold water, let it boil for a quarter of an hour, strain all together through a sieve; next day take the fat off the top carefully, and scrape the under side; repeat this boiling twice more, then put it into pans, quite free from water, and tie it over.

DRIVING.—The art of driving consists of a few simple rules. 1. Always keep to the left or *near* side, except when passing another vehicle, which you do on the right or *off* side. 2. Do not turn sharply round corners, but give a full sweep, so as to allow room for any vehicle coming in an opposite direction. 3. When you pull up or turn round, intimate your intention by holding up your hand or whip, so that those behind you may be made aware of the fact. 4. When going down hill, hold the reins tightly, as that will in some measure support the horse; when going up hill, the reins may be held slacker; at all times, however, the reins should be held in the hands with moderate firmness, so that you may check a horse on the instant when he stumbles. 5. Do not employ the whip too frequently, or tug capriciously at the reins; such treatment not only spoils a horse's temper, but renders him callous and indifferent to your command. 6. A horse will go a greater distance in a shorter space of time, and with less distress to himself, if driven at a moderate pace throughout, instead of galloping one moment, and being compelled to subside into a walk the next. 7. When a horse has the habit of shying, draw him gently aside from any startling object as you approach it; also hold the whip on the shady and not the sunny side of his body. 8. If a shoe gets loose or comes off, have it rectified as soon as possible, instead of waiting till you reach home; both the animal and yourself will perform the remainder of the journey with greater ease and comfort, and an attack of lameness may be prevented. 9. If a horse runs away, do not abandon all controul over him, but continue to guide him as if he were going at an ordinary pace; generally speaking, the horse will yield mechanically to the rein, and thus danger may be escaped. 10. Treat a horse generally with gentleness and kindness, stroke his neck occasionally with the whip, pat his back, and now and then call to him by his name. Horses invariably express their gratification at these little attentions by their gestures, and renew their efforts and increase their pace, as a sort of grateful acknowledgment to the driver.

DROP CAKES.—Beat to a cream twelve teacupfuls of sugar and one teacupful of butter; add five eggs well beaten, a saltspoonful of salt, four teacupfuls of sifted flour, and one teacupful of milk; beat all well together, and drop it on buttered paper in small cakes; bake them for twenty minutes.

☞ Sugar, 12 teacupfuls; butter; 1 teacupful; eggs, 5; salt, 1 saltspoonful; flour, 4 teacupfuls; milk, 1 teacupful.

DROPS, IN CONFECTIONERY.—See ACIDULATED, APRICOT, BARBERRY, CHOCOLATE, CURRANT, GINGER, LEMON, PEPPERMINT, RASPBERRY, &c.

DROPSY.—Dropsies, though generally regarded as special diseases, are in fact only affections consequent on some organic disease or state of high functional derangement, either of an inflammatory or febrile character; such as disease of the kidneys, liver, or intestines, or from scarlet fever, or it may result from debility; the immediate cause appearing to reside in some pressure on the veins and absorbents. The general symptoms of dropsy are, loss of appetite, red tongue, dry skin, difficulty of breathing, cough, checked secretions, and either general or partial swelling, which on being pressed leaves pits in the cuticle; besides which there is much thirst and the skin is of an unnaturally pale colour. The treatment of dropsy must depend upon the organ and the form of disease that has given rise to the dropsy, the two chief objects to be aimed at being first to equalize the circulation, and next to promote the absorption of the effused serum.

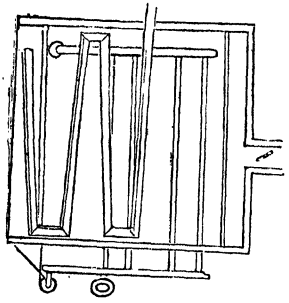
DROWNING.—A person taken out of the water should be carried, with the face downwards, as gently as possible to the nearest house, the body well dried and placed in a heated bed, with bottles of hot water applied to the feet, groins, and arm-pits; the mouth should be cleansed of all mucus, and the lungs inflated with air, as recommended in suspended animation; apply heated bricks or electricity to the spine, and when swallowing is restored, some wine and water, or gruel with a little brandy, is to be administered. Or respiration may be attempted by one person with both hands pressing down the chest, while another in like manner presses up the belly, continuing this alternate process as long as there is any reasonable hope of benefit accruing. Another process is that of placing the body well dried on its side, and exciting the lungs by a steady but gentle pressure upon the abdomen, reversing the body from side to side; while along with these means the patient is to be kept constantly hot with bricks or bottles of water, giving, as in the former instance, the warm stimulant as soon as the stomach is capable of receiving it.

DRUGGET.—A coarse woollen cloth, supplying a cheap carpet. They are chiefly used for bedrooms, stairs and passages, and also for covering other carpets.

DRUGS.—To preserve these more surely, they should be kept in well stoppered bottles. All vegetable medicines lose their virtues in the course of a few months, if not carefully closed from the air, and even in bottles they seldom keep good for a year. It is, therefore, desirable to purchase them in small quantities at a time, and to renew them at intervals of twelve months. Tinctures will keep for a much longer time; but even they, in the course of years, lose a portion of their properties; though, at the same time, as the spirit evaporates, they become more concentrated, and consequently stronger in a given quantity, until their

virtues become lost by keeping. All drugs should be kept in a receptacle made expressly for them, with each ingredient distinctly labelled on every bottle or package; by this means they will always come ready to hand, and the liability to make a mistake will be considerably lessened.

DRYING CLOSET.—A receptacle for drying clothes within doors, in connexion with the laundry and washhouse. By this means the health and comfort of those employed are greatly promoted, by their being almost entirely free from the pernicious



effect of damp vapour, and in not being inconvenienced with great heat in hot weather; the linen, also, is kept quite free from smoke and dust. The drying closet may be eight feet by six feet, and may contain four wooden horses, each with five rails or bars. Each horse runs in and out of the closet upon two small iron wheels, upon an iron railway. One such horse will hold six shirts, or a proportionate quantity of other linen, and the whole will dry off as much and as speedily as six women can wash in succession. Or the drying closet may be limited in its capacity to two horses only, and the heat may be sufficient to dry the linen in an hour.

DRYING CLOTHES.—When clothes are hung out to dry, great care should be taken to avoid palings, or any materials that may communicate a stain, particularly iron, as this will cause iron-moulds. All articles intended to be white should be hung in the sun as much as possible, and when they acquire a bad colour, and require a kind of bleaching, they are best laid out on the grass, and prevented from blowing away by placing clean but heavy stones on them. Dyed and printed articles should never be hung in the sun, but dried in the shade; a shed or other sheltered place may therefore be selected for this purpose. Some articles require particular modes of hanging them up to dry. Very thick articles, as quilts, waistcoats, &c., are best hung over two lines placed a few feet apart, in order that both sides may be sufficiently exposed to the air. The summer months are best for washing thick and heavy articles of furniture, as blankets, counterpanes, bed curtains, &c., on account of the greater facility with which they may be dried out of doors in that time of the year, and thus, also, acquiring a better colour. Laces and veils require to be stretched smooth and tacked to a piece of white calico, before they are hung up. Muslin and other dresses must be stretched as smooth as possible, to prevent their becoming wrinkled in drying.

DRY ROT.—A process of decay that timber undergoes through being imperfectly seasoned or improperly ventilated. The maintenance of this ventilation when the house is finished will depend upon the judicious introduction of openings in the side walls, under all the floors, and under the eaves of the roof, for the admission of a free current of air. A circulation between the roof of a house and the ceiling of the uppermost room is maintained by small openings directly under the eaves, or by very small windows, loopholes, or slits in the gable ends. A circulation is promoted under the floors of the different stories of a house by the introduction of small iron gratings in the walls, communicating with the vacancies between the floors and the ceilings. One of the best preventives of dry rot is as follows: Melt twelve ounces of rosin in an iron pot; add three gallons of train oil and three or four rolls of brimstone, and when the brimstone and rosin are melted and become thin, add as much Spanish brown, or red and yellow ochre, or any other colour required, first ground fine with the same oil, as will give the desired shade; lay this on with a brush in a hot state and as thin as possible; some time after the first coat is dried, put on a second. This preparation will preserve timber for many years, and prevent the weather from penetrating through brickwork.

DRY STOVE.—A stove used in horticulture, chiefly devoted to the culture of succulents. In design, it need not differ from the greenhouse, unless, perhaps, in the stage being placed somewhat nearer the roof. The volume of air to be heated by one fire in the dry stove should not exceed two-thirds of that to be heated in a greenhouse or conservatory similarly constructed and situated.

DUCK BOILED.—Make a paste, allowing half a pound of butter to a pound of flour. Truss a duck as for boiling; put into the inside a little pepper and salt, one or two sage leaves, and a little onion finely minced; enclose the duck in the paste, with a little jellied gravy. Boil it in a cloth, and serve it with brown gravy poured round it.

DUCK BRAISED.—Lard two young ducks, and place them in a braising-pan with a slice of ham, a few onions, a bay leaf, pepper and salt, and a little stock; close the pan, and let it stand over a gentle fire till done; serve them with their own liquor. Morels, capers, and artichoke bottoms may be added.

DUCK HASHED.—Cut up the remains of duck into neat pieces, and put into a stewpan with a tablespoonful of flour; mix well, moisten with a glass or two of wine, and sufficient broth or water to make a somewhat thick sauce; season well, add mushroom ketchup, a little sugar and cay-

enne pepper; let it simmer, but not boil; take out the pieces, which dress upon toast, reduce the sauce, pour over and serve.

DUCK PIE.—Cut off the wings and neck of a duck, boil it for a quarter of an hour, cut it up while hot, save the gravy that runs from it; then take the giblets, add anchovies, a little butter, a blade of mace, six black pepper corns, two onions, a bit of toasted bread, a bunch of herbs, and a little cayenne pepper. Stew them till the butter is melted, then add half a pint of boiling water, and let them stew till the giblets are tender; then strain it, and put the giblets into the pie. Let the gravy stand till cold, skim off the fat, and put it with what runs from the duck at the bottom of the dish; then put in the duck well seasoned with pepper, salt, and butter, and cover with a short crust. Bake in a moderate oven until of a bright brown.

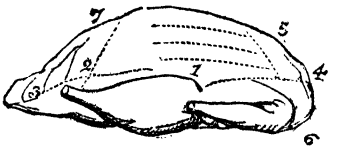
DUCK RAGOUT.—Half roast a duck, then score the breast in three places at each side, lightly strew mixed spices and cayenne into each cut, and squeeze lemon juice over the spices. Stew the bird till tender in good brown gravy; take it out and keep it hot; add one or two finely-shred shalots to the gravy, also a glass of red wine, and pour the gravy over the duck. Wild fowl and any sort of game may be re-warmed, after being cut up, in good gravy boiling hot and thickened with bread crumbs, seasoned with salt, and spices to taste.

DUCK ROASTED.—Put into its body a seasoning of parboiled onions mixed with minced sage, salt, pepper, and a slice of butter. Place it before a brisk fire, but not sufficiently near to be scorched; baste it constantly, and when the breast is well plumped and the steam from it draws towards the fire, dish, and serve it quickly with a little good brown gravy poured round them, and some also in a gravy tureen. Young ducks will take about half an hour to roast, full-sized ones from three quarters to an hour.

DUCK STEWED, WITH PEAS.—Truss a duck with the legs turned inside, which put into a stewpan with two ounces of butter, and a quarter of a pound of streaked bacon, cut into small slices; set the stewpan over a moderate fire, occasionally stirring its contents until it becomes lightly browned, then add a tablespoonful of flour, and when well mixed a pint of stock or water, stir occasionally until boiling, when add twenty of the smallest sized onions, and a bunch of parsley, with a bay leaf; let the whole simmer for a quarter of an hour longer, or until the peas are quite tender, when take out the duck, draw out the string, and dress it upon the dish; remove the parsley and bay leaf, season the peas and sauce with a little pepper, salt, and sugar, pour over the duck, and serve.

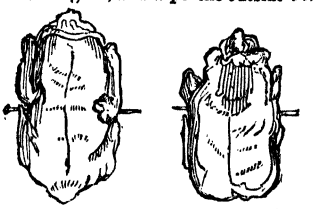
DUCK, STUFFING FOR.—Chop very finely about two ounces of onion, of green sage leaves about an ounce (both unboiled), four ounces of bread crumbs, a bit of butter about the size of a walnut, the yolk and white of an egg, and a little pepper and salt.

DUCK, TO CARVE.—After cutting a few slices off the breast, the legs should be removed, which is done by cutting in the direction 1, 2, 3; then the wings, 4 to 1; and



the merrythought, 5 to 6. Then displace the spine, according to the line of 7, 2, 3. Under this is the seasoning, part of which must be served to each guest. To take off the wings, insert the fork in the small end of the pinion, and press it close to the body; then put in the knife, and divide the joint down. Beside the wings there are two side-bones, which should be taken off, as also the back and lower side bones.

DUCK, TO TRUSS.—Clear the skin entirely from the stumps of the feathers, cut off the neck close to the back, leaving the skin of the neck long enough to turn over the back. Pull out the throat and tie a knot at the end. Loosen the liver and other matters at the breast end with the middle finger, and cut it open between the vent and the adjacent parts. Draw out all the entrails except the soul, wash the inside of the bird by pouring water through it, and wipe the outside with

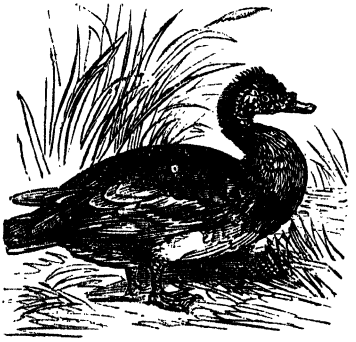


a dry cloth; beat the breast bone flat with a rolling pin, put a skewer into the wing, and draw the legs close up; put the skewer through the middle of the leg, and through the body, and the same on the other side. Cut off the end of the vent, and make a large hole, by which means the seasoning will be kept in more securely. The engraving represents the back and breast of the duck when trussed.

DUCKS, TO CHOOSE.—If ducks are fat they are hard and thick on the belly. If fresh killed the legs are limber, if stale, the feet are dry and stiff. The feet of tame ducks are thick, and inclining to a dusky yellow; wild ducks have smaller feet than tame ones, and of a reddish colour.

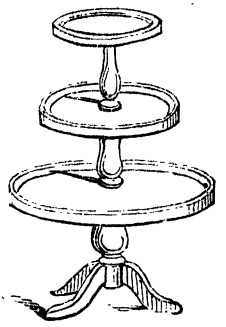
DUCKS, TO REAR.—There are many varieties of the tame duck, and many foreign kinds have been brought to this country. The most in request is the dark-coloured Rouen, originally from France, which is very prolific in eggs. The English or Aylesbury white variety is also considered valuable, as

large and profitable. The Muscovy duck, as seen in the engraving, is a distinct species, much larger than the common duck, and distinguished by a sort of compounded membrane of a red colour, covering the cheeks and extending behind the eyes. This kind is easily fattened, and is a profitable breeder. The tame duck will lay from eleven to fifteen eggs, and she sits for thirty or thirty-one days. If the eggs are not of the duck's own laying, they should be all of the same colour as her own, as she will sometimes turn out of her nest those of a different shade, or those belonging to other ducks. During incubation, or sitting, food must be placed beside her, and an opportunity may be sometimes afforded her of going into the water for a short period. Sometimes a duck will leave her eggs for so long a time that they will become quite cold and unfit for hatching, at other times she will take the precaution of covering them with hay, straw, or leaves, before she quits them. When the ducklings are hatched, there is no necessity for removing them; they are hardy, and



may be left to the care of the parent. In fine weather, as soon as all are hatched, they may be allowed to run on the grass, the duck being confined under a coop, with food made of oatmeal, or barleymeal in water, near at hand. When the ducks grow large they may be fed upon oats (never barley), which should be bruised; to which may be added pea-meal, some broth, chopped vegetables; such as carrots, turnips, potatoes, and lettuce, of which latter they are particularly fond. Ducks are the least expensive of any domestic fowl to keep, for if allowed to have their liberty, they will succeed in finding food for themselves; when, however, they are intended for the table, they should be confined some weeks previously, and fed as before stated, as they have gross appetites, and feed upon any garbage they meet with, which imparts a rank and disagreeable flavour to their flesh. Ducks may also be reared by placing the eggs under a hen, who will tend them with the same care as though they formed part of her own brood.

DUMB WAITER.—A well-known piece of furniture formerly much in use, and ex-



tremely convenient; the shelves should be made to turn round, which renders them still more serviceable.

DUMPLINGS.—See APPLE, CURRANT, NORFOLK, SUFFOLK, SUET, YEAST, &c.

DUST-BIN.—A place for containing the dust, and other refuse formed in carrying on the business of the house. It should, if possible, have a northern exposure, and be furnished with a door, to exclude smells. Attached to every dwelling there ought, properly, to be two distinct places for dust or refuse; one for vegetable and animal matters, dust, ashes, &c., which are convertible into manure; and another (which may always be of much smaller size) for broken earthenware, glass, stones, &c., which are of no use, except for the bottoms of roads or walks, or for grinding into powder, to be used for forming cement or anti-corrosive paint. Few materials thrown into a dust-hole produce more offensive and dangerous smells than recent bones, from the decomposing animal matter remaining on their surface; and it is always better to throw in some sifted ashes from the fire-place along with them; because the ashes, by absorbing the decomposing matter, prevent it from giving out an offensive smell. In whatever way the dust, ashes, bones, and vegetable refuse of a house are kept, as little moisture as possible ought to be admitted with them, as this promotes putrefaction. In country cottages, the dust-hole and the dung-heap are most frequently combined; and as the water, which in suburban town-houses is usually poured down the sink, is thrown into this pit, a very excellent manure is produced. In order that this manure pit may be as little injurious to health as possible, it should be some yards' distance from the cottage; and, in warm weather it should be covered with boards, or even with a straw hurdle, to prevent evaporation, and the diffusion of noisome smells.

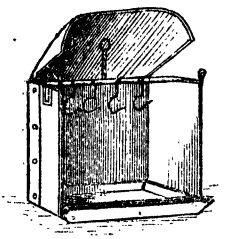
DUSTING.—A domestic operation which follows sweeping, after an interval sufficiently long has elapsed to allow the dust to settle. The window curtains, which have

been lifted up from the floor when the room was being swept, should now be released, opened, shaken, brushed with the proper brush, and neatly arranged over the hook or bands for the day. Tables, sofas, chairs, &c., are then to be carefully dusted and arranged. Ledges of wainscots, panels of doors, and window-panes must be swept with a small brush. Specimens and pictures with gilded frames, must be brushed with feathers or silk dusters. Chimneypiece ornaments must be carefully removed, and the chimneypiece either wiped free from dust, or washed with cold soap and water; the ornaments before being replaced must be carefully wiped with a fine linen duster. Bedrooms require a thorough dusting every day.

DUTCH CAKE.—Mix five and a half pounds of flour, one pound of butter, one and a half pounds of sugar, one and a quarter pounds of raisins, one pound of currants, five eggs, one nutmeg, thirty-six cloves, one ounce of cinnamon, one tablespoonful of allspice, two wineglassfuls of brandy, three tablespoonfuls of rose water; three pints of milk, a saltspoonful of salt, and yeast enough to raise it.

☞ Flour, 5½lbs.; butter, 1lb.; sugar, 1½lbs.; raisins, 1½lbs.; currants, 1lb.; eggs, 5; nutmeg, 1; cloves, 36; cinnamon, 1oz.; allspice, 1 tablespoonful; brandy, 2 wineglassfuls; rosewater, 3 tablespoonfuls; milk, 3 pints; salt, 1 saltspoonful; yeast, sufficient.

DUTCH OVEN.—A miniature roasting and toasting apparatus, designed for cooking small things, which could not well be cooked



by means of the spit, or the ordinary oven; they are suspended to the bars of the grate, and the hooks with which they are furnished are moveable, so that what is being cooked may be readily turned.

DUTCH PUDDING.—Mix two pounds of flour with a pound of butter, melted in half a pint of milk; add to this eight eggs, with the whites and yolks separately beaten, half a pound of fine sifted sugar, a pound of clean currants, and thirty chopped almonds. Put to this four tablespoonfuls of yeast, cover it up for an hour or two, and bake it for an hour in a wide shallow dish. When cold, it eats well sliced, as a sort of cake.

☞ Flour, 2lbs.; butter, 1lb.; milk, ½ pint; eggs, 8; sugar, ½lb.; currants, 1lb.; almonds, 30; yeast, 4 tablespoonfuls.

DUTCH RUSKS.—Take three pounds of flour, half a pound of butter, a quarter of a pound of sugar; mix half a pint of new milk with a quarter of a pint of yeast, rub the flour, sugar, and butter together; set sponge with the milk; when risen, work up the dough, and make it into small balls; bake on tins in a moderate oven for a quarter of an hour; next day cut them in two and dry them in the oven.

☞ Flour, 3lbs.; butter, ½lb.; sugar, ½lb.; milk, ½ pint; yeast, ½ pint.

DUTCH SAUCE. — Mix well together half a pound of butter, two tablespoonfuls of flour, and the yolks of six eggs; put this paste into a saucepan with some salt, whole pepper, the juice of three lemons, and a quarter of a pint of water; stir it over the fire until it is sufficiently thick, and serve with fish and vegetables.

☞ Butter, ½lb.; flour, 2 tablespoonfuls; eggs, 6 yolks; salt, and whole pepper, to season; lemon, juice of 3; water, ½ pint.

DYEING.—This process should, generally speaking, be intrusted to a person who makes it his profession; the following hints, however, will be found useful: pour the colour desired into water as hot as the hand can bear it; pass the stuff to be dyed through this water as often as necessary for it to imbibe the colour perfectly; take care not to squeeze or express it. Next, hang the stuff up till it is quite cold, which will only require a few minutes, then plunge it into two pailfuls of soft water, and afterwards in one of hard, and before hanging it up to dry, pass it through a little alum water; the process is terminated by pressing or ironing out the stuff before it is thoroughly dry.—See BLACK, BLUE, BROWN, GREEN, RED, YELLOW, &c.

DYSENTERY.—This is a disease more common in hot climates than cold ones, and both in its type and character approaches much more nearly than any other disease, to cholera. Dysentery is either the result of a congestive state of the bowels, or it proceeds from a chronic inflammation of the lining membrane of the colon.

Symptoms.—Dysentery commences with shivering, a griping flatulent state of the bowels, frequent discharges of mucus, or blood and mucus, and often blood alone; with loss of appetite, sickness, fever, and great debility.

Treatment.—When depending on inflammatory action, it is necessary to bleed and give cooling drinks with an emetic. In ordinary cases the treatment should begin with the warm bath or fomentations, with three grains of calomel, one grain of opium, and three grains of assafœtida pill; the whole made and divided into two pills, which are to be taken every six hours, and a starch injection with assafœtida tincture twice a day. As the symptoms improve, tonics are to be given, at first mild, and gradually increased in strength, and combined with wine and a soft unexciting diet.

DYSPEPSIA, or indigestion, is that impaired condition of the stomach when the food is only half or imperfectly digested; producing want of appetite, a sense of distem-

sion, debility, headache, languor, want of sleep, and all those constitutional symptoms that usually attend an overtaxed and weakened stomach.

Treatment.—To effect a perfect restoration in the tone of the stomach, an entire change in the mode of diet is absolutely necessary, also in the habits and pursuits of the patient; the stomach must first be emptied and slightly stimulated by an emetic, or by a few alterative doses of blue pill and rhubarb, and the system submitted to a regular course of such tonics as infusion of camomile with carbonate of soda, gentian with potass, and, after a time, infusion of quassia with a few drops of muriatic acid. The food should be at first light and simple, and comprise the most solid aliments, and such as will compel a long mastication before swallowing; all drinks or stimulants with the meal being strictly prohibited till the salivary glands yield of themselves enough saliva to macerate the food; and this can only be effected by a long and perfect mastication.

E.

EAR, AFFECTIONS OF THE.—The delicate yet important organ of the ear is subject to many diseases and accidents. The most frequent mischief to which the *external* part of the organ is subject, is partial or complete loss of the cartilage or shell of the ear, a result that either follows sabre cuts, gunshot wounds, or sloughing from blows or pressure. Inflammation seldom attacks the external parts, or, if it does, is in general of an erysipelatous character. When the cartilage has been lacerated, or part of its structure destroyed, the separated parts are to be placed as near as possible in their natural position, and kept together by two or three stitches, a warm moist poultice laid over the part, and a light bandage passed round the head to keep the dressing in its place. The external ear is also frequently the seat of scrofulous ulcers and ill-conditioned sores, and the skin behind the ear is particularly liable to small encysted tumours, which are very tedious in their suppuration, and cause considerable pain and inconvenience. The treatment is nearly the same for all these affections; a course of alterative and tonic medicines, a warm bran or bread poultice night and morning on the part, and when the discharge is fœtid and thin, a lotion made by dissolving two grains of nitrate of silver in an ounce of rose or distilled water, is to be used as a wash to the sores, once or twice a day; in very obstinate cases a small blister applied to the nape of the neck will speedily effect a cure, though in general, cleanliness, attention to the diet, and an alterative and tonic course of medicine, will effect a sure and far more satisfactory cure than can be obtained by any counter-irritant remedy that can be used. *Ear-ache* is a very painful affection of the auditory passage, consequent on cold or a slight degree of inflammation in the membrane of the ear; in all such affections the soothing system will be found the best and safest practice, and this consists of a little cotton dipped in oil with a few drops of laudanum placed in the ear, and a warm bran poultice over all, repeating the poultice every two hours; when, however, the pain is more intense, apply a leech below or behind the ear, and promote the bleeding by poultices.

EAR, FUNCTIONS OF.—By the function of hearing is understood the collection by the external ear of the waves of sound, their conveyance along the auditory passage to the tympanum and vestibule, and through the labyrinth of the internal ear to the filaments of the auditory nerve, distributed, or more properly expanded, over the membranous lining of the parts, and by these again conveyed to the brain for appreciation. To make this more intelligible, it must be understood that sound travels in undulating waves or tremors, which being received and collected by the shell-like cartilage of the ear, are transmitted in the same undulating currents to the drumhead or tympanum, a fine membrane-like parchment, that divides the external from the internal ear, and which being struck by the vibrations of sound, communicates its motion to an apparatus of four very small bones, which in their turn pass the vibration to the fluid contained in the tortuous canal or labyrinth, on the lining membrane of which is diffused the termination of the auditory half of the seventh pair of nerves; these sentient extremities receiving from the agitated fluid the impression of the sound, bear it along the trunk of the nerve to its seat of origin in the brain, where another function of the sensorium translates the impression into a definite meaning.

EARLY RISING.—The habit of early rising is important in both a physical and pecuniary point of view. No person who indulges in lying in bed late can be positively healthy, for, after the body has received its due amount of nourishment, every moment it lies in the heated and vitiated atmosphere only tends to relax the system and enervate the frame. If a person be in perfect health, he ought not to lie in bed later than six o'clock in the summer and seven in the winter, that is, supposing he goes to rest at a reasonable hour, say eleven or twelve o'clock. Early rising, however, requires resolution and a strength of will to put it in practice persistently, and in many cases it is necessary to have recourse to certain ingenious devices to aid the efforts of the would-be early riser, and to counteract the effects of sloth and irresoluteness. One person who relates his experience in this way, had a string attached to his bed-clothes, communicating with the room of some watchful servant, who at a certain hour in the morning denuded his master, and compelled him to rise in self-defence. Another person had a basin of cold water put immediately by the side of, and on a level with

the bed, so that at the hour for rising, he might turn his face over and immerse it in the water, which had the immediate effect of thoroughly awaking and refreshing him. One thing is certain, and that is, that no person can be an early riser unless he acts promptly, for if he lies in bed and keeps promising himself that he will get up in a few minutes, he is sure to deceive himself and lie till a late hour; therefore a person should step from his bed at once; the shock is but momentary, and must be experienced at whatever hour a person rises. The sacrifice which a person makes both to his worldly prospects, his moral welfare, and his health, by habitually lying in bed to a late hour, and, on the other hand, the advantages and pleasures to be derived from early rising, must be sufficiently obvious, and are borne out by the fact, that all persons who have risen to wealth and eminence by their own unaided efforts, and all those who have lived to a good old age, retaining their bodily and mental vigour to the last, have been during the whole course of their life habitually early risers.

EARTHENWARE.—The various wares known as china and earthenware are all compounds of clay with bone-earth, flint, and other similar materials, ground together and baked. According to the proportion of the clay will be the solidity of the china and the capability of being moulded; while the flint gives hardness, whiteness, and transparency, and the bone-earth increases those qualities. The chief kinds of china used in the present day are the Oriental, Dresden, Sèvres, several French kinds, and English varieties, made principally at Worcester and in the potteries of Staffordshire.

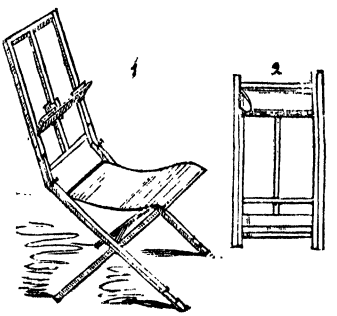
EARTHENWARE, TO CLEAN.—Earthenware articles may be washed in hot water, with the addition occasionally of a little soap, and the use of a brush. They should also be rinsed in clean water and dried with a linen cloth. A wooden bowl or tub should be used, to prevent cracking or chipping the brittle material.

EARTHENWARE, TO REPAIR. — See CEMENT.

EARTHWORMS.—Unless these exist in large numbers, they are not very destructive, but, on the contrary, by perforating the ground in every direction, and preparing it to receive air and moisture, materially facilitate vegetation. When, however, they are so numerous as to leave traces of their ravages on the surrounding plants, they may be destroyed as follows:—Dissolve in water three parts of quick lime newly made, and two parts of soap boilers' lye, or potash dissolved in water; pour this into the holes which the earthworms infest, when they will immediately emerge to the surface, and after a few moments languish and die.

EARWIG.—A very destructive insect to flowers and plants, and their ravages are especially committed upon the petals of roses, pinks, dahlias, &c. They may be captured by driving sticks into the ground, and placing on each an inverted flower-pot; the earwigs will climb up to find refuge under it, and may be taken out and killed. Clean bowls of tobacco-pipes placed in like manner on the tops of smaller sticks are very good traps; or very deep holes may be made in the ground; into these they will fall, and may be destroyed by boiling water.

EASEL.—A rest employed by artists for the canvas they are painting on. A portable



easel, for the use of artists out of doors has recently been introduced; this contrivance also combines a seat for the artist, and when not in use may be folded into a compact form. *Fig.* 1 represents an easel of this kind open. *Fig.* 2 illustrates the same implement closed.

EAU DE BOUQUET.—Take two ounces each of storax, lemon-peel, and nutmeg; six ounces each of coriander and calamus aromaticus; one ounce and a half of cloves; four ounces of iris of Florence; half an ounce of essence of bergamot; a drachm of essence of lemon, a drachm of rosemary; fifteen drops of otto of roses; a quarter of a drachm of ambergris; half a drachm of vanilla; three gallons and a half of spirits of wine; and a quart of orange-flower water. Bruise all the solid substances, except the amber, the iris, and the vanilla, and infuse them in the spirits of wine for several days; then distill, and add to the product the amber, vanilla, and iris; infuse them for several days, then filter the mixture, and add the orange-flower water. When used as a cosmetic, this mixture must be greatly diluted with water.

☞ Storax, 2ozs.; lemon-peel, 2ozs.; nutmeg, 2ozs.; coriander, 6ozs.; calamus aromaticus, 6ozs.; cloves, 1½oz.; iris of Florence, 4ozs.; bergamot, ½oz.; essence of lemon, 1 drachm; rosemary, 1 drachm; otto of roses, 15 drops; ambergris, ½ drachm; vanilla, ½ drachm; spirits of wine, 3½ gallons; orange-flower water, 1 quart.

EAU DE COLOGNE.—This favourite perfume may be compounded in a variety of ways; the following are some of the most approved:—

☞ 1. Oil of neroli, citron, bergamot, orange, and rosemary, 12 drops each; cardamom seeds, 1 drachm; spirits of wine, 1 pint; infuse for a week.

☞ 2. Rectified spirits of wine, 4 pints; oil of bergamot, 1 oz.; oil of lemon, ½oz.;

oil of rosemary, ½ drachm; oil of neroli, ½ drachm; oil of English lavender, 1 drachm; oil of oranges, 1 drachm; mix well and filter.

☞ 3. Essence of citron, 2 drachms; essence of bergamot, 2 drachms; essence of cedrat, 1 drachm; essence of lavender, ½ drachm; essence of orange-flowers, 10 drops; tincture of musk, ½ drachm; tincture of benjamin, 3 drachms; otto of roses, drops; proof spirit, 2 pints. Mix and filter.

☞ 4. (*Farina's.*) Infuse in a quart of spirits of wine a piece of benzoin about the size of a filbert, and a drachm and a half of cardamom seed; when these have stood forty-eight hours, add half an ounce of animal charcoal, shaking the bottle well, and when it has stood for an hour filter it through blotting paper; when filtered add a drachm and a half of bergamot, half a drachm of oil of rosemary, two drachms of essence of lemon, half a drachm of oil of lavender, fifteen drops of neroli, and two drops of oil of cloves; shake these together, and filter again.

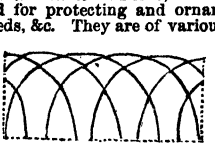
EBONY.—A wood naturally of a deep black colour, exceedingly hard, heavy, and durable. An *imitation of ebony* is made by steeping pale-coloured woods in a decoction of logwood or galls, allowing them to dry, and then washing them over with a solution of the sulphate or acetate of iron. When dry, they are washed with clean water, and the process repeated if required. They are lastly polished or varnished.

ECARTE.—A game played by two persons with thirty-two cards; the deuce, three, four, five, and six of each suit being discarded. Five points scored are game. Whoever wins three tricks, scores one point; whoever wins all the tricks, scores two. The following are the rules of the game:—1. The deal is decided by cutting—highest deals. 2. The cards are dealt by two and three, or by three and two. Five are given to each player, and the eleventh is turned up, which indicates the suit of trumps. 3. A trump is superior to every other card of a different suit. 4. The king counts as one point in favour of the person on either turning it up or holding it. 5. The holder of the king should distinctly announce that "he has the king." If the holder is also the player, he ought to make this announcement before he leads his first card, except when he plays king first, and in that case it is allowable to announce it after it is on the table, but before it is covered by the adversary's hand. 6. When a player is not satisfied with the hand dealt him, he proposes to take other cards, saying, "I propose;" the dealer accepts or refuses, according to whether he is satisfied or not with what he holds; if he accept, he gives as many cards as his adversary requires, and then serves himself with as many as he may want. 7. Whoever plays without changing cards, or whoever refuses to change cards, loses two points if he make not three tricks, and making them scores but one. 8. When a proposition is once made or refused, there can be no retracting; also, when once a certain number of cards are asked for, that number can neither be diminished nor increased. 9. If after the second time of giving cards, the player still wishes to propose, he has the power of so doing; likewise after the third, and so on until the pack is exhausted; but the dealer, in refusing, no longer loses two points if he does not make three tricks. 10. It is obligatory to play the suit announced; thus, any one calling "club," and playing spade or any other suit, is obliged, if the adversary desire to retake his card and to play the suit announced; if he has none the adversary can call a suit. If, however, the adversary deem the card played more favourable to him than the suit announced, he has the right to hinder its being taken back. 11. Whichever, from mistake, or otherwise, announces the king and has it not, loses one point independently of the result of the deal. 12. When a player deals out of his turn, and the error is perceived before the trump is turned up, there is a fresh deal by the proper dealer; if the trump is turned up, the deal is put aside for the present, but holds good for the next time; if the error is not perceived until after the hand is played, the deal holds good, since the fault lies between the two players, the one in having dealt, the other in having allowed the deal. The *method of playing* is as follows:—When a player holds (comprising the king of trumps) three cards which ensure the point, he ought always to "propose" if the two remaining cards are not sufficiently strong to give reasonable expectation of the *vole* (winning all the tricks). It is even good play to propose, were it only for one card, in order to hazard receiving a refusal, or to make the vole if the proposal is accepted; and there should be five cards in the *rentrée* (or take in). When a player has hopes of making the vole, and the adversary cannot answer a lead of trumps, it is better to play a king if single, than to continue trumps. When a player expects to make the vole, and has not trumps sufficiently strong to begin by playing them, he must be careful to keep changing his suit, to prevent his card being taken by a higher one of the same suit, and also to be able to make a trump, whatever it may be, at the fourth card, after having secured the point. When a player has made two tricks, and remains with the queen of trumps and two small ones, knowing the king to be in the adversary's hand, he ought to lead with one of the small trumps, and wait with the queen guarded. When there is a fear lest the adversary should make the vole, and the player has but one trump and four weak cards, without any hope of making the point, he must play his strongest single card, in order to get a chance of employing his trump in case the suit of his single card should be led up to him. When the game is three against four, and the player who is at four makes his adversary play, or plays himself without changing, the one who is at three, if he have the king, would do well not to announce it, in order to draw his antagonist into the error of leading trumps to pass his

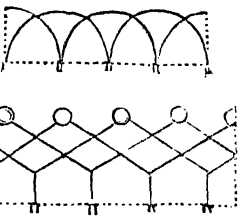
good cards, and be taken by the king, which he did not expect; thus losing the point which he would perhaps have won had he known that the king was in the adversary's hand.

ECONOMY.—Economy should be the first point in all families, whatever be their circumstances. A prudent housekeeper will regulate the ordinary expenses of a family according to the annual sum allowed for housekeeping. By this means the provision will be uniformly good, and it will not be requisite to practise meanness on many occasions for the sake of meeting the extra expense attending one. The best check upon outrunning an income, is to pay bills weekly; for you may then retrench in time. This practice is likewise a salutary check upon the accounts themselves. A bill of parcels and receipt should be demanded, however small the amount, even if it be paid at the time of purchase; and, to avoid mistakes, let the goods be compared with these when brought home; or, if paid for at a future period, a bill should be sent with the articles, and regularly filed on separate files for each tradesman. An inventory of furniture, linen, china, &c., should be kept, and the items examined by it twice a year, or oftener, if there be a change of servants. In articles not in common use, tickets should be sewn on each, numbering them, and specifying to what they belong. The following minor hints are also worth observing: Preserve the backs of old letters to write upon. If you have children who are learning to write, buy coarse white paper by the quantity, and keep it locked up ready to be made into writing books; it does not cost half so much as it does to buy them at the stationer's. Do not buy ready-made articles if they can be made at home; by the latter method they will be found much cheaper and better. Linen rags should be carefully saved, for they are extremely useful in sickness. If they have become dirty and worn by cleaning silver, &c., wash them, and scrape them into lint. Do not cook a fresh joint whilst any of the last remains uneaten; with a little judgment, many excellent dishes may be contrived. Have all pieces of stale bread eaten up before a new loaf is cut, and put all the pieces left at meals into a pan, to be converted into puddings and cakes. Finally, throw nothing away that can be of the slightest service to your own family, or of benefit to a poorer one.

EDGING.—In horticulture, the materials employed for protecting and ornamenting flower-beds, &c. They are of various sorts,

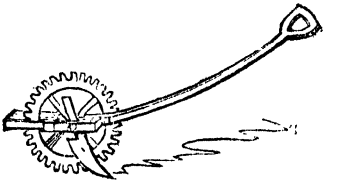


and are formed of wire, basket-willows, laths, boards, and iron. They may also be of various forms, as seen in the engravings. The basket-edging is a rim or fret of iron wire, sometimes of laths, formed, when small, in entire pieces; and when large, in segments. Its use is to enclose dug spots or



lawns, so that when the flowers and shrubs cover the surface, they appear to grow from, or yield some allusion to a basket.

EDGING IRONS.—Implements for trimming borders, turf, &c. They are of various constructions. The form seen in the engraving is one of the best for this purpose; in using it, no garden-line is necessary, if the line to be edged is long and straight; but



when a line is used, it should be placed between the wheel and the cutting part of the machine. A certain degree of pressure on the handle is necessary when the ground is hard. When in use, the cutters should be sharpened every morning, and several should be taken out by the operator, in order that the instant one loses its cutting edge, its place may be supplied by another.

EDUCATION.—The education of children is a duty about which every parent should be, and generally is extremely solicitous. Where there is a large family, however, and the income happens to be limited, the great consideration is, how to provide a good education for the children upon reasonable terms. But, in endeavouring to attain this end, every consideration should not be sacrificed to cheapness; for it is well known that there are establishments where children are professedly fed, lodged, and educated, upon terms which cannot be remunerative, if justice be done; and, as a consequence, the children thus secured have an insufficient supply of food, are miserably accommodated, and are suffered to run wild, without any regard being paid either to their morals or their education. On the other hand, there are establishments where, if all these requirements are attended to, they are charged for at an unreasonable and exorbitant rate; such as persons in the most

affluent circumstances only can afford to pay for. What, therefore, is required is a medium between these extremes, where children may derive the advantage of a sound education and the comforts of a home upon moderate terms. Many such establishments exist in every town in England, and they may be found by a little inquiry, or by consulting the advertising columns of the newspapers. The terms charged at such establishments are from twenty pounds a year, upwards, additional expenses being of course incurred for instruction in any special accomplishment, which it is desirous the pupil should learn; French, Italian, German, music, singing, dancing, &c., usually come under this exceptional head. Before incurring the expense for these items, however, it should be considered whether these accomplishments are likely to be of future service, and compatible with the pupil's after life; and, in all cases, it is better that a few accomplishments should be learned perfectly, rather than gaining a superficial acquaintance with many.

Some parents are in favour of having their children educated abroad, others are opposed to this system, and will insist on keeping their children at an English school. The best method of all is, to let children have the earlier portion of their education in England, and finish it at some foreign seminary; by thus placing the children of one nation with another, the mind becomes expanded, and enlarged views take the place of narrow prejudices. Again, by thus sending children abroad for their education, the language of the country, especially its idioms and pronunciation, are attained with a greater degree of facility and precision than they could be in the mother country, under the ablest of instructors. The terms for education in France and Germany are upon a somewhat lower scale than those of England, especially in the provincial towns. Before, however, children are intrusted to the care of a foreigner, the strictest inquiries should be made respecting the establishment and the proprietor, owing to the remoteness of the school; as in most instances the care of the child will be totally transferred from the parent to the temporary guardian. Respecting the separate merits of children being educated at home and at school, there cannot be a question. At home a child is humoured and indulged, and many wholesome rules and regulations are relaxed, without which a school could not exist. But at school, certain duties have to be performed, and the scholar well knows that if he neglects them he will meet with merited punishment. Home education has also a bad moral influence; for children, being too tenderly cared for, are unfitted to meet those trials experienced from home good humouredly, and their tempers thus become soured, and their spirits crushed. A school, however, is a miniature world, where every member is urged onward by a spirit of emulation, is impressed with the necessity of subordination, taught to despise small troubles, and learns how to defend his right. By a parity of reasoning, establishments termed day-schools are not so salutary for the pupil as boarding-schools; for here again the indulgence of the parent neutralizes the authority of the instructor, and in nearly all cases the child is encouraged to bring home idle tales of every petty grievance, and to be sympathised with accordingly, which a distance from home would, as a matter of course, effectually prevent. Finally, when once a child is placed under the care of an instructor, no parent should interfere with the system of education or mode of training pursued, by introducing theories of his own. Nor should he display the bad taste to side with the pupil against the master, when the former has been disobedient and refractory.

EEL.—A dainty fish much prized for the table. It is, however, not much sought after for sport by the angler, and is by many accomplished anglers considered scarcely deserving of notice. The eel is found in rivers, reservoirs, ponds, canals, &c., being very fond of still water with a muddy bottom. Those that have chosen for their habitation rivers having uninterrupted communication with the sea — unlike the salmon — are supposed to migrate to the sea, deposit their spawn, and the young to enter the rivers, and pursue their upward way in large swarms, until they find fresh water wherein to take up their future habitation. Ancient authors differed as to the means of propagation of the eel, and supported a theory which may be called a re-creation of mud by the sun's heat when it shines upon the overflowing of the Nile, or from the putrefaction of the earth, or of a particular dew falling in May or June; and even in the present day there is a difference of opinion as to whether the eel is oviparous or viviparous.

The eel may be taken by the angler at the bottom with worms, loach, gudgeon, bleak, minnows, a small lamprey, the entrails of fish, flesh, or fowl, or, indeed, with almost anything; but it is generally caught by night-lines, to which several hooks are attached, and which are cast into the water by a brick, stone, or other weight being attached thereto, and the other end pegged into the bank, or tied to a branch of a tree, or to a bunch of weeds on the water-side. Sniggling is a plan successfully adopted for catching eels in the day-time, when they creep into holes in the bank or woodwork, or under stones or logs of wood. It is practised by baiting a small hook or stout needle bound to the line for half of its length only with a worm, and presenting it at the entrance of the hole, or at the edge of the stone or log by the aid of a bent rod; the eel takes the bait, and the angler holds the line taut until his prey, gradually relaxing its adhesion to its shelter, is drawn out. Bobbing also is practised by first stringing a quantity of large lob worms upon worsted, attaching them to a bell-shaped piece of lead, sufficiently large to readily sink them; the lead and worms are secured to a pole of sufficient length, say twelve or fourteen feet long, by a piece of stout whipcord. The eel may be felt to bite, when it is to be

gently but quickly lifted, either out of the water, or be suffered to drop into a basket floating ready for its reception; their teeth become entangled in the worsted, from which they cannot disengage themselves, if the angler is an adept at the process. Eels are caught in rivers in baskets or pots, to which access is easy, but retreat difficult, wherein have been placed some small fish or some flowers of the elder tree, and in bucks, which are large baskets made on the same principle, fitted to a framework, and at suitable periods and convenient states of the water, lowered therein, when the eels run into them on their downward passage to the sea, or when seeking a new locality. Eels are also taken by spearing them whilst they are lying singly on the bottom, or in clusters imbedded in the mud. The instrument used, called an eel-spear, is of six or eight prongs of flattened iron, the edges of each prong being notched, and fastened to a long pole. It is then violently plunged into the mud and quickly withdrawn; the eels are retained between the prongs by their serrated edges.

EEL FORCEMEAT.—Take two fine eels, boil them till they are nearly done, then put them into cold water: broil a perch; when it is nearly done, lay it to cool; take the meat from the bones of both of the fish, mince it, and add the liver of a cod minced also; season with pepper and salt, add sweet herbs, some small onions minced, some scraped bacon, a little veal suet, a few bread crumbs, and a piece of butter; put the whole into a mortar, and beat it to a paste. It is used for fish pies, and adds a fine relish to all made dishes of fish. It also may be rolled up into balls, and fried or stewed.

EEL PIE.—Skin and prepare the eels, roll them in spices and sweet herbs, boil the skins, heads, and bones, and make as much stock as will be required; cut the eels into pieces, lay them in a dish, and cover with a paste; bake in a moderate oven.

EEL SOUP.—Take two pounds of cleaned and cut eels, two quarts of water, a crust of bread, two blades of mace, two onions, a few corns of white pepper, and a bundle of sweet herbs: boil the fish uncovered till half the liquor is wasted, then strain it, and serve it up with toasted bread.

EELS BAKED.—Skin and clean the eels, cut them in lengths according to the capacity of a shallow pan; stand them upright in the pan, and fill it with them; put in a little water, some salt, pepper, shalots cut small, sweet herbs, and a little minced parsley; set them in an oven to bake. When they are done, pour the liquor that comes from them into a saucepan, and flavour and thicken it with a piece of butter rolled in flour, and a little white wine.

EELS BOILED.—For this the smaller ones should be chosen. When they are well cleaned and skinned, cut off the heads, and put them into boiling salt and water, adding a little vinegar; parsley and butter are generally served with them.

EELS COLLARED.—Clean and skin the eels, take out the bones, and cut off the heads and tails; lay them flat, and strew over them a liberal supply of the following seasoning: grated nutmeg, grated lemon-peel, some salt, pepper, minced parsley, sweet marjoram, a little thyme, savoury, and a leaf or two of sage; roll them very tight, and bind them firmly with tape. Boil the heads, tails, and bones in two quarts of water and a pint of vinegar, with an onion, three bay leaves, some salt and pepper; when it boils, put in the eels; and when tender, take them out, and boil the liquor a little longer; strain and skim it, and when cold, put in the fish. If the eels are to be kept long, it will be necessary to boil up the liquor occasionally, and to add a little fresh vinegar.

EELS FRIED.—Clean and skin the eels, cut off their heads, and divide them into pieces three or four inches long, and then score across in two or three places; season them with pepper and salt, and dust them in flour, or dip them into an egg beaten up, and sprinkle them with finely grated bread crumbs. Fry them in fresh lard or dripping; let them drain and dry on the back of a sieve before the fire; serve with melted butter and parsley.

EELS PICKLED.—Skin some eels, slit them up the middle, take out the bones, and rub the flesh over with salt; let them lie three days and turn them every day; then take them out of the brine, wash them in water, and wipe them dry with a cloth; season them with nutmeg, cloves, mace, and a bay leaf; roll them up, and tie them tightly in a cloth; boil them in an equal quantity of white wine and vinegar; when they are tender, take them out of the liquor and set them to cool; when quite cold, put them into the same liquor again; and if there is not sufficient liquor, boil some more vinegar, white wine, and spices. Put by in jars.

EELS POTTED.—Clean, skin, and bone them; season them well on both sides with pepper, salt, and mace; let them lie for six hours, then cut them into small pieces and pack them closely into a dish; cover them with a coarse paste and bake them. When quite cold, remove the paste, and pour over them clarified butter.

EELS, PROPERTIES OF.—The qualities of eels as an article of diet differ materially with their size; the smaller sorts are nutritious and comparatively easy of digestion, but the larger kinds, from the quantity of oil they contain, are apt to disagree with delicate stomachs. For this reason, they should not be partaken of until the greater portion of the oil has been previously extracted; this is done by boiling them very gently for some time until the oil rises, when the eels are to be taken out, and set aside for use.

EELS ROASTED.—After skinning an eel broil it on a clear fire, wipe and scrape it; clean it, and turn it in the form of a ring; put skewers into it of wood or silver; then put the eels into a stewpan, with a little butter, slices of carrot, spices, parsley, chives, and onions; add some stock and half-a-pint of wine, and boil. When the eel is half done, fix it on a spit; wrap it up in buttered paper

and roast it by a clear fire till done; take off the paper just before serving, in order to brown the fish. Serve with melted butter and anchovy sauce.

EELS SPITCHCOCKED.—Clean them well and rub them with salt; slit them up the middle and remove the bone. Wash and dry them, cut them into pieces three or four inches long, dredge them with flour and afterwards wipe it off, to render them quite dry. Dip them in a thick batter made of melted butter, yolk of eggs, with a little minced parsley, sage, a very small shalot, and a seasoning of pepper, salt, and cayenne. Roll the pieces in finely grated bread-crumbs or biscuit powder. Dip and roll them again, and broil them over a clear fire till they attain a light brown colour. Serve with melted butter flavoured with anchovy sauce, and slightly acidulated with lemon juice, or any favourite flavoured vinegar.

EELS STEWED.—Clean and skin the eels, and cut them into pieces about four inches long. Season well two pounds and a half with salt and black pepper; put an ounce of butter into a stewpan with a large handful of sorrel, three or four sage leaves, a small onion minced, a little grated lemon-peel, and an anchovy chopped small. Put in the eels, and pour over them half-a-pint of water, stew them gently for half an hour, shaking them occasionally; before serving them, add a little grated nutmeg, and the juice of half a lemon.

EELS, TO CARVE.—If eels should be brought to table whole, they should be divided into pieces three or four inches long; the thickest portion is considered the best. A little of the sauce should be served with them.

EELS, TO KILL AND SKIN.—The heads of the eels must be struck upon a block or hard substance, and this, by stunning them, causes them to suffer least. To skin them, take the head in your hand with a cloth and just cut through the skin round the neck, which turn down about an inch; then pull the head with one hand and the skin with the other, and it will come off with facility; to dress them, the belly must be opened, the interior taken out without breaking the gall, and the bristles which run up the back cut off.

EGG BALLS.—Pound a sufficient quantity of the yolks of hard-boiled eggs in a mortar, with as much raw yolk and flour as will bind the composition. Add salt, and make up in the form of balls the size of a marble. Put at least two dozen to a tureen of soup.

EGG CURRY.—Slice two onions and fry them in butter, add a tablespoonful of curry-powder; let them stew in a pint of good broth till quite tender; mix half a pint of cream and thicken with arrowroot or rice-flour. Simmer a few minutes, then add six hard-boiled eggs, cut into slices; beat them thoroughly, but do not let them boil.

☞ Onions, 2; butter, sufficient; curry-powder, one tablespoonful; broth, 1 pint; cream, ½ pint; arrowroot or rice flour, to thicken; eggs, 6.

EGG FLIP.—Heat a quart of mild ale, and pour it into a jug with a spout; in a similar jug beat up three eggs with a quarter of a pound of moist sugar, add a quartern of brandy or gin, and flavour with nutmeg. When the ale is quite hot but not boiling, pour it quickly into the jug that contains the eggs, return it back into the other jug, and thus keep pouring the mixture from one jug to the other, till the whole is thoroughly incorporated and perfectly smooth.

☞ Ale, 1 quart; eggs, 3; sugar, ¼lb.; brandy or gin, 1 quartern; nutmeg, to flavour.

EGG FORCED.—Boil six eggs hard, remove the shells, but leave the eggs whole; cover them with a forcemeat made with scraped ham, pounded anchovy, pounded veal and bacon fat, well mixed together and highly seasoned; brush them with the yolk of egg, and dredge them with bread-crumbs or vermicelli; fry them a pale gold colour, or put them in an oven for a quarter of an hour, and serve them up with gravy in the dish.

EGG HOT.—This is made in the same manner as the preceding, but without spirits or spice; eggs, ale, and sugar being the only ingredients.

EGG MARMALADE.—Blanch and pound with a little rose water two ounces of sweet almonds, two ounces of orange marmalade, and four ounces of citron; add two tablespoonfuls of brandy, the beaten yolks of six and the whites of two eggs, with an ounce of pounded loaf sugar; put it into a saucepan, and stir it till it becomes thick, then pour it into a shape. When quite cold, serve it, turned out and garnished with flowers.

☞ Almonds, 2ozs.; rose-water, sufficient; marmalade, 2 ozs.; citron, 4 ozs.; brandy, 2 tablespoonfuls; eggs, 6 yolks, 2 whites; sugar, 1 oz.

EGG PIE.—Mince the yolks of twenty-four eggs, two pounds of suet, half a pound of bread-crumbs, an ounce of candied peel, two ounces of sugar, one tablespoonful of orange-flower water, half an ounce of allspice, a pound of minced raisins, half a pound of currants, and two dozen sweet almonds; cover, bake, and serve with wine sauce.

☞ Eggs, 24 yolks, suet, 2 lbs.; bread-crumbs, ½lb.; candied peel, 1 oz.; sugar, 2 ozs.; orange-flower water, 1 tablespoonful; allspice, ½oz.; raisins, 1 lb.; currants, ½lb.; almonds, 24.

EGG-PLANT.—A tender greenhouse plant, native of Africa. It flourishes best in a light rich soil, and blows violet-coloured flowers in June and July, which are succeeded by fruit, shaped and coloured like an egg. It is propagated by seed.

EGG-PLANT, TO DRESS.—Take as many egg-plants as the extent of the family requires; pare, quarter, and boil them till soft enough to mash like turnips. In mashing them, add a little bread-crumb soaked in milk, butter, chopped parsley, an onion boiled, pepper, and salt. Mix these well together, pour the mixture into a baking dish, cover the top with grated bread, and bake for half an hour.

EGG-PUDDING.—Beat nine eggs with nine tablespoonfuls of flour, add a quart of milk and a saltspoonful of salt; tie the mixture in a cloth which has been scalded and dredged with flour; put into boiling water, and boil for an hour and a half. Serve with sweet sauce.

☞ Eggs, 9; flour, 9 tablespoonfuls; milk, 1 quart; salt, 1 tablespoonful.

EGG SALAD.—Boil six cloves of garlic for six minutes, and pound them with a few capers and two anchovies; mix them thoroughly with oil, salt, pepper, and vinegar, and serve with hard-boiled eggs, whole or cut in two.

EGG-SAUCE.—Boil a couple of eggs hard, and when quite cold, mince the yolks and whites separately; mix them well, put them into a hot tureen, and pour to them a quarter of a pint of boiling melted butter; stir, and serve immediately.

EGG WINE.—For each half-pint of wine intended to be made, take two eggs, beat them up thoroughly in a small basin with an ounce and and a half of fine moist sugar, and a flavouring of nutmeg and cloves. In the meantime, heat half-a-pint of sherry and water, in equal quantities, or stronger, of the sherry if desired, and when boiling, stir it into the eggs, after which pour the whole backwards and forwards until it thickens. If it will not thicken readily, it must be put over the fire again, and stirred for a few minutes.

☞ Wine and water, ½ pint, mixed; eggs, 2; sugar, 1½ozs.; nutmegs and cloves, to flavour.

EGGS BOILED.—The boiling of eggs demands a certain degree of care. If they are brought from a cold place, and suddenly plunged into boiling water, they will frequently break, and a large portion will often escape from the shell. When this accident does occur, a little salt put into the water will prevent the further escape of the egg from the fracture. In winter, eggs should be held for an instant over the steam from the saucepan before they are laid in. When they are introduced into the saucepan they should not be dropped in from the hand, but gently deposited by the aid of a spoon. The time required for boiling eggs is regulated by the degree of firmness desired. Three minutes will boil them sufficiently for persons who like the whites in a partially liquid state; four minutes will harden the whites only, and leave the yolks still liquid, and five minutes and upwards will render both the yolk and white hard. Eggs are frequently underdressed or overdressed through forgetfulness or miscalculation. A certain way to avoid this is to put the eggs into *cold water*, and by the time the water boils, the eggs will be cooked to a medium degree. They may continue boiling beyond this point to any stage of hardness desired.

EGGS BROILED.—Lightly butter a small oval dish, upon which break two, three, or more eggs without disturbing the yolks, season lightly with a little white pepper and salt. Put a few small pieces of butter here and there upon them and then place the dish in a small oven, where let it remain until the whites become set, but by no means hard, and serve hot; if the oven is moderately hot the eggs will take about ten minutes. They may also be cooked on a dish before the fire, turn it round now and then until the eggs are regularly set.

EGGS BUTTERED.—Beat up six eggs thoroughly in a basin; set two ounces of fresh butter to melt in another basin placed in boiling water. Stir the eggs and butter together; add pepper and salt, and a finely minced onion, if liked. Pour the mixture into a small saucepan, and toss it over a slow fire for a few seconds, then pour it into a large basin; and continue pouring it backwards and forwards several times, setting it on the fire occasionally, and keeping it briskly agitated till it thickens. Serve on toast or as an accompaniment to salt fish, or herrings.

EGGS COOKED WITHOUT BOILING.—Put some boiling water into a large basin, and let it remain for a few seconds; then turn it out, lay in the eggs, and roll them over, to take the chill off the shell, and to prevent their cracking. Pour upon the eggs boiling water from the kettle, until they are completely immersed; cover the basin with a plate instantly, and let it remain upon the table for twelve minutes; the eggs will then be found to be perfectly cooked, free from all flavour and appearance of rawness, and yet so lightly and delicately dressed, that persons will be tempted by them who cannot eat eggs boiled in the usual way.

EGGS FRICASSEED.—Boil eggs hard, take out a portion of the yolks whole, cut the remainder into quarters with the whites. Make some good gravy boiling hot, put in minced thyme and parsley, and add it to the eggs with a little grated nutmeg; shake the whole up with a piece of butter until it is of the proper consistence. Garnish with eggs boiled hard and chopped up fine.

EGGS FRIED.—Have ready a frying-pan containing hot fat, drop the eggs in separately, let them fry for one minute, then drop some more hot fat over them; three minutes will cook them. They do not require to be turned.

EGGS POACHED.—Have water gently simmering in a stewpan, place in carefully each egg, previously broken, with a cup, without disturbing the yolk; when the white is coagulated, which it will be in fourteen minutes, the eggs will be done. They may be served in various ways; on bread slightly toasted, or with spinach. In these cases, the bread should be cut into squares, and an egg placed on each square. The spinach, after being boiled, must be pressed, and cut into triangular pieces; upon one of each of which an egg must be placed. Serve with melted butter.

EGGS POTTED.—Boil the eggs hard, shell them, and separate the whites from the yolks; pound the latter in a mortar with a seasoning of salt, pepper, and powdered spice. Rub in, also, by degrees, a quantity of clarified butter cold, chop up the whites into small pieces. As the yolk paste is put

into pots, strew in the bits of white with it, and press the whole down well. Cover with clarified butter.

EGGS, PROPERTIES OF.—Eggs are composed almost entirely of albumen; the yolk, besides this substance, contains gelatin, oil, and water, in combination with yellow colouring matter. There is also a small proportion of sulphur mixed with the albumen; it is to this circumstance that silver spoons used in eating eggs, are stained of a dark colour; and the strong smell of sulphuretted hydrogen, which eggs emit when in a state of putrefaction, is also derived from the same principle. As an article of diet, eggs, when raw, have a gently laxative effect; when taken in this state, they are deemed serviceable in jaundice and obstructions of the liver; when boiled in the usual manner, they afford a mild strengthening aliment, not difficult of digestion. Hard boiled eggs remain long on the stomach, and are apt to constipate the bowels; they are rendered easier of digestion when used with vinegar as a condiment. The eggs of granivorous fowls are considered the best; those of the common hen and the Guinea hen are the most esteemed. The eggs of ducks, geese, and all the water fowls, contain a greater proportion of oil, and are more strongly flavoured; they are only suited for powerful stomachs. An egg boiled until the greater part of the white is slightly coagulated, without depriving the yolk of its fluidity, and taken with a due proportion of bread, is an excellent article of diet for a child, or a person in a state of convalescence; but when the stomach is deranged, eggs, in whatever state, are apt to increase the disorder. A fresh egg contains about the same amount of nourishment as an ounce and a half of meat, and an ounce of wheaten bread. For the officinal qualities of white of eggs, see ALBUMEN.

EGGS, TO CHOOSE.—In choosing eggs, hold them to the light: if they are clear, they are fresh; if they are thick and clouded, they are stale; if they have a black spot on the shell, they are worthless. The most reliable mode of testing them is by the light of a candle. The freshness of eggs may also be proved by putting them in a pan of cold water. Those that sink the soonest are the freshest, and those that remain on the surface, not fit for food. Eggs purchased in the ordinary way are always to be suspected; therefore let an earthen pan be kept with charcoal and lime-water to put them in. The longer the eggs are kept in this liquid the better they will be; the charcoal and lime having the tendency to destroy and arrest decay.

EGGS, TO PRESERVE.—Eggs should be new, or not more than twenty-four hours old, when they are stored, otherwise their flavour cannot be relied upon. Eggs may be preserved a short time by putting them in a jar of salt or lime-water, with the small end downwards. They may be preserved for several months by greasing them all over with melted mutton suet, and wedging them close together, the small ends downwards, in a box of bran. To keep them for winter use, pour a gallon of boiling water on two quarts of quicklime, and half a pound of salt; when cold, mix with it an ounce of cream of tartar. The day following put in the eggs. After the lime has been stirred well into the boiling water, a large portion of it will settle at the bottom of the vessel in which the eggs will remain. Keep them covered with the liquor, and they may be preserved for two years.

ELDER.—Of this tree there are many varieties, but those cultivated for their fruit are chiefly the white and black. The scarlet and green berries may also be used like the black, and are very ornamental trees in the shrubbery. As the tree will grow anywhere, either in open or shady situations, it may be planted in any out-ground or waste spot, as single standards or in rows, to assist in forming boundary fences. Trees planted in the hedge order, if suffered to grow up untrimmed, will produce abundance of berries for use. The elder is raised by the cuttings of the last year's shoots planted in the winter or very early in the spring, and by seed in the autumn. Select for cuttings some strong young shoots of the preceding summer, cut into lengths of one foot to three feet or more; these may be planted either where it is intended the plants should remain, or in a nursery for a year's growth. Insert them from six inches to fifteen inches into the ground, according to their length; they will soon strike root; and will shoot strongly at top the same year. Train those designed for standards with a single stem, from three feet to five feet high; and those for hedges, with branches out from the bottom. To raise this tree from seed, sow in autumn, October, or November, or later in mild weather, or soon in the spring, either for a hedge in drills, where the plants are to remain, or in a bed or border for planting out when of one or two years' growth. The berries ripen in perfection, for the purpose of making wine, about the middle and end of September, and in October, and should then be gathered in bunches. The elder, by the smell that it emits, acts as some sort of protection to esculents, grain, and fruit trees, against the ravages of flies and insects.

ELDERBERRY WINE.—To six gallons of berries add seven of water, add a quarter of a pound of allspice, two ounces of ginger, with a few cloves. Boil this for half an hour, by which time it will probably be wasted to seven or eight gallons. Squeeze the berries well through a sieve, adding to every gallon three pounds and a half of moist sugar; the quantity then will be sufficient for a nine gallon cask. The sugar being added, boil till the liquor becomes clear, taking the scum off as it rises. Remove it to a cool place, and put it into the cask; when lukewarm, add to it a piece of toasted bread dipped in thick yeast. Should fermentation not have taken place on the next day, a small quantity of wine being taken out and made to boil, and then replaced in the cask, will most probably excite it; if not, another piece of bread dipped in yeast, as before, must be added; let it remain about a week.

When the fermentation has subsided fill up the cask, and bung it down closely. It will be fit to drink in about three months, but will keep for years.

ELDER FLOWER OINTMENT — One of the mildest and most cooling of all unguents, and very suitable for anointing the face, neck, &c., when sun-burnt. It is made of fresh elder flowers stripped from the stalks, two pounds of which are simmered in an equal quantity of hog's lard till they become crisp, after which the ointment, in its fluid state, is strained through a coarse sieve.

ELDER FLOWER VINEGAR.—To half a peck of elder flowers put one gallon of vinegar, and leave it for a fortnight in a stone bottle to ferment; then strain it through a flannel bag, put into it a small portion of dissolved isinglass, and bottle for use.

ELDER FLOWER WATER.—To two drachms and a half of elder flowers add one quart of boiling water, infuse for an hour, and strain. This is used as a wash or lotion for the face, in cases of sunburn.

ELDER FLOWER WINE. — To every gallon of water put four pounds of sugar, half a pint of elder, and a tablespoonful of yeast. Mix these altogether, and put them in a barrel, stir it up every morning for a week, then stop it up close; it will be ready to bottle in six weeks.

ELECTRICITY.—A phenomenon in science, by which various bodies become influenced through the medium of attraction and repulsion. If a stick of sealing-wax, a bit of amber, the glass of a watch, or any other smooth piece of glass, be rubbed upon dry flannel or woollen cloth, or even the sleeve of a cloth coat, it will be found to have acquired a new and very singular physical property. This property is exhibited by holding the body which has been subjected to friction over small and light substances, such as shreds of paper, gold leaf, feathers, straw, cork, &c. These will be instantly attracted to it, some of them adhering to its surface, others falling back to the place whence they were withdrawn; whilst others are thrown off from the body, as if they were repelled from it.—See *Dictionary of Useful Knowledge*, article ELECTRICITY.

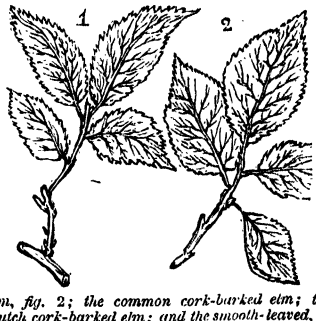
ELECTRIC TELEGRAPH. — A well-known invention by which communications are conveyed to a distance, and answers are received, in the space of a few minutes. The scale of charges for conveying messages by electric telegraph is regulated by the number of words, and by the distance. In sending a message, the meaning should be expressed as clearly and concisely as possible, not only on the score of economy, but also to prevent misapprehension. An illustration of the inconvenience occasioned by using ambiguous phrases in electric telegraph messages, is furnished by the following incident:—A London physician was engaged by a lady residing in the country to attend upon her in her approaching accouchement. It happened soon afterwards that the child was prematurely born, and the friends of the lady telegraphed the London physician, "Don't come—too late;" meaning that, as the anticipated event had taken place, there would be no need of his services. The physician, upon receiving the message, however, read it "Don't come too late;" understanding the meaning to be that the accouchement was momentarily expected, and that he was not to delay his departure. He accordingly took the train and hastened to his patient, and was, of course, soon made aware of the blunder and the fruitlessness of his errand. In matters of vital import, it would always be as well to request an answer, so that the sender of a message may be assured that it has been received and understood.

ELECTRO PLATE.—See GILDING, SILVERING, &c.

ELECTUARY. — A medicinal compound formed of light powders, generally vegetable, mixed up with honey, syrup, or sugar, to the consistence of a stiff paste. The preparation of electuaries is similar to that of confections and conserves, and the same precautions must be observed to reduce the dry ingredients to very fine powder before adding them to the syrup or other substances used to give them form. Care must also be taken to diffuse the ingredients equally through every portion of the mass, by patient and laborious stirring. The neglect of this has often led to disagreeable consequences, from some portion of the electuary being nearly inert, while another portion has possessed increased activity.—See LENITIVE ELECTUARY, PECTORAL, STIMULANT, STOMACHIC.

ELIXIR.—A name formerly applied to various compound tinctures, and to preparations supposed to contain the quintessence of other substances.—See DAFFEY'S ELIXIR, GARLIC, IPECACUANHA, ORANGE-PEEL, PAREGORIC, ROSES, VITRIOL.

ELM.—A genus of the forest trees, common in Great Britain. There are several varieties of this tree. *The English or narrow-leaved elm, fig. 1; the Scotch, or broad-leaved*



elm, fig. 2; the common cork-barked elm; the Dutch cork-barked elm; and the smooth-leaved, or Wych elm. The elm is valued for the rapidity of its growth, its hardiness, and its capability of thriving in poor soil unfit for tillage. It is *propagated* by suckers, which rise abundantly from the old roots. It is also pro-

pagated by layers, and often by grafting on the common Wych elm, especially when wanted for dressed ground, or for avenues, where it is desired that no suckers should be seen. Elm *timber* is difficult to work, but not liable to split, and bears the driving of bolts and nails better than any other timber. It is used in all works where it is liable to be continually dry or wet, as for water-pipes, pumps, water-wheels, &c. It is also very generally employed for weather boarding, and for common cabinet-work. The *leaves* of the elm are eagerly eaten by cattle, sheep, and hogs, and the inner bark is a valuable medicinal agent. The decoction of it forms an excellent vehicle for minute doses of corrosive sublimate in some obstinate skin diseases; and in combination with vinegar or muriatic acid, it is a useful gargle for inflamed throats.

ELOCUTION.—Books: *Vandenhoff's Art*, 5*s*.; *Sheridan Knowles's Elocutionist*, 3*s*. 6*d*.; *Chambers's Course*, 3*s*.; *Aitken's Class Book*, 3*s*. 6*d*.; *Thelwall's Exercises*, 5*s* 6*d*.; *Smart's Practice*, 5*s*.; *Caldwell's Manual*, 3*s*. 6*d*.; *Ewing's Principles*, 3*s*. 6*d*.; *Roberts's Students' Assistant*, 3*s*. 6*d*.; *Comstock's System*, 8*s*.; *Cawthorp's Reader*, 2*s*.; *Bell's Manual*, 3*s*. 6*d*.; *Simmington's Elocutionist*, 3*s*.; *Pinche's Practical Elocutionist*, 4*s*.; *Rowton's Debater*, 6*s*.; *Enfield's Exercises*, 4*s*.; *Neil's Elocution and Composition*, 1*s*.; *Smith's Elocution without a Master*, 1*s*. 6*d*.: *Neil's How to Speak*, 1*s*.

EMBARRASSMENT, PECUNIARY.—When a person finds himself in such pecuniary difficulties as to be unable to meet the demands made upon him, the wisest course he can adopt is to meet the adverse circumstance boldly, and not to endeavour to conceal either from himself or others, a position which must be divulged sooner or later, and which only becomes the more aggravated the longer it is hidden. To accomplish this end effectually, an embarrassed debtor should make out a clear and honest statement of his assets and liabilities, without exaggerating the one, or diminishing the other. This done, he should write down a detailed list of his creditors, and place against each the amounts of the present proposed instalment, and of the future payments which his resources justify him to apportion to each creditor. Thus prepared, the debtor should wait upon each of his creditors in person, or depute some friend, or legal representative, to do so, briefly stating the circumstances of the case, and making a proposition for settlement agreeably to the statement drawn up. The chances are, that an offer thus made will be accepted, with little or no detriment to the character and position of the embarrassed debtor. The creditor, as a matter of feeling, will appreciate the man who thus ingeniously declares his inability to meet his engagements, and makes practical arrangements for their future liquidation; while, as a matter of policy, he will be impressed with the fact, that if he refuse to acquiesce, he will, in all probability, drive the debtor to the Insolvent Court, and so obtain far worse terms than those voluntarily made, or, it may be, none at all. But if, on the other hand, a debtor, through false notions of pride, conceals the real state of his affairs, and temporarily patches them up, by purchasing present relief at an exorbitant rate, he is but *postponing* the revelation which eventually must be made; increasing, in the meantime, his liabilities, incensing his creditors against him, so that they become inexorable, and finally expiating his folly by ruin and degradation, accompanied, perhaps, by flight or imprisonment. These remarks apply more immediately to persons who have contracted personal debts only, or business ones on a limited scale. For the settlement of commercial liability in a more extended sense, see ARRANGEMENT WITH CREDITORS.

EMBROCATION.—A fluid medicine for external and local use; applied in the same manner as lotions and liniments.

EMBROIDERY.—Books: *Ladies' Book of Embroidery and Braiding, in Nos.* 1*s*. *each*; *Frame and Table-work Companion*, 3*s*.; *Embroidery Companion*, 5*s*.; *Young Ladies' Manual of Embroidery*, 2*s*. 6*d*.; *Embroidery and Sampler Book*, 6*d*.; *Trübner's Embroidery*, 1*s*.

EMERALD.—A gem ranking next to the diamond in value. A fine emerald weighing four or five grains, is worth as many pounds; one of ten grains, about £2 per grain; one of fifteen grains, £3 or £4 per grain; and so on in proportion to the increase in size.

EMETICS are certain drugs that, by producing a sudden revulsion in the system, and reversing the peristaltic or downward motion of the intestines, cause the stomach, by a series of irregular spasmodic contractions, to discharge its contents upwards. This is effected either by an agent that acts primarily and immediately on the nervous system, as by the exhibition of tobacco-smoke, or the injection into a vein of tartar emetic; or by the employment of such drugs as excite an undue action of a sub-inflammatory nature in the mucous membrane of the stomach, exciting an abundant secretion of gastric juice, and throwing the muscular coat of the organ into a state of irregular contraction. Emetics are employed in medicine, either as a simple evacuant to empty the stomach, when oppressed or overloaded by too much, or an indigestible character of food; or at the commencement of fevers, in the hope of breaking the chain of morbid actions, by emptying the stomach, accelerating for a space the action of the heart, promoting perspiration, by their efficacy in stimulating all the secreting functions; and finally, in robust subjects, in cases of dislocation, to relax the muscular tension and save time and suffering to the patient. Emetics are only a species of stimulant, and like that class of drugs, if often repeated, lose their effect; in this manner, tartar emetic, which is one of the most powerful emetics in the materia medica, after one or two exhibitions, becomes a promoter of digestion, and an excellent tonic in consumption. Emetics should always be given on a full stomach, or if not, they should be accompanied with copious draughts of warm water, to facilitate and render more easy the operation of vomiting. Eme-

tics are of two sorts, the mineral and the vegetable. The mineral are silver, zinc, copper, iron, mercury, and antimony; the vegetable, ipecacuanha, squills, tobacco, camomiles, mustard, asarabacca, and ammoniacum; beside these, an emetic can always be extemporised, by giving a large tablespoonful of common salt, dissolved in warm water, or by swallowing it dry, and drinking the water after. In all cases of poisoning, from whatever means, the first duty is to empty the stomach of whatever unabsorbed poison may be remaining, and for this purpose, an emetic is an immediate necessity. In selecting the kind of emetic to be used in these cases, it must be borne in mind, that the chief danger accruing from most poisons, is their absorption into the blood; the quicker, therefore, the stomach can be emptied, the better chance the patient has of recovery; for this purpose, the most active emetics should be employed; but as some of them have the power of promoting absorption, discretion must be exercised in deciding on the agent to be used. On this account, as a general rule, mineral emetics should be given for vegetable poisons, and vegetable emetics for mineral poisons. In affections of the liver, where the biliary secretion is defective, emetics are productive of much benefit, by stimulating the secreting powers of the organ; and again, in cases of acute hæmorrhage, emetics in small nauseating doses, repeated at frequent intervals, are highly serviceable, by diminishing the force of the circulation. Though generally considered a safe remedy, and one attended with beneficial results, there are conditions of the system in which it would be improper or dangerous to employ them. 1. They should never, or only in exceptional cases, be given to persons of a plethoric state of body. 2. In all congestive states of the head, they are inadmissible. 3. In inflammation of the viscera or internal organs, or where inflammation is to be apprehended.

EMIGRANT PASSENGERS.—The law relating to emigrant passengers extends to every passenger ship on any voyage from Britain, Ireland, or the Channel Islands, to any place out of Europe not within the Mediterranean Sea, except ships of war, transports, or mail steamers. No ship to carry passengers on more than two decks, nor be allowed to clear out with a greater number of persons on board than in the proportion of one person to every two tons of registered tonnage. Two children under twelve years of age to be reckoned as one person, but children not above one year old not to be computed. For *light and air* the passengers are at all times (weather permitting) to have free access to and from between-decks by the hatchway appropriated for their use. Two boats to be provided for every ship of less than 200 tons; three boats if 200 tons and upwards; four boats if 400 tons. One boat to be a long-boat, and one a life-boat, with life-buoys, &c. Each ship to be manned with a proper complement of seamen. Gunpowder, vitriol, guano, green hides, or any other article likely to endanger life or health, prohibited as cargo, and no part of the cargo to be on deck. *Dietary scale* for each passenger (exclusive of any providings by the passengers themselves), of water, at least three quarts daily; of provisions, after the rate per week of three and a half pounds of bread or biscuit, not inferior in quality to navy biscuit; one pound of wheaten flour; one and a half pound of oatmeal, two ounces of tea, one pound of sugar, and two ounces of salt. The water to be pure, and the provisions sweet and wholesome. Such issue of provisions to be made daily before two o'clock in the afternoon, as near as possible in the proportion of one-seventh part of the weekly allowance; first issue to be made on the day of embarkation to all passengers on board, and articles to be in a cooked state. Other articles of diet may be substituted by the master in a fixed proportion, provided the substituted articles be set forth in the contract-tickets of the passengers. In every ship with above 100 passengers, a passenger steward to be appointed to mess and serve out provisions, and to maintain order and cleanliness; also a cook and cooking apparatus. No passenger ship having fifty passengers on board, and the computed voyage exceeding eighty days by sailing vessels or forty-five days by steamers, or having 100 persons on board, whatever the length of the voyage, and not bound to North America, allowed to proceed on the voyage without a duly qualified medical practitioner on board. Ships bound to North America, and allowing fourteen instead of twelve feet superficial space for each passenger, may clear without a medical practitioner; but no vessel to clear without a medical man if the passengers exceed 500. *Diseased persons* to be re-landed and entitled to recover their passage money. *If passage not provided* by owner, according to contract, passage money to be returned with compensation. *Subsistence money* at the rate of one shilling per day for each passenger, to be paid by the owners in case the time fixed for sailing be deferred. *In case of wreck* another vessel to be provided for the passage, or compensation may be recovered. Passengers to be maintained and lodged during the voyage and for forty-eight hours after arrival. Surgeon, or in his absence the master, may exact obedience to rules and regulations, and persons obstructing, liable to a penalty. For facilitating the *emigration of poor orphans and deserted children under sixteen years of age*, guardians of the poor are empowered to expend money in and about the emigration of such children having no settlement, and who are chargeable; but such emigration not to take place without previous consent of the child, signified before justices in petty session, and a certificate of such consent signed by two of the justices present, has been transmitted to the Poor Law Board.

EMIGRATION.—Before a person takes the important step of emigrating to a distant land, he should take every possible precaution to assure himself that he is acting wisely, as regards both his present and future circumstances. Emigration entirely alters a person's position in life, by diverting the current of his every-day existence and

placing him in the midst of new aspects and influences. It also creates a wide gap in the ordinary routine of commercial duties, and entails the positive sacrifice of a year or more, which the leaving the old country, and the settling down in the new, necessarily occasion. Before these sacrifices are made, therefore, an intending emigrant should consider whether he is fitted by nature and habit to undergo the trials and grapple with the difficulties he is sure to meet with. An emigrant should possess a tolerably good constitution, and a fund of energy and animal spirits, capable of surmounting obstacles and breasting dangers. He should be capable of adapting himself to every variety of situation, and turning his hand to any kind of employment that emergencies may demand. Unless he possess these, he will, if he emigrates under ordinary circumstances, experience that disappointment and chagrin which has driven so many emigrants back to the mother country almost as soon as they have landed on the strange shore. Mechanics and agricultural labourers are undoubtedly best fitted for emigration, as their previous habits have rendered them to a certain extent hardy and indifferent to the nice observances of society; while the labour and handicraft they are accustomed to are just such as are required in a young and uncultivated country. But if a person ordinarily removed above this sphere has determined upon emigrating, he should, previous to setting out, obtain a practical knowledge of several branches of industry; especially farming, grazing and agriculture, and the trades of bricklayer, carpenter, and smith.

The precise quarter of the world to which a person should bend his steps it is difficult to decide upon; each has its distinctive characteristics, and peculiar advantages and disadvantages; the main consideration with all emigrants, however, is the speedy realization of an independency, and this achievement depends more upon the emigrant himself than upon the locality he emigrates to. Books:—*Marshall's Emigrant and Farmer's Handbook* 6s.; *Cunningham's Hints*, 5s. 6d.; *Cotton's Guide*, 4s.; *Curtis's Guide*, 6s.; *Phillips's Guide*, 1s.; *Hursthouse's Where to Go*, 1s.; *Tegg's Handbook*, 4s.; *Kingston's How to Emigrate*, 2s. 6d.; *Matthew's Emigration Fields*, 3s. 6d.; *Butler's Handbook of Facts*, 3s.; *Burton's Manual*, 4s. 6d.; *Kent's Information*, 1s. 6d.; *Washbourne's Counsel*, 4s.; *Newhall's British Handbook*, 1s. 6d.; *Earp's Handbook*, 1s. 6d.; *Warr's Emigrant's Friend*, 2s.; *Rosier's Canada*, 2s.; *Lang's Australia*, 1s.; *Haydon's Australia*, 6s.; *Mackenzie's Australia*, 3s. 6d.; *Carmichael's New South Wales*, 1s. 6d.; *Byrne's New South Wales*, 1s.; *Mann's Port Stephen*, 1s.; *Wiley's United States*, 2s.; *J. C. Smith's United States*, 2s. 6d.; *Smith & Elder's United States*, 2s. 6d.; *Hill's Introduction*, 5s.; *Frazer's Medical Guide*, 3s.; *Kingston's Emigrant Voyager's Manual*, 1s.; *Hogg's Medical Guide*, 1s.; *Ansted's Gold-seeker's Manual*, 3s. 6d.; *Wood's Gold Diggings*, 4s. 6d.; *Tullock's Gold Diggings of Victoria*, 21s.; *Hargrave's Australian Gold Fields*, 5s.; *Mackenzie's Australian Gold Fields*, 1s.; *Alsop's California*, 1s.; *Bryant's California*, 2s. 6d.; *Fremont's Guide to California*, 4s. 6d.

EMOLLIENTS.—This word signifies to soften; and is applied to those drugs and substances that have the power of relaxing the fibres of the body, and are principally employed to allay pain by rendering expansive the tense skin, as in cases of slow suppuration, and also to facilitate the after absorption of any application. Though divided into several varieties, the most simple, and at the same time the most universal and beneficial, is "*warm moisture*," either used as hot water, or a poultice made of bran or bread. These may be said to be in a measure confined to all kinds of suppuration or abscesses. The *relaxing emollients* are those employed for the swelling that succeeds sprains, &c., and are decoctions of camomile, mallow—marsh and common—and other vegetable substances. The *lubricating emollients* are composed of fixed or fluid oils, and are employed to excite absorption by the stimulus of friction. These consist of sweet oil, palm oil, lard, or other unctuous compounds; and the *atonic emollients*, a set of remedies that to the effects produced by other emollients superadd that of an anodyne or soother; these consist of decoctions of poppy-heads, or hemlock, or sweet oil in combination with laudanum.

EMPLOYMENT. — To persons seeking employment, various means are available by which it can be obtained. The first thing for a person so situated to do, is to make the fact known as widely and extensively as possible. For this purpose, he should go daily to the various establishments in his peculiar line of business, and make his want known both to the principals and the assistants; the latter frequently knowing of vacancies existing in other establishments, when there may not happen to be any in their own. These personal applications must be renewed from day to day, until the object is accomplished. And although seeking for employment is frequently an irksome and unsuccessful task, the applicant, by calling patience and perseverance to his aid, will spare himself from being disheartened, and ultimately achieve success. In seeking employment, much depends upon the applicant's manner and address; if he is rude and ungainly, and expresses himself in an awkward manner, an employer will at once conceive a prejudice against him, and curtly decline the proffer of his services. But if, on the other hand, he is pleasing in his manners and address, he will not only be engaged to fill a vacancy, but will sometimes be taken into the establishment, although no vacancy exists. Applicants for employment should also be scrupulously neat in their attire, and clean in their persons; for an employer naturally argues, that a person who is careless of himself, will be equally so about his business. Another important feature to be borne in mind is punctuality, and in every case where an appointment has been made, it should be kept to the minute. The want of observing this, not only gives an employer a prejudicial impression of the applicant's general habits, but so irritates him for the time being, that

the tardy applicant has frequently a message left him, "not to trouble himself to call again." Another medium by which employment may be sought, is through a "registry office," many of which are established in London and other cities, and large towns. At these offices, lists are kept of persons requiring servants and assistants, which may be consulted for a small fee, and the persons waited on accordingly. Simultaneously with these personal applications, *advertising* in the public newspapers should be adopted. *The Times*, as having the largest and widest circulation of any journal, is usually considered the best medium, and on general principles, it undoubtedly is; but when any specific trade or profession is to be appealed to, it is more directly accomplished through the medium of a newspaper in the interests of the particular class.—See ADVERTISEMENT, APPOINTMENTS, SITUATION.

EMULSION.—The vegetable albumen of almonds. It is white, soluble in cold water, and coagulated by heat and alcohol. Also a milky fluid, formed by the mechanical mixture of oil and water, by means of some other substance that possesses the power of combining with both.

ENCYCLOPÆDIA.—A work containing definitions or accounts of the principal subjects in one or all departments of learning, art, or science. The important feature in an Encyclopædia is, that it brings within certain limits the scattered information of many volumes, and thus affords a ready reference to any particular item sought for. A number of this class of works have been published from time to time, possessing various degrees of merit, and distinctive characteristics; for general purposes, however, the following are generally admitted to be the most useful:—*Encyclopædia Britannica; Encyclopædia Metropolitana*; *Penny Cyclopædia*; *Popular Encyclopædia*; *Edinburgh Encyclopædia*; *Encyclopædia Edinensis*; *Oxford Encyclopædia*; *Rees's Cyclopædia*; *Wilke's Encyclopædia Londinensis*; *English Cyclopædia*; *British Cyclopædia*; *Pantologia*. These are expensive works, if purchased at the published price; there would be no difficulty, however, in obtaining any of them second-hand at a considerable reduction; taking care at the same time to procure a recent edition.

ENDIVE, CULTURE OF.—The seed for this plant must be sown twice, thinly scattered; the first sowing about the beginning of June, the second in July; when the plants are about three inches high, they should be transplanted in rows a foot asunder, and a foot apart, taking care to water them in dry weather. As the transplanted crops approach to full growth, sticky, and full in the heart, some should have the leaves tied up every week or for a fortnight, to blanch or whiten, and to render them tender, crisp, and mild-tasted. Perform this on dry days; and in winter, when the weather is dry without frost. Using strings of fresh bast, or small osier twigs, tie the leaves regularly together a little above the middle, moderately close. If the soil be light and dry, earth them half way up; but if moist, merely tie them. The blanching will be completed sometimes in a week, when the weather is hot and dry; at others, it may take a fortnight or three weeks; after which the endive should be taken up for use.

ENDIVE, PROPERTIES AND USES OF.—This plant is chiefly used for winter salads, as a substitute for lettuce. It contains a bitter quality, which is considered a good stomachic.

ENDIVE, TO DRESS.—Chop endive very fine, boil it first, then put it into cold water; then drain the water off, and squeeze it out till quite dry. Take a good tablespoonful of flour, and a piece of butter about the size of a walnut, mix them well near the fire, and boil them in a pipkin. Put this mixture with the vegetable, and about a teacupful of water, for fear of burning; add a little salt and pepper, and boil till done.

ENGINEERING.—Books: *Engineer's and Machinist's Assistant*, 84*s.*; *Blunt's Civil Engineer*, 5 *parts*, 21*s. each*; *Dempsey's Railway Practical Engineer*, 52*s.* 6*d.*; *Mudie's Engineer, Surveyor, and Architect*; *Blackie's Drawing Book*, 40*s.*; *Herbert's Encyclopædia*, 30*s.*; *Haswell's Pocket Book*, 8*s.* 6*d.*; *Templeton's Pocket Companion*, 5*s.*; *Ryde's Companion*, 10*s.* 6*d.*; *Templeton's Book of Reference*, 5*s.*; *Adcock's Pocket Book*, 6*s.*; *Wallar's Guide*, 1*s.*; *Ryde's Text-Book*, 28*s.*

ENGLISH STEW.—Cut cold meat of any description into slices; pepper, salt, and flour them, and lay them in a dish; take pickles of any or of every kind at discretion, sprinkle them over the meat; then add half a teacupful of water to a small quantity of the vinegar belonging to the pickles, a little mushroom, and any gravy that may be set by for use; stir all together, and pour it over the meat. Set it before the fire in a Dutch oven, or in the oven of the kitchen range, for about half an hour before dinner time.

ENGRAVINGS, TO COPY.—Mix ten grains of bichromate of potash, and twenty grains of sulphate of copper, in one ounce of distilled water. Spread this mixture over common writing-paper, and let it dry; then place the engraving, face downwards, on the prepared side of the paper, cover them with a piece of plate glass, and expose to the sunshine. In about half an hour, a faint copy is produced in yellow. This must be washed over with a solution of nitrate of silver, twenty grains, to an ounce of distilled water; and when washed over, a beautiful red picture makes its appearance. Fix by washing in pure water. If it be desired to change the colour of the picture, soak it in salt and water till it disappears; then hold it in the sun for five minutes, and the same picture again appears in a fine lilac colour.

ENIGMA.—A proposition put in obscure, ambiguous, and generally contradictory terms, to puzzle the understanding, and exercise the ingenuity of those to whom the enigma is propounded. Enigmas may be founded upon simple catches, thus:—

"Though you set me on foot,
I shall be on my head."

The answer is, *A nail in a shoe*. One of the most ancient and celebrated specimens of

the enigma, is that which was proposed by the Sphinx and solved by Œdipus, in the following terms:—"What is that which goes upon four legs in the morning, two at noon, and three at night?" The answer is, *Man*. For in the morning, or infancy of life, he crawls upon his hands and feet; at noon, or in manhood, he walks erect; and at night, or in old age, he requires the assistance of a stick. The enigma may be usefully applied, and serve the double purpose of amusement and instruction, by making it the medium for conveying scientific problems, artistic combinations, and literary information. Book: *The Family Pastime*, 1s.

ENLISTMENT.—A person receiving the one shilling *smart money* from a recruiting officer, and being further attested before a magistrate, and examined by the surgeon, accepts service in the army, and may not leave it without being considered and punished as a deserter. Persons may, however, be *bought off*, the terms and conditions being usually a matter of arrangement with the commanding officer of the regiment. No person can be enlisted as a soldier for a longer term than ten years in the infantry, or twelve years in the cavalry, artillery, or other ordnance service, such term to be reckoned from the day of enlistment; or if such person be under eighteen years of age, from the day on which he attained such age. Soldiers during the last six months, or at the end of their term of service, may re-enlist for a further term of eleven years, or for twelve years in the cavalry or artillery. If while on foreign service, the soldier's time shall expire, his term may be prolonged by the commanding officer of the station for the further term of two years, and if any soldier, after the completion of his second term of service, shall give notice to his officer of his willingness to continue, he shall be allowed to do so until he give three months' notice of his desire to be discharged; but if, at the expiration of such term, he shall be unwilling to re-enlist, he shall be conveyed home with all convenient despatch unless he desire to remain in the colony. If the term of service shall expire after the committal of any offence, he is to be considered as in the service till after the trial and during punishment, if any, for the same, but for no other purpose. The term of enlistment for the royal marine forces is limited to twelve years, with the same limitations and conditions as the preceding act relating to the army service.

ENTOMOLOGY.—The science which treats of the organization, habits, properties, and classification of insects. Books: *Entomologist's Annual*, published yearly, 2s. 6d.; *Stainton's Companion*, 3s.; *Westwood's Text-Book*, 5s.; *Kirby & Spence's Treatise*, 31s. 6d.; *Curtis's British*, parts 3s. 6d. each; *Catlow's Popular*, 10s. 6d.; *Dallas's Entomology*, 8s. 6d.; *The Little Entomologist*, 1s.; *Shuckard's Elements*, 8s.; *Stephens's Manual*, 14s.; *Newman's Grammar*, 8s. 6d.; *Burmeister's Manual*, 20s.; *Newman's Introduction*, 12s.

ENVELOPE.—A well-known receptacle in which epistolary correspondence is generally enclosed. The best kind of envelope is the "cream laid," with opaque or coloured interior, which prevents the correspondence being read from without. The size of the envelope, especially those employed for commercial purposes, should be sufficiently large to admit the sheet written on when folded into three. Envelopes used for social intercourse and for complimentary purposes may, without any offence to propriety, bear upon them neat and appropriate designs and mottoes, with coloured and fancy edges. It is also customary among the better classes to use envelopes with the crest impressed upon them. For business purposes, the name and address printed around the adhesive portion of the envelope is an excellent device, as it at once indicates the nature of the communication, and may thus be opened and answered by an assistant in the absence of his principal. The back of an addressed envelope should accord with the face, that is to say, with the adhesive lappel and the superscription both tending downwards; the contrary practice betrays vulgarity or negligence. The backs of envelopes have frequently a soiled appearance, owing to the adhesive lappel being pressed down by a dirty or inked finger; to avoid this, a piece of blotting or other paper should be interposed between the envelope and the hand. Low-priced envelopes should not be used, as they have a mean appearance, and are insecure. With important communications it is always as well to use sealing-wax in addition to the ordinary fastening. Envelopes which are impervious to water are made for special purposes, and may be advantageously employed for ship letters and foreign correspondence. — See ADDRESSES OF LETTERS.

EPILEPSY, OR FALLING SICKNESS.—This is a disease coming on in convulsive paroxysms, returning at undefined and irregular periods, accompanied by great muscular exertion, foaming at the mouth, loss of memory, voluntary motion, and ending in sleep or a state of coma. The attacks are often sudden, the patient without notice falling to the ground; at other times it is preceded by a sense of weight in the head, drowsiness, and languor, indicating the approach of the fit. The causes of epilepsy are various; in some cases it is hereditary, in others it proceeds from softening of the brain, or organic disease of that organ and spinal marrow; it sometimes results from blows, very frequently in children from worms, or other sources of irritation in the bowels or stomach. Epilepsy is most frequent in the young, the spare, and those of a delicate organization.

Symptoms.—The fit usually begins with an excessive and involuntary action of the muscles, the body is bent forward, or drawn violently backward with great force, the eyes roll in a rapid and furious manner, the lips are convulsed, and a frothy saliva, like the champ of a horse, covers the lips and teeth; the tongue is violently protruded, and often dreadfully injured by the spasmodic closing of the teeth, the pulse is quick and irregular the breathing heavy and

laboured, the muscular action of the arms and legs and the writhings of the body are immense, and often more than five or six strong persons can restrain, even in a woman. After a time, which varies from ten minutes to half an hour, nature becomes exhausted, and the patient sinks into a state of sleep, or more properly coma, from which in a few hours, he awakes exhausted, low, and feeble. The only diseases with which epilepsy could be confounded are hysteria and apoplexy; from the first, it is known by the absence of tears, sobs, and laughter, and the rising in the throat, like a ball or lump, that always characterizes it; and from apoplexy, by the stertorous breathing and the dilated pupil.

Treatment.—Where the patient is young, and it is the first attack, bleeding to a small extent is advisable; but in general, beyond the exhibition of stimulating draughts of ammonia and brandy, cold water dashed on the face, and heat applied to the feet, little or nothing can be done during the paroxysm beyond putting a gag in the mouth, and fastening it behind the head, so as to save the patient's tongue; the treatment must be left till after the fit, and the remedies used with the hope of preventing a recurrence of the attack. When epilepsy proceeds from disease of the brain or spinal column, a seton should be established in the neck, the general correction of the system attended to, by change of scene, a course of mineral waters, a plain but unexciting diet, and the daily use of the subjoined pills, marked 1 and 2, continuing each for three weeks, resting one week, and then beginning the other exactly with the same routine. It may be here remarked, that no medicine has been found so efficacious in epilepsy as nitrate of silver or lunar caustic, and after that a preparation of copper. No. 1. Take of

Nitrate of silver . .	4 grains.
Bread crumbs . .	1 drachm.

Mix.

Extract of gentian, sufficient to make a mass, which divide into twenty-four pills, of which give one, three times a day. No. 2. Take of

Ammoniate of copper .	6 grains.
Bread crumbs . .	1 drachm.

Mix well, and add

Extract of camomile, enough to make into a mass, which divide into twenty-four pills, one to be given three times a day.

When epilepsy is symptomatic, or the cause of worms or irritation in the bowels, it must be treated according to the provocative cause; in other cases, a course of mild aperient medicines should be adopted, and the bowels kept regularly open; exercise by walking, sea bathing, early hours, and such pastimes as give a healthy tone to the mind steadily persisted in. For the tremor that sometimes follows the recovery from the fit, the following antispasmodic mixture will be found efficacious, though, as a general rule for symptomatic epilepsy, a regular diet, change of scene and air, exercise, and a constant mild action on the bowels, will be found sufficient, following, where worms are present, the advice given under that head. Take of

Valerian root . .	2 drachms.
Serpentaria root . .	1 drachm.
Boiling water . .	½ pint.

Infuse for six hours, strain, and add

Spirits of hartshorn .	3 drachms.
Sulphuric ether . .	1 drachm.

Mix, and give one or two tablespoonfuls three times a day. By adding half a drachm of quassia to this infusion, a tonic property will be added to the antispasmodic effect of the mixture.—See WORMS.

EPSOM SALTS.—A compound synonymous with sulphate of magnesia. It was originally extracted from the saline springs of Epsom, in Surrey, and is now exclusively prepared on the larger scale, and from either magnesian limestone, or the residual liquor of the sea-salt works. Epsom salts is extensively employed as an active and cooling purgative. Large doses should, however, be avoided, especially as it has been proved, that a small quantity of Epsom salts, largely diluted with water, will usually purge as much as the common dose. Epsom salts is frequently mixed with senna, to assist its operation.

ERUPTIONS ON THE SKIN. — The common cause of all these affections may be traced to the stomach, and is excited and kept alive by some faulty state of that organ, and sometimes the liver acting sympathetically with the stomach. The rash called "surfeit," that so often follows a supper of shell-fish, mushrooms, and other articles of diet, are good illustrations of this kind of eruption, the consequence of functional irritation. The treatment in all affections of this nature should begin with an emetic, if the case is severe, or a warm bath; a dose of magnesia and soda, to correct any acidity in the stomach, and a pill every four hours, of equal parts of colocynth and blue pill. As soon as the bowels are relieved, the rash will disappear, especially so if, in addition to the warm bath, the body has been well rubbed while in the water. For eruptions, the consequence of diseased action, see SCROFULA, SCURVY, &c.

ERYSIPELAS.—An irruptive fever, attended with a peculiar redness of the skin, with or without swelling, usually coming on with loss of appetite, cold chills, great confusion in the head, nausea, and vomiting; tongue moist and coated with white fur, pulse quick and hard, though sometimes small and wiry, as the fever varies in its type from inflammatory to typhoid; and when the symptoms run high, there is also delirium and coma. Between the second and third day the cuticle on some part of the body becomes inflamed of a florid red colour, presenting the appearance of innumerable insect bites, at first circumscribed, but after a time spreading in one or more broad patches. Sometimes the swelling is excessive, and if on the face, quickly puffing up the lids and closing the eyes. After a few days the inflammation subsides, either by a disquamation or peeling off of the cuticle, or

by the formation of small vesicles of water. Erysipelas is very apt to fly from one part of the body to another, or to terminate in an abscess, and in bad cases, by gangrene. The persons most subject to attacks of this disease are those of mid life and age; and though it often seizes on the robust and plethoric, it as frequently assails the weak and emaciated. It is very generally excited by cold, indigestible matters in the stomach and bowels, by intemperance, and by contagion, inflammation, and wounds. The favourable symptoms in an attack of erysipelas are, the inflammatory blush, becoming of a yellowish brown, the subsidence of the swelling, without vesicles, diminution of the fever, and absence of coma. The unfavourable, when the fever becomes protracted, and assuming a typhoid character, by the eruption suddenly receding by livid vesicles, increased coma, and a small weak pulse.

Treatment.—As this disease may either assume a typhoid or an inflammatory character, the treatment adopted must be in accordance to whichever of the two the erysipelatous action mostly tends. When inflammatory, the object is to reduce the arterial action, both in the system and part; when of a typhoid character, to support the strength and stimulate the heart. Besides these, the head and other important organs must be guarded from the danger of congestion. Bleeding, which in other inflammations would be imperative, must in erysipelas be adopted with great caution, and then only employed in the young and robust, and never repeated; while in advanced life, or in the weak and sickly, it is contra-indicated. As a general rule, the treatment should begin with an emetic, composed of ten grains of ipecacuanha, and one grain of tartar emetic, dissolved in water; and an hour after the vomiting has subsided, the following mixture in doses of two tablespoonfuls, every four hours.

Epsom salts . . .	1 ounce.
Rochelle salts . .	½ ounce.
Camphor water . .	8 ounces.

Dissolve, and add

Antimonial wine . .	3 drachms.

Mix. When the bowels are much confined, the annexed powder is to be given each night, at bed-time, for two or three times.

Calomel	3 grains.
Antimonialis . . .	5 grains.
Jalap powder . . .	10 grains.

Mix. If the head is particularly affected, and the drowsiness or coma is severe, a blister should be put on the nape of the neck, and bottles of hot water kept constantly at the feet; at the same time the local inflammation is to be covered with violet powder or common flour, and where the action has a typhoid character, the part is to be frequently dusted with chalk and camphor, prepared by mixing one drachm of powdered camphor with two ounces of prepared chalk. Where the debility is great, and with patients advanced in life, instead of the emetic, the treatment should commence with the aperient mixture, and, if necessary, one of the aperient powders; and when the bowels have been properly excited, the patient's strength is to be supported by a light and generous diet, a small quantity of wine or brandy and water, and the following mixture in doses of one tablespoonful, every two hours.

Aromatic confection . .	1 drachm.
Carbonate of ammonia .	½ drachm.
Peppermint water . .	8 ounces.

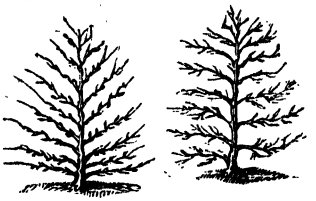
Mix thoroughly, and add

Compound tincture of bark	½ ounce.
Laudanum	1 drachm.

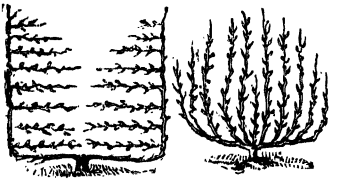
Mix. In such a disease as erysipelas, presenting a mixed character of symptoms, the treatment is often compelled to embrace opposite modes of practice; and though it must generally commence by the employment of depleting agents, the treatment nearly always ends by the employment of tonics and stimulants, and as soon as the vesicles begin to form, or the cuticle to peel off, the above cordial tonic mixture is to be employed, with the addition of wine, broths, and boiled meats. For the local erysipelas, when the swelling is considerable, the dry powders must be changed for warm fermentations of camomiles, hemlock, or poppy-heads, repeated every two hours; while in severe cases, the alternation of the hot fomentations with a cold sugar of lead lotion, is not only necessary, but frequently most beneficial. Where the erysipelas attacks the head and face, the greatest relief will be found from fomentations of camomiles and poppy-heads, made strong and used hot; the feet throughout are to be kept warm, the stomach and bowels attended to, the coma and pains in the head relieved by a blister on the neck, or a couple of leeches on each temple, and the strength supported by a nutritious diet, and the aromatic mixture with wine and other stimulants.

ESPALIER.—A system in horticulture in connection with the training of fruit trees. The espaliers are generally formed of upright and cross-bars of wood, but sometimes made of cast-iron. The best are of wood, and from four to five feet in height. To these the trees are trained as on a wall, with this difference, that instead of being nailed, the branches are usually tied; the fastenings are soft hemp cord or strips of bast; but twigs of willow answer much better. The situation of espaliers is generally along the side walks; and if the trees be carefully trained, they have a neat effect. Care must be taken that they do not prevent the sun and air from reaching the surrounding vegetation. The following is the plan of cultivation: Have the ground well trenched and manured, and plant the trees three or four feet from the walk, and twice as near to one another as they should afterwards be when full-grown. The reasons for this close planting are, that the value of a few crops is more than the expense of the trees; the rails are sooner covered, and when the trees begin to meet and incommode one another, you can then, having ascertained their various qualities, give scope to the

best, by diminishing or rooting out the less worthy. To incur no more expense than is necessary, the stakes may be placed two feet apart, in which case the annual shoots will require to be conducted from one resting-



place to another, by pieces of bast or wild briar, or willow of two years' growth. These conductors require a firm and separate tying, distinct from that which fastens more loosely the living wood; they thus give strength to the rails, and provide for straighter training than is commonly done



by having the stakes twice as thickly set, and consequently at double the expense of timber. Espaliers may be trained in a great variety of forms, those represented in the engravings being the best adapted for general purposes.—See APPLE, PEAR, &c.

ESSENCE.—The active and characteristic portion of a substance, or that on which its most remarkable properties depend.—See ANCHOVY, CELERY, CINNAMON, CLOVE, COFFEE, GINGER, LEMON-PEEL, ORANGE-PEEL, PEPPERMINT, ROSES, &c.

ESSENCE OF FLOWERS, TO EXTRACT.—Procure a quantity of the petals of any flowers which have an agreeable fragrance, card thin layers of cotton, which dip into the finest Florence or Lucca oil: sprinkle a small quantity of fine salt on the flowers, and lay them alternately, a layer of cotton and a layer of flowers, until an earthen vessel or wide-mouthed glass bottle is full. Tie the mouth close with a bladder, then place the bottle in a southern aspect to the heat of the sun, and in fifteen days, when uncovered, a fragrant oil may be expressed from the mass, equal to the essences ordinarily purchased at perfumers' shops.

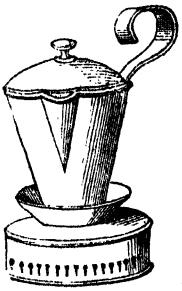
ESSENTIAL OIL.—The oil which floats on the water in the aqueous distillation of plants, fruits, &c. There is a more simple mode of obtaining the essential oil of lemons and oranges than by distillation: rasp the rinds, and as soon as there is enough to fill a tablespoonful, put it into a bottle, and carefully cork it up; continue the process in the same way until the quantity required is obtained, thus preventing the admission of air and the consequent loss of aroma. When the pulp is ready, put it between two thick pieces of glass, and press out the oil, which must be kept in a closely stopped bottle. By dissolving these essential oils in spirit of wine, they form an elegant perfume for the toilet table.

ETHER.—A transparent, colourless, and perfectly liquid fluid, highly volatile, and extremely inflammable, possessed of a sharp penetrating odour, and a hot pungent taste. Ether is one of the most subtle and diffusible stimulants we have in the pharmacopœia, it is employed in medicine as a stimulant, a narcotic, and antispasmodic; and is particularly beneficial in all cases of prostration or oppressed action of the heart and lungs, in typhus or fevers of a low typhoid character. Ether is prepared from a mixture of spirits of wine, or alcohol, and sulphuric acid, or vitriol, and immediately submitting the product to a rapid distillation, the ether passing over in the form of vapour, to be condensed into liquid in the refrigerated receiver. Sulphuric ether boils in the air at the temperature of ninety-six degrees, and in a vacuum at twelve degrees below the freezing point. From its rapid evaporation it is capable of producing an intense degree of cold when poured or applied to any part of the body; at the same time it is excessively inflammable, and on that account should never be employed near the fire or a candle, as the most serious disasters might result from the sudden ignition of the vapour. Ether, being a powerful spirit, dissolves balsams, wax, volatile oils, bitumen, gum-resins, and resins. The dose of ether is from twenty drops to one drachm, when taken alone; but from its great inadmissibility in water, should be shaken up with that liquid before taking. Ether also dissolves gun-cotton, and forms that syrup-like liquid called collodium, used so extensively in photography. Besides the ordinary mode of employment, ether is occasionally inhaled in cases of asthma or difficult breathing, and before the introduction of chloroform, was extensively employed as an æsthetic agent, to render the system insensible to pain, during surgical operations.

ETIQUETTE.—The art of politeness and correct behaviour, not only in accordance with kind feeling and natural instincts, but also in obedience to certain laws laid down by society. It is the observance or the disregard of these rules which tend chiefly to distinguish the gentleman from the boor; and in order to enter good society, and to be received with a welcome, it is as necessary to practise etiquette as it is to be well dressed. The best method of attaining a knowledge of this important art is to observe the behaviour and gestures of persons moving in the best circles, and in similar exigencies to imitate, but not ape, the example that has thus been set. Much information may also be obtained from treatises that have been written from time to time upon this subject. Books: *Manual of Etiquette and Politeness*,

1s. 6d.; *Guide to English Etiquette*, 2s.; *Etiquette for Gentlemen and Ladies*, 1s.; *Ladies' Book of Etiquette*, 1s.; *Douglas's Etiquette of Fashionable Life*, 1s.; *Parisian Etiquette*, 1s.; *Hints on Etiquette*, 2s. 6d.; *Illustrated Etiquette*, 1s.

ETNA.—A utensil by which water may be heated or boiled in a few minutes. It consists of a tin vessel in form of an inverted cone, to hold the water, and this is placed in a cup of tin, into which a little spirit of wine or naphtha is poured, and set fire to. The flame striking against the sides of the cone very soon causes the water to boil. The handle is constructed to go inside when packed for travelling.



EVERGREEN HEDGE.—To produce a hedge that is almost impregnable, plant strong white thorn three to four feet in height, and eight inches apart, and place them thus—XXX; plant a row of tree-box on the outside, and a row of evergreen privet on the other, and the hedge will soon rise.

EVERGREEN PLANTS.—These plants have the faculty of preserving their verdure through the winter, when other plants are perishing, and do not cast their leaves till a new spring has commenced, when other trees are leafing, or even later. With these plants the functions of the leaves are going on during all the winter, although languidly; they are constantly extracting sap from the earth through the springlets, and are, therefore, in a state of slow but continual winter growth. See HOLLY, LAUREL, MYRTLE, &c.

EXCHANGE.—In commerce this term is generally used to designate that species of mercantile transactions by which the debts of individuals residing at a distance from their creditors are cancelled without the transmission of money. Among cities or countries having any considerable intercourse together, the debts mutually due by each other approach, for the most part, near to an equality. There are at all times, for example, a considerable number of persons in London indebted to Hamburg; but, speaking generally, there are about an equal number of persons in London to whom Hamburg is indebted; and hence, when A. of London has a payment to make to B. of Hamburg, the former does not remit an equivalent sum of money to the latter, but goes into the market and buys a *bill* upon Hamburg, that is, he buys an order from C. of London addressed to his debtor D. of Hamburg, requesting him to pay the amount to A. or his order. A., having indorsed this bill or order, sends it to B., who receives payment from his neighbour D. The convenience of all parties is consulted in a transaction of this sort; the debts due by A. to B., and by D. to C., being extinguished without the intervention of any money. The *Par of exchange* means the equivalency of a certain amount of the currency of one country to the other; thus, £1 sterling English is equal to 25 francs 20 centimes French, which is said to be the par between London and Paris. And the exchange between the two countries is said to be on par when bills are negotiated on this footing. When £1 in London buys a bill on Paris for more than 25 francs 20 centimes, the exchange is said to be in favour of London, and against Paris; and when, on the other hand, £1 in London will not buy a bill on Paris for 25 francs 20 centimes, the exchange is against London, and in favour of Paris. The exchange is made to diverge from par by two classes of circumstances; first, by any discrepancy between the actual weight or fineness of the coins, or of the bullion for which the substitutes used in their place will exchange, and their weight or fineness as fixed by mint regulations; and, secondly, by any sudden increase or diminution of the bills drawn in one country upon another.

EXCHEQUER.—A court of law consisting of two divisions, one of which possesses jurisdiction in matters of public revenue, while the other is subdivided into a court of common law and a court of equity. The judges are the Chancellor of the Exchequer for the time being, the Chief Baron, and four other barons. The Chancellor being one of the leading members of the cabinet, rarely, if ever, exercises his privilege.

EXCHEQUER BILLS are promissory notes issued by the Treasury under the authority of Parliament, and are the form in which the floating or unfunded part of the National Debt chiefly exists. These bills are circulated for sums varying from £100 to £1000, and are printed with ink of different colours; namely, £100 bills with red; £200, yellow; £500, blue; and £1000, black. The bills bear interest from their date, at the rate of from 1½d. to 2½d. per diem, per hundred. A date is fixed for their payment, which is announced by advertisement, and is generally about a year after their being issued, when they are either discharged or renewed for other bills, at the option of their holders. Parties neglecting to present their bills on the day appointed, are deprived of interest till the next opportunity of obtaining new bills, or else must submit to the loss of whatever premium they may chance to bear at the time. During the currency of these bills they may, after a limited time, be paid to the Government at par in discharge of duties and taxes. They are transferable without the necessity of a formal assignment, and form an eligible investment for capital that may require to be suddenly made available. Exchequer Bills are issued at the Exchequer Bill Office, Palace Yard, Westminster.

EXCISE.—The name given to the duties or taxes laid upon certain articles produced and consumed at home, but, exclusive of these, the duties on licences and post-horses are also placed under the management of the excise, and are consequently included in the excise duties.

EXCISE LICENCES.—These, within the limits of the chief office of excise in London, are granted by the commissioners or persons appointed by them for the purpose; within the limits of the cities of Edinburgh and Dublin, by the commissioner or assistant commissioners there, or persons employed by them; elsewhere, by the collectors and supervisors of the respective excise collections. Every licence contains the name and abode of the person taking out the same, the date and purpose for which granted, and the place where the trade or business shall be carried on. No excise licence is necessary for the sale of an exciseable commodity while it is in the import warehouse, provided such sale be of not less than one entire package or cask, made to one person or partnership. —See LICENCES.

EXCORIATION.—This term implies any abrasion, peeling off, or separation of the cuticle, by which the sensitive and true skin is left unprotected. Many persons are subject to excoriation or chafing from the slightest muscular exertion, more particularly in such parts as are exposed to friction. In general, excoriation is the result of inattention to the surface of the body, and is frequently excited by perspiration and dust or fine particles of sand adhering to the cuticle, and being rubbed by the play of the muscles into the lines and creases of the body. The perspiration secreted by fatiguing exertion will, from its acridity, if left on the body, very frequently act as an irritant on the cuticle and destroy its texture. Cleanliness, therefore, whether with adult or infant, is the best preventive against this painful affection. The treatment of excoriation, when occurring in those parts of the body usually covered, should consist in first washing the place with warm water, and when well dried by a soft towel, to be freely dusted with violet powder, repeating the application every two hours; for all that is necessary is to remove the exciting cause, and keep the part cool and covered. When the abrasion is deep seated, a piece of lint wetted with the liquor plumbi (extract of lead), is to be laid on for an hour, and on its removal the abrasion dusted with violet powder or common flour; no other lotion will be needed, and ointments or grease should never be employed.

EXECUTION.—A legal process by which the sentence of the law is put in force. Execution is of divers kinds. If the plaintiff obtain a verdict whereby *the possession of land is awarded* to him, a writ is directed to the sheriff, commanding him to give actual possession to the plaintiff; and the sheriff may justify breaking open doors if possession is not peaceably yielded. But if quietly given up, the delivery of a twig or turf, or the ring of the door, in the form of putting in possession, is sufficient. Execution in civil actions *where money is awarded*, may be entered against the body of the defendant, or against his goods or chattels, or against all three. Every writ of execution must be sued out within a year and a day after the judgment is entered. In a verdict obtained out of term, execution may issue in fourteen days, unless the judge order an earlier or later day. — See ARREST, DEBTOR AND CREDITOR, WRIT, &c.

EXECUTOR.—A person to whom a man commits the execution of his last will and testament. If the testator make an incomplete will, without naming executors, or if he name incapable persons, or if the executors named refuse to act; the Ordinary must grant administration to some other person to perform the duties of executor. An executor may be appointed by express words, or by words that amount to a direct appointment; but, though a person is appointed executor, he is not obliged to act, unless he has performed the offices which are proper for an executor, as by paying or receiving debts, &c. If there are many executors to a will, and one of them only prove the will, and take upon him the executorship, it is sufficient for them all; but if the executors are appointed by will, and one of them prove the will, in the name of both, without the consent of the other, this will not bind him who refuses the executorship, unless he administer. If executors waste the goods of the testator, the Court of Chancery will, on application of the creditors, appoint a receiver of the testator's effects in order to protect them. Or, if they retain money in their hands, they are chargeable with interest and costs, if any have been incurred: but they are not liable for the property of the deceased, unless it has been lost through wilful negligence, or without taking reasonable care to prevent such defalcation. Neither is one executor answerable for money received, or detriment occasioned by his co-executor, unless it has been by means of some joint act done by them. If a creditor make his debtor executor, it is an extinguishment of the debt; for an executor cannot sue himself; but still, in equity, the executor's debt is assets with respect to the creditors, if the residue of the testator's estate is not sufficient; because it is extinguished, not by way of *release*, but in the way of *legacy*.

The duties of executors are, first, to bury the deceased in a manner suitable to his rank in life, and the estate he has left behind him. In strictness, no funeral expenses are allowed against a creditor except for the coffin, tolling of the bell, parson, clerk, and bearers' fees, but not for the pall or ornaments. But if there are assets sufficient, the allowance is regulated by the rank and property of the deceased. The next duty of the executor is to *prove the will*, which is done upon oath before the ordinary or his surrogate. This must be done within six months after the death of the testator, under a penalty of £50. After proving the will, the original must be deposited in the registry of the Ordinary, and a copy is made and delivered to the executor, called the probate. After obtaining probate, an inventory must be made of all the goods and chattels of the testator, which, if required, must be delivered to the ordinary on oath.

Disposition of assets.—All the assets that come into the executor's hands must be dis-

posed of in the following order:—1. The executor must pay all funeral charges, the expenses of proving the will, and other necessary outgoings incurred in the execution of the trust. 2. He must pay all debts due to the Queen. 3. Such debts as are due by particular statutes; as money due for poor-rates, post-office letters, or to a friendly society. 4. Debts of record on judgment of courts of law, and debts due on mortgage. 5. Debts due on special contract, as for rent in arrear, and debts due on bond or covenant under seal. 6. Debts on simple contract, as promissory notes, bills of exchange, or verbal promises; and, lastly, legacies must be paid. If an executor pay debts of a *lower* degree first, and should there be a deficiency of assets, he is bound to answer those of a higher nature out of his own estate.—See ADMINISTRATION, PROBATE, WILL, &c.

EXERCISE is essential to the healthy performance of the functions of both body and mind. Without it, the frame becomes contracted and enfeebled; the internal functions of the body deranged, and the brain lethargic and incapable of any great mental effort. With it, the machinery of life goes on with vigour and regularity, and the mind is stimulated to healthy action. With persons whose occupation is sedentary, the taking of regular exercise at stated periods is absolutely necessary to prevent them from suffering from dyspepsia and a number of painful disorders that follow in its train. The precise amount of exercise required depends in a great measure upon a person's strength and his general habit of body, but under ordinary circumstances every person should pass at least two hours daily in entire open air exercise; nor is it wise for persons in generally robust health to refrain from taking out of door exercise because the weather is inclement; with proper precaution the frame may be protected against the external influences of the elements, and under this condition the exercise imparts almost as much benefit as though the weather were fine. On such occasions the delicate may take exercise within doors, selecting a large room for the purpose with the windows open, and walking backwards and forwards for an hour or more. Females, from education and inclination, are apt to neglect this important duty. But were they to attend to it, not only would they derive considerable bodily and mental benefit, but they would bestow additional grace and elegance on their movements, and promote a more perfect development of their figures. Neither age nor sex are exempt from this salutary law of nature; we are all formed with certain limbs and muscles which obviously demand exercise by which they may derive an amount of nourishment sufficient to enable them to perform their functions effectively; and if this necessity is disregarded, it will entail sooner or later a long train of ills, which are the more to be deplored because they may be so easily prevented. Some persons err on the other side, and take exercise in excess, and by one imprudent act, "knock themselves up" (as it is familiarly expressed), for several days or even weeks subsequently. Nothing can be more short-sighted and unpardonable than this, for when sufficient exercise has been taken, the symptoms of fatigue are so unmistakeable, that it is impossible not to know when to desist. The time for taking exercise must in many cases be regulated by a person's avocations; generally speaking, however, especially in large towns, the earlier part of the day is the most suitable, as the air is then purer, and the frame more active and vigorous. It should also be borne in mind that violent exercise either immediately before or after a hearty meal, is liable to produce injurious effects.—See CHILDREN, GYMNASTICS, HORSE-RIDING, WALKING, &c.

EXHAUSTION may proceed from many causes, as the state of physical collapse that follows resuscitation from drowning, any great bodily fatigue, or long endurance of hunger, or there may be a bodily exhaustion consequent on long-sustained mental labour. Besides these causes, the system is often reduced to a state of exhaustion from the length or severity of disease, but in every form of physical prostration measures must be immediately taken to correct so serious a state of the function, which, if not relieved, may result in syncope and coma. The treatment in all cases should embrace two objects, to rouse the sinking powers, and give the stomach occupation. Consequently, wherever possible, the stimulant demanded by the case should combine with it aliment, or some sort of sustenance, as brandy and gruel, broth and crumbs of bread, or wine sop. In whatever form the restorative is administered, the conditions of blending some amount of substance with the liquid should be always complied with. The cases where diffusible stimulants are absolutely necessary are very rare and exceptionable. In all cases of exhaustion, the body should be kept warm, and heat applied to the feet

EXPORTS.—Goods sent outwards or beyond the seas. The laws pertaining to exports enact that no goods can be shipped, or water-borne to be shipped, in any place in the United Kingdom, or the Isle of Man, to be carried to parts beyond the seas, before due entry outwards of ship, and entry of goods have been made, and cocket granted; nor before the goods have been duly cleared for shipment. The person entering outwards, goods to be exported, must deliver to the collector or comptroller of customs a bill of entry fairly written, in words at length, expressing the name of the ship, and of the master, and of the place to which the goods are to be exported, and of the person in whose name they are to be entered, and the quantities and proper denominations or descriptions of the several sorts, and must pay any duties due upon the exportation; and deliver at the same time one or more duplicates of the bill, in which sums and numbers may be expressed in figures. The particulars in the bill must be so written and arranged, and the number of duplicates must be such as the collector and comptroller may require. The collector and comptroller then cause to be prepared and sign a cooket

for the goods, to be delivered to the person who makes entry, and who is responsible for the proper use of it. This process need not necessarily be performed by the exporter himself, but may be done through the medium of a custom-house agent on the payment of a small fee.

EXPOSURE TO WEATHER. — Under this head are understood all those casualties and accidents to which the body is subject from vicissitudes of climate. The narcotic effect produced on the senses by long exposure to cold or snow is well known to most persons, but the prostrating influence is so powerful, and comes on so insidiously, that the victim forgets the fatal consequences of yielding to the drowsy fit in the benumbing apathy that creeps over him; for, if gratified, the sleep in a few minutes becomes a coma, which deepens into an apoplexy that defies all the remedies of art, and in a brief time extinguishes every vestige of life. Sleeping all night in the open air, or in the cold and wet, very often produces effects entirely analogous to those induced by snow and polar frosts, and requires most judicious care in the treatment; or what in these cases was only coma, by a rash rousing of the functions, may be converted into a congestive apoplexy that renders nugatory every exertion. The patient should, therefore, be very carefully treated, the functions being gradually and slowly restored to their operation, and on no account rudely forced back into action, as such a course can only lead to a reaction as fatal as it is brief. The best mode of procedure is to undress the patient quickly, and if the body be wet, it is to be dried and placed between blankets in bed; all but the face being closely covered up, two bottles of hot water are then to be applied to the feet, and after a time, another placed under each arm, a hot flannel laid over the stomach, and, if necessary, other bottles between the thighs. As soon as the patient is placed in bed, and heat applied to the feet, the use of internal restoratives must commence. These should consist of gruel with a small amount of spirit, of which a tablespoonful should be given every few minutes till the patient recovers the power of swallowing, when longer intervals must elapse; and after a time broth thickened with crumbs of bread administered, but no solid substance or animal food should be given for the first twenty hours. Should the pulse become hard, or the head exhibit any sign of excessive action, a blister must be put on the neck, and when required, mustard poultices to the feet, to subdue any congestive symptoms that may arise. —See EXHAUSTION, FROST-BITE, SUNSTROKE, &c.

EXTRACT.—The production of a solution of the soluble portion of the substance operated on; and the reduction of this solution by evaporation to a certain consistence.

EYE.—Most of the affections of this organ will be found under their several heads of Cataract, Ophthalmia, &c. In this place the only disease noticed will be that condition of the organ known as general inflammation, and those affections that belong to the appendage of the eye. Inflammation of the eye commences with heat and pricking, and a sense of tightness in the part; the upper lid first and then the lower, become red, swollen, and extremely painful, attended with great tenderness when pressed, the eyeball itself is bloodshot, intolerant of light, and feels as if particles of sand were between the ball and the lids, the surrounding parts sympathize in the swelling, and there is an abundant flow of tears. The constitution at the same time suffers, there is more or less fever, a quick pulse, and considerable pain in the head.

Treatment. — The patient should either be bled from the arm or cupped on the temple, four or six leeches applied round the orbit, the bowels at the same time acted on quickly by one of the following powders every three hours, and a dose of the accompanying mixture every four hours, till they are thoroughly relieved, the patient all the time being kept quiet, and in a darkened room.

Powders.—

Calomel	12 grains.
Antimonialis . . .	12 grains.
Jalap, powdered . .	2 scruples.

Mix, and divide into four powders.

Mixture.—Take of

Infusion of senna . .	5 ounces.
Epsom salts . . .	1 ounce.

Dissolve, and add

Syrup of buckthorn .	1 ounce.

Mix. Take two tablespoonfuls for a dose. After the leeches the eye should be fomented with warm water, or a decoction of poppy-heads, and should the skin remain dry and hot, a sweating draught must be given at bed-time, preceded by a mustard and water foot bath.

Draught.—Take of

Acetated solution of ammonia	1 ounce.
Tincture of squills . .	30 drops.
Tincture of opium . .	30 drops.
Antimonial wine . .	1 drachm.
Spirits of nitre . . .	2 drachms.

F.

FACE, AFFECTIONS OF THE.— Under this head must be comprehended face-ache, consequent on cold, tic-doloreux and other nervous affections, erysipelas, pimples, blotches, and other eruptive diseases of the cuticle. As many of the most serious and painful affections of the face are the result of some disorganization of the system, or disease more remotely situated, such as erysipelas, tic-doloreux, and toothache, these affections must be looked for under their respective heads; the present section being confined merely to those blotches and pimples that so often disfigure the countenance. These are sometimes of a scorbutic character; when they are distinguished by irregular red, or reddish brown patches on the cheeks

and nose, attended with heat and itching, occasionally disappearing and again returning, after the least excitement.

Treatment.—Take of corrosive sublimate two grains, spirits of wine, one ounce. Dissolve and mix, and take five drops in a wineglass of decoction of dandelion, or wormwood tea, three times a day, for a week; when it is to be intermitted for a few days, and again resumed in the same order and dose. In bad cases, a lotion made by mixing milk of sulphur in elder-flower water, till the whole is of the consistency of cream, may be applied every night, in addition to the medicine, and washed off in the morning with warm water.

Black spots and freckles are to be treated by making an emulsion of bitter almonds, and dissolving in every half pint two grains of corrosive sublimate; and after softening the cuticle by bathing the face for a few minutes with warm water, applying the emulsion so prepared before going to bed, letting the lotion dry into the skin and washing well off in the morning. At the same time, a wineglassful of wormwood tea should be taken every day, either two or three times. In all affections of the skin, proceeding from functional disorder in the stomach, liver, or other organs, producing blemishes on the face, there is no remedy that exercises so permanently beneficial an effect as a course of wormwood; and the infusion should, therefore, in all cases where the complexion is injured, especially in females, be made the primary and principal remedial agent.

In long standing discoloration of the face, proceeding from impaired action of the liver, a steady course of alterative medicine must be persisted in for some time, if any permanent benefit is to be expected; and for this purpose, a compound Plummer's pill must be taken every night for one or two weeks, with a wineglass of the compound decoction of sarsaparilla twice a day; alternating this treatment every week or fortnight, by one of the following pills, and a decoction of dulcamara and dandelion, in the proportion of an ounce of each to a pint of water. *Pills:*—

Take of blue pill . .	1 scruple.
Extract of colocynth .	1 scruple.
Compound rhubarb pill .	1 scruple.

Mix, and divide into twelve pills.

At the same time, under either treatment, a warm bath should be taken once a week, and a constant friction kept up over the body; and especially above the region of the liver, while in the water, by the flesh-brush, or a rough irritating towel.

FACTOR.—This term implies the agent of a merchant or trader, constituted by letter of attorney, and whose power and responsibility are generally limited by the commission of his principal. If a factor buy goods on account of his principal, where he is used so to do, the contract will bind the principal to a fulfilment of the bargain. But where the goods are bought or exchanged without order, it is at the merchant's option whether he will accept them or turn them on the factor's hands. If a factor, by the adventure of his principal's property, not authorized by the usage of trade or the terms of his employment, and without the express consent of his principal, occasion loss to the principal, he is answerable to the amount of the damage sustained: but mere negligence is not sufficient to make a factor liable; it must be gross carelessness, fraud, or a breach of positive orders. If a factor deals or speculates with the effects of the principal, whatever advantage or profit accrues from the transaction is for the benefit of the principal. A factor employed to sell, cannot be a purchaser; nor if employed to purchase, can he be a seller, unless by the express consent of his employer. A factor has a lien on the property of his principal or on his securities, as well for incidental charges, as for the balance due to him. —See AGENT, BROKER, COMMISSION, &c.

FAINTING, OR SYNCOPE, as it is professionally called, very often attacks the individual without warning, though at other times, and in those subject to these distressing symptoms, fainting is preceded by well-defined sensations, such as a feeling of distress, languor, and sickness; the sight becomes dim, and the eyes appear covered by a film; an areola or dark circle appears round the orbits; a buzzing, or low singing noise, is heard in the ears; the face and lips are pale, a cold perspiration breaks out over the skin; the pulse sinks to a mere flutter, and finally ceases; the body totters, and unless upheld, falls to the ground. The loss of consciousness is sometimes complete; at others, the patient retains a partial amount of recollection; the pallor, too, is occasionally more intense, and corpse-like, the eyes shut, mouth open, the limbs flaccid, and the extremities deadly cold. This state lasts from five minutes to half an hour; a spasm of the chest and a few gasping sobs, each more prolonged than the last, is the first indication of returning consciousness. When the fit is prolonged, it may terminate in epilepsy or convulsions. The causes that predispose to faintings, are an intensely nervous state of the system, a delicate constitution, and extreme debility from whatever cause produced, or a diseased state of the heart. Youth is more subject than age, to fainting; and females more frequently affected by it than males.

Treatment.—When fainting is the result of excessive nervous sensibility, or when it occurs in hysterical women, there is seldom any danger; all that is generally necessary, is to lay the patient on his back in the horizontal position; loosen any string that may compress the chest or neck, open the window, dash water in the face, and apply volatile salts to the nostrils, and give a draught with half a teaspoonful of spirits of lavender, or thirty drops of sal volatile, and twenty of ether, added to the lavender and water, where the fainting threatens to merge in hysteria. Should the case be obstinate, heated bricks or mustard plasters must be applied to the feet or thighs. Where the fainting proceeds from organic disease, the treatment must be guided by the nature of the primary affection.—See HYSTERIA.

FAIR.—A greater sort of market instituted for the convenience of traffic, so that traders may be furnished with the commodities they want, at a particular spot, without the trouble and loss of time which must necessarily attend travelling from place to place: and as this is a matter of universal concern to the commonwealth, no person can claim a fair or market, unless it be by grant from the crown, or by prescription which presumes such a grant. Fairs held without charter or prescription may be suppressed; but the owner or occupier of the ground may enter into recognizances to try the legality of the fair, and in that case no measures can be adopted for its suppression until the Court of Queen's Bench has negatived or affirmed its legal existence. All business and amusements at fairs in the neighbourhood of London must cease at eleven in the evening, and not re-commence earlier than the hour of six in the morning. Any house, shop, room, booth, standing, tent, caravan, or other place in the fair being open within the prohibited hours, subjects the owner to a penalty of £5; and any person present in such house, room, booth, &c., not removing therefrom, at the request of a constable, is liable to a penalty of forty shillings.

FALLOW.—Such land as has been repeatedly ploughed over, for the purpose of clearing it of weeds, and exposing it to the influence of the atmosphere. During a fallow, a quantity of ammonia is collected from the atmosphere, potassa disengaged from its combinations, and other chemical effects produced, which have a beneficial influence on the future crops.

FARE, BILLS OF.—See BREAKFAST, DINNER, SUPPER, &c.

FARES, LOCOMOTIVE.—See CAB, OMNIBUS, RAILWAY, STEAMBOAT, &c.

FARM.—A portion of ground cultivated for the purpose of profit. There are different kinds of farms. Where the principal part of the land is under the plough, they are termed arable farms; but where the fattening of cattle or other live stock is more immediately the object, they are distinguished by the title of grazing farms; where the chief intention is the obtaining different animal products, such as milk, butter, and cheese, they are denominated dairy farms; and when the two systems of arable and grass management can be combined, they are called convertible farms. As manure must be had in order to render a farm of any kind productive, the last may probably be considered as the most advantageous. In addition to these, in districts where the hay is the principal produce, there are hay or grass farms, and there are also what are denominated breeding or cattle farms. Besides the healthfulness of the situation, then, other things should be particularly attended to in the choice of a farm; these are, the air, the water, and the soil. The air should be pure and temperate, the water wholesome and easily obtainable, and the soil fertile. In addition to these qualifications, the farm should be within a reasonable distance of good markets, both for the sale of the produce, and the purchase of material. The nature of the soil of a farm may be ascertained, by observation of the weeds which flourish upon it, and of the trees growing on the hedgerows. The elm and the oak are commonly tenants of good soils; the birch, the holly, and the ash, indicate those which are poor. And again, the productiveness of a soil may be estimated from the degrees of its attraction for the insensible moisture of the atmosphere; by the substratum on which it rests, and by its inclination. A person about to take a farm should also closely examine the state of the buildings, the mode in which the farm has been cultivated, and the course of cropping which the outgoing tenant has followed. Books: *Johnson's Farmer's Encyclopædia*, 50*s.*; *Stephens's Book of the Farm*, 60*s.*; *Beasley's Account Book*, 15*s.*; *Rham's Dictionary*, 5*s.*; *Grant's Journal*, 10*s.*; *Fletcher's Ledger*, 3*s.* 6*d.*; *Nash's Progressive Farmer*, 5*s.*; *Johnson's Almanack*, 2*s.*; *Grieve's Assistant*, 3*s.*; *Wilson's Dictionary*, 45*s.*; *Swinborne's Register*, 5*s.*; *Webb's Guide*, 3*s.* 6*d.*; *Knight's Library*, 17*s.* 6*d.*; *MacDermont's Ready Reckoner*, 6*s.*; *Main's Manual*, 6*s.*; *Neil's Scrap-Book*, 2*s.* 6*d.*; *Davis's Communications*, 5*s.*; *Doyle's Cottage*, 1*s.*; *Mayne's Dairy Cattle*, 3*s.*; *Bürger's Economy*, 3*s.* 6*d.*; *Murray's Farming for Ladies*, 8*s.*; *Doyle's Small Farms*, 1*s.*; *Passy's Small and Large*, 2*s.*; *O'Connor's Management*, 2*s.* 6*d.*

FARM BAILIFF.—A person occupying this position should have a tolerable education, be acquainted with accounts, measuring of work, land, and timber, and capable of drawing up agreements for hiring servants. He should have practised every part of farming himself, from tending poultry, swine, and sheep, to stacking and sowing. When employed by a gentleman, or one who has no skill in farming, he should not be under twenty-five years of age; but a *farmer's bailiff* need not exceed twenty-one years, is to be considered as a sort of apprentice, and will be directed in all leading matters by his master.

FASTING.—See ABSTINENCE.

FAT.—Fat is formed in the animal body by the separation of oxygen from the elements of the food, and whether it is the immediate result of decomposition of fibrin and albumen, the chief constituents of the blood, or by that of starch, sugar, or gum, it must be accompanied by the separation of oxygen from the elements of these compounds. Fat forming in the human body to an undue extent is a species of disease, entailing many inconveniences, and interfering materially with the general health: wherever a tendency in this direction evinces itself, a careful regimen and regular exercise should be had recourse to. Generally speaking, persons after they have reached the age of thirty-five, begin to "make fat," a change in the system probably owing to, among other causes, a decreased vigour of the digestive organs.

FAT, DIETETIC PROPERTIES OF.—A certain portion of fat is needed with animal food, to assimilate or assist the digesting of the leaner parts; thus with meats that have little or no fat, such as veal and fowl, bacon

or ham is almost universally considered a necessary adjunct. Eating fat to excess, however, is extremely injurious, as the oily matter into which it is converted after it has reached the stomach, interrupts the biliary functions, and not only occasions internal disorders, but frequently manifests itself in unsightly eruptions breaking out upon the face and various parts of the body.

FATIGUE.—See EXHAUSTION.

FEATHER BED.—Beds stuffed with feathers are in universal use in this country. The feathers are enclosed in a case of ticking. To prevent the feathers from coming through, which they are apt to do, the ticking is sometimes rubbed with beeswax in the inside, or with a mixture of beeswax and yellow soap. This is necessary when the ticking is thin; but it is better to have the ticking so close and stout as not to require it; and to prevent the feathers from penetrating, the ticking is occasionally made double. Feather beds, to be kept in good order, require to be well shaken every day, otherwise the feathers mat together in hard knots, that are difficult to undo and separate. When this has happened from long use or neglect, so that the beds are uncomfortable to those who sleep upon them, it is necessary to take the feathers out to have them dressed, and the ticking well washed, dried, and aired, if not renewed. The dressing of the feathers is usually performed by regular manufacturers, in which case it is necessary to take care that they do not keep back part of the feathers, which, in some cases, they are apt to do. The process may be performed by any one in a house where there is a spare empty room. The feathers should be emptied in a sheet, and carefully loosened by hand, picking out all the quill parts from the light feathers. The loosened or cleared feathers are then to be returned by handfuls into the new ticking, through a part of the seam left unclosed for the purpose. While this process is going on, the doors and windows of the room should be kept carefully closed, to prevent the feathers from flying about. As there will be some deficiency of bulk by this process, it would be as well to have a reserve stock in readiness to make good the abstracted portion. For this purpose, the feathers of poultry should be collected from time to time, put into strong brown paper bags, and well dried by keeping them several days in an oven after the usual baking processes have been performed. They should then be taken out, the quill parts cut carefully, and the feathers cleaned; then restored to the paper bags, and kept in a dry place for use. In *purchasing feather-beds*, the purchasers may choose their feathers, which are of various prices, at so much per pound; and they may see the ticking filled with them, having the quantity put in which they wish. If too much is put into the bed it will feel hard. As feathers are very expensive when bought new, it is more economical to await some favourable opportunity of purchasing them second-hand at a genuine sale of household furniture; by this means they will not only be procured much cheaper, but if they have been moderately used, and carefully preserved, will be more advantageous to have than an entirely new bed.

FEATHER FLOWERS.—Procure the best white geese or swans' feathers, have them plucked off the bird carefully so as not to break the web, and free them from down, except a small quantity on the shaft of the feather. Having procured two good specimens of the flowers you wish to imitate, carefully pull off the petals of one, and with a piece of tissue paper, cut out the shape of each size, taking care to leave the shaft of the feather at least half an inch longer than the petal of the flower. Carefully bend the feather with the thumb and finger to the proper shape, being cautious not to fracture the web. *To make the stem and heart of a flower*, take a piece of wire six inches long; across the top, lay a small piece of cotton wool, turn the wire over it, and wind it round; until it is the size of the centre of the flower which is being made. If a single flower, cover it with paste or velvet of the proper colour, and arrange the stamens round it; these are made of fine Indian silk, or feathers may be used for this purpose. After the petals have been attached, dip the silk or feather into gum, and then into the farina. Place the petals around, one at a time, and wind them on with Moravian cotton, No. 4; arrange them as nearly like the flower you have for a copy as possible. Cut the stems of the feathers evenly, and then make the calyx of feathers, cut like the pattern or natural flower. For small flowers, the calyx is made with paste, Cover the stems with paper or silk the same colour as the flowers; the paper must be cut in narrow strips about a quarter of an inch wide. *To make the paste of the calyx, heart, and buds of flowers*, mix common white starch with gum-water until it is the consistence of treacle; colour it with the dyes used for the feathers, and keep it from the air. *To make the farina*, use common ground rice, mixed into a stiff paste with any dye; dry it before the fire, and when quite hard, pound it to a fine powder. The buds, leaves, and hearts of some double flowers are made with cotton wool, wound around wire, moulded into shape with the thumb and finger. Smooth it over with gum-water, and when dry, cover the buds, leaves, or calyx with appropriately coloured pastes; they will require one or two coats, and may be shaded with a little paint, and then gummed and left to dry. Flowers of two or more shades or colours are variegated with water colours, mixed with lemon-juice; ultramarine and chrome, for blue and gold, may also be used in powder, mixed with lemon-juice and gum water. Feather-flowers thus made prove an easy and inexpensive accomplishment, and yield pretty ornaments for the chimney-piece, cheffonier, &c.

FEATHERS, TO CLEAN.—Feathers may be *cleansed of their animal oil* as follows:—Take for every gallon of clean water one pound of quicklime; mix them well together, and

when the undissolved lime is precipitated in fine powder, pour off the clear lime water for use. Put the feathers to be cleaned into another tub, and add to them a portion of the clear lime water, sufficient to cover them about three inches when well immersed and stirred about therein. The feathers when thoroughly moistened will sink down, and should remain in the lime water three or four days, after which the foul liquor should be separated from them by laying them in a sieve. The feathers should be afterwards well washed in clean water, and dried upon nets, the meshes of which may be about the fineness of cabbage nets. The feathers must be from time to time shaken on the nets, and as they become dry they will fall through the meshes, and may then be collected for use. The admission of air will be serviceable in drying. The process will be completed in three weeks, and after being thus prepared the feathers will only require to be beaten to rid them of the dust. *To clean white, brown, or fawn-coloured feathers*, dissolve some fine white soap in boiling soft water, and add a small piece of pearlash. When the water is just cool enough for the hand to bear it, pass the feathers several times through it, squeezing them gently with the hand. Repeat the same process with a weaker solution of soap, and then rinse the feathers in cold water, beating them across the hand to expel the water; when they are nearly dry, draw each fibre or flue over the edge of a small blunt knife, turning it round in the direction you wish the curl to take; then if the feather is to be flat, place it between the leaves of a book, to press it. *Black* feathers may be cleaned with water and some gall, proceeding as above.

FEATHERS, TO DYE.—Feathers may be dyed of various colours, as follows:—*Blue*, one ounce of oil of vitriol by measure, one drachm of the best indigo in powder, mix them well together, and let the mixture stand for a day or two; when wanted, shake it well, and put a tablespoonful of it into a quart of boiling water. Stir it well, put the feathers in, and let them simmer for a few minutes; then take them out and lay them by to dry. *Green.*—Mix the indigo liquid with turmeric, and pour boiling water over it; let the feathers simmer in the dye until they have attained the shade desired. *Lilac.*—Put two teaspoonfuls of cudbear into a quart of boiling water; let it simmer a few minutes before the feathers are put in. *Pink.*—Three deep pink saucers in a quart of boiling water, with a small quantity of cream of tartar. If a deep colour be required, use four saucers. Let the feathers remain in the dye for several hours. *Scarlet.*—Into a quart of boiling water dissolve a teaspoonful of cream of tartar, put in a teaspoonful of prepared cochineal, and then a few drops of muriate of tin. *Yellow.*—Put a tablespoonful of the best turmeric into a quart of boiling water; when well mixed, put in the feathers. More or less of the turmeric will give them different shades, lighter or deeper, and a very small quantity of soda will give them an orange hue.

FEBRIFUGE.—A term applied to medicinal agents which mitigate and allay fever They take the form of powders, pills, oils, salts spirits, &c. The following is considered an excellent febrifuge powder:—One drachm of refined sugar and four grains of tartar emetic, intimately rubbed together in a mortar; to this is to be put two drachms of prepared chalk gradually added and rubbed in until the whole is thoroughly mixed. This powder is given in doses of from four to six or eight grains every three or four hours.—See FEVER.

FEBRUARY, GARDENING FOR.—*Kitchen Garden*:—*Artichokes*, defend in frosty weather. *Asparagus*, sow, plant, plant in hot-bed, attend to that in forcing. *Balm*, plant. *Beans*, plant, draw earth to advancing plants; transplant those raised under frames. *Beets*, sow, plant for seed, dig up and store any left in the bed. *Borecole*, sow. *Brocoli*, sow. *Cabbages*, plant and sow, plant for seed, *Cauliflowers*, attend to in frames, plant into border, sow, prick out. *Carrots*, sow; sow to draw young in a hot-bed, plant for seed. *Celery*, dress and earth up winter standing, sow in a hot-bed or warm border. *Chervil*, sow. *Clary*, sow. *Composts*, prepare and turn over. *Coriander*, sow. *Corn salad*, sow. *Cucumbers*, sow in hot-beds, prick and plant out, attend to those in forcing. *Dill*, sow. *Earthing up*, perform where necessary. *Endive*, blanch, transplant into frames. *Fennel*, sow or plant. *Garlic*, plant. *Horseradish*, plant. *Kidney beans*, sow in hot-bed. *Leeks*, sow, transplant for seed. *Lettuces* in frames, attend to and transplant; sow in a warm border or hot-bed, and in any open situation. *Liquorice*, plant, dig up three-year-old roots. *Melons*, attend to those in hot-beds, sow, prick out. *Mint*, force in hot-beds, make plantations. *Mushroom beds*, make, attend to those in production. *Mustard and cress*, sow. *Onions*, sow main crop, clear off weeds. *Parsley*, sow. *Parsnips*, sow main crop; dig up and store winter standing plants for seed. *Peas*, sow, hoe advancing, stock, when three inches high, attend to those in hot-beds. *Pennyroyal*, plant. *Potatoes* (early), plant in hot-beds and in borders. *Radishes*, sow in a hot-bed, attend to those in hot-beds, sow in open ground. *Rape*, sow. *Rhubarb*, sow. *Spinach*, sow, clear from weeds advancing crops. *Shalots*, plant. *Sorrels*, sow and plant. *Skirrets*, sow. *Savoys*, sow. *Sage*, plant. *Turnips*, sow. *Tansy*, plant. *Tarragon*, plant. *Thyme*, plant.

Flower Garden.—February is the first spring month, and the flowers will begin to give indications of life and gaiety. The anemones, hepaticas, &c., will now bud and flower if the weather is genial; and the crocus and snowdrop will begin to put forth their bloom. About the end of this month hardy annuals may be sown, including hawkweed, lavatera, Venus's looking-glass, candytuft, larkspurs, lupins, convolvulus, flos Adonis, dwarf lychnis, nigella, annual sunflowers, &c. During this month all hardy fibrous-rooted flowering perennials and biennials may be planted and transplanted; such as saxifrage, gentinella, hepaticas, violets, primroses of all sorts, poly-

anthuses, double daisies, thrift, &c.; rose campions, rockets, campanulas, sweet-williams, hollyhocks, scarlet lychnis, carnations, pinks, monkshood, perennial asters, sunflowers and plant cuttings of roses, honeysuckles, and jasmines. If the weather be mild, many kinds of evergreen shrubs may be transplanted, such as phillyreas, laurels, laurustinus, pyracanthus, cistuses, &c. In transplanting, let a bed of earth be retained round their roots; if box edging be required, it should be planted now. Dig the borders carefully and lightly with the garden fork; make the garden neat and free from weeds; clear away dead leaves; sweep the lawn and walks, and otherwise prepare for the advance of spring.

FEBRUARY, THINGS IN SEASON.—*Fish*—Carp, cod, eels, gurnet, oysters, perch, plaice, skate, smelt, soles, tench, turbot, whiting.

Fruit—Apples, grapes, pears.

Meat—Beef, house lamb, mutton, pork, veal.

Poultry and Game—Fowls, hares, partridges, pheasants, rabbits, snipes, turkeys, widgeons, woodcocks.

Vegetables—Brocoli, carrots, celery, endive, onions, parsley, potatoes, savoys, sprouts, turnips.

FEEDING BOTTLE.—A substitute for the breast, by which sustenance is administered to infants. These bottles are made of a convenient form, having in the centre an aperture through which the food is poured, while at the mouth of the bottle the teat is fastened on for the infant to suck from. The best kind of teat is that made of calf's teat, and usually sold at surgeons; others are made of caoutchouc, but these are not to be recommended, as their hard surface frequently irritates the gums of the infant and prevents him from sucking; the calf's teat is decidedly the best, being soft and pleasant, and more nearly resembling the human breast than any other. Great care, however, is necessary in using them, as they soon turn sour; immediately, therefore, the child is fed, the teat should be thrown into a tumbler about half full of cold water, with a wineglassful of gin in it, this will counteract any tendency to acidity, and the teat should remain in the glass until it is again required; after a time it becomes very hard and tough, and should then be exchanged for a new one. The bottle itself should be attended to with the most scrupulous attention; it should be rinsed out every time it has been fed from, and the food should not be suffered to remain in it and again offered to the child. If these matters are neglected, the infant's stomach, by being subjected to the stale food, becomes deranged, and his whole system disordered from a mere act of inattention and carelessness. In holding the bottle, it should be slightly elevated in the direction of the infant's mouth, and the hole in the centre of the bottle should be partially covered with a cork, in such a manner that the infant may not suck in the wind, and yet not to render it air-tight, and so preventing him obtaining any food. The teat also should be from time to time examined, as the orifice through which the food is sucked is apt to get larger, and admit too great a quantity of food passing at a time, or sometimes it becomes clogged up and resists all efforts made to obtain food from it. These bottles, by their shape, are very well adapted for being placed under the pillow at night. For this purpose warm food should be poured into them just previously to retiring to rest, both openings corked up, and the bottle rolled up in flannel and placed under the pillow or in the bed; the teat should also be placed by the bedside in its accustomed tumbler, so that when the infant awakes and requires food, the cork has only to be taken out, the teat fastened on, and the child is at once supplied with warm food.

FEEDING CATTLE.—Food ought to be given to cattle at stated times, in such quantities as to satisfy but not to glut the animals, and varied in quality, so as to keep the appetite alive. Water should be regularly supplied according to the kind of food, the state of the animal, and the season of the year. Cattle that are fed in part on green food or roots, will require less drink than those fed on hay, straw, or corn; and cattle that have been at work and perspire, will require more water than such as have been idle or at pasture. In summer, cattle fed on dry food obviously require more water than in winter, owing to the increased perspiration.

FEES, MEDICAL.—There is in this country no legal scale of remuneration for medical men of any grade. The physician, by the spirit of his degree, is prohibited from making *any* charge whatever for time or services, and consequently could not recover by law any sum for professional advice that he might consider due to him. The understood fee in this country, for one visit of a physician, ranges from one to five guineas, according to the rank of the patient and the professional eminence of the doctor; though the average may be struck, as *two* guineas for the first, and *one* for all subsequent visits for the one illness. Many physicians, whose ratio is known to be never less than two guineas, give home consultations, at certain hours in the morning, where all convalescent patients obtain advice for *half a guinea;* but whatever a physician may report to be the amount of his fee, no one would refuse a guinea if offered, unless he did so from motives of charity. As respects operative surgeons, the scale of remuneration for minor or capital operations, is equally vague and indefinite. General practitioners have a very doubtful legal right to charge, and though modern usage has established a precedent to make their power so far safe, the amount they may charge for medicine and attendance is entirely a matter of choice. A six-ounce mixture is generally allowed from 2s. 6d. to 3s.; a dose of two pills 6d., a larger number 1s; draughts from 1s. to 1s. 3d. each; and lotions from 2s. to 3s. 6d. a pint. When at this ratio medicine to the amount of 6s. or 7s. a day has been sent to the patient, unless his circumstances should

be affluent, no jury will allow a separate item for professional attendance—a very common practice is to charge at the rate of 2s. 6d. or 3s. 6d. a visit; if, however, the invalid lives beyond a mile from his doctor's house, he is *allowed to charge the visit as a journey*, at 1s. For being called up in the night the customary fee is 5s., and this also, with the mileage, a jury would allow. The only exception is in the case where the state of the patient demanded frequent visits in the day, when, if without medicine, the attendant might charge every such professional interview at 2s. 6d. The fee usually charged by a general practitioner for reducing a dislocation, or setting a simple fracture, is the same, and varies from *half a guinea to two guineas;* and this, unless a fracture of the thigh, which requires frequent watching, and readjustment of splints, should include every demand, till the patient is cured. For compound fractures, the fee would depend upon the amount of mischief done, and of course the means of the sufferer. For minor operations, of bleeding, tooth-drawing, and cupping, the two first are charged from 1s. to 2s. 6d., unless the medical man is sent for to perform either, when the amount would be doubled; while for cupping the fee always ranges from 7s. 6d. to one guinea.

FEET.—To preserve the feet in a proper condition, they should be frequently soaked and well washed in warm or tepid water. Many persons are subject to tender feet. This frequently arises from the use of thin cotton or silk socks or stockings, and boots and shoes that are either too tight or stiff, or not sufficiently porous to allow of the escape of perspiration. Waterproof boots and shoes are on this account frequently the cause of tender feet. The best remedy for tender feet is the immediate adoption of worsted stockings or socks, and light easy shoes of buckskin, goatskin, or some other equally soft kind of leather. For the preservation of health, it is highly necessary to preserve the feet dry; persons who are therefore exposed to the wet, or who have much walking in wet weather, should be particular in wearing sound boots and shoes; through neglecting this precaution, many persons have brought on pulmonary complaints, which have frequently had a fatal termination. Coldness and numbness of the feet is a complaint to which some persons are subject, especially aged and delicate persons, and those whose employment is sedentary. The best and most natural remedy for this, is action, exercise, or friction —the former being always adopted when possible. Retiring to rest with cold feet is especially to be avoided, and persons so subject, should pace up and down the room just previously to going to bed, until their feet have attained a warm glow. Where this is impracticable, owing to weakness, old age, &c., warm woollen stockings may be put on with great advantage, or the hot water bottle had recourse to. The peculiarly disagreeable odour emitted by offensive feet, may be remedied chiefly by scrupulous attention to cleanliness, and by occasionally soaking the feet in warm water to which a small quantity of chloride of lime or sal ammoniac has been added.—See BOOTS, BUNIONS, CHILBLAINS, CORNS, SHOES, SOCKS, STOCKINGS, &c.

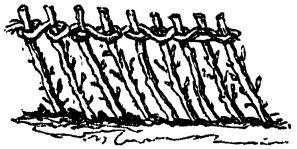
FELLING TREES.—The art of cutting down trees for the purpose of timber. The season for conducting this operation depends upon the quantity and the value of the soft or outer wood of the trunk of the tree to be felled, known by foresters and carpenters as the sap-wood. As this sap or outer wood is the only portion of the trunk in which the sap or juices of the tree flow, it is evident that if no value be set upon it, the tree may be cut down at any season; because the truly valuable part of the trunk, the mature timber, is impermeable to the sap in its ascent through the soft wood, and is therefore in the same state at every season of the year. On the other hand, when much value is attached to the soft or outer wood, where the wood is to be made as valuable as possible, or where, as in the case of comparatively young trees, the greater part of the trunk consists of sap-wood, felling ought to take place when there is least sap in the course of ascending. This season is, without doubt, midwinter; the next best is midsummer, when the sap is chiefly confined to the young shoots, the circumference of the soft wood, and the bark. The worst time for felling timber is the spring, just before the development of the buds, when the tree is fullest of sap, and receiving constantly fresh supplies from the root; and in autumn, immediately before the fall of the leaf, when there is a superabundance of sap, from its being, as it were, thrown out of employment by the falling of the leaf. In general, all the soft woods, such as the elm, lime, poplar, willow, &c., should be felled during winter; hard woods, like the oak, beech, ash, &c., when the trunks are of large size, and valued chiefly for their heart wood, may be felled at any time. When the bark, however, is taken into consideration, as in the oak, the tree should be felled in spring, as then the bark contains four times the quantity of astringent matter to that felled in winter.

FELT.—A material formed of fur or wool alone, or of a mixture of these substances with camel's hair, which are blended into a compact texture, used principally in the manufacture of hats. Hare and rabbit fur, wool and beaver, are the chief materials used; they are mixed in proper proportions, and tossed about by the strokes of a vibrating string or bow, till they become duly matted together. Felt strongly compressed is now used as cloth. It has one advantage over woven cloth, it does not become threadbare by use.

FENCE.—In rural economy any kind of erection made for the purpose of enclosing ground, or a hedge, wall, ditch, bank, paling, or any continuous line of obstacle interposed between one portion of the surface of land and another, for the purpose of separation and exclusion. Of these constructions there are various kinds, according to the uses to which they are put. *The willow or wattled fence* (*fig.* 1) is made by driving a number of poles

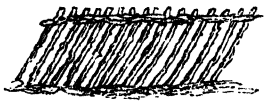
of any of the kinds of willow or poplar, about half the thickness of a man's wrist, into the earth in the direction of the fence, and at the distance of about eighteen inches from each other. They are then twisted or

Fig. 1.



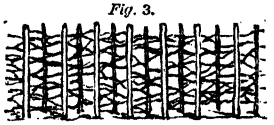
bound together along the top with small twigs of willow or poplar. This kind of fence has some advantages peculiar to itself; it not only forms a cheap and neat paling, but if it be done either about the end of autumn or early in the spring, with willows or poplars recently cut down, the upright parts or stakes will take root, grow, and send out a number of lateral branches; and if pains are taken in the following autumn to twist and interweave these branches properly, a permanent and almost impenetrable fence may be formed in two or three years. For the enclosing of marshy lands or completing any enclosure, where a part of the line in which the fence ought to run is so wet as to be unfit for the growth of thorns or the building of a wall, the willow paling will be found an excellent contrivance, and the use of it will render many enclosures complete that could not otherwise have been formed. Sometimes stakes are used of a kind which do not take root and grow, in which case this form still makes a

Fig. 2.



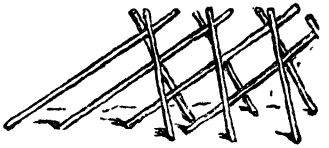
neat and very efficient temporary fence. (*fig.* 2.) *The light open fence*, with thorns or the branches of trees wove in, is made by

Fig. 3.



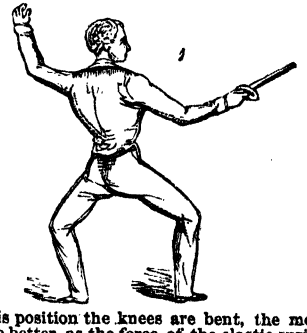
stakes being warped, as seen in *fig.* 3. When properly executed, it forms at once a very complete fence; but, like all fences made with dead wood, it will be found very penetrable, and will require many repairs. It has, however, one advantage, namely, that when properly executed, it is proof against the entrance of animals of any kind. *Primitive fences* are formed without nails or fastenings of any sort, by inserting the pales or stakes in the ground in different directions, (*fig.* 4.) and by using forked or hooked stakes. They are chiefly desirable in forest or park scenery for maintaining a particular character, and for separating horses, deer, &c. *Park fences of iron* are the most efficient and elegant. Light cast-iron posts with rails or round iron rods, five-eighths of an inch in diameter to the height of four feet, and a foot higher, on the bent extremity of the posts, a chain instead of a rod, are found to form an effectual barrier against any description of cattle. Similarly characterized fences may be composed of connected

Fig. 4.



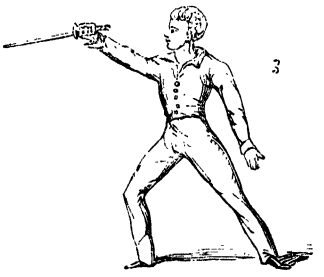
hurdles, which are valuable, and probably the cheapest of all fences in dividing rich and extensive pastures. For poultry, or for excluding hares, rabbits, &c., the lower part of such fences is covered with a wire netting (*fig.* 4). *Wall fences* are constructed of different sorts of materials and are of various kinds. They are for the most part good fences, though some of them, as those of the earthy kinds, are not by any means durable, and therefore should not be formed where better sorts can be used. — See HURDLE, PALING, &c.

FENCING.—In the practice of this art one of the most essential considerations is the command of the body, which is to be exercised in the three following positions:— The first is the well-known position of a soldier standing on parade, erect, with his heels close, upon a small base. This is, of itself, a weak attitude, and unfit for defence; the fencer, therefore, is to spring from this into the second position, which is well adapted to defence and attack (*fig.* 1). In

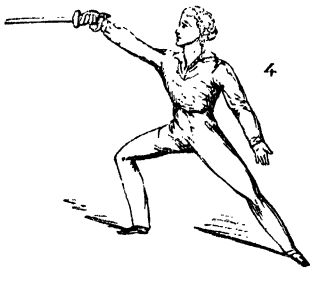


this position the knees are bent, the more the better, as the force of the elastic spring will be in proportion to the contraction of the muscles; the body is balanced on the legs so that it may rest on both or upon one, and more particularly upon the hinder leg. Thus, instead of standing square to the front, as in the first position, and presenting the greater diameter of the person, the side only

is presented, which will be covered by the weapon, and the arm directed in a line before it. The sword is to be grasped by all the fingers, and the thumb extended along the gripe. As the knees are bent, so must the arm be contracted at the elbow. In the second position you sink your knees and have all your powers restrained and ready for action; the exertion of these powers will place you in the third position, with your feet about three feet asunder, at right angles. This attitude is termed the *allonge*. The allonge is to be made with all possible rapidity: this will be better accomplished by impressing the ideas of it upon the mind one after the other. Thus, first form your extension (*fig.* 3); elevate your right hand

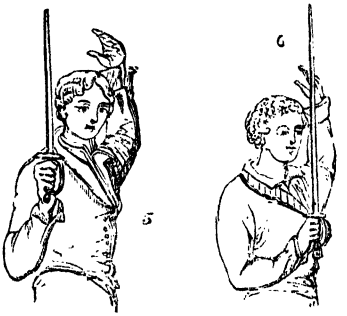


as high as the direction of your left eyebrow; lower your point in a line with the cavity under the arm of your adversary; extend your left hand and left knee; then project the thrust, throw forward your right foot at the same instant, fifteen or sixteen inches, so that your feet may be about thirty-six inches asunder (*fig.* 4). The foot



should resound in striking the ground. Repeat this practice until you can execute it in one rapid motion. Examine your attitude in this third position, and practise unremittingly in the air, until you acquire a graceful precision in the execution. In cutting, the hand is to be in the most natural position, between supination and pronation; but it is to be turned into complete supination when you end your cut in a thrust.

The best mode of parrying this cut is by the *pointe volante;* that is, by contracting the arm, and opposing the foot of the weapon, which must be raised perpendicularly to extricate the foible (*figs.* 5 *and* 6). The terms



fort and *foible* are relative, and so used to mark the different forces of the different parts of the hand-weapon. That part of the weapon held by the hand is the fort; the powers of the other parts of the weapon vary in proportion to their nearness to, or distance from fort. The guard, cut and thrust of tierce, are formed by turning the fore-arm, wrist and hand into pronation. The hand has also to describe an arc of about eight inches from the guard of quatre to that of tierce, from the left to the right. The delivery of the thrust and cut in tierce, is similar in principle to that of quatre, in justly applying your fort. The formation of the extension and the allonge are the same in all thrusts; but the opposition in tierce and in quatre over the arm, is to your right. Feel your adversary's blade constantly, but do not press it, as you will be exposed to his tierce-thrust by relinquishing the point of contact. Roll your hand into pronation as you project the thrust along his blade. Oppose your hand high, and over his blade, to your right. Direct your point into the cavity under his arm. The *glissade* is a sliding movement along the adversary's blade, intended to draw him from the line, and to expose him to a thrust or cut. The glissade is dangerous, as your adversary may hit you on the first movement by his simple thrust, having two to one in his favour. The *flanconnade* is a thrust directed to the lateral part of the stomach: make use of it as a return from your round parade of quatre, by pressing down your adversary's point with your fort; the resistance of his point will assist the direction of your flanconnade.

Disarming.—The dexterous combination of the round parades will enable you frequently to disarm your adversary. The weakness of the hand in pronation is evident. This weakness is still more manifest in the guards, termed the hanging guard, the protects, and the inside and outside half-hangers. No aid from the sword-knot can

prevent the fingers from opening and yielding to any impulse in the vertical direction, when the sword is held in these positions. But even a tolerable swordsman may be disarmed under the following circumstances:—1. If he change from tierce to push quatre, cross his foible from your left towards your right, in the direction of the opening of his fingers, direct your point in the line towards his right eye, allonge, and you will both hit and disarm him. 2. If he cuts over your point, or pushes quatre-over, use your round parade of quatre, instantly rolling your hand into pronation; direct your point in the line as before. 3. Parry any assault made over your arm with the pointe volante in tierce, hurl down the vertical cut, end it in a thrust, opposing your hand well in quatre, and he will be cut, hit, and disarmed. 4. If he push prime, seconde, or quinte, &c., his hand is ready prepared to be disarmed by the slightest impulse of your weapon in quatre, touching his foible. Be careful to disarm in the line, that you may not be exposed, in the event of your not succeeding in your plan. 5. If he push or cut under your arm, rotate your hand, describing the half-circle three or four times in continuation; adhere closely to his blade, and he may be thus disarmed. 6. The following mode of disarming is safe and certain:—Parry your adversary's quatre-over with your round parade of quatre, and before his fort strikes the ground, depress his foible, and adhere to it with your fort; seize the fort of his sword with your left hand, and he will be instantly disarmed: but none of these modes of disarming should be attempted before you feel yourself completely dexterous in the preceding operations. Books: *Rolando's Introductory Course; Gribble's Treatise; Walker's Defensive Exercises.*

FENDER.—An article of furniture belonging to the fire-place. In construction the fender should be low and narrow, for the lower and narrower it is, the more heat will be radiated from it into the room. The front of the fender, unless very low indeed, ought always to be of open work, in order to admit through it the radiation from the fire. The forms and lines, and general style of the fender, ought to be the same as those of the grate, and both should harmonize with the chimney-piece. The best and most elegant fenders are made of polished steel, enriched with brass or bronze, to correspond with the style of the grate, and many are made of cast iron, very highly ornamented and decorated. The cheapest fenders are made of tin plate and wire painted, and brass or iron tops and bottoms; and these are best adapted for bedrooms. A more durable kind are cut out of sheet iron and painted in imitation of iron wire. Fenders may be rendered the receptacles and economizers of fuel, by having a well-hole inside for containing fuel; thus serving instead of a coal-scuttle, and at the same time drying the fuel so as to diminish the quantity of smoke produced. In this case the fender and its well may be fitted into a sunk place in the hearth; the coals will thus be always at hand, and burn readily when put on the fire.

FENNEL.—A perennial plant naturalized in England, and found in chalky soils. There are several varieties, all of which are raised from seed, half an ounce of which is sufficient for a seed-bed four feet by six feet; sometimes, also, they are raised from offsets from the old plants, where only a few are wanted. It should be sown in the spring in light earth, either in drills from six to twelve inches apart, or broadcast, and raked in. When the plants are three or four inches in height, they should be thinned or transplanted fifteen inches asunder. As the roots of old plants divide into side offsets, these may be slipped off in spring, summer or autumn, and planted one foot apart. They will produce immediate leaves for present supply, and in continuance; or for an immediate larger supply of leaves, established full roots should be procured, planted as above, and well watered. The same plants remain several years by the root, but as fennel sends up showy stems for seed in summer, these, or a part of them, should be cut down to encourage the production of young leaves below, in succession.

FENNEL PICKLED.—Put into boiling spring water, bunches of fennel tied; add salt, simmer it until it attains a bright green colour, when take it out and dry it on a cloth; when it is cold, put it into jars with nutmeg and mace, fill it with cold vinegar, and put a sprig of green fennel on the top; cover the jars with bladder, and set by in a dry place.

FENNEL, PROPERTIES AND USES OF.—The leaves and seeds of this plant are used in the form of infusion as a remedy for flatulence, and to assist digestion. For culinary purposes it is employed in sauces to be eaten with fish, particularly mackerel and salmon, and is sometimes used as a salad and a pickle. Its peculiar flavour, however, renders it distasteful to many palates.

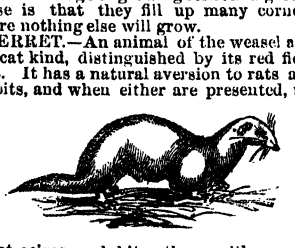
FENNEL SAUCE.—Take as many sprigs of green fennel as may be required; pick and wash it clean, chop it very small, scald, and then lay it in a sieve to cool; put two tablespoonfuls of stock, and two ounces of butter into a saucepan, make them quite hot; take care to stir it well, that they may be properly mixed; rub the fennel in a little butter, and then throw it into the sauce; mix it thoroughly, and season it with pepper and salt.

FERMENTATION. — The spontaneous decomposition of the proximate principles of organic substances, under the joint influence of warmth, air and moisture, and the reunion of their elements, forming new compounds.—See BREAD, BREWING, YEAST, &c.

FERNS.—A species of plant partaking of the character of heaths. *Hardy ferns*, if producing side-shoots, may be increased by division. If they are planted out in a bed or on rock-work, they should be taken up and divided into pieces, with a portion of earth to each. They may be replanted; but a better method is to pot them, and place them in a cold frame kept close and shaded till they make fresh roots and fronds.

Scarce kinds may be increased by seed. If some small sandstones be placed in a damp shady situation, and the fern seed be scattered upon them, and then be covered with a hand glass, the seeds will germinate, and the stones will be covered with ferns. For the rarer kinds a little extra care will be necessary. Sow them on rough pieces of dead turf, place them under a hand-glass, in a situation where they can have a close, warm, moist atmosphere; a cold frame, kept close in summer, will answer admirably. *Stone ferns*, or any kind of fern that sends out creeping stems underground, rapidly increases by division. This requires considerable care. They should not be divided till the parts to be separated have a portion of roots to each. Turn the plants out of the pots, and with a sharp knife, divide the plants into as many parts as have roots and a small ball; pot them in pots only a little larger than the little ball; drain them well, give a gentle watering, and place them in a shady situation till they begin to grow again, and send up fresh fronds. Ferns may also be propagated by seed. For this culture, they require a constantly humid, warm atmosphere, and little, if any sunshine. Procure a wide earthen pan, a hand or bell-glass that will fit within it and rest on the bottom, and a shallow wide pot that will stand within the glass and above the rim of the pan two or three inches. Fill this pot half full of potsherds and upon them a sufficient number of small pieces of turfy peat, mixed with small pieces of sandstone about the size of peas, to come up to the pot. Then take the frond of any fern that is full of seed, and with the hand, brush them off upon the prepared pot set in the pan; place the glass over the pot, and fill the pan nearly with water. Place the whole in the warmest part of the stove, shading it from the sun. The small pieces of turf and stone can be easily separated, and the seedlings on each put into small pots, without any danger of destroying them by the process of potting. *Greenhouse ferns* may be cultivated by the same method, and with the same compost. The only difference is in the temperature. In summer they may be set out of doors with the rest of the greenhouse plants, and brought into it as soon as there is any danger of frost. The great advantage of growing ferns in a greenhouse is that they fill up many corners where nothing else will grow.

FERRET.—An animal of the weasel and polecat kind, distinguished by its red fiery eyes. It has a natural aversion to rats and rabbits, and when either are presented, the



ferret seizes and bites them with uncontrollable savageness. When employed to expel the rabbit from its burrows it must be muzzled, as otherwise it will suck the blood of its victim, and instantly fall into a profound sleep, from which it will awaken again to the work of destruction, committing in the warren, where it was introduced only for its services, the most dreadful havoc. The ferret hutch should be large and roomy; the bottom made sloping, so as to drain off the wet, and a large square of wire work in front. The inside should be fitted with a raised platform for sleeping purposes. A bed of hay in winter, wheat straw in summer, is the best. This bed, in ordinary times, should be changed thrice a week; when the young ones have the distemper, as often as twice a day. Their ordinary food should be new milk and wheaten bread, with occasional birds, flesh, &c.; when in the distemper, milk and bread alone. Should this plan be followed out, no outward application whatever is necessary.

FEVER is the result of a diseased or impaired action of the system, and though sometimes attending or following certain diseases as a symptom or consequence, most frequently falls on the constitution as a substantive disease, either developing its characteristic symptoms, as the disease advances, or following the slow maturity of a chain of morbid actions. Fevers may, in the first instance, be divided into those which proceed from some indirect or secondary cause, and those that arise from contagion, or causes the direct precursors of fever, having a definite rise, an understood progress, and a well ascertained termination. In the first named class of fevers, are comprised those febrile symptoms that appear during or after some organic disease, accidents, surgical operations, or other causes of physical suffering.

The second, or spontaneous class, is divided into two chief heads—nervous and inflammatory fevers: under nervous fevers are classed typhus, intermittent, continued, and remittent fevers; and under that of inflammatory fevers, first, all eruptive fevers, as scarlet fever, small pox; and, secondly, the fevers attending all inflammatory actions of organs or viscera, such as inflammation of the liver and bowels.

The general characteristics of fever are cold chills, lassitude, headache, loss of appetite, thirst and nausea, with a moist furred tongue, or else a tongue dry and coated, pain in the back and loins, succeeded by cold shiverings, which gradually give place to heat, diffusing itself over the body and becoming permanent; ringing in the ears, intolerance of light and cold extremities; the pulse is either small and quick, or full and hard. Special fevers, and constitutional temperament, very much magnify, or even mitigate these symptoms; still those given are the ordinary characteristics and sufficient to indicate the presence of fever to the least accustomed eye.

The *treatment*, on the same broad principle, resolves itself into relieving the congested organs, breaking the chain of morbid actions on which fever depends, equalizing the circulation, and lastly, by the adoption of a course of medicinal agents, correcting the vitiated state of the secretions, and re-

storing the functions to a healthy performance of their several duties. To effect the first it is often found necessary to bleed, or else by leeches, cupping, or blisters, relieve the overloaded organs; the second object is generally effected by an emetic, which in some instances it becomes necessary to repeat. The warm, the hot, or the shower bath, or aspersions of cold vinegar and water, are the means employed to effect an equalization of the circulation and restore blood and warmth to the surface. The therapeutic means to be employed during the career of a fever, must depend entirely upon the character of the disease to be treated, and will be entered upon more particularly under their several heads.

A remarkable peculiarity belonging to all fevers, is a periodicity of the disease, or a property that all fevers have of arranging their effects into periods of regular sections; as, first, into fits and paroxysms, then into remissions, and finally into critical days. Most fevers have three stages, called the *cold*, *hot*, and *sweating*; in some, these divisions are perfect and distinct, in others, broken and imperfect; these fits following in regular order, comprise a paroxysm, which may return at certain hours or only at irregular periods.

The critical days are regarded as the 3, 5, 7, 9, 11, 14, 17, and 20, and the non-critical days are the intervening ones.

The ages at which persons are most liable to fever, are from 20 to 30, and in the following order, gradually declining from 30 to 40, 40 to 50, and 50 to 60. As respects sex, females are more subject to fever than males, but only in a small degree. All fevers are not infectious, but those that are so are communicated by contact, exposure to the atmosphere surrounding a fever patient, and whatever depresses the mind or weakens the body, predisposes the system to infection. The best preventative against the worst form of fever, is cleanliness, a cheerful disposition, and an active body.

FIBRIN.—This term is applied to a peculiar compound organic substance, existing both in animals and vegetables, and is eminently nutritious. It is of a whitish colour, without taste or smell, tough and elastic, but when dried, hard and almost brittle. It is not soluble in water or alcohol, and the concentrated alkalies form with it a kind of fluid viscid soap. It is dissolved even by the weak and diluted acids, but it undergoes some change by which it acquires the properties of jellying and of being soluble in hot water. By maceration in water it becomes putrid; by long boiling in water it is rendered tough and corneous, and when decomposed by heat or nitric acid, it is found to contain a large proportion of nitrogen. It forms the basis of muscular fibre, and is contained in the crassamentum of the blood, and does not seem to differ in any important property from the gluten of wheat. It will be thus seen, that on this property predominating either in animal or vegetable substances, will their value in a great measure as an article of diet be determined.

FIERI FACIAS.—A judicial writ, when judgment is obtained for debt or damage, by which the sheriff is commanded to levy the same on the goods and chattels of the defendant.

FIG, CULTURE OF.—This tree may be propagated by cuttings chosen in autumn from the best ripened wood of the same season's growth, selecting those that are from eight to ten inches in length; retaining about an inch of the older wood at the base, and planting them at once in light sandy soil without taking off their tops. They should be planted in pots, and these plunged in a dry warm sheltered place, and protected from frost during winter. In spring they should be placed in a more open and airy situation, and by the autumn following they will be fit for shifting into larger pots, or, if upon a large scale, into nursery rows. The young plants require little pruning, only training them to one stem to the height of a foot—if for dwarf standards. If the trees are intended for training against walls or espaliers, training for the first and second year is necessary. If properly attended to, figs from cuttings will begin to produce fruit the second and third year. Figs propagated by suckers are apt to send up suckers ever after, and, besides this, they seldom make such short-jointed well-formed wood as those originated from cuttings. The fig may also be struck from single eyes, by which mode it is probable that better and shorter-jointed wood might be produced.

FIG PUDDING.—Take three-quarters of a pound of grated bread, half a pound of figs, six ounces of suet, six ounces of moist sugar, a teacupful of milk, and a little grated nutmeg. Chop the figs and suet very fine. Mix the bread and suet first, then the figs, sugar, and nutmeg, one egg beaten well, and lastly, the milk. Boil in a mould for four hours. Serve with sweet sauce.

☞ Bread grated, ½lb.; figs, ½lb.; suet, 6ozs.; sugar, 6ozs.; milk, 1 teacupful; egg, 1; nutmeg, to flavour.

FIGS PRESERVED.—Allow an equal weight of loaf sugar and of small green figs; wipe them, and cut them across the top; lay them into a strong brine of salt and water for ten days. Boil them in water till the head of a pin will easily pierce them, and then lay them into cold water for four days, changing it daily. Clarify the sugar, and put in the figs while hot; beat them in the syrup three times, and the last time boil them till they look green and clear.

FIGS STEWED.—Put into an enamelled or copper stewpan, four ounces of refined sugar, the very thin rind of a large fresh lemon, and a pint of cold water. When the sugar is dissolved add a pound of Turkey figs, and place the stewpan over a moderate fire, where they may heat and swell slowly, and be very gently stewed for two hours or two hours and a half. When they are quite tender, add to them two glassfuls of port wine and the strained juice of the lemon, arrange them in a glass dish and serve them cold.

☞ Sugar, 4ozs.; lemon, 1 rind; water, 1 pint; figs, 1lb.; port wine, 2 wineglassfuls; lemon, juice of 1.

FIGURE.—See CALISTHENICS, CORSET, DEPORTMENT, &c.

FILBERT.—A nut derived from the cultivation of the common hazel. New and improved varieties can only be obtained from seed, and therefore nuts of the most approved varieties should be sown in October or November on light rich soil, covering them to the depth of two inches. Care must be taken that rats and mice be prevented from attacking them, by rubbing the nuts at sowing with arsenic, mixed with tallow or lard. When the plants are one year old, transplant into nursery lines about two feet apart, and one foot plant from plant in the line. Stock, however, may be better procured from suckers than from layers, the former producing trees upon a single stem, which is important. Seedlings or suckers afford excellent stocks for grafting approved and esteemed sorts upon, but these must be trained to single stems. Where ground is not to spare in gardens, the filbert may be successfully grown along the sides of plantations, and in sunny places in open woods and copses.

FILBERT BISCUIT.—Take half a pound of blanched filberts, one ounce of blanched bitter almonds, the white of six eggs and the yolks of three, one ounce of flour, and half a pound of loaf sugar; pound the filberts and almonds, adding a little white of egg from time to time, to prevent their turning to oil; whip up the remainder of the white of egg into a froth, and mix with them the yolks previously beaten up, with half the sugar; then add the flour through a sieve, and after that the remainder of the sugar; mix this with the filberts and almonds thoroughly; fill little cases made of writing paper, about four inches long and half an inch high, leaving them open at the top. Bake in a moderate oven.

☞ Filberts blanched, ½lb.; bitter almonds blanched, 1oz.; eggs, 6 whites, 3 yolks; flour, 1oz.; sugar, ½lb.

FILBERTS, TO PRESERVE. — The nut should be gathered when its cup or covering turns brown, and when they begin to drop of their own accord. When gathered with the husks attached to them, they may be laid on the shelves of the fruit-room like any other fruit, and will thus keep good till Christmas. For later keeping, remove the husky covering, and pack the nuts in boxes containing dry sand, which will exclude the air and prevent the kernels from shrivelling; in a cool place they will keep thus for a year or more.

FILE.—When the edge of this implement becomes dull from age, dirt, or being much worn, it may be greatly improved by immersing it in water for a day or two.

FILLY.—The new-born one is called a *foal*, the male being a *colt foal*, and the female a *filly foal*. After being weaned, the foals are simply called *colt* or *filly*, according to the sex. For the breaking in of fillies, see COLT-BREAKING and HORSE-TAMING.

FILTER.—A utensil through which water is made to pass, for the purpose of retaining its impurities, and preventing them from mingling with the fluid when employed for drinking or other purposes. The impurities which the Thames and other river-waters contain, render a filter not only an article of great domestic utility, but almost a necessity. From the very nature of their office, filters require to be kept scrupulously clean, and the water when used for drinking should be put in fresh daily. Filters should be kept in a cool shady situation, and in some place where they are not liable to be disturbed. Filters for delicate purposes are made of white unsized paper, and they are folded up, so as to form a cone; to support this, the paper, so folded, is put into a funnel, and this funnel into a filtering stand. These filters can only serve once. When large quantities are to be filtered, bags made of flannel or linen, and fastened to a hoop, are used. Where no great nicety is required, a wooden frame supporting a cloth, and placed over a tub or pan, is sufficient.

A substitute for the ordinary filter may be constructed as follows:—Put into an earthen vessel (such as bakers use to form the loaves in, with a small hole at the bottom or pointed end) some pieces of sponge, and on them a sufficient number of small clean pebbles to quarter-fill the vessel. Hang this filter, end downward, in a barrel with the head out, leaving a space of about two or three inches between the end of the filter and the bottom of the barrel. The upper part of the filter should be kept a little above the top of the barrel, which must always be kept full of water. The sediment of the water will remain at the bottom of the barrel, and the pure water will rise through the sponge and pebbles to the vacant part of the filter. It may be hung in a cistern or water-butt, if more convenient. The pebbles and sponge should be cleaned occasionally. Another economical filter may be made by taking out the head of a cask, setting it upright, and at a distance of about one-third from the bottom putting on a shelf or partition pierced with small holes; this shelf being covered with pebbles, upon which is a layer of fresh charcoal made from bones; and over this lay fine sand, to the depth of an inch, covered with another layer of pebbles; and upon this should be placed another shelf, pierced with holes, to prevent the pebbles, sand, and charcoal being disturbed by the water which is poured or runs in at the top of the cask; and after passing through the filter, is drawn off by a crane, placed at the bottom of the cask.

FINDING.—The law of finding, after much discordant decision has been lately determined as follows:—1. If a man find goods that have been actually lost, or are reasonably supposed by him to have been lost, and

appropriates them with intent to take the entire property of them, really believing when he takes them that the owner cannot be found, it is not theft. 2. But if he takes them with the like intent, though lost, or reasonably supposed to be lost, but reasonably believing that the owner can be found, it is larceny.

FINGER GLASSES.—Glasses filled with rose or orange-water, slightly warmed in winter, or iced in summer, and handed round amongst the guests at a dinner-party when the repast is finished. The use of them demands some little delicacy; the tips of the fingers only should be immersed, or the corner of the table-napkin slightly wetted and applied to the fingers. The practice of gargling the mouth out on such occasions, though sometimes tolerated, is both indelicate and offensive.

FINING.—An operation by which thick and cloudy liquors are made to look bright and clear. *Beer finings* may be made and used as follows:—Isinglass (finely shred), one pound; sour beer, cider, or vinegar, three or four pints, macerate these together; add more of the sour liquor as the isinglass swells, until about a gallon has been used; agitate with a whisk or small bundle of twigs, to promote the solution. When the whole of the isinglass is dissolved, reduce the mixture to the consistence of thin syrup, with weak, mild beer, or cider. Then strain the whole through a tammy cloth or hair sieve, and reduce the mixture to a proper state of dilution by adding more liquor. A pint or a pint and a half is sufficient for a barrel of ale or porter. *Spirits may be fined* as follows: supposing the quantity to be fifty gallons; boil two ounces of rock alum in a pint and a half of water for ten minutes or a quarter of an hour; take it from the fire and dissolve by degrees, an ounce of salt of tartar. When the mixture is milk-warm, pour it into the spirits, stir the whole well together for five minutes, and bung the cask down close.

When wine is to be fined, draw off a jugful, and dissolve isinglass in it, in the proportion of half an ounce to ten gallons, and then pour back through the bung-hole. Let it stand a few weeks longer. Tap the casks above the lees. When the isinglass is put into the cask, stir it round with a stick, taking great care not to touch the lees at the bottom. For *white wine*, mix with the isinglass a quarter of a pint of milk to each gallon of wine. White of eggs beaten with some of the wine, in the proportion of one white of egg to four gallons of wine, makes an excellent fining.

FIR.—This tree, of which there are several kinds, is one of the tallest of European trees. It is peculiarly valuable as a nurse, from being evergreen and closely covered with branches, by which radiating heat is retained; from its conical shape, and rigid stem, by which it does not suffocate or whip the adjoining trees; from its being valuable at whatever age it is thinned out; and from its being an excellent shelter for the most valuable game. It is also an excellent hedge plant for shelter, but is deficient in point of defence and durability. It grows rapidly on every description of soil, from a very stiff loam, to such as possess a considerable degree of humidity. It should never be planted for the sake of its wood, except in masses or groves by itself; otherwise its timber is so coarse and knotty, that it is hardly worth working; but if planted thickly and in a mass, and properly pruned and thinned afterwards, it may be trained to tall clean timber.

FIRE-ARMS, CAUTIONS RESPECTING.—Fire-arms should never be kept loaded in a house, or if they must of necessity be, they should be placed beyond the reach of children, and have the word "loaded" conspicuously attached to them. Fire-arms should never be pointed in sport at a person; many fatal accidents have occurred through loaded fire-arms having been aimed "in fun," under the impression that they were not loaded. It is questionable whether loaded fire-arms are proper weapons of defence to have in a sleeping apartment; persons of an irritable and excitable temperament, are liable to use them somewhat too freely upon trivial occasions; and persons being suddenly awakened out of sleep by an accidental intrusion, may, acting on the impulse of fear, wound or kill an unoffending fellow-creature. Another consideration is, that burglars may find these weapons before the sleeper awakes, and so turn them against him. In lonely and remote localities, however, it is as well that the knowledge should get abroad that the occupier of a house is always prepared with these means of defence.—See GUN, PISTOL, &c.

FIRE ESCAPE.—The escape from a house which is on fire is sometimes prevented by the stairs being of wood, and either burning or already destroyed. In such an emergency there are only two means of escape—issuing by the roof, and so reaching the next house, or descending into the street through the window. As the former mode of escape is the readiest and less dangerous, every house should be provided with a trap door opening on to the roof, furnished with a broad wooden ladder, communicating with the landing place below. Where this is wanting, a rope-ladder should be kept in every sleeping apartment; this ladder may be either furnished with steps, or simply knotted at intervals, to support the hands and feet in their descent. A large iron nail or bracket might be fastened near the window, so that in the moment of danger the rope-ladder might be instantly hung on it without any delay. Where, from carelessness, no fire-escape of this kind has been provided, two or more sheets or blankets taken from the bed may be tied to each other by the corners, and thus a rope may be formed. Public fire-escapes afford the readiest and most convenient form of rescue; but, as the arrival of them cannot always be calculated on, the precautions previously mentioned should always be taken. When a person has to traverse rooms or passages where the fire is actually raging, he should creep along the floor on his hands and knees, and if the opportunity is afforded him, he should

envelope himself in a damp blanket, by means of which he will be enabled to escape from the threatened danger comparatively unhurt.

FIRE, EXTINGUISHING AND PREVENTING.—The calamitous accidents arising from fire might be frequently prevented by the exercise of a little salutary caution. The carrying candles about bedrooms and holding them carelessly over drawers filled with linen &c., is a prolific cause of fire. Lighting gas with pieces of paper and throwing them carelessly away; dropping lighted tobacco on the floor, and not putting it out; leaving lucifer matches about for children to play with; standing too near the fire-place with light and expansive dresses on, are all fraught with the same danger. Another frequent cause is the raking out fires on retiring to rest; live embers being sometimes scattered about the room and left to smoulder until they burst into a blaze. This great mistake is committed under the two-fold idea of safety and economy, the latter consideration being as erroneous as the former; for the embers being separated and scattered, will generally burn longer and more freely than if left to die out in the grate. Fires might often be readily extinguished by the timely application of a few buckets of water. When an apartment is found to be on fire, the door, chimney, and windows should be immediately closed, if possible, and only opened for the purpose of projecting water on the flames. By this means the supply of air will be cut off, and rapid combustion prevented. The same rule applies to the lower doors and windows of a house, which are often injudiciously kept open or removed, with the mistaken view of rendering assistance. The mixture of certain agents with the water employed for extinguishing fire has also been found to increase its efficacy. Sal-ammoniac, in the proportion of five ounces to the gallon, exerts this influence in a remarkable degree. Several other articles, as common salt, pearlash, or kitchen soda, act in the same way, though less effectively. It must also be observed that all of these remedies must be applied before the fire has reached great height, otherwise little or no effect will be produced.—See BURNS, CHIMNEY, &c.

FIRE-GUARD. — Nurseries and other rooms which children are in the habit of occupying should always be furnished with this useful and necessary precaution against fire. The cost is trifling, the application of it simple and entailing little trouble. Fire-guards are mostly constructed of brass or iron wire, closely woven together, to prevent the hand from being thrust in, or the live coals withdrawn; it is also furnished with two or more hooks, by which it is fastened on to the bars of the grate.

FIRE INSURANCE.—See INSURANCE, FIRE.

FIRE-IRONS, PRESERVATION OF.—When fire-irons are not likely to be wanted for some weeks or months, and during which period a housemaid may be absent with the family she is serving, it is desirable to rub them over with a little Florence oil; when it is requisite to remove the oil from the steel-work a little dry whiting may be dusted over it, and the whole rubbed clean off with leather. Fire-irons in summer should be tied up in green baize bags, and hung near the kitchen fire, or in any other office where there is usually a fire. It should be known that when once fire-irons or other steel articles become rusty, they are with great difficulty recoverable, and dull spots, therefore, which are the first indications of rust, should be carefully rubbed off immediately they appear.

FIRE, LIGHTING AND MANAGEMENT OF.—Although this would appear a simple process, yet, from inattention and want of thought, it very frequently fails. The wood used for lighting a fire should be of a proper length and thickness; for, if in too large pieces, the iron of the grate abstracts the heat so much from the commencing flame, that it will not have strength enough to kindle the wood: or, if it does take fire, the combustion is too feeble to set light to the coals that are heaped upon it. Nor should the paper be laid at the bottom of the grate, as is frequently done. The best way is to lay a few pieces of inflammable coal at first on the bottom bars, but without covering them entirely; then lay on the paper or shavings, then the wood, and on that some pieces of round coal of the size of eggs, and no small coal: when the whole is kindled, let it burn up before any more is added. If the small coal be put on first, it is sure to choke the fire, by filling up the vacancies, and preventing the air from having access to the centre. The coal laid at the bottom will take fire by the time that the wood is nearly burnt out, and will, by its flame, keep the fire alight. If a fire be thus prepared and kindled, there is no reason why it should go out, and it ought to burn up with certainty when left to itself. When a fire is lighted in a stove with bright bars, the paper, wood, and coals should be laid a little way back from the front, otherwise the bars will be blackened and discoloured. The *management of a fire* is as important as the lighting; coal should not be thrown on in too large a quantity at a time, as it causes the chimney to smoke; it also suffers a great deal of the hydrogen to be distilled off, and consequently a large portion of the heat required to warm the room, escapes up the chimney in the shape of smoke. The warmth derived from fires depends almost entirely upon the radiation of heat proceeding from the centre of the fire; it is therefore important to keep the front of the grate in a glowing red heat, without suffering the unburned coals to fall down and obtrude themselves between the bars. To promote this, brick balls are sometimes put into the fire, and when these are properly managed, they assist in throwing out radiant heat by becoming red-hot; but they require much care and attention, as they are apt to collect together and choke up the fire, thus doing more harm than good. Much of the comfort and advantage of a fire depends upon the quality of the coals: they should not be too luminous, otherwise they cake so fast as to require frequent stirring and breaking. The use of the poker is, in

many instances, misunderstood; its office is to open a languishing fire, so as to admit the free passage of air into it, or apportionating the remains of a half-burned fire so as to concentrate the heat, whilst the parts still ignited are opened to the atmosphere. A fire properly lighted and judiciously managed, will give double the amount of heat at half the cost, that a badly lighted and ill-regulated fire affords.—See BELLOWS, COAL, COKE, &c.

FIRE-PROOF BOXES, CLOSETS, &c.—The principle upon which these should be constructed is, that they should be made of such materials as are not only incombustible, but as little as possible capable of being heated. Metals are not combustible by ordinary fires; but, as they are susceptible of being made extremely hot, they are not proper for this purpose. If the joints are not perfectly close, so as to exclude the external air, papers and other inflammable substances will be burnt and consumed in them in case of a fire; and even should the joints fit quite tightly, papers in them will at least be charred and rendered useless. Brick, soft stone, layers of pumice, charcoal, and other porous substances, are the best non-conductors of heat. Fire-proof boxes should, therefore, be constructed of these materials, which may be cased with sheet iron, merely to keep them together. Air is a good non-conductor; therefore two boxes of non-conducting materials, with a space of a few inches between them, will be far safer than any single box. The inner box should rest upon pieces of pumice, and should not touch the external one anywhere: or the space between the two boxes should be filled with pumice.

FIRE-PROOF CLOTHING.—Cloth made of the fibres of asbestos by weaving, will bear a considerable heat without injury. Cotton and linen fabrics prepared with a solution of borax, phosphate of soda, or sal-ammoniac, may be placed in contact with ignited bodies without their suffering active combustion or bursting into a flame. These substances act by forming a species of glaze on the surface of the fibres, which excludes them from the air. The addition of about an ounce of alum or sal-ammoniac to the last water used to rinse a lady's dress, or a set of bed furniture, or a less quantity added to the starch used to stiffen them, renders them uninflammable, or at least so little combustible that they will not readily take fire. Chloride of zinc is, however, the most active incombustible agent in such cases, and will render a lady's dress quite secure from the ravages of fire. *Paper, wood*, and other materials, may be rendered incombustible by soaking them in any of the above solutions.

FIRE-PROOF HOUSES.—The rendering a dwelling-house fire-proof is a matter of great importance, furnishing, as it does, the occupant with perfect comfort and security. This precaution is all the more necessary for country dwellings, where a house may be on fire for a long time before any assistance arrives, or any means are found for extinguishing it. The chief means proposed have been iron roofs, floors supported by iron or flat brick arches, plaster or what is called flagging under the flooring-boards, stone or iron staircases, brick or at least brick-nogged partitions, metal sashes, iron plating round all timbers: in short, using metal or brick, and slate, wherever it is possible, instead of wood.

FIREWORKS.—The three principal materials employed in this manufacture, are charcoal, nitre, and sulphur, along with filings of iron, steel, copper, or zinc, or with resin, camphor, lycopodium, or other substances to impart colour, or to modify the defect in duration of combustion. Gunpowder is used either in grain half-crushed, or finely ground, for different purposes. The longer the iron filings are, the brighter red and white spots they give, those being preferred which are made with a coarse file and quite free from rust. Steel-filings and cast-iron borings contain carbon, and afford a more brilliant fire, with wavy radiations. Copper filings give a greenish tint to flame; those of zinc, a fine blue colour; amber affords a yellow colour, as also resin and common salt, but the last must be very dry. Lamp-black produces a very red colour with gunpowder, and a pink one with nitre in excess; it serves for making golden showers. When this substance is lightly mixed with gunpowder and put into cases, it throws out small stars, resembling the rowels of a spur. The yellow sand or glistening mica, communicates to fireworks golden radiations; verdigris imparts a pale green; sulphate of copper and sal-ammoniac give a palm-tree green. Camphor yields a very white flame and aromatic fumes. Benzoin and storax are also used on account of their agreeable odour. Lycopodium burns with a rose colour and a magnificent flame.

FISH BAIT.—See BAIT; FLIES, ARTIFICIAL, &c.

FISH BAKED.—Some kinds of fish are better baked than boiled, especially that class that furnishes the smallest amount of nutrition; as the process of baking tends to the retention of the nutritive qualities of food while it is being dressed. In baking fish, generally, the oven employed should be of a very moderate heat; the time is not of so much consequence as the temperature, so much so that fish may be left in a slow oven for hours without injury.

FISH BOILED.—Fish that is to be boiled must be put on the fire in cold hard water; when it boils, skim with the greatest care, throw in a cupful of cold water to moderate the heat; then keep it simmering only, lest the outer part break before the thick and inner part be done; but "crimped fish" should be put into boiling water and simmered for a few minutes. A large handful of coarse salt, with a small piece of saltpetre and a little horseradish, should be put into the water in which fish is boiled; it is also reckoned finer by the addition of two or three spoonfuls of vinegar. Care must be taken to preserve the roe, milt, and liver whole; to let them be sufficiently dressed, and to arrange them conspicuously when

served. The sound adhering to the bone must be left there, but very carefully cleaned. To judge if a large fish be sufficiently boiled, draw up the fish plate, and with a thin knife, try if the fish easily divides from the bone in the thick parts, which it will when done enough. Keep it hot, by laying the fish-plate crosswise on the kettle, and covering with a thick cloth moistened with hot water; if left in the water after it is dressed it loses its firmness and becomes woolly. Great care is necessary to drain the water from boiled fish, that its dryness may not be lessened, or its colour deteriorated.

FISH BROILED.—When fish is to be broiled, it should be seasoned and floured; the gridiron on which it is cooked should be rubbed over with suet when hot, to prevent the fish sticking to the bars. The fire should always be very clear, to prevent the fish being impregnated with smoke, and great care should be taken not to scorch it.

FISH CAKE.—Remove the bones and skin from any fish that is left at dinner, and put it into warm water for a short time. Then take it out, press it dry, and beat it in a mortar to a fine paste with an equal quantity of mashed potato; season to taste. Make the mass up into round flat cakes, and fry them in butter or lard till they attain a fine brown colour.

FISH COLD, TO DRESS.—Dip a flat dish in hot water, to prevent cracking; smear it with butter and sprinkle white pepper on it; then a thick layer of finely grated stale bread; then a layer of fish separated from the bones and broken small; a little melted butter poured over a layer of bread; then a layer of fish with butter as before, repeated as often as required for the quantity of fish and size of the dish. Smooth the surface with a spoon, and sprinkle lightly grated bread and pepper on the top. Place it for twenty or thirty minutes, according to thickness, before a brisk fire, with a tin shade at back of dish to refract the heat. Take it up when sufficiently browned.

FISH CURRIED.—Cut cold boiled fish into thick slices, and fry them with butter. In as much vinegar as will cover the fish boil a little salt, two or three cloves of garlic, a good deal of turmeric finely pounded, three cloves, a little ginger, nutmeg, and black pepper, as much as will season it sufficiently; pour this over the fish. Cover it closely, and when it has stood for twenty-four hours, it will be fit for use. Boiled rice will be found an excellent accompaniment for this dish.

FISH CUTLETS.—Chop a considerable quantity of herbs with a small piece of shalot; season it with pepper and salt, and put it into a stewpan with two ounces of butter; as the butter is melting add a teaspoonful of essence of anchovies. Do not suffer the butter to get beyond melting point, and mix the whole thoroughly together. Then cut any kind of fish dressed or raw into cutlets; and when the herb seasoning is nearly cold, spread it on the fish thickly with a knife; dredge the fish with bread crumbs, and cook them on butter pans in an oven, or before the fire. Stew a chopped onion with any green vegetables in season; cut it into slices in a little broth; add nasturtiums with a little of the pickle; place them in the centre of the dish, and arrange the cutlets round.

FISH FORCEMEAT.—Chop and afterwards pound in a mortar, any kind of fish, adding one or two anchovies, or a teaspoonful of the essence of anchovies, together with a hard boiled egg. Pound the fat of bacon separately, and then mix with the foregoing; add a third portion of bread, prepared by soaking and pounding previously, and mix the whole up with raw eggs.

FISH FRIED.—After the fish has been well cleaned and washed, wrap it in a clean soft cloth; and when perfectly dry, moisten it with egg, and sprinkle over it finely grated bread crumbs. Place it in a frying-pan containing hot lard or dripping, and let it fry quickly, until it is of a light brown colour. If the fish be done, and still retains a pale hue, draw the pan to the side of the fire, take the fish carefully up, and place it either upon a sieve turned upwards, or on the under side of a dish, and let it then drain before the fire and finish browning. If desired to have a particularly delicate appearance, the fish should be enveloped in a sheet of foolscap paper. Fish fried in oil obtains a much finer colour than when dressed in lard or dripping. Butter should never be used, as it imparts a bad colour.

FISH FRITTERS.—Make a light forcemeat with fish of any kind, then put a small quantity into pieces of puff paste; fry them in boiling lard, and drain them dry. Serve them with truffles or bechamel sauce.

FISH, GOLD AND SILVER.—These are very sensitive and susceptible creatures, and should therefore be treated with great care and delicacy. The globe in which they are kept should be capacious; this should be placed in a light cheerful situation, at the same time avoiding the sun, the heat of which, intensified by the glass, would be fatal to the occupants of the globe. They should have a supply of fresh river water every day, and when they are removed for this purpose, a net should be used, and not the hand. While being thus removed, they should be put into a bowl of fresh water with a few bread crumbs in it, and after remaining there an hour, placed in their usual habitation. In giving bread, care must be taken not to leave it in the water for any considerable length of time, or it will become sour and kill the fish. As they are averse to noise and violence, they should not be disturbed by loud shouts or whistling, nor should the vessel in which they are, be shaken. Noisome smells are also frequently fatal to them. To propagate gold and silver fish, they must be put into reservoirs of considerable depth, in some parts at least, shaded here and there with water lilies, and constantly supplied with fresh water. Care must be taken to collect the spawn when it appears on the surface of the water, as otherwise it will be destroyed by the fish themselves. This spawn should be put into

a vessel and exposed to the sun, until vivified by the heat.

FISH GRAVY.—Skin two or three eels or some flounders; gut and wash them very clean; cut them into small pieces, and put them into a saucepan. Cover them with water, and add a little crust of bread toasted brown, two blades of mace, some whole pepper, sweet herbs, a piece of lemon-peel, an anchovy or two, and a little horseradish. Cover close and simmer; add butter and flour, and boil with the above.

FISH PATTIES.—Take a carp, a tench, and an eel, boil them slightly; half stew six oysters; pick the flesh from the bones of the fish, add some mace and a little white wine, and mix all well together. Make some rich puff paste, line tins with it, then put in a portion of the forcemeat, with one oyster and a bit of butter; cover with paste, and bake till done.

FISH PIE.—Boil two pounds of small eels, then having cut the fins quite close, pick the flesh off and throw the bones into the liquor, with a little mace, pepper, salt, and sliced onion; boil till quite rich, and strain it. Make forcemeat of the flesh, lay at the bottom of a dish an anchovy, parsley, lemon-peel, salt, pepper, bread crumbs, and four ounces of butter warmed. Take the flesh of soles, small cod, or dressed turbot, and lay on the forcemeat, having previously rubbed it with salt and pepper. Pour the gravy over and bake.

FISH POND.—A collection of water employed for the purpose of propagating and feeding fish. The qualities of a pond, to make it profitable for breeding fish, differ materially from those required for the feeding of them, inasmuch as some particular ponds serve only for the purpose first named, and others for the last mentioned; and the same pond is scarcely ever found efficient for both purposes. The indications of a good breeding pond are—a considerable quantity of rushes and grass about its sides, with gravelly shoals, such as horse ponds usually have. The spawn of fish is very prolific, and when the owner of the pond wishes the fish to grow to some size, he is frequently compelled to thin their numbers, to prevent their starving one another. It may also be necessary to put in other fish that will prey upon the young, and thin them in the quickest manner. Eels and perch are most useful on this account, because they prey not only upon the spawn itself, but upon the young fry, from the first hatching to the time they are of a considerable size. Some fish are observed to breed indifferently in all kinds of water; of this nature are the roach, pike, and perch.

FISH, PROPERTIES OF.—The white kinds of fish, as cod, haddock, flounders, &c., are easy of digestion, but not very nutritious; the oily kinds, salmon, eels, herrings, &c., are more difficult of digestion. The class of fish most highly esteemed is that which comes from the sea; river fish ranks next, and last in point of quality is the fish of ponds or lakes. The best sea fish is that which feeds in rocky places; the next, that which swims in deep waters; and the least wholesome, the fish that approaches nearest the coast. The oil of all fish is more or less unwholesome; generally speaking, therefore, the fish which is the least oily is to be preferred. In cooking fish, as far as health is concerned, the best mode is boiling—broiling and frying not agreeing with some stomachs. Whenever fish is used for stews, it is always advisable to put a little wine with it, to correct its watery tendency.

FISH RAGOUT.—Take carp, tench, pike, perch, and eels, clean and scale them well, and cut them into pieces for serving; put into a stewpan a good sized piece of butter, add some flour to it, and let it fry to a pale brown; add a quart or two of good bouillon, with a couple of glassfuls of red wine and a few cloves and onions. When this boils up, put in the fish, stew it till done, sprinkle lemon-juice over it, and serve.

FISH, SALT.—When fish is very salt and dry, it must be soaked in water a long time before it is boiled. Lay it in cold water for some hours until it is well softened. Brush it very clean, wash it thoroughly, and put it with plenty of cold water into the fish-kettle, place it near the fire, and let it heat very slowly indeed. Keep it just on the point of simmering, without allowing it ever to boil, from three quarters of an hour to an hour, according to its weight; should it be small and thin, less time will be sufficient for it. From the commencement, while the fish is boiling, the scum should be carefully removed.

FISH SAUCE.—To about four ounces of melted butter, add three tablespoonfuls of mushroom-ketchup, a tablespoonful of essence of anchovies, a tablespoonful of white wine vinegar, some cayenne, and a teaspoonful of soy.

☞ Melted butter, 4ozs.; ketchup, 3 tablespoonfuls; anchovy essence, 1 tablespoonful; vinegar, 1 tablespoonful; cayenne, sufficient; soy, 1 teaspoonful.

FISH SAUCE, FOR PRESERVING.—Chop forty anchovies, bones and all, put to them ten shalots cut small, a stick of scraped horseradish, a quarter of an ounce of mace, a quart of white wine, a pint of water, one lemon cut in slices, half a pint of anchovy liquor, a pint of red wine, twelve cloves, twelve peppercorns. Boil the whole together till it is reduced to a quart; then strain, bottle off, and cork it securely, and put by in a cool dry place. One teaspoonful of this sauce will be sufficient for half a pound of butter. Warm the sauce first, and then put the butter in to melt, with a little flour.

☞ Anchovies, 40; shalots, 16; horseradish, 1 stick; mace, ½oz.; white wine, 1 quart; water, 1 pint; lemon, 1; anchovy liquor, ½ pint; red wine, 1 pint; cloves, 12; peppercorns, 12.

FISH SAUCE, WITHOUT BUTTER.—Simmer a quarter of a pint of vinegar, and half a pint of soft water, together with an onion, half a stick of horseradish scraped, four cloves, two blades of mace, and half a teaspoonful of black pepper. When the onion is quite tender, chop it small with a couple of anchovies, and set the whole to boil for a few minutes with a tablespoonful of ketchup;

in the meantime have ready, well beaten the yolks of three eggs; strain them, mix the liquor by degrees with them, and when they are well mixed, set the saucepan over a moderate fire, holding a basin in one hand, into which toss the sauce to and fro, and shake the saucepan over the fire, to prevent the eggs from curdling.

☞ Vinegar, ¼ pint; soft water, ¼ pint; onion, 1; horseradish, ½ stick; cloves, 4; mace, 2 blades; black pepper, ½ teaspoonful; anchovies, 2; eggs, 3 yolks.

FISH SOUP.—Take a dozen flounders, or any small flat fish, and the same number of perch; gut and clean them carefully; put them into a stewpan with two quarts of strong veal broth; add a few slices of lean ham, two or three carrots, onions, and heads of celery cut in slices; some sweet herbs, salt, and cayenne. Stew the fish till it will pass through a coarse sieve; then return it into the stewpan, with a good lump of butter and some flour to thicken it; add two glassfuls of white wine and a tablespoonful of garlic vinegar. This stock, if once reboiled, will, in cold weather, keep well for a month; and when served as soup, the quantity may of course be reduced according to the number of the party intended to partake of it.

FISH STEWED.—Take some good veal-stock, chopped shalots, anchovies, horseradish scraped, and a few slices of lemon-peel: season with cayenne pepper, salt, and lemon-juice. Boil all these together for about a quarter of an hour; strain the liquor, put the fish into it and stew it; when nearly done add a couple of glasses of red wine; serve in a deep dish with fried bread arranged round it.

FISH, TAINTED, TO SWEETEN.—The application of strong vinegar, or of acetic acid, will sweeten fish when the taint is but slight. The vinegar should be used pure; and one wineglassful of the acid should be mixed with two of water. Pour either of these over the fish, and rub it on the parts which require it, then leave it untouched for a few minutes, and wash it afterwards well, changing the water two or three times. When the fish is considerably tainted, no remedy will render it fit for human food, and it is therefore better to reject it at once.

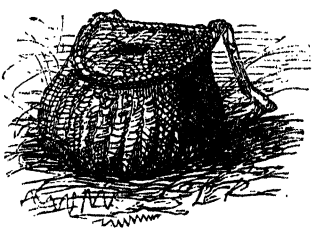
FISH, TO CHOOSE.—The signs of the freshness and good condition of fish are unmistakeable. If fresh, the eyes will be bright, the gills of a fine clear red, the body stiff, the flesh firm, yet elastic to the touch, and the smell not disagreeable; but if the fish be stale, the very reverse of these conditions will make themselves apparent.

FISH, TO CLEAN.—This operation requires scrupulous delicacy and nicety, to be performed properly. Wash the fish well, but do not leave it longer in water than necessary, as it loses its flavour by being soaked. Handle it lightly, and when the scales are to be removed, lay the fish flat upon its side, and hold it firmly with the left hand, while the knife is being used with the right; turn it, and when both sides are done, pour or pump sufficient water on the fish to remove the loose particles; then proceed to remove the internal parts, and do this without opening the fish more than is necessary for the purposes of cleanliness. Be careful not to leave the smallest portion of offensive matter in the inside; wash out the blood entirely, and scrape or brush it away, if needful, from the back-bone. In cases where the scales of the fish are left on, the outside of the fish should be well washed, and afterwards wiped with a coarse cloth, drawn from the head to the tail. The gills of all fish (with the occasional exception of the red mullet) must be taken out, and the fins of fish generally should be cut off, with the exception of turbot, of which fish they are considered a great delicacy. All the articles employed in this operation should be carefully cleaned when they are done with, and the dresser or other place wiped with a damp flannel.

FISH, TO PRESERVE.—Fish of the smaller kinds are best preserved if washed and dressed, then wiped gently as dry as possible, and hung up separately by the head in some cool place, and where they may be submitted to the action of the air. When there is danger of their being attacked by flies, a wire safe, placed in a strong draught of air, is the best place to preserve them. Soles will in winter remain good for two days when thus prepared; and whitings and mackerel may be similarly kept without losing any of their excellence. Cod-fish may be preserved by having salt rubbed slightly along the back-bone; salmon is best preserved by rubbing the inside with vinegar, and sprinkling it with pepper. When the weather is excessively sultry, however, all these modes are unavailing, and the only plan is to cook the fish partially without delay.

FISHING.—See ANGLING.

FISHING BASKET.—This should be made of wicker-work, with two openings for a leathern strap to pass through, which strap should encircle one shoulder and be buckled, so that it may be let down or taken



up as occasion may suit. During the process of fishing, the basket may hang easy, and will thus encumber the arms less; but on the return home, if well laden, it is most conveniently carried when drawn up tightly under the arm. There are great varieties of fishing baskets made to suit varied fishings. Much depends on the country fished in, the fish angled for, and other circumstances.

FISHING, LAW OF.—Every person has a right to fish in the open sea, and in the tideway of rivers, but in rivers which are not navigable, the fish belongs to the owners of the soil on each bank. Everyone who fishes in private water is liable to be considered as a trespasser: the law in this respect enacting, "That if any person shall unlawfully and wilfully take or destroy any fish in any water which shall run through or be in any land adjoining or belonging to the dwellinghouse of any person being the owner of such water, or have a right to fishery thereof, such offender shall be guilty of a misdemeanour, and, being convicted thereof, shall be punished accordingly; and if any person shall unlawfully and wilfully take or destroy, or attempt to take or destroy, any fish in any water not being such as aforesaid, but which shall be private property, or in which there shall be any private right of fishery, every such offender, being convicted thereof before a justice of the peace, shall forfeit and pay over and above the value of the fish taken or destroyed (if any), such sum of money not exceeding £5, as to the justice shall seem meet: provided always, that nothing hereinbefore contained shall extend to any person angling in the day-time; but if any person shall by angling in the day-time unlawfully and wilfully take or destroy, or attempt to take or destroy, any fish in any such water as first mentioned, he shall, on conviction before a justice of the peace, forfeit and pay any sum not exceeding £5; and if any such water as last mentioned, he shall, on the like conviction, forfeit and pay any sum not exceeding £2, as to the justice shall seem meet; and if the boundary in any parish or township shall happen to be in or by the side of such water as is hereinbefore mentioned, it shall be sufficient to prove that the offence was committed either in the parish or township named in the indictment or information, or in any parish or township adjoining thereto."

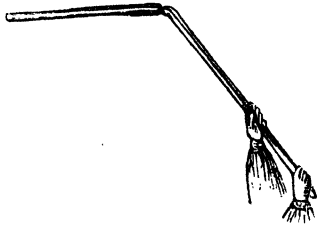
FISHING LINES are made of various substances according to the fish they are intended to capture, and are treated of under the headings of the several sorts of fish. They are constructed of hemp, silk, hair, vegetable fibre, and silkworm gut twisted or plaited either together or singly. There is the sea-line and the eel or night-line generally made of twisted or plaited hemp, the trolling and spinning line of plaited silk, either dressed or undressed, the fly or casting line of silk or hair, or silk and hair united, and the general running line of any or either of the descriptions mentioned. There is also the bottom or foot line of finer and better material, either silkworm gut or hair, single or twisted, according to circumstances.

FISHING-NET.—An angling appendage intended to keep alive the fish taken. The hoop-net may be of any dimensions, from ten inches to a foot and a half. It is usually constructed of circular pieces of cane, one of which forms the upper end, the other the lower, while the third sustains and keeps open the centre portion. A fourth and smaller circle forms the mouth of the net, which is drawn up and closed by means of its cord. This cord, of some yards' length is attached to it, and by its means is first lowered into the water, and then secured either by fastening it to a bough of a tree or to a spike inserted in the ground. In the use of this net it is to be noticed, that when a strong current is flowing it will be prudent either to put a stone within the net, or to have the lower part of it loaded with lead. The reason of this caution is, that in the current it sometimes happens that the net will become closed by the buoyancy of the cane and thus drown the fish. In addition to this appendage, there is what is termed a landing net, intended to render more secure the fish after it is captured. There is also a minnow-net, in which the small fish of that name taken for the purpose of bait are secured.

FISHING RODS are made of ash, deal, hazel, bamboo, cane, hickory, and various kinds of wood; and the kind of rod to be used depends upon the fish intended to be caught; there is the trolling rod, the spinning rod, the fly rod (for trout, &c.), either single or double handed, the salmon rod, the roach rod, the general rod, the punt rod, &c.—See BARBEL, CARP, DACE, ROACH, &c.

FIXTURES.—In law, a term generally applied to all articles of a personal nature affixed to land. This annexation must be by the article being let into, or connected with the land, or with some substance previously connected therewith. Thus, a barn built in a frame, not let into the earth, is not a fixture; a brewer's stills set in brickwork, resting on a foundation, are fixtures. And the application of the same principle gives in every case the true rule to judge whether anything be a fixture or not. Whatever is thus fixed, becomes by law parcel of the freehold; it is therefore on general principles not removeable; but there are exceptions to this rule, established by custom.

FLAIL.—A wooden instrument used for threshing out grain. It consists of two parts, the handstaff and the beater. The first is a light rod of ash, about five feet in length, slightly increased in breadth at the lower extremity, where it is perforated for



the passage of the thongs that bind the beater to it. The beater is a rod about two feet and a half or three feet in length, which is best made of some compact wood, such as thorn. If the beater be not properly applied,

it will soon separate into splinters; and to prevent this it should be constructed to fall upon the edge, instead of its flat or convex side; this is easily accomplished in the formation. The usual form of the beater is cylindrical, but frequently thickened a little towards the extreme end. It is usually attached to the handstaff by a strap of leather, or of untanned hide. When mounted in this manner, the beater is formed with two projecting ears, standing at right angles to the side on which it is intended to fall, and about an inch and a half from the end by which it is attached; serving the purpose of retaining the beater within the strap. The strap is about eight inches long and an inch and a half broad; it is bent over the end of the beater, and the tails are brought to embrace the sides of it beyond the ears. The strap being previously perforated with four holes in each tail, it is bound by a thong of leather laced through the holes and round the neck of the beater; the upper turn of the lacing thong catching the ears, prevents the strap from slipping off. The strap thus applied forms a loop standing about an inch beyond the edge of the beater; and through that, and the perforation at the end of the handstaff, another and a stronger thong is passed several turns and secured; thus forming a kind of loose swing joint that allows free action to the beater in its gyration round the head of the threshers and its descent upon the threshing-floor. Another mode of mounting the beater is by applying a plate of iron in place of the leathern strap, which is fixed to the wood by rivetting, leaving a loop as before, which must be neatly rounded and smoothed, to prevent the too rapid chafing of the thong by which it is bound to the handstaff, in the same manner as described above.

FLAN.—A sweet dish made as follows:—Mix a tablespoonful of flour with a tablespoonful of brandy or orange-flower water, eight yolks of eggs, and a little salt; when well mixed, add a quarter of a pound of sugar to a pint of milk, which pour over the eggs, stirring all the time; put the mixture into a buttered tart-pan, and bake it in a moderate oven for half an hour; powder it with sugar, and serve.

☞ Flour, 1 tablespoonful; brandy or orange-flower water, 1 tablespoonful; eggs, 8 yolks; salt, sufficient; sugar, ¼lb.; milk, 1 pint.

FLANNEL, Properties of.—As an article of clothing, flannel is superior to any other, both for personal comfort and the preservation of health. When worn as underclothing its advantages are numerous and important. It acts on the surface of the skin, and exercises the most beneficial action, by keeping the pores clean and in a state most favourable to perspiration. It has also the advantage of absorbing the perspiration as soon as emitted, and allowing its watery portion to pass off into the atmosphere almost as soon as formed. Thus, persons who wear flannel next their skin, seldom catch cold from changes of temperature, even though perspiring profusely. In a variable climate like that of England every person should wear flannel, not only in the colder season, but throughout the year; the substance of the material being regulated according to the coldness or mildness of the season. In fact, flannel is required even more in summer than in winter, because persons perspire more freely in warm than in cold weather, and are consequently more susceptible of cold; while at that period of the year their clothing is less capable of protecting them from the effects of sudden changes of temperature. Flannel clothing should be removed at night upon going to bed, otherwise the body does not receive the due amount of warmth and comfort from it during the day. Some persons imagine that flannel may be worn with impunity for an extraordinary length of time without changing; but this is an error, as flannel in time, from the repeated absorptions of perspiration which it undergoes, has a species of incrustation forming on its surface, which impedes rather than assists the operation of the pores, and creates considerable irritation of the skin. Flannels, therefore, for the purposes of health and cleanliness, should be changed once a week. Flannel is sometimes objected to from the irritation it causes when first worn, and for this trifling inconvenience is often discarded after a few hours trial. This may in part be obviated by turning the flannel, and wearing the smooth and outer surface next the skin.

FLANNEL, to Clean and Preserve.—*To wash flannel.*—Take half the weight of soda that there is of soap, boil them with water, allowing a gallon to every pound of soap, and use it when perfectly cold. Wet the flannel in cold water, then wash it in fresh cold water, with some of the boiled mixture amongst it; wash them in this, changing the water till the flannel becomes perfectly clean; then rinse it well in cold water, and dry it in the shade. *To scour flannels.*—Slice half a pound of yellow soap, and dissolve it in boiling water, so as to make it of the thickness of oil; cover the flannels with warm water, add a lump of pearlash, and about one-third of the soap solution; beat them till no head rises on the water; then pour it off, and proceed as before with hotter water, without pearlash. *To prevent flannels from shrinking.*—Put them on the occasion of the first washing into a pailful of boiling water, and let them lie till cold. *To preserve the colour of flannels.*—Mix four tablespoonfuls of flour with four quarts of water, and let it boil, stirring the whole time. When it has boiled thoroughly, put the flannel articles that are to be washed into a pan or tub, and pour over them half the quantity of the mixture in a boiling state. When the water has become cool enough to hold the hand in it, wash the flannels in the usual way, but without the addition of soap; then rinse in three or four waters, and having let them drain as much as possible, put them back into the tub or pan, and pour over them the remaining flour and water in a boiling state. When cool enough, wash them as before; rinse well, and lay them out to dry without wringing.

FLATULENCE, unless in exceptional cases, such as from ill-cooked food, an excess of vegetable diet, &c., is always an indication of impaired functional action of the stomach, either proceeding from a disease of that organ or through sympathy with some other part; but by far the greater number of those who suffer from flatulence owe it to a weakened state of the stomach itself, often hereditary, frequently the result of an erroneous dietary, and sometimes from the injudicious habit of over stimulating; besides these cases, it frequently proceeds from mental anxiety, imperfect mastication of the food, and a close sedentary habit.

Flatulence is often completely cured by strict attention to dietetic rules, such as avoiding for a time all vegetables and fruits, making the breakfast and tea on hard crusts, biscuits or dry toast, and *chewing* these for a considerable time before *permitting* the food to pass into the *stomach;* at the same time taking as small a quantity of fluid in the way of tea, coffee, or cocoa, as possible, and only sufficient to facilitate the descent of the solid food; meat and bread for dinner, with a sparing draught of cold gin and water should constitute the meal. The tea should be a repetition of the breakfast, and a supper of biscuit and cheese with a small tumbler of cold spirits and water, the same as that for dinner; a system like this, with exercise, repose on a sofa for half an hour after each meal, and using the *flesh brush* night and morning *over the chest and shoulders*, and especially across the stomach, so as to excite the organ to increased action, will be found to yield the fullest advantage, and in many cases will supersede the necessity of any medicine whatever. When, however, there is much acidity in the stomach, it should be neutralized by a teaspoonful of magnesia, or half a drachm of carbonate of soda, a short time before any one of the meals, and when the bowels require it, a compound assafœtida pill at bed-time; the same regimen as to diet being persevered in, as that above. Where the stomach has become seriously enfeebled by a long continued state of flatulence, it will be necessary in addition to either of the former plans, to give the organ tone and strength, by employing one or other of the subjoined pills, adopting them in the order in which they stand. Take of

Sulphate of zinc . 10 grains—powder,
Rhubarb, powdered 20 grains.
Extract of gentian, sufficient to make a mass,

which divide into thirty pills, one to be taken three times a day. Take of

Nitrate of silver—
Lunar caustic . 3 grains—powder.
Quinine . . . . . 4 grains.
Ginger . . . . . 6 grains.

Mix well, and add extract of camomile sufficient to make a mass, which divide into twenty-four pills, one to be taken three times a day. When flatulence is attended with a sense of coldness in the stomach, a teaspoonful of "Gregory's Powder," with ten grains of soda, may be taken in a little aromatic water before breakfast each morning.

FLEA.—The troublesome little animal that infests our clothing and haunts our households, is produced from various sources, but, generally speaking, owing to the accumulation of dust and dirt. Carpets, blankets, and every article manufactured from wool should be so well attended to as to prevent any accumulation of dust from settling in them. The blankets used in the cribs and beds of children should for this reason be daily shaken, and, weather permitting, hung before an open window, that the air may pass through and cleanse from dust their loosely woven fabrics. The refuse known as "flue," which collects in bedrooms is very favourable to the propagation of fleas, as dust and down combined contain the nourishment nature has ordained for the young of this animal, and therefore the mother-flea seeks to lay her ergs wherever this combination can be found. The vicinity of dog-kennels, pigeon-cotes, fowl-houses, &c., are amongst the causes of the rapid production of fleas in some houses. Although flea-bites are irritating to persons of all ages, they prove particularly so to children. Hence particular care should be taken to keep the nurseries in a state of cleanliness. Although many specifics have been promulgated for the extermination of this pest, when once it has made itself felt, there is none that can be said to be entirely successful. But cold, light perfumes, such as camphor, will certainly tend to diminish them; and they also betray a rooted aversion to cold water.

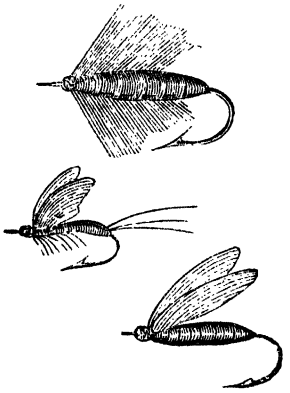
FLESH.—See FAT, FIBRIN, FOOD, &c.

FLESH BRUSH.—An instrument which is exceedingly advantageous, in exciting a healthy stimulus to the skin, and may be adopted to any extent short of actual irritation; the most suitable times for using them are upon rising in the morning, and when taking a bath. The *flesh glove* is a useful modification of the flesh brush, and is especially adapted for tender and sensitive skins.

FLIES.—The common house fly causes considerable annoyance to the person, and damage to the furniture of a household. It is in vain to attempt to exclude them, and the fly-poison usually vended generally attracts more flies into a house, than it destroys. A domestic remedy which is partially successful will be found in a strong decoction of quassia, thickened with moist sugar, or by mixing together a teaspoonful of black pepper, two of brown sugar, and four of cream. It should also be known, that flies will not pass through a netting made of fine silk thread or wire, even though the meshes be an inch apart, provided there is no window behind it: this affords a ready means of excluding these insects from all apartments which have windows only on one side of them, which may at the same time be kept wide open. If, however, there is a window on the other side of the room, the flies will pass through the netting immediately.

FLIES, ARTIFICIAL, are made of fur, wool, feathers, mohair, silk, gold and silver twist, and similar materials, and are, as their name partly implies, intended to be as close an imitation of the living creature as possi-

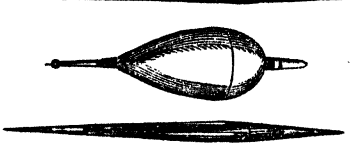
ble, so as to deceive the fish they are used to capture. Any one who has once acquired a taste for fly-fishing will not change it for any other of the sports of the field, the loch, or the moor. The species of our fresh-water fish to be taken with artificial flies are, salmon, trout, grayling, chub, dace, bleak, and occasionally, both as to locality and time, roach, pike, perch, and bream. Artificial flies are not merely imitations of flies strictly speaking, for the various descriptions of insects are indeed numerous, there being nine *orders* which are again subdivided into *families*,



genera, and *species*. Ronalds well remarks, "After all, what is a descriptive catalogue of the best insects for fly-fishing? If followed blindly without intelligence, it will be as useless as a dictionary in the hand of untutored youth. But use it intelligently as a *help*, not as an *oracle*, and it will assist and facilitate your studies. But it requires ingenuity and perseverance, observation and judgment, ay, travel too, and experience to make a good angler!" Books: *Daniell; Blaine; Davy;* and *Ronalds's Fly Fisher's Entomology*, 5th edition.

FLIES, NATURAL, as used for angling, comprise almost every insect that either crawls, hops, or flies.—See FLIES, ARTIFICIAL.

FLOAT.—An article used by anglers to regulate the position in the water of the



bait used in fishing, and to show when they get a bite; it is made of cork, turkey, swan, goose, or porcupine quills, reeds, and some anglers use even glass floats; the float like the rod and the line, varies, according to the particular fish intended to be angled for.

FLOATING.—See SWIMMING.

FLOOR.—An improvement has been introduced in the laying down of floors, by which warping is prevented, and the risk of their being burned through considerably lessened. For this purpose boards are sometimes laid down three inches thick, while, to prevent the warping and also to render the process of cleaning more easy, when the floors are newly laid, cover them over with a copious soaking of boiled and hot linseed oil, and afterwards paint them with two coats of good oil colour. Very little warping will take place after this, and a slight sponging with cold water will at all times be sufficient to render them clean.

FLOOR, TO CLEAN.—See BOARDS.

FLOOR-CLOTH.—A painted material adapted to those floors that are subjected to much wet and dirt, as halls, pantries, kitchens, &c. They are made either in rolls of different widths, from five-eighths of a yard to a yard or more, or in large breadths fitted to the room which they are intended to protect. The foundation of these cloths is ordinarily of flax, but old carpeting will answer the purpose extremely well. A strong oil paint composed of white lead and linseed oil, with a large proportion of litharge, is laid on smoothly for four consecutive coats, and a pattern is printed by blocks, consisting of circular rollers with metal projections, under which the cloth is drawn after it has received its coats of paint. *In choosing floor-cloths*, those are to be preferred that are painted on a fine cloth, which is well covered with the colour, and the patterns of which do not rise much above the ground, as they wear out first. The durability of the cloth will also in a great measure depend on the time it has been painted, and the quality of the colours. If they have not been allowed a sufficient time to harden, a very little wear will injure them; to ensure this latter condition, therefore, it is as well to keep floor-cloths some time before they are used, hung up in an outhouse or a spare room, where they will be kept dry and have plenty of air. When taken up for the winter they should be rolled round a carpet roller, and carefully turned, so as to prevent the paint from cracking. *The objections to floor-cloth* is that it strikes cold to the feet, and in the course of time affects the whole body. In apartments, therefore, where floor-cloth is employed, a mat or rug should be laid down, on that portion of the floor where the feet are likely to remain longest. *To clean floor-cloths*, sweep them, then wipe them with a flannel, and when all dust and spots are removed, rub with a waxed cloth, and then with a dry plain one; but use little wax, and rub only enough with the latter to impart a certain degree of smoothness, or it may cause persons to fall, by being too slippery. Washing occasionally with milk, after the above sweeping and dry rubbing, gives them a fine glossy appearance, and renders them less slippery.

FLOTSAM.—Goods found floating on the sea; these belong to the Crown or the lord of the manor, unless claimed by the owner within a year and a day.

FLOUNDER.—One of the most common of the flat fish. It is found all round the English coast, particularly near the mouths of large rivers, which it generally ascends. They are in season from January to March, and from July to September.—For cooking, they should be stiff and thick, and their eyes bright and full. They should be dressed as fresh as possible, as they very soon become flabby and tainted. Flounder is a river fish as well as a sea fish, and is caught in the Trent and a few of our other rivers. It must be angled for at the bottom, with or without a float, hook No. 8, 9, or 10, and any kind of small worm for bait.

FLOUNDERS BOILED.—Set on the fire a stewpan with a sufficient quantity of water to cover the flounders that are to be dressed, add some vinegar and horseradish, and when the water boils put in the fish, having been previously well cleaned and their fins cut off; let them boil slowly, to prevent their being broken, and when they are sufficiently done lay them on a fish plate, with their tails in the middle. Serve them with parsley and butter.

FLOUNDERS BROILED.—Cleanse and wash as many flounders as you may require, dry and rub them over with oil, and sprinkle salt and pepper over them; broil them on a gridiron over a slow fire, and serve with capers, or any other sauce preferred.

FLOUNDERS FRICASSEED.—Carefully clean the fish, and take off the black skin, but not the white; cut the flesh from the bones in long slices, and dip them in yolk of egg; strew them over with bread raspings, and fry them in clarified butter; when they are sufficiently done, lay them on a dish, and keep them hot. For sauce, take the bones of the fish, boil them in water; then put in an anchovy, some thyme, parsley, a little pepper, salt, cloves, and mace; let these simmer till the anchovy is dissolved; then take the butter in which the fish were fried, put it into a pan, set it over the fire, dredge some flour into it, stirring in the meanwhile, then strain the liquor into it, and boil it till it becomes thick; squeeze some lemon-juice into it; and serve the fish in a dish, with the sauce poured over them.

FLOUNDERS FRIED.—Well rub them inside and out with salt, then let them lie for two hours, to give them some firmness. Dip them in egg, cover them with bread-crumbs, and fry them of a light brown colour.

FLOUNDERS STEWED.—Fry some flounders till they attain a light brown colour, then take them up, and add to the butter they were fried in, a sufficient quantity of water to make sauce for the fish that are dressed; to a quart of water add two anchovies, an onion cut in slices, a tablespoonful of ketchup, and a wineglassful of red wine, let it simmer for a quarter of an hour; pour it on to the fish, and stew them gently for a quarter of an hour; then take them out and put them into a hot dish; thicken the sauce with butter and flour; give it a boil, strain it off, and pour it over the fish.

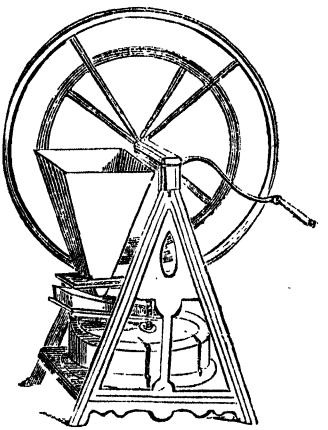
FLOUR.—The meal of wheat-corn finely ground and sifted. It represents the following properties:—1. Fecula, which is insoluble in cold water, but soluble in hot water. 2. Gluten. 3. A saccharine matter, susceptible of the spirituous fermentation. Flour is very susceptible of injury, both by the breeding of insects, and from atmospheric influences. To prevent these consequences, it should always be carefully and thoroughly dried before it is stored away; the barrels or other vessels in which it is put should also be dried before they are used; and it should then be placed in a room tolerably warm and dry.

FLOUR, ADULTERATION OF.—See BREAD, ADULTERATION OF.

FLOUR BOILED.—Tie a quantity of fine flour in a linen cloth, as tightly as possible, dip it several times into cold water, dredge the outside of the cloth with flour until a crust is formed round it, to prevent the water soaking into it while boiling; boil it for a long time, and when cold, divide it into small oblong cakes. For *use*, it is reduced to powder, and is then prepared like arrowroot, in which condition it forms an excellent diet for children suffering from diarrhœa, &c. It enjoys the advantage of being easily prepared, and also of being free from adulteration.

FLOUR CAUDLE.—Mix smoothly a tablespoonful of flour with a gill of water; sweeten a gill of milk, and when it boils, add the flour and water; simmer and stir them together for a quarter of an hour.

FLOUR-MILL.—A hand flour-mill for family use is shown in the accompanying engraving. It consists of one wheel and



pinion, and a fixed French burstone, with a similar stone in motion to cover it. The

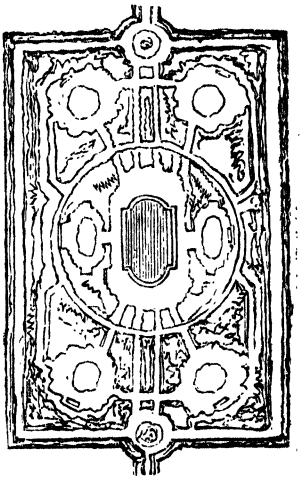
corn passes through a hopper in the usual manner, and comes out from the stones fit for the bolting machine. This mill requires two men to work it, and the price is from ten to sixteen guineas. The employment of a mill of this kind for a household, has many advantages: by its means, security is furnished against adulteration, the expense and inconvenience of sending the grain to the mill are avoided; and the flour is better economized, and more certainly preserved, by being prepared in small quantities only, as it is required for use.

FLOUR PUDDING.—To four ounces of flour, add an ounce of sugar, three-quarters of a pint of milk, one egg, and six grains of ginger; mix the ingredients thoroughly together and boil.

☞ Flour, 4ozs.; sugar, 1oz.; milk, ¾ pint; egg, 1; ginger, 6 grains.

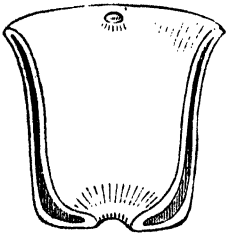
FLOWER GARDEN.—The *situation* of the flower garden should be conveniently near to the house, so as to afford ready access at all times, especially during winter and spring. In *exposure and aspect*, the flower-garden should be laid out in such a manner as that it may derive the greatest possible advantage from the sun and air. It should not be naturally low in surface, nor of a wet retentive soil, nor rendered damp and gloomy by surrounding high trees, or lofty walls or buildings. If it happen that a house be nearly surrounded by a flower garden, the variety of aspect thence afforded, will be favourable to the continuance of the bloom of flowers, far beyond what can be obtained if confined to a southern exposure. South, south-east, and east, are the aspects most advantageous to the growth of flowers; and, possessing these varieties of exposure, the bloom of a garden may be protracted some weeks beyond the time it could be preserved under a single aspect. The *extent* of the flower garden depends jointly on the general scale of the residence, and the particular taste of the owner. If the form of the ground where a pasture is to be situated is sloping, its size should be larger than when the surface is flat. *Shelter* is essentially requisite for the flower garden. The plantation on the side next the garden should begin with the lowest shrubs, and rise in gradation to the trees, which, unless in the north, should not be of the tallest kinds. A few elegant shrubs, and one or two trees, may be scattered through the scene, either in the dug compartments, or the turf glades, for the purpose of shelter and shade, as well as ornament; but in general, much of either of the two former qualities is highly injurious both to the culture of flowers and the thick closeness of turf; besides rendering the garden unfit to be resorted to in the winter and spring seasons. Sometimes an evergreen hedge will afford all the shelter requisite, as in small gardens composed of earth and gravel only, but when the scene is large, and composed of dug compartments placed on a lawn, the whole may be surrounded by an irregular border of flowers, shrubbery, and trees. The soil best adapted for a flower garden is one of commonly good qualities, and moderately light and mellow. Negatively the ground should never be excessively strong and clayey; and mere gravel is very intractable. The *surface* of the flower garden is regulated by the superficial extent; if that be small, and the plants to be grown are chiefly florists' flowers, or other select kinds, in beds separated by gravel walks, a level or gentle and uniform slope will be found most suitable; but where the limits are more extensive, and turf and shrubs are introduced, a wavy surface, either naturally or rendered so by art, will have the best effect.

The form of a small garden will be found most pleasing when some regular figure is



adopted, as a circle, an oval, an octagon, a crescent, &c.: but where the extent is so great as not readily to be caught by a single glance of the eye, an irregular shape is generally more convenient, and it may be diversified by agreeable figures, or component scenes, by the introduction of shrubs, so as to divide the space. A variety of forms may be indulged in without offending taste; and a simple parallelogram divided into beds running lengthwise, or the larger segment of an oval, with beds running parallel to its outer margin, will always please. On general principles, it should be observed, that as flower gardens are objects of pleasure, they must be laid out with taste. But in flower-gardens, as in other objects, there are different kinds of tastes; these embodied are called styles or diameters, and the great art of the designer is, having fixed on a style, to follow it out unmixed with other styles, or with any deviation interfering with the kind of taste or impression which that style is calculated to produce.

FLOWER POT.—The ordinary form of these implements of horticulture are well known. Several improvements have been introduced from time to time. One of these is the flower-pot illustrated in the accompanying engraving. This has double closed



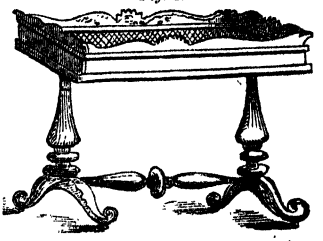
sides, and may have the vacuity filled with water through a small orifice in the rim, or be left empty at pleasure. By this means plants are prevented from suffering for want of water when the vacuity is filled, and from losing the heat, which would be carried off by evaporation if the pot were not furnished with hollow sides. Various other means have been adopted for obtaining the same end; and, generally speaking, it will be sufficient if the flower-pot containing the plant be put within another, at least two sizes larger than itself—the two flower-pots being joined together by a little cement at its base. *The flower-pot saucer* is a flat circular vessel, with a rim from one to two inches high, and is made somewhat larger than the bottoms of the pots. Its chief use is to prevent the water, which escapes by the bottom of the pot, from proving inconvenient on the shelves or stages in rooms or particular situations. A form of saucer has been introduced as much larger than the pot to be placed in it as to admit of surrounding its base with water, in order to keep away creeping insects. In the centre of the saucer is raised a basement on which to place the pot, to keep it dry.

FLOWER STAND.—These articles of use and ornament may be obtained in every variety of shape and form. For plants in

Fig. 1.

pots *fig.* 1 is admirably adapted; it consists chiefly of basket-work made of brass wire. It is mounted upon a mahogany or oak clawed pedestal set on castors. A shallow zinc tray is placed within, to prevent the water that may pass through the pots from falling on to the carpet. The plants must be packed in moss, kept perfectly green and fresh on the surface. For cut flowers *fig.* 2 is one of the most suitable. It is made

Fig. 2.



water-tight within, with the usual provision for drawing it off every day, in order that fresh water may be supplied. The top is covered with a portable fine brass wire grating, the meshes being about half an inch square, to support the flowers and keep them in an upright position. All stands with cut flowers should be provided with glass shades, to be put on at night, to secure them from the dust that must necessarily arise. The moss and sand being saturated with water when they are put in will tend to preserve the flowers much longer than if placed in water alone.

FLOWERS, ARTIFICIAL.—The form and combination of these articles of personal decoration mainly depend on the taste and ingenuity of the maker. The *materials* generally employed are velvet, kid, and fine cambric for the petals, and tafleta for the leaves, and very recently thin plates of bleached whalebone have been successfully introduced. The *colours* are ordinarily produced as follows:—Blue, indigo dissolved in oil of vitriol, and the acid partly neutralized with salt of tartar or whiting; green, a solution of distilled verdigris; lilac, liquid archil; red, carmine dissolved in a solution of salt of tartar, or in spirits of hartshorn; violet, liquid archil, mixed with a little salt of tartar; yellow, tincture of turmeric. These colours are usually applied to the petals with the fingers.

FLOWERS, PRESERVATION OF.—Flowers may be preserved in a fresh state for a considerable time, by keeping them in a moist atmosphere. Another method, by which some flowers may be preserved for many months, is to carefully dip them, as soon as gathered, in perfectly limpid gum water; and after allowing them to drain for two or three minutes, to set them upright, or arrange them in the usual manner in an empty vase. The gum gradually forms a transparent coating on the surface of the petals and stems, and preserves their colour

and figure long after they have become dry and crisp. *Faded flowers may be generally more or less restored* by immersing them half-way up their stems in very hot water, and allowing them to remain in it until it cools or they have recovered. The coddled portion of the stems must then be cut off, and the flowers placed in clean cold water. In this way a great number of faded flowers may be restored, but there are some of the more fugacious kinds, on which it proves useless. Flowers may be produced in winter by taking up the plants, trees, or shrubs, in the spring, at the time when they are about to bud, with some of their own soil carefully preserved around the roots, and placing them upright in a cellar till Michaelmas; when, with the addition of fresh earth, they are to be put into proper tubs or vessels, and placed in a stove or hot-house, when they must be treated in the usual manner. By this method in the month of February, fruits or roses will appear. Flowers sown in pots about Michaelmas, may thus be made to bloom at Christmas.

FLUMMERY.—Put finely ground oatmeal to steep in water for three days. Pour off the thin of the first water, and add more water. Stir up, strain, and boil this with a little salt, till smooth and of the thickness required, adding water at first; if it be in danger of becoming too stiff, a piece of butter is an improvement and a little white sugar. Serve in a basin with milk, wine, cider, or cream.

FOG.—In meteorology, a dense vapour near the surface of the land or water. Fogs, in general, are the consequence of the nocturnal cooling of the atmosphere. The air by its rapid cooling becomes surcharged with moisture; a part of which being precipitated in the form of a cloud, gives rise to the ordinary fog. During the day, the heat of the sun generally disperses the fog, because the quantity of moisture which the air is capable of holding becomes more considerable in proportion as its temperature is increased. Fogs are peculiarly injurious to pulmonary subjects and to persons whose respiratory organs are at all affected; such persons should shun going out into a fog if possible; but if they cannot avoid doing so, they should take every precaution to prevent the noxious atmosphere entering the lungs.

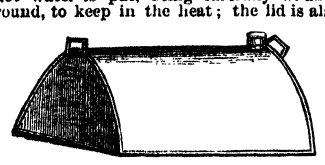
FOOT, DEFORMITIES OF.—There are many varieties of malformation, or deformity of the feet, proceeding either from accident or a congenital cause, and in some instances, arising from weakness either in the bones, muscles, or ligaments of the part, depending originally on a general debility or want of tone in the system. Deformity of the foot is caused either by an overlapping of the bones of the ankle joint, the contraction or paralytic action of the adjacent muscles, drawing one or more bones from their articulation, or from some malformation in the joint before birth. The most common and remarkable malformation of the feet, is the deformity known as club-foot, of which there are four varieties, described under different names by surgeons, but which will be understood by an account of the position of the foot in walking. The *first* variety, is a simple drawing up of the heel, the individual walking on the balls of the toes. In the *second*, the heel is still drawn up, the inner edge of the foot is drawn outwards, and the whole member twisted inwards, in such a manner as to compel the sufferer to walk on the outer edge, and sometimes on what in its natural position would be the top of the foot. In the *third* variety, the outer edge of the foot is so raised up as to throw the tread on the inner margin of the foot. And the *fourth* is that in which the whole foot is pressed forward, the toes uppermost on the front of the leg, the patient walking upon the heel only. The treatment of all these deformities, when they proceed from spasm or paralysis, is to remove the cause, by adopting a course of purgatives and a soothing system of fomentations; or when rheumatism is the exciting cause, by such remedies as are admissible in that disease; but when the contraction has become permanent, the cure can only be effected by dividing the tendons of the contracted muscles. This operation is performed by passing a narrow-bladed knife under the tendon or tendons, the principal always being the "*Tendo Achillis*," and cutting outwards, so as to divide the tendon; after a time the foot is placed in its natural position, and by a proper apparatus kept so till the tendon, by means of the interposition of *callus* or fresh matter, is re-united, and as a consequence elongated by the amount of new deposit thrown out. When the union is perfect, the foot is to be strengthened by friction, salt water bathing, tonics, and galvanism.

FOOTMAN.—The footman's routine of duty is, in a complete establishment, of a subordinate description. In the morning he assists in cleaning the furniture, windows, &c., and preparing first and putting by afterwards, the articles used for the breakfast table. He then cleans himself and prepares to attend the carriage, to answer bells, or to obey any orders given him by his master or mistress. At dinner he again attends, having previously assisted to prepare the table for it. His next duty is to clean and put away the same things. At tea he again waits; and, generally speaking, his daily avocations end after this meal is finished. *The footman in small establishments* has more general and constant occupation. In such cases the performance of the various duties are left to be regulated in a great measure by the servant himself; and in order to render them lighter and more agreeable, he should adopt a certain method, by which his daily work is to be ruled. He must rise early, and endeavour to get some of the roughest part of his work finished before breakfast. In order to preserve the cleanliness of his clothes, he should be provided with a complete overall suit, made of materials that will easily brush clean or bear washing. In this dress he cleans the boots, knives, &c. After this, he cleans and washes himself, previously to the preparation for the family breakfast table.

After the footman has himself breakfasted, and replaced all the articles used, he must direct his attention to the cleaning of candlesticks, trimming of lamps, &c. The furniture he must rub daily, and window cleaning he must perform as opportunity offers. In the after part of the day he must make the preparations for the dinner-table. During this part of the day he should be attired in a dress that is not inconsistent with his employments, nor yet unfit for him to appear in if summoned to the parlour or street-door. A coloured cotton or plain cloth jacket and white linen apron are usually worn by footmen while thus engaged. When he attends his mistress in her walks or drives, he should be scrupulously neat and clean. In giving orders to the coachman he should be quick and accurate. Nor is it altogether out of place to remark that the knock at the door, by which he announces his mistress's visit, is to be performed with a certain measure and degree; if too long and loud it disturbs the surrounding neighbourhood, and if too insignificant it savours of disrespect to the visitor.

FOOTPAN.—Footpans are either of wood, earthenware, or metal, as tin or zinc. Small tubs are apt to sever at the joints when they remain by dry for any time; earthenware is free from that objection, but as the interior if glazed, is unpleasantly slippery, it is best to have a loose piece of board to cover the bottom, loaded with lead to keep it down. Those made of zinc painted in oil are perhaps the most suitable.

FOOT WARMER.—This usually consists of a box containing a tin vessel, in which hot water is put, being carefully wadded round, to keep in the heat; the lid is also



wadded. This will remain warm for some hours when shut, and is very useful to put the feet on when occasion requires it.

FORCEMEAT.—Take an equal quantity of lean veal scraped and beef suet shred; beat them in a marble mortar; add pepper, salt, cloves, pounded lemon-peel, and nutmeg grated, parsley and sweet herbs chopped fine, a little shalot and young onion, a few bread crumbs grated fine, and yolk of egg sufficient to work it light; roll this into balls with a little flour. If for white sauce, boil them; if for brown sauce, fry them.

FORCEMEAT BALLS FOR FISH, SOUPS, &c.—Beat the flesh and soft parts of a middling sized lobster, half an anchovy, a large piece of boiled celery, the yolk of an egg hard boiled, a little cayenne, mace, salt, and white pepper, with two tablespoonfuls of bread crumbs, one of oyster liquor, two ounces of butter warmed, and two eggs well beaten; make into balls, and fry them of a nice brown colour in butter.

FORCEMEAT COLLOPS.—Mince the remains of hash or any other meat, and set it over the fire in a stewpan, with a slice of butter, a sprig of parsley, and green onions shred fine, shake in a little flour, and moisten with stock; add pepper, and reduce it to a thick sauce, then leave it to cool. Make a paste with flour and water and a little butter and salt; knead and roll it with a rolling-pin as thin as a half-crown; place the meat upon it in small masses, at a distance of two or three inches from each other; wet the paste all round the meat, pinching the paste round the meat with the fingers. Cut the collops separately and fry them of a light brown colour.

FORCEMEAT RAGOUT.—Put a slice of fresh butter into a saucepan with some sorrel, lettuce, chervil, parsley, and green onions; let the whole be well washed, squeezed, and chopped fine; shake the saucepan over the fire till the liquor of the vegetables is entirely consumed, then shake in a little flour, moisten with some gravy, and add salt and pepper. Let the mixture boil till the herbs are well done and the sauce wholly consumed; then add the yolks of three eggs beaten up with cream, and thicken the ragout over the fire without letting it boil.

FORCING.—In horticulture, the art of accelerating the growth of plants, so as to obtain fruits or flowers at seasons when they are not produced naturally in the open air.—See CONSERVATORY, HOTBED, HOTHOUSE, GREENHOUSE, &c.

FORFEITS.—A pastime usually played by a number of persons of both sexes. The ordinary mode is to select some sentence, which each person of the party is to repeat without making a mistake, and in the event of his so doing, he has to forfeit to some person chosen for the purpose any trifling article, such as a card-case, smelling-bottle, fan, &c. When the sentence has gone the round of the party, one of the company has to kneel with her head in the lap of the person holding the forfeits; this latter person holds up the forfeits one by one in sight of the whole company, and says, "Here's a pretty thing, and a very pretty thing, and what's to be done to the owner of this pretty thing?" The person kneeling down has then to impose some penalty which involves some ludicrous situation, and is calculated to produce laughter and good humour among the company present. This accomplished, the forfeited article is returned to the owner. By this it is evident that the person who has to impose the forfeits should possess a fund of humour and ready invention; and, to ensure uninterrupted sport, some person should be selected gifted with these attributes.

FORGET-ME-NOT.—A well-known flower belonging to the species *Myosotis*. It may be propagated by seed, by dividing the roots in spring, or by setting cuttings in a shady place in summer under a hand-light. In winter they may be treated like alpine plants, and will bloom long and well. This flower prefers a moist soil, in the neighbourhood of ponds and streams.

FORK.—A domestic implement manufactured of various metals, as silver, steel, &c. Plated forks in imitation of silver are much used, and answer equally well for general purposes. Forks should be cleaned with great care, especially between the prongs, and this may be done with a piece of leather tied to a stick, and afterwards wiped with a cloth. Forks that have been used for fish, and juices, or any other mixture likely to impart an unpleasant flavour or an unsightly appearance, should, immediately after being used, be plunged into a can of boiling water and suffered to remain there some time until the flavour or stain is entirely removed.

FORK, IN HUSBANDRY. — A tool of which there are three principal species. The first made with three prongs for working with litter, haulm, or stable refuse; the second, having two prongs, for stirring the earth among numerous roots, as in fruit-trees or flower-borders, or for taking up roots; and the third about a foot and a half in length, the prongs of which are small and round, and should be kept carefully polished, for plunging pots in bark pits, or taking up asparagus or other roots.

FORMA PAUPERIS.—Where any person has just cause of suit, and is so poor that he can make oath he is not worth £5 after all his debts are paid, and excepting the property in question, upon oath made of of this fact, and a certificate from a barrister that he has good cause of action, the court will permit him to sue *in formâ pauperis*, without paying any fees to counsel, attorneys, or clerks in court. If a cause go against a person thus suing, he is liable to imprisonment for the costs of the defendant.

FOWL BOILED.—Put it on with plenty of water a little warmed, and in a flannel cloth; skim the liquor very carefully, and let it simmer by the side of the fire from thirty-five minutes to an hour and a half, according to the size and age of the fowl.

FOWL BOILED, WITH RICE.—Boil a pint of rice in as much water as will cover it, and in it put black pepper, a few blades of mace, and half a dozen cloves, tied up in a small cloth; when the rice is tender, take out the spice; stir in a piece of butter; boil a fowl and a piece of bacon, and lay them in a dish; cover them with the rice; lay around the dish and upon the rice, hard eggs, cut in halves, quarters, and lengthways, with onions boiled first, and afterwards fried.

FOWL BRAISED. — Put a little bacon into a stewpan, then a fowl, a large onion, half a carrot, half a head of celery, two bay-leaves, two cloves, a peppercorn, one and a half tablespoonfuls of salt, a little pepper, and a quart of water, let it simmer till tender; dish up, after having well drained it, take the string off, and pour over it mush-room or any other sauce.

FOWL BROILED.—Have a fowl ready plucked and drawn, open the back from one end to the other with a sharp knife, having previously cut off the feet at the second joint; make an incision in the skin, and pass the bone through, to fix it internally; lay the fowl on the table breast downwards, beat it as flat as possible with a chopper, take out the breast bone, and also the rough part of the interior of the back, especially if a large or old fowl; after you have it in nice shape, season all over with a teaspoonful of salt and half a teaspoonful of pepper; put it on a gridiron over a slow fire, turning it every five minutes till done; if a young one, twenty-five minutes will be ample time, but by trying it with the finger on the thick part the result may be known; if firm when pressed it is done, or by pressing the wing, if tender it is also done; serve with mush-room sauce.

FOWL CURRIED.—Skin the fowl, cut it into small pieces, and lay them in cold water for an hour; mince an onion and put it into a saucepan with two ounces of fresh butter, and a little flour stirred in by degrees; when it is well browned add three pints of water, and put in the fowl, and a large tablespoonful of curry powder; boil until the fowl is quite tender. Sprinkle with the juice of half a lemon and serve.

FOWL FORCED.—Having boned a fowl, stuff the inside with a forcemeat made as follows:—A quarter of a pound of minced veal, two ounces of grated ham, two ounces of chopped onion and suet, a tablespoonful of sweet herbs shred, two hard yolks of eggs chopped, a teaspoonful of mixed lemon-peel, mixed spices, and a little cayenne. Shred the several ingredients, and beat the whole to a paste in a mortar, adding two eggs, to make them incorporate. Stuff the fowl with this mixture, sew it up, and still retaining the natural shape, draw the legs inside and truss the wings. Stew it in clear stock, and when nearly done, thicken the sauce with butter rolled in flour. When just ready to serve, add a little cream, squeeze a lemon into the dish, and serve the fowl with sauce around it.

FOWL FRICASSEED.—Divide a fowl into eight pieces, and put them into a stew-pan, cover with boiling water, and season with a teaspoonful of salt, a little pepper, a bunch of parsley, four cloves, and a blade of mace; let it boil for twenty minutes; pass the stock through a sieve into a basin; take out the pieces of fowl, trim them neatly; then put into another stewpan two ounces of butter, with which mix a tablespoonful of flour, moisten the stock, put in the pieces of fowl, stir occasionally until boiling, skim well, add twenty small onions, and let it simmer until the onions are tender, then add a gill of cream, in which the yolks of two eggs have been mixed, stir it quickly over the fire, but do not let it boil; take out the pieces, dress in the form of a pyramid upon a dish and serve. If it is required to warm up the remainder of the above, put it into a basin, which set in a stewpan having a little water in it; put on the cover, and let it boil gently; by these means the contents of the basin will become warm, without the sauce being affected.

FOWL FRIED.—Cut fowl into rather small pieces, and put them into a basin with a little salt and pepper, a tablespoonful of oil, two tablespoonfuls of vinegar, and a little chopped shalot; stir the whole well together, and let it remain for half an hour;

have ready a quantity of butter, and take a fork and dip each piece one after the other into it: then let it drop into a frying-pan, in which is sufficient hot fat to cover them; fry them till they obtain an agreeable colour, and serve in the form of a pyramid, with fried parsley on the top, and any sauce preferred underneath.

FOWL HASHED.—Take the lean portions of the remains of a fowl from a previous dinner, chop it into small pieces: then put into a stewpan a teaspoonful of chopped shalot, with half an ounce of butter, pass them for about three minutes over the fire, add a teaspoonful of flour; mix well, then add the fowl and a gill of white sauce, or more if not sufficiently moist; season with pepper and salt, and serve with mashed potatoes.

FOWL PIE.—Make a paste and forcemeat. Bone a young fowl and lay it flat on a clean cloth breast downwards; season the interior with a little pepper, salt, and chopped onions; spread a layer of forcemeat over, half an inch in thickness. Take ten pieces of veal a quarter of an inch thick, and the same length as the fowl, then have the same number of pieces of fat bacon; lay half of the veal and bacon alternately on the fowl, well seasoned with pepper and salt, cover over with more forcemeat, then another layer of veal and bacon, and more forcemeat again; then roll the fowl over, making the skin meet at the back; have a pie-dish lined both with paste and forcemeat; lay in the fowl, sprinkle with pepper salt, and more forcemeat until a dome is formed; place a pat of butter and two bay-leaves on the top, and bake it in a moderate oven for about two hours. Gravy may be made from the bones of the fowl.

FOWL RAGOUT.—Half roast a fowl, cut it up into joints, place them in a stewpan with some good stock, and add a couple of onions, two dozen corns of allspice and black pepper, a few cloves, and a piece of lemon-peel. Skim the stew, and keeping the lid quite close, let it simmer for three quarters of an hour or more, according to the age and size of the bird. Strain off the gravy, leaving the fowl in the stewpan to keep hot. Take off the fat which forms at the top, and thicken the gravy with brown roux, or butter rolled in brown flour till it is as thick as stiff pancake batter. Add to it a glass of white wine and a sprinkling of lemon-juice. Serve with the sauce poured hot over the fowl and garnished with fried bread.

FOWL ROASTED.—Strip off the feathers and carefully pick every stump from

the skin. Take off the head and neck close to the body, but leave sufficient skin to tie over the part that is cut. In drawing the bird, do not open it more than is needful, and use great precaution to avoid breaking the gall-bladder. Hold the legs in boiling water for two or three minutes, that the skin may be peeled from them easily; cut the claws, and then with a piece of lighted writing-paper singe off the hairs without blackening the fowl. Wash and wipe it afterwards very dry, and let the liver and gizzard be made delicately clean, and fastened into the pinions. Truss and spit it firmly; flour it well when first laid to the fire, baste it frequently with butter, and when it is done draw out the skewers; dish it, pour a little good gravy over, and send it to table with bread, mushroom, egg, or chestnut sauce.

FOWL ROASTED, WITH CHESTNUTS.—Roast some chestnuts very carefully, so that they may not be burnt, then take off the skins and peel them, Cut about a dozen of them small and pound them in a mortar. Parboil the liver of a fowl; bruise it with a quarter of a pound of ham or bacon. Then mix altogether with a quantity of chopped parsley, sweet herbs, some mace, pepper, salt, and nutmeg. When these ingredients are mixed into a uniform mass, put it into the fowl, roast it, and baste with butter. For sauce, take the remainder of the chestnuts, peel and skin them, put them into some good gravy with a little white wine, and thicken it with a piece of butter rolled in flour. Then place the fowl in a dish, pour in the sauce, garnish with lemon, and serve.

FOWL SALAD.—Cut up a pair of cold roasted fowls into twenty or thirty pieces, take off the skin and trim them; lay them in a deep dish, with salt, oil, and vinegar; when they have soaked in this for a short time, place the pieces of fowl on a dish, round which lay some lettuces, well washed and cut into quarters, hard-boiled eggs cut into slices, quartered fillets of anchovy, gherkins, and capers. Pour the dressing over the whole and serve.

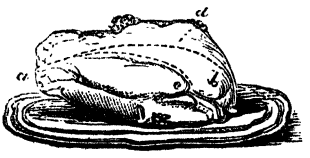
FOWL SOUP.—Cut up a large fowl and boil it well in milk and water; thicken with cream, butter, and flour. Add vegetables of different kinds cut into small pieces, such as potatoes, turnips, the heart of cabbage, onions, and celery, with a seasoning of pepper, salt, and mace. Boil all together, and just previously to dishing up, add wine or a little lemon-juice.

FOWL STEWED.—Place four clean skewers at the bottom of a stewpan, and place the fowl upon them. Put in a quart of gravy, a head of celery cut small, and two or three blades of mace. Let it stew gently until there remains only just sufficient for sauce; then add a large piece of butter rolled in flour, a wineglassful of red wine, a tablespoonful of ketchup, and a seasoning of pepper and salt. Dish up the fowl and serve with the sauce poured over it.

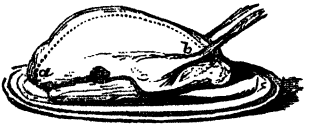
FOWL STEWED, WITH OYSTERS.—Truss a fowl as for boiling, put into it plenty of butter, and a seasoning of mace and lemon-peel; tie it at the neck and vent: line a stewpan with streaked bacon, and put in the fowl breast downwards. Moisten with stock, and stew the fowl slowly.

Meanwhile have a thick oyster sauce prepared with butter and cream; dish the fowl on this, and garnish with fried oysters and slices of lemon.

FOWLS, TO CARVE.—When a boiled fowl has to be carved, fix the fork firmly in the centre of the breast, and after disengaging the leg from the skin, take it off with the wing in the line *a b*; or the wing may be previously removed by carving it down the line to *b*, and there separating it from the neck-bone; the leg may then be released



from the skin and easily taken off by cutting around it from *a* to *c*, and then turning it with the fork back from the body, when the joint will readily be perceived. After the leg and wing on the other side have been taken off in the same manner, the merrythought must follow. To remove this, the knife must be drawn through the flesh in the line *d e*, and then turned towards the neck quite under the merrythought, which it will lift from the breast. The neck bones which lie close under the upper part of the wings, must next be disengaged from the fowl by putting the knife in at the top of the joint, dividing the long part of the bone from the flesh, and breaking the short one off by raising it up and turning it from the body; the breast may then be divided from it by merely cutting through the tender ribs on either side. It is seldom that further disjointing than this is required at table, but when it is necessary to cut up the entire fowl, the remainder of it must be laid with the back uppermost, and to take off the side bones, the point of the knife must be pressed through the backbone, near the top, about half an inch from the centre, and brought down towards the end of the back, quite through the bone, then turned in the opposite direction, when the joints will separate without difficulty. All that then remains to be done is, to lay the edge of the knife across the middle of the only two un-



divided bones, and then with the fork to raise the small end of the fowl, which will part them immediately. The most delicate parts of the fowl are, the breast, wings, and merrythought. A *roast fowl* is carved generally according to the direction already given, but when it is very large, the breast may be carved in slices like that of a turkey; or, if small, the whole of it may be taken off with the wings, as shown by the line *a b* in the engraving. As the liver is considered a delicacy, it should be divided, and an equal portion of it sent with each wing.

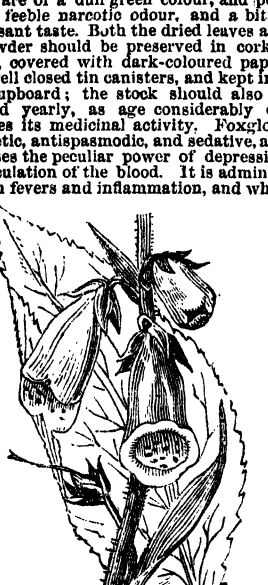
FOWLS, TO CHOOSE.—The male bird is preferable to the female. The age also greatly influences its tenderness and flavour the flesh after a certain time becoming tough and coarse. The length of the spur will give some idea of the age of the bird; when young, his spurs are short. The beak also furnishes another indication; if upon lifting the dead bird by the beak it will bear the weight, the fowl may be considered an old one: but if the beak breaks off, the bird is a young one. The claws supply a similar test; that is to say, they will break off readily if the bird be young, but if old they will sever with difficulty. A person purchasing a fowl should not judge of its weight by appearance, as various arts are practised to impart a plump appearance which they do not possess; to ascertain the fact more correctly, the fowl should be poised for a few seconds in the hand, and its relative weight may thus be arrived at by any person of ordinary judgment. Fowls, and indeed poultry and game of all descriptions, should as a rule be purchased of some one particular dealer; for poulterers naturally select the best of their stock for their regular customers, and dispose of the indifferent birds to casual buyers. Above all, dealing with itinerant vendors should be carefully avoided; in most cases, men clad in smock frocks and otherwise "got up" to represent country dealers, are in reality artful denizens of London, who purchase the refuse stock of the large markets at nominal prices, and thus palm them off to the public at enormous profits.

FOWLS, TO REAR.—See POULTRY.

FOX.—The ravages committed by this animal among lambs, poultry, geese, and other farm-produce, render its destruction in many cases, absolutely necessary. To achieve this, the farmer must take a sheep's paunch and fasten it to a long stick; then rub his soles well upon the paunch, that the fox may not scent his feet. He should then draw the paunch after him as a trail, a mile or more till he gets near a large tree; then leave the paunch and ascend the tree with a gun, and as night advances, the fox will be perceived coming after the scent of the trail, when it may be shot. Or set a steel trap in the plain part of a large field, distant from paths and hedges; then open the trap, place it on the ground, cut out the exact shape thereof in a turf, and take out so much earth to make room for it to stand, and then cover it again very neatly with the turf you cut out. As the joint of the turf will not close exactly, procure some mould from a mole-hill newly thrown up, and stick some grass in it, as is it grew there. Scatter some mould of the mole-hill very thinly three different ways, at the distance of ten or twelve yards from the trap; let this mould be thrown on spots fifteen or sixteen inches square, and when the trap is placed, lay three or four pieces of cheese; and then

with a sheep's paunch draw a trail a mile or two long to each of these three places, and from thence to the trap, that the fox may approach one of the places first; for then he will advance to the trap more boldly, and thus may be readily caught.

FOXGLOVE.—One of the most beautiful and useful of our indigenous plants. It grows on sandy and gravelly banks, in woods and uncultivated places, and flowers in June and July. This plant possesses peculiar medical properties, and it is in this light that it is chiefly to be regarded. The leaves and seeds of the foxglove are both used for medical purposes. When good, the leaves are of a dull green colour, and possess a feeble narcotic odour, and a bitter unpleasant taste. Both the dried leaves and the powder should be preserved in corked bottles, covered with dark-coloured paper, or in well closed tin canisters, and kept in a dark cupboard; the stock should also be renewed yearly, as age considerably diminishes its medicinal activity. Foxglove is diuretic, antispasmodic, and sedative, and possesses the peculiar power of depressing the circulation of the blood. It is administered in fevers and inflammation, and when



given in full doses, reduces the pulse from seventy-five to forty-five or forty beats a minute. In dropsy there is no diuretic medicine so powerful and certain in its action as this, more especially in dropsy of the chest. In diseases of the heart, as enlargement and various other affections, it is very useful in lowering the heart's action, and in epilepsy and insanity it is useful in repressing vascular excitement. The greatest caution is required to be observed in the use of the foxglove, as its effects accumulate in the system; and if given in too large or too frequent doses, will produce giddiness of sight, nausea, faintness followed by vomiting, swooning, convulsions, stupor, and sometimes death.

FRACTURES.—Under this head are understood all broken bones. These are of two kinds, simple and compound fractures, and are treated of under their special heads. —See ARM, LEG, SHOULDER, THIGH, &c.

FRECKLES. — Yellow coloured spots, similar to stains, developed on the skin. There are two varieties, summer freckles: resulting from the action of the sun and heat, during the summer season, and disappearing at the termination of the hot weather; and cold freckles will appear at all times of the year. The latter form commonly arises from disordered health or some general disturbance of the system, to which attention should be chiefly directed. The summer freckles may be removed by the application of any of the lotions following: —1. Bichloride of mercury, 5 grains; hydrochloric acid, 30 drops; lump sugar, 1oz.; rectified spirit of wine, 2ozs.; rosewater, 7ozs.; agitate together until the whole is dissolved. 2. Petals of leaves of red roses, 1 oz.; hot water, 12 fluid ounces; infuse for an hour, and strain with expression, ½ pint; add of citric acid, 30 grains; dissolve, and in a few hours decant the clear. 3. Salammoniac, 1 drachm; spring water, 1 pint; lavender water or eau de Cologne, ½oz.; mix. The lotion made choice of should be applied with the fingers every night and morning, or after, if necessary.

FRENCH LANGUAGE. — The knowledge of this language has ever been found a most useful acquisition, and still more in the present day, when our relations with France, both social and commercial, have become so greatly extended. The readiest and most perfect mode of acquiring this language, is, undoubtedly, to reside for some time in France, by which means the idiom and pronunciation (two of the greatest difficulties), may be mastered in a few months, if a person possesses quick intelligence and is capable of application. But if this opportunity does not offer, the next best plan is to take lessons of a native professor, some of which class are always to be found in our principal cities and towns. But where this opportunity is again denied, the learner may teach himself by the aid of some of the following books: — *Grandineau's First Step*, 3s.; *Vlieland's Easy Method*, 6s.; *Tourrier*, 4s.; *Dictionary of Difficulties*, 6s. 6d.; *Le Page's Conversation*, 3s.; *Tiesset's Instructor*, 3s.; *Murgeand's Easy Access*, 4s.; *Dagobert's Idiomatic Instruction*, 1s.; *Beauvoisin's How to Read and Translate*, 2s. 6d.; *Delille's Lessons*, 1s. 6d.; *Tarver's Oral Progress*, 3s. 6d.; *Ollendorff's Method of Learning*, 12s.; *De Porquet's Phrase Book*, 2s. 6d.; *Nugent's Dictionary*, 6s.; *Foster's Exercises*, 2s. 6d.; *Delille's Grammar*, 5s. 6d: *Levizac's Grammar*, 5s.; *Cobbett's Grammar*, 5s.; *Cassell's Manual*, 3s.; *Le Page's Prompter*, 5s.; *Jobert's Pronouncing Handbook*, 3s.; *Tourrier's Model Pronunciation Book*, 9s.; *Thibaudin's Pronunciation*, 1s.; *Jobert's Questioning and Answering*, 3s. 6d.; *Fasquelle's Reader*, 2s.; *Du Gué's Translator*, 2s.; *Monteith's French Without a Master*, 2s.; *Bellenger's Word and Phrase Book*, 1s.; *Chapman's French Talk*, 2s.

FRENCH POLISH, FOR BOOTS AND SHOES.—Take of logwood chips, half a pound; glue, a quarter of a pound; indigo pounded very fine, a quarter of an ounce; soft soap, a quarter of an ounce; isinglass a quarter of an ounce: boil these ingredients in two pints of vinegar and one pint of water, let it continue to boil for ten minutes after the first ebullition, then strain the liquid; when cold it is fit for use. To apply the polish, it must be rubbed on the leather with a piece of sponge; the boots and shoes being previously freed from dust and dirt.

FRENCH POLISH, FOR FURNITURE.—To one pint of spirits of wine, add half an ounce of gum shellac, half an ounce of seed lac, and a quarter of an ounce of gum sandarac; submit the whole to a gentle heat, frequently shaking it, till the various gums are dissolved, when it is fit for use. Make a roller of list, put a little of the polish upon it, and cover that with a piece of soft linen rag, which must be lightly touched with cold drawn linseed oil. Rub the wood in a circular direction, not covering too large a space at a time, till the pores of the wood are sufficiently filled up. After this, rub in the same manner spirits of wine, with a small portion of the polish added to it, and a most brilliant surface will be produced.

FRENCH PUDDING. — Take half a pound of flour, half a pound of suet chopped fine, half a pound of currants, a quarter of a pound of treacle, and half a pint of milk; mix well, and boil in a basin for three or four hours.

FRENCH SOUP.—Boil a sheep's head and pluck, gently in a gallon of water till reduced to half the quantity, a small teacupful of pearl barley, six large onions, one turnip, one carrot, a bunch of sweet herbs, and a few cloves and peppercorns. Add a little mushroom ketchup, and thicken with some flour rolled in a lump of butter. Cut the meat off the head in slices as for hashed calf's head (taking it out for this purpose as soon as it is sufficiently tender), and then divide the slices into small squares, which must be put into the soup again, when it is warmed up for use. Finish it with forcemeat and little egg balls, and a gill of white wine, which, with the addition of a little sugar, will produce a soup trifling in cost, and nearly equal to mock turtle. The soup is improved by boiling it the day before it is wanted, and warming it up the next day.

FRICANDEL.—A dish made as follows: Take three pounds of the best end of a loin of veal, chop both fat and lean very finely; then soak a French roll in some milk, beat three eggs, add pepper, salt, nutmeg, and mace; make the mixture up into the size and somewhat the shape of a chicken, rub it over with egg and bread crumbs, fry till brown, pour off the fat, boil water in the pan, and stew fricandels in the gravy. Thicken the gravy previously to sending to table.

FRICASSEE. — See BEEF, CHICKEN, FOWL, LAMB, MUTTON, SWEETBREAD, VEAL, &c.

FRITTERS.—Mix a quarter of a pint of milk with three well beaten eggs, and strain the mixture through a fine sieve, add to it gradually three tablespoonfuls of flour, and thin the batter with as much more milk as will bring it to the consistence of cream; beat it up thoroughly at the moment of using it, that the fritters may be light. Drop it in small portions into a frying-pan containing boiling lard; when lightly coloured on one side, turn them, drain them well from the lard as they are lifted out, and serve them very quickly. They are eaten generally with fine sugar, and orange or lemon juice. See also APPLE, BREAD, CURRANT, ORANGE, POTATO, SPANISH, &c.

FRONTINIAC, IMITATIVE.—Boil eighteen pounds of loaf sugar in six gallons of water, with two whites of eggs well beaten. Skim it, and put in a quarter of a peck of elder flowers: take the mixture from the fire, and when nearly cold, stir into it six tablespoonfuls of lemon-juice, and four of yeast; incorporate the whole well with the liquor. Stir it every day, put six pounds of the best raisins stoned into the cask, and tun the wine. Stop it close, and bottle it at the end of six months. It is a wine that requires keeping.

☞ Sugar, 18lbs.; water, 6 gals.: eggs, 2 whites; elder flowers, ½ peck; lemon-juice, 6 tablespoonfuls; yeast, 4 tablespoonfuls: raisins, 6lbs.

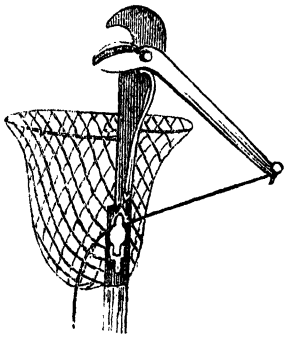
FROST BITE.—This insidious and dangerous affection of the extremities and parts most exposed to frost, as the feet and toes, hands, fingers, nose, and ears, is the result of exposure to extreme cold; and though persons of a phlegmatic temperament, and a sluggish state of the circulation are more prone to this misfortune than others, yet it may attack persons of all habits of body, and of all ages. The effect of the sudden application of intense cold, or long continued cold of a less severe character, is, in the first instance, to deaden the nervous sensibility, and next to drive the blood from the part most exposed, and leave it in such a state of torpidity as to be unable to resist the killing effect of the surrounding cold, which finding the part thus unprotected with the vitality of nervous energy, or the warmth of circulation, in reality freezes it to death. Though excessive cold is the cause of death either to a part or the entire body, the amount of cold the frame can bear with impunity is remarkable; the actual danger, as far as frost-bite is concerned, resulting from the sudden *reaction* in the part, from the rise of temperature, or the application of warmth: on this account, the greatest precaution must be observed, in avoiding all abrupt change of temperature, as by forcing the blood suddenly back to the part, inflammation, mortification, and sloughing, must follow. A frost-bite is known by the swelling and discoloration of the part, attended with pain, numbness, and a sense of pricking; the colour, at first bright, becoming of a dull brown, which, if unrelieved, deepens into black. The *treatment* consists in *slowly* and *very cautiously* restoring the circulation for if the slightest warmth

is incautiously applied, mortification is certain to ensue. The patient should therefore be removed into a cold room, and the part rubbed gently with snow, or bathed with cold water, and on no account allowed to enter a room with a fire, or any heated apartment. After half an hour, a small quantity of weak spirits and water may be taken cold; and ultimately the patient put to bed in cold sheets: the treatment of frost-bite resolves itself into the *slow* and *careful restoration of the circulation* in the affected part.

FRUIT.—The class of fruit comprised under the heads of acidulous and subacid fruits are antiseptic, aperient, diuretic, and refrigerant. They afford but little nourishment, and are apt to promote diarrhœa and flatulency. They are, however, occasionally exhibited medicinally in putrid affections, and are often useful in bilious and dyspeptic complaints. The saccharine fruits are those abounding in sugar, they are nutritious and laxative, but are apt to ferment and disagree with delicate stomachs when eaten in excess. Stone fruits are more difficult of digestion than the other varieties, and are very apt to disorder the stomach and bowels. As a rule, fruit should never be eaten in large quantities at a time, and only when quite ripe. It then has wholesome properties, and is a suitable corrective to the grossness of animal food. It also exercises a powerful action on the skin, and is a specific for scurvy in its early stages. Many cutaneous diseases may also be removed by the daily use of a moderate quantity of fruit.

FRUIT BISCUITS.—Take of any kind of fruit, an equal weight of the pulp scalded, and of fine white sifted sugar: beat them together for two hours, make forms of white paper, and fill with the mixture; place them in a cool oven, turn them each day, and in three or four days box them.

FRUIT GATHERING.—Fruit should be



gathered in dry weather, and preferably about noon, because the dew and moisture deposited on them during the night and earlier part of the morning have then evaporated. They should be quite ripe, when gathered, but the sooner they are removed from the tree after this point is arrived at, the better. Immature fruit never keeps so well as that which has ripened on the tree; and overripe fruit is liable to be bruised and to lose its flavour. The less fruit is handled in gathering, the better. Some of them, as peaches, nectarines, grapes, plums, &c., require to be treated with great delicacy, to prevent bruising and rubbing off the bloom. To accomplish this more effectually as well as to save labour the employment of a fruit gatherer, such as seen in the engraving, is recommended. The use of this implement is extremely simple, the net being held under the fruit desired to be gathered, and the cord being then pulled, the clippers sever the fruit at the stem, and it falls into the net below.

FRUIT PRESERVING.—Ripe fruits are commonly preserved in a fresh state by placing them in a cool dry situation on shelves, so that they do not touch each other; or by packing them in clean dry sand, sawdust, straw, bran, or any similar substance, with like care to preserve them from the action of air and moisture. An excellent plan, commonly adopted for dessert fruit, is to wrap each, separately, in a piece of clean dry paper, and to fill small wide-mouthed jars or honey-pots with them. The filled pots are then packed one upon another, as seen in the engraving, in a dry and cool place. The space between the pots may be advantageously filled up with plaster of Paris made into a paste with water. The joint is thus rendered air-tight, and the fruit will keep good for a long time. The mouth of the top jar is covered with a slate. For use, the jars should be taken one at a time from the store-room as wanted, and the fruit exposed for a week or ten days in a warm dry room before being eaten, by which the flavour is much improved.

FRUIT STAINS, TO REMOVE.—Hold the portion of the article stained lightly over a tub or pan, and pour boiling water over it. This must be done before any soap is applied to it. As soon as a stain is made, it should be rubbed with common salt before it has time to dry; the salt will keep the part damp till the cloth is treated as above. For stains that are of long standing, rub the part each side with yellow soap, then lay on a mixture of starch in cold water very thick; rub it well in, and expose the linen to the sun and air till the stain comes out. If not removed in two or three days, rub that off, and renew the process. When dry, it may be sprinkled with a little water.

FRUIT TREES.—The culture of fruit trees is liable to be interrupted by various causes. In the first place, insects are exceedingly troublesome, and commit great ravages on them; to prevent this, let a piece of India rubber be burnt over a gallipot, into which it will gradually drop in the condition of a thick viscid juice, which state

it will permanently retain. Having melted the India rubber, let a piece of cord or worsted be smeared with it and then tied several times round the trunk of the tree. The melted substance will prove so adhesive, that the insects will be prevented and generally captured in their attempt to pass over it. About threepennyworth of India rubber is sufficient for the protection of twenty ordinary sized fruit trees. *Frost*, which destroys so many fruit trees in the early spring, may have its effects neutralized by the following simple precaution:—Introduce a rope among the branches of the tree, and bring the end of it down so as to terminate in a bucket of water, and, should a slight frost take place in the night-time, the tree will not be in the least affected; the action of the frost being wholly confined to the bucket of water, on the surface of which a coat of ice will be formed.

To remedy moss on fruit trees:—Scrape the moss off and burn it. Confine the operation to the trunk and main branches, which you cannot easily hurt. A trowel is a good instrument, as it is handy to use, and takes off all loose bark as well. Having thus cleared the trees from the moss, apply the following composition, viz., a peck of fresh cow-droppings, half a peck of quicklime, half a pound of flower of sulphur, some wood-ashes, and a quarter of a pound of lamp-black. Mix the whole together with as much ley and soap-suds in a boiling state as will form the ingredients into a thick paint, and lay it on with a brush.

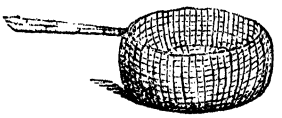
Fruit trees are frequently injured by the contact of iron nails: the corroding effects of the rust from which, will not only destroy the particular branches where the nails are fastened, but will frequently destroy the whole tree. To avoid this evil, it requires care when fastening in the nails, to prevent them from coming in contact with the bark of the tree; perhaps the surest method of all to secure immunity against this mischief, is to use copper nails only, which are not affected by the weather, and therefore cannot communicate rust. The colour, size, and taste of fruit are peculiarly susceptible of improvement or deterioration, according to the *nature of the soil* they occupy. This is especially the case with the more delicate kinds of fruits, such as grapes, peaches, &c. For instance, if two black Hamburgh grapes made from the cuttings of the same plant, shall be planted, the one in a dry, hazelly loam, and the other in a moist, black earth, the fruit of the one will be of a brown or grizzly colour, and the other of a dark crimson or black; and the latter will be more juicy and of a finer flavour than the former grown in the dry soil. The Chinese have an ingenious mode of propagating fruit trees, which might be practised with success in this country. They strip a ring of bark about an inch in width from a bearing branch, surround the place with a ball of rich loam bound fast to the branch with a piece of matting, over this, they suspend a pot or horn with water, having a small hole in the bottom, to allow just sufficient water to drop on the ball of earth to keep it constantly moist. The branch throws new roots into the earth just above the place where the ring of bark has been stripped off. The operation is performed in the spring, and the branch is sawed off and put into the ground at the fall of the leaf. The following year it will bear fruit.—See APPLE, CHERRY, ORCHARD, PEACH, PEAR, &c.

FRYING.—A very convenient mode of cookery to those who wish to unite comfort with economy. The fire used for frying should neither be too slack nor too fierce, but maintain throughout the process a steady and uniform brightness; and, above all, smoke should be particularly avoided. The frying fat, be it lard, oil, butter, or dripping, must not be stale, much less rancid. This fat, on being melted in the pan, must be brought to boiling point, or nearly so, before the materials to be fried are put in. The proper degree of heat may be ascertained, by putting into the fat a few sprigs of parsley or a piece of bread, which, if they become crisp without acquiring a black colour, the fat will be hot enough for frying. The meat to be fried should be cut into chops or slices of not more than half or three-quarters of an inch in thickness, and slightly seasoned with salt and pepper. It is not necessary that the meat should be wholly immersed in the boiling fat; if it be immersed in part it will be sufficient. Fish is more difficult to fry than meat, on account of the softness of the fibre; it consequently requires a greater degree of attention. Before fish is put into the pan, it should be wiped thoroughly dry; it should also be brushed over with eggs and crumbs of bread, flour, or any farinaceous substance. Fish is best fried in oil. Fritters and sweet things must have either good butter, or good lard, or good oil. When the butter which is used for frying is clarified, it is not nearly so apt to burn. A rich brown colour is communicated to any fried substance by pressing it, when nearly cooked, against the bottom of the pan. Fat that has fried veal cutlets, lamb steaks, &c., may be used afterwards for fish, if allowed to settle, and poured clear from the sediment; but what is used for fish would spoil meat, though it will answer repeatedly for fish, especially of the same sort, if strained. All fries served dry are dished on a napkin. When served with gravy, as with cutlets, steaks, &c., pour the fat from the pan, and throw in a small slice of butter; stir to this a large teaspoonful of flour, brown it gently, and pour in by degrees a quarter of a pint of hot broth or water; shake the pan well round, add pepper, salt, and a little ketchup or any other sauce that may be preferred, and pour it over the meat.

FRYING-PAN.—The ordinary frying-pan should be thick at the bottom, and lined throughout with enamel. It should be kept scrupulously clean, being washed with hot water immediately the process is finished, and thoroughly wiped before it is used again. It would be as well to have separate pans for fish and meat, to prevent an unpleasant flavour being imparted from previous fryings. The *sauté-pan* is a shallow

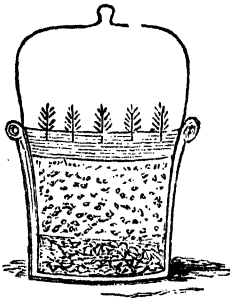
copper vessel, made sometimes with two handles, and sometimes with one, as in the engraving; it is used instead of a frying-

pan for small fillets or collops of meat, or aught else that requires but little cooking. It is more particularly convenient for tossing anything that is being cooked as soon as it is affected by the heat, and for this reason performs the process of frying with great nicety. A wire basket of the form illustrated is convenient for frying parsley and

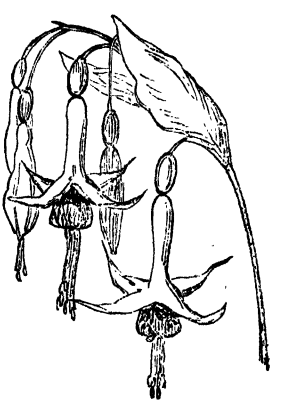


other herbs. It must be placed in a pan well filled with fat, and lifted out quickly when the herbs are done; they may likewise be crushed in it over a clear fire, without any fat. A frying-pan has been recently introduced, fitted with wire linings that lift in and out of it; it is excellently adapted to save trouble, and very convenient for preparing dishes of a light and delicate nature. The articles to be cooked are arranged on the wire lining, and plunged together into the boiling fat, and well drained on it when they are lifted out.

FUCHSIA.—This plant is propagated by seed, when new varieties are desired, and by cuttings of the young wood for general purposes. To produce improved varieties by seed, it is a necessary condition that artificial impregnation has been made to take place between two existing varieties, possessing some or all of the properties which constitute perfection in the flower and plant. The seed should not be gathered until it is fully ripe; the pulp must then be cleared from it by washing, and when thoroughly dried in the sun, kept in a cool dry place till March, which is the best time for sowing. Prepare shallow pots or pans by draining them well, then fill them to within half an inch of the top, and press the soil pretty firmly down, leaving the surface quite smooth, and on this, sow the seed thinly, and cover to the depth of a quarter of an inch. Place them in a pit at a moderate temperature, but near to the glass. When the young plants are from an inch to an inch and a half high, pot them off in 60-sized pots singly, and place them in a shallow pit, with an ordinary greenhouse temperature, shifting first into 48-sized pots, and afterwards into 32-sized, and allow them there to remain until they flower, when a selection of those having good points should be made, and the others thrown away. Those retained should be shifted in 24 or 16-sized pots, according to their strength. This constitutes their first season's growth. *Propagation by cuttings* is best commenced in February and March; and should the plants from which they are to be taken be not already sufficiently excited, set them in a warm pit for a few days to forward them. The cuttings should be taken when about two inches long, cutting them off close to the old wood. Set them in pots filled with light sandy soil to within an inch and a half of their tops, upon which place an inch of fine



silver sand, in which insert the cuttings. Settle the sand about them by a gentle watering, and when dry, plunge them in a mild bottom heat; as the plants advance in growth shift them into larger pots. *The soil* best suited for this plant is a rich sandy one for very young plants; but as they attain strength, supply them with stronger



soil, until they are placed in their flowering pots, when a compost of strong yellow loam, containing about one-eighth of leaf-mould, and one-fourth of cow-droppings in a very advanced stage of decomposition should be used. Young plants will require

to have their tops pinched off from time to time, to ensure a sufficiency of branches for their proper formation. If they are to be grown as pyramids, which is the form mostly followed for show plants, one of the leading shoots should be removed as soon as the lower branches have extended to a few inches in length, and the other leader allowed to attain a foot or so more in height, when it should be topped also. This mode is applicable to both old and young plants, until the height desired be attained, the side shoots in the meantime being topped wherever they extend beyond the prescribed limits, and also when a thinness of branches is observable. The fuchsia is often trained as a standard, having a single stem and globular head; they are also sometimes trained as tall pyramids, covering a trellis-work of that form, and clothed with foliage and flowers from bottom to top; and when trained in the manner of creepers over parts of the roof, they have a very pretty effect. The fuchsia is easily protected during winter by being placed, on the approach of frost in autumn, under the greenhouse stage, in a dry shed, or even in a cellar, or anywhere where the frost is excluded. It is important, however, that they be kept dry and brought into gradual excitement, light, and air, in spring, at which time they should be taken out of their pots, and the old soil removed, and be re-potted in fresh compost, to carry them through the ensuing season.

FUEL.—Any combustible substance which is used for the production of heat constitutes a species of fuel; but the term is more properly limited to coal, coke, charcoal, wood, and a few other substances. The comparative value of fuel of different kinds of carbonaceous substances has been found by experiment to be thus:—

1lb. of charcoal	wood melts	95lb.	of ice.
,,	good coal	,,	90	,,
,,	coke	,,	84	,,
,,	wood	,,	32	,,
,,	peat	,,	19	,,

There are what are termed patent fuels, but it is doubtful whether they can compete on a large scale with those provided by the hand of nature ready for our use. — See COAL, COKE, FIRES, &c.

FULLER'S EARTH.—A species of clay which, upon being dug out of the earth, is thoroughly dried in ovens, and then thrown into cold water, where it soon falls to powder, and is purified by the process known as washing over. It is extensively used to extract oil and grease from cloth in the process of "fulling;" it forms an excellent filtering powder for oils, and is also useful for domestic purposes, to extract grease from floors, &c. It possesses cooling and healing properties for inflammations and excoriations, and is especially efficacious in relieving chafing of the skin.

FUMIGATION.—Vapour or gas extricated for the time being for the purpose of destroying contagious or noxious miasmata or effluvia, or to mask unpleasant odours, or to produce a medicinal action on those parts of the body with which it is brought in contact. Among the various substances used as disinfecting fumigations, are included chlorine, nitrous acid, hydrochloric acid, sulphur, and vinegar. Of all common diseases, scarlet fever appears to be the one most requiring fumigation. For this purpose chlorine gas or heat should be employed. The infectious matters of certain diseases, especially scarlet fever, are either dissipated or destroyed at a heat slightly above that of boiling water. The fumes of strong vinegar or acetic acid, obtained by heating the liquid over a lamp or by sprinkling it on a hot shovel, yield very refreshing fumes, and prove generally efficacious. One of the most simple of fumigations is the following: Take muriatic acid and nitrous acid, of each half an ounce; put them into a quart bottle; add of manganese an ounce and a half; carry this about the room for a few minutes; a powerful smell will then be perceived, which will be sufficient; then let the bottle be closely stopped till the air begins to be offensive, when the same method must be repeated. This mixture will last for months. Fumigations, for the purpose of obviating or masking unpleasant odours in the sick chamber, must never be employed to the neglect of cleanliness and ventilation; for most of them, instead of purifying the air, actually render it less fit for respiration. The common practice of burning scented paper, pastilles, &c., so as to create an odoriferous smoke, is of this character. The fumes thus diffused through the atmosphere *disguise* unpleasant odours, but they accomplish nothing more. The infection remains not only unaltered by the diffusion of the most powerful aromatic vapours, but its deleterious properties are sometimes augmented by them. — See CONTAGION, DISINFECTION, &c.

FUMIGATION, IN HORTICULTURE.—The fumigation of the leaves of trees and plants is extensively practised, for the purpose of destroying insects. When this operation is performed, the leaves should be quite dry; for, when wet, many of the insects will secrete themselves under the leaves, and so escape. Tobacco is mostly used for fumigating trees, &c., and sometimes a little damp hay, old dried potherbs, or moss, are added to the tobacco, to increase the quantity and density of the smoke. The fumigating instrument ordinarily consists of a common hard-burned flowerpot of six or eight inches in diameter, into which a few live embers are put, and over them a handful of damp, unrolled, coarse tobacco. A small hole being cut in the side of the pot, near its bottom, the nozzle of a pair of common bellows is applied, and by blowing the air in, slow combustion takes place, accompanied by a large volume of smoke. Care must be taken that flames do not proceed from the pot, else the foliage might be injured. Where the fumigating process is carried on in a house or pit, and it can be conveniently covered during the operation with canvas, and this allowed to remain on all night, few of the insects will escape. In the morning the house may be freely ventilated, and the trees subjected to a copious syringing.

FUNDS, PUBLIC.—The designation given to the public funded debt, due by Government. Under this head are comprised a variety of channels for the investment of money, which are known collectively in the commercial world under the name of stock. The price of stock is influenced by a variety of circumstances. Whatever tends to increase or shake the public confidence in the stability of Government, tends at the same time to raise or lower the prices of stock. They are also influenced by the state of the revenue; and more than all, by the facility of obtaining supplies of disposable capital, and the interest which may be realized upon loans to responsible persons. Persons having occasion to invest money in the funds usually employ a broker, who finds a seller of the stock wanted, and having agreed upon the price, delivers the particulars of the transfer to be made to a clerk in the proper office of the Bank of England, and fills up a receipt to be signed by the seller for the money paid. The transaction is completed in a short time, with very little trouble to the parties concerned. The broker's usual charge to the purchaser is ⅛ per cent., or half-a-crown for every £100 of stock purchased. The dividends on the various funds are in the majority of cases payable half-yearly, but it is in the power of the stockholders to invest in such a manner as to draw their income quarterly. The personal attendance of the purchaser to receive his funds is not compulsory, and he may employ any person to receive the money on his behalf, by an instrument known as a power of attorney. Besides this legitimate operation of buying and selling, there is also what is termed *speculating in the funds*, which is frequently carried on by persons who have no property in the funds, as follows:—A. agrees to sell B. £1000 of bank stock, to be transferred in twenty days for £1200. A. has, in fact, no such stock; but if the price of the bank stock on the day appointed for the transfer should be 118 per cent., A. may purchase as much as will enable him to fulfil his bargain for £1180, and thus gain £20 by the transaction. On the contrary, if the price of bank stock be 125 per cent., he will lose £50. The transaction is then settled by A. paying to B., or receiving from him, the difference between the current price of the stock on the day appointed and the price bargained for.

FUNERAL CHARGES.—The charges for funerals are almost the last thing a person thinks about, because he has no occasion to do so until the unhappy necessity arrives, and then he is generally at a loss how to give orders for the funeral, so that it may be performed with becoming decency, and yet with economy. In such cases it would be as well to prevail upon some friend to make the necessary arrangements with a respectable undertaker, having at the same time a perfect understanding as to what is to be furnished, and the amount that is to be paid. Some undertakers take advantage of the recent grief of a bereaved person to import extravagant items into the funeral ceremony, and to charge a most exorbitant sum for them. Others have "fixed charges," as they are called, but liable to a further addition for extras; and in many cases, where, for instance, a person has died poor, and left a large family, these cruel exactions fall upon a person just at the season that they are least able to be borne. Funerals are of two kinds, walking and carriage funerals. Walking funerals, except on extraordinary occasions, are, as a matter of course, much more economical of the two; but they are always associated with poverty or meanness. Carriage funerals are of various degrees, from a hearse and coach with two horses each, to a six-horsed hearse and ten or twelve mourning coaches, each with four horses. Within the last few years companies have been started in London for the burial of the dead. One in particular, the Necropolis Company, carries on its operations in connection with a great National Mausoleum of a thousand acres at Woking, in Surrey. Funeral trains leave London daily, and the company undertakes all the expenses of the funeral at charges varying from three guineas up to twenty.

FUNERALS, ETIQUETTE OF.—It is usual, when a death takes place, to communicate the event immediately, upon mourning note paper, to every principal member of the family, and to request them to communicate the same to the more remote relatives in their circle. A subsequent note should communicate information of the day and hour at which the funeral is fixed to take place. Special invitations to funerals are not considered requisite to be sent to near relatives; but to friends and acquaintances short invitations should be sent. Most persons who attend funerals will provide themselves with gloves; but it is well to have a dozen pairs, of assorted sizes, provided, in the case of accident. An arrangement can be made for those not used to be returned. Hat-bands and cloaks are provided by the undertaker. The degree of mourning to be worn must be regulated according to the age of the deceased and the relationship to the mourner. This will be best advised upon by the dressmaker, whilst the undertaker will regulate the degree of mourning to be displayed upon the carriages, horses, &c. In going to a funeral, the nearest relatives of the deceased occupy the carriages nearest the hearse. The same order prevails in returning. Only the relatives and most intimate friends of the family should return to the house after the funeral, and their stay should be as short as possible. In walking funerals it is considered a mark of respect for friends to become pall-bearers. In the funerals of young persons, the pall should be borne by their companions, wearing white gloves and love-ribbon. Visits of condolence should be paid within a week or fortnight after the funeral; by friends within the second week of the fortnight. Acquaintances should make inquiries and leave cards. All correspondence with families in mourning should be upon black-edged paper if from members of the family, or upon ordinary note-paper, but sealed with black, if from friends.

FUNGI.—A large natural tribe of plants of a very low organization, consisting chiefly of cellular tissue, sometimes intermixed with flocculent matter, and very rarely furnished with spiral vessels. They form, as it were, a link between the animal and vegetable kingdoms. They inhabit dead and decaying organic bodies, and are also a common pest to living plants, upon which they are parasites, and prey in the same manner as vermin and intestinal worms do upon animals. The eating of some kinds of fungi is liable to prove hurtful, and sometimes fatal; and as these cases arise from mistaking them for edible fungi, it will be as well to point out the characteristics of the fungi that are hurtful and poisonous. It appears, then, that most fungi which have a warty cap, more especially fragments of membrane adhering to their upper surface, are poisonous. Heavy fungi, which have an unpleasant odour, especially if they emerge from a valley or bog, are also generally hurtful. Those which grow in woods and shady places are rarely esculent, but most are unwholesome; and if they are moist on the surface, they should be avoided. All those which grow in tufts or clusters from the trunks or stumps of trees, ought likewise to be shunned. A sure test of a poisonous fungus is an astringent styptic taste, and perhaps also a disagreeable but certainly pungent odour. Those, the substance of which becomes blue directly after they are cut, are invariably poisonous. The general rules laid down for distinguishing wholesome fungi are not so well founded; but the most simple and easy mode of testing the quality of field fungi is to introduce a silver spoon, or coin of that metal, or an onion into the vessel in which mushrooms are seething; if, on taking either of them out, they assume a bluish black, or dark discoloured appearance, there are certainly some dangerous fungi among them; if, on the other hand, the metal or onion, on being withdrawn from the liquor, wears its natural appearance, the fungi may be considered wholesome and innoxious. The symptoms indicating poisoning by fungi are nausea, purging, vomiting, and colic; in general accompanied with great depression of the pulse, cold extremities, clammy sweats, stupor, delirium, convulsions, sometimes paralysis. In such cases immediate means should be taken to clear the stomach, and a medical practitioner sent for, as the subsequent treatment must vary according to the symptoms in each individual case.

FUNNEL.—An article in the form of an inverted cone, for transfusing and filtering liquids. Funnels are made of glass, tin, copper, &c. The best, as being most easily kept clean for filtrations, are of glass. In ordinary filtration, when nothing more is required than to separate from the liquid any rough particles which may be floating in it, all that is necessary is to put a little cotton, wool, or tow into the funnel over the aperture of the spout or neck; but where transparency is wanted, the funnel must be lined with filtering paper of a single or double thickness, according to the neatness of the operation. The paper is fitted to the funnel by twice doubling a piece larger than the funnel, and folding it up in plaits in such a way that one end may be completely pointed. The upper and uneven end is then rounded off with a pair of scissors, and the paper on being opened and put into the funnel, with the pointed part downwards may be adapted to it in every direction. The liquid to be filtered must be poured in gently and a little at a time, so that the sudden weight may not fracture the paper.—See FILTRATION.

FURNITURE.—In the selection of household furniture the general aim should be to procure good articles rather than cheap ones; and to obtain useful and substantial furniture, in preference to gay and tawdry articles, proportionately worthless. Regard should be paid to its suitability for the house and room it is to occupy, and also to the general harmony to be produced by design, form, colour, &c. Persons who are about to purchase furniture should be cautious in dealing with cheap advertising houses, and in every case they should be governed by their own taste, and the knowledge of what is actually required, instead of being led away by the plausible recommendations of the salesman. The durability of furniture depends in a great measure upon the manner in which it is used; if it is neglected, seldom cleaned, and left in rooms in which a fire is rarely lighted it will soon deteriorate both in appearance and value. Much damage is also done to furniture on occasions of removing, and when this takes place, the owner of the furniture should superintend the operation, and see that the articles are carefully packed, and securely stowed away.—See AUCTION, BEDROOM, BEDSTEAD, CARPETS, CHAIR, COUCH, CURTAINS, DRAWERS, DRAWING-ROOM, SOFA, TABLE, &c.

FURNITURE POLISH.—To produce a polish on furniture, several agents may be employed, according to the furniture operated upon, and the degree of brilliancy required to be produced. A *furniture cream* which will produce a brilliant surface in a few weeks may be made as follows: linseed oil, one pint; spirits of wine, one ounce; vinegar, one ounce; butter of antimony, half an ounce. A *furniture oil*, for obliterating the marks left by hot dishes, the stains of wet glasses, &c., is compounded in the following manner: alkanet root, one part; shell lac varnish, four parts; linseed oil, sixteen parts; spirits of turpentine, two parts; wax, two parts; mix, and let them stand for a week. Either of these are used by being applied with a piece of flannel, and then rubbed briskly with a soft cloth; if the effect desired is not produced by the first application, it must be repeated day after day until a successful result is attained. *Furniture paste* is better adapted for kitchen furniture than for any other. It is made by dissolving five parts of beeswax and one of resin, in enough spirits of turpentine to make them sufficiently thin to spread. This must be rubbed on to the surface with a cloth, and brushed rapidly and with considerable force, with a brush sold for the purpose, after which the surface is finished off with a fine

piece of baize, and though it feels somewhat sticky, yet it has a tolerably firm face.

FURS, PRESERVATION OF. While in use, furs should be occasionally combed. When not wanted, dry them first, then let them cool, and mix among them bitter apples from the druggists, in small muslin bags, sewing them in several folds of linen, carefully turned in at the edges, and kept from damp. Camphor or pepper used in the same manner will have a similar effect.

FURZE.—A hardy evergreen shrub, indigenous to most parts of Great Britain, and growing abundantly on sandy or gravelly heaths and commons. It is chiefly used for fences, and as a cover for game, and shelter for young plantations. With common care, furze fences last for a very long period, but they require peculiar management to prevent the roots becoming exposed. Sowing in three tiers on a bank is perhaps the best mode, as it allows one tier to be kept low by the shears or bill, the second of higher growth, and the last to attain its natural stature. Furze possesses the merit of being highly nutritious as food for horses, sheep, and cattle; bruised in a mill and mixed with chopped hay or straw, it constitutes an excellent food for cows. Bruised furze is also an admirable substitute for hay for horses, but they should at the same time have oats and beans, to counteract the relaxing properties of the furze. Furze is also extensively used as fuel: for this purpose it will generally have attained its full growth in four years, and it ought not to be cut more frequently. This plant may be propagated by seed, sown from February to May. Young plants, or even slips planted in spring or October will grow readily. It should be cut the year after sowing, beginning in September or October; it will grow again until Christmas, and be fit for use till March.

FUSTIAN.—A species of coarse twilled cotton, used as an article of apparel by the poorer classes. Fustians are either plain or twilled, and are sold sometimes as low as sixpence a yard. From their texture, colour, &c., they form durable and suitable clothing for mechanics and labourers.

G.

GAD-FLY.—An insect with spotted wings and a yellow breast, and having a long proboscis armed with a sharp dart. These flies are particularly troublesome to cattle by their sting. The horse-bot deposits its eggs on such parts of the horse as the animal can reach with his tongue. They are thus licked up and introduced into the stomach, are then hatched, and form bots. In Sweden, the grooms are accustomed to clean the mouths and the throats of the horses daily with a peculiar kind of brush, which prevents the larvæ of this insect getting into the stomach of the animal. The ox-warble deposits its eggs on the back of oxen, causing great torture to the animal and much agitation to the beast if many attack it at once. The ovipositor of the insect pierces the skin on the back of the ox and then drops the eggs. At

the season of the year when gad-flies attack animals, their harness should be so managed as to allow them to be easily let loose, and they should also have free access to water.

GAIT.—See CALISTHENICS, DANCING, DEPORTMENT, &c.

GALETTE.—A favourite cake in France. It may be made rich and comparatively delicate, or quite common, by using more or less butter for it, and by augmenting or diminishing the size. Work lightly three-quarters of a pound of good butter into a pound of flour, add a large saltspoonful of salt, and make these into a paste with the yolks of a couple of eggs mixed with a teacupful of cream, or simply with water; roll this into a complete round, three-quarters of an inch thick; score it in small diamonds, brush yolk of eggs over the top, and bake it for about half an hour in a tolerably quick oven: it is usually eaten hot, but is served cold also.

☞ Flour, 1lb.; butter, ¾lb.; salt, 1 saltspoonful; eggs, 2 yolks; cream, 1 teacupful.

GALL-NUT.—A kind of excrescence produced by a small insect which deposits its eggs in the tender shoots of a species of

oak, abundant in Asia Minor. When the maggot is hatched, it feeds on the morbid excrescence formed by the irritation of the deposited ovum on the surrounding parts, and ultimately, when perfected as the fly, it eats its way out of the nidus thus formed. Good gall-nuts are of a bluish green hue,

heavy, and breaking with a flinty fracture. When they are white, light, with a hole in one side, they are useless. Gall-nuts are employed in dyeing and in medicine.

GALLING, IN INVALIDS.—Persons who have been long confined in bed are liable to this complaint, to remedy which, beat the white of an egg to a strong froth, then drop in gradually whilst you are beating, two teaspoonfuls of spirits of wine. Put it into a bottle and apply occasionally with a feather.—See BED-SORES, CHAFING.

GALLON.—An English measure of capacity containing four quarts. By Act of Parliament the imperial gallon is to contain 10lb. avoirdupois of distilled water, weighed at the temperature of 62 degrees of Fahrenheit, and the barometer standing at 30 inches. This is equal to 277·274 cubic inches. The old English gallon, wine measure, contained 231 cubic inches, and held 8lb. avoirdupois, of pure water; ale and beer measure, 282 cubic inches, and held 10lb. 3½oz. avoirdupois, of water; and the gallon for corn, meal, &c., 272 cubic inches, containing 9lb. 13oz. of pure water. Hence the imperial gallon is about $\frac{1}{5}$ larger than the old wine gallon, and about $\frac{1}{20}$ less than the old ale gallon.

GALOPADE QUADRILLE.—1. Galopade. 2. Right and left, sides the same. 3. Set and turn hands, all eight. 4. Galopade. 5. Ladies chain, sides the same. 6. Set and turn partners, all eight. 7. Galopade. 8. Tirois, sides the same. 9. Set and turn partners, all eight. 10. Galopade. 11. Top lady and bottom gentleman advance and retire, the other six do the same. 12. Set and turn partners, all eight. 13. Galopade. 14. Four ladies advance and retire, gentlemen the same. 15. Double ladies chain. 16. Set and turn partners, all eight. 17. Galopade. 18. Poursette, sides the same. 19. Set and turn. 20. Galopade waltz.

GALVANISM.—A species of electrical phenomena, taking its name from Galvani, the discoverer. Its action is produced through the medium of two different metals, such as zinc and silver, tin and gold, &c. By this means, the muscles of the body may be subjected to involuntary motion: for instance, if an experiment be made upon a dead rabbit, so that one of the metals be in contact with the brain, and the other with the muscles of the extremities, the whole body of the animal is strangely agitated. Similar experiments have been made upon the bodies of criminals shortly after execution, when the galvanic shock has made the legs, arms, &c. move as in life.—See *Dictionary of Useful Knowledge*, article GALVANISM.

GAMBOGE.—A yellow gum resin, much used as a pigment, and in medicine as a drastic and nauseating purge. In this latter capacity gamboge is highly dangerous when the stomach is in an irritable and inflammatory state; and under circumstances when taken in large quantities it is a violent poison. In obstinate constipation, in dropsies, in apoplexy, and in worms (especially tape worms) it is beneficial, either alone or taken with other cathartics. *Dose*, one to five grains, made into pills or mixture, every four or six hours.

GAME HASH.—Take underdressed or half-roasted game, and after having stripped the skin from the thighs, wings, and breast, arrange the joints evenly in a clean stewpan, and keep them covered till wanted. Cut into cubes four ounces of the lean of an unboiled ham, and put it, with two ounces of butter, into a thick well-turned saucepan or stewpan, add three or four shalots minced, a carrot sliced, four cloves, two bay-leaves, a dozen peppercorns, one blade of mace, a small sprig of thyme, and two or three of parsley. Stew them over a gentle fire, stirring them frequently, until the sides of the saucepan appear of a reddish brown, then mix well with them a dessertspoonful of flour, and let it take a little colour. Next, add by degrees, making the sauce boil as each portion is thrown in, three-quarters of a pint of strong veal stock or gravy, and half a pint of sherry or Madeira; put in the bodies of the birds, well bruised, and boil them for from an hour to an hour and a half; strain, and clear the sauce from fat; pour it on the joints of game, heat them in it slowly; and when they are near the point of boiling, dish them immediately with sippets of toast arranged round the dish.

GAME PIE.—If the birds are small, keep them whole, if large, divide or quarter them. Season them highly, and put plenty of butter into the dish above and below them, or put a beef-steak into the bottom of the dish. Cover it with good puff paste and take care not to bake the pie too much. A half-pint of hot sauce made of melted butter, the juice of a lemon, and a glass of claret poured into the dish when to be served hot, is a great improvement. A very savoury raised game pie is made of partridges, pheasants, and other kinds of game, mixed; taking out the bones, and cutting up the flesh. It is then mixed with chopped liver, and placed underneath the raised crust; after which, when cold, the top is taken off, and a strong jelly made from the bones, and well spiced, then, after getting cold, mixed among the meat.

GAME SOUP.—Break the bones of cold cooked game, and cut the meat in pieces; boil the bones and meat in broth for an hour or more, then thicken the soup with the yolks of eggs and with boiled cream, and season according to taste. Care must be taken not to boil the soup after the eggs are mixed in it, or it will curdle.

GAME, TO CHOOSE.—See HARE, PARTRIDGE, PHEASANT, SNIPE, WOODCOCK, &c.

GAME, TO PRESERVE.—With few exceptions, game depends almost entirely, for the fine flavour and the tenderness of its flesh, on the time which it is allowed to hang before it is cooked, and it is never good when very fresh; but it does not follow that it should be sent to table in a really offensive state, for this is agreeable to few eaters, and repulsive to many. Game may be often rendered fit for eating when it is apparently spoiled, by carefully cleaning it, and washing it with vinegar and water. If it be suspected of any birds that they will not keep, draw,

crop, and pick them; then wash them in two or three waters, and rub them with salt; have in readiness a large saucepan of boiling water, and plunge them into it, one by one, drawing them up and down by the legs, so that the water may penetrate them thoroughly. Let them remain in the saucepan for five or six minutes, then hang them up in a cold place; when they are completely drained, apply salt and pepper to the insides, and thoroughly wash them before they are dressed. By this means the most delicate birds may be preserved.

GAMEKEEPER. — The well appointed gamekeeper ought to be a man of varied information, and a general observer of human nature. He should be well versed in the habits and haunts of every sort of vermin destructive to game, and be indefatigable in devising means for catching and destroying them. He is not required to be a first-rate shot, but sufficiently skilled to protect the interests of his employer. He should be possessed of personal courage and determined will, as he may, perhaps, be occasionally brought into contact with poachers, who are generally the most desperate and lawless ruffians in the surrounding district. Gamekeepers form a sort of rural police in the execution of the game laws. They are authorized to seize all dogs, guns, nets, and other engines used for the taking or killing of game by uncertificated persons; but they must not shoot a dog following game within manor, unless used by an uncertificated person for the purpose of killing game. A gamekeeper may be discharged at pleasure, without previous notice, unless there be an express agreement to the contrary; and the occupation of any house he may be permitted to reside in is, merely an incident in his vocation. It has been ruled that no gamekeeper has a right to carry and use fire-arms for the capture of poachers, or to fire at any poacher whatever; he may take any poacher into custody, but it is at his peril that he uses fire-arms.

GAME LAWS.—There are a number of laws in connection with game, the following being the most important: Any person that shall kill or take game, or use any dog, gun, or net, or other engine for these purposes, on a Sunday or Christmas Day, shall, on conviction, forfeit a sum not exceeding £5, with costs: any person taking or killing any *partridge* from the 1st of February to the 1st of September; or *pheasant* from the 1st of February to the 1st of October; or *black game* between the 10th of December and the 12th of August (or the 1st of September in the counties of Somerset, Devon, and in the New Forest); or *grouse* between the 10th of December and the 12th of August; or *bustard* between the 1st of March and the 1st of September, shall, on conviction, forfeit for every head of game a sum not exceeding 20s., with costs.

For any person to be entitled to kill game during the sporting season, it is necessary he should obtain a certificate from the clerk of the peace of the county or district where he resides, otherwise he will be liable to a penalty of £20, over and above the full duty of £3 13s. 6d. Any person trespassing on land in the daytime, in pursuit of game, to forfeit a sum not exceeding £2, with costs; if one or more persons together commit such trespass, each to forfeit a sum not exceeding £5. The person having the right of killing the game, or the occupier of the land, or gamekeeper, or other person authorized by either of them, may require a person so found trespassing to quit the land forthwith, and to tell his name and abode; and in case of a refusal, or in case such person continue or return on the land, the party so requiring, and any person in his aid, may apprehend the offender, and take him before a justice, and such offender to forfeit a sum not exceeding £5, with costs; but the party arrested must be discharged, unless brought before a justice within twelve hours, in which case he may be proceeded against by summons or warrant. Where five or more persons together so trespassing, any of them being armed with a gun, shall, by violence or menace, prevent any authorized person from approaching them for the purpose of requiring them to quit the land, or to tell their names and abodes, any person so offending or aiding, to forfeit a sum not exceeding £5, in addition to any other penalty, with costs. *Daytime* to be deemed from one hour before sunrise to one hour after sunset. If any person be found by day or night on any land in search of game, and have in his possession any game which shall appear to have been recently killed, the person having the right of killing the game, or the occupier, or any gamekeeper, or servant, if either of them, may demand such game and seize it, if not immediately delivered up. As "game" only is mentioned, woodcocks, snipes, quails, landrails, or coneys, cannot be so seized. If any person, not having the right to kill game on any lands, nor permission from the person having such right, shall take out of the nest, or destroy the eggs of any bird or game, or of any swan, wild duck, teal, or widgeon, or shall knowingly have in his possession any such eggs so taken, such person, on conviction, shall forfeit a sum not exceeding 5s., with costs, for every egg. In leases granted subsequently to the Act of 1 & 2 Wm. IV., the tenant is entitled to the game upon the land in his occupation, unless restricted by the terms of his lease. Under all leases, however, granted previously to the passing of that Act, the landlord is entitled to the game, except in the three following cases: 1. Where the right of the game has been expressly granted to the tenant. 2. Where a fine has been paid upon the granting or renewal of the lease. 3. Where, in the case of a term for years, the lease has been granted for a term exceeding twenty-one years.

The laws for the *sale of game* are as follows. Certificated persons may sell game to licensed dealers. Every licensed person annually to obtain a certificate, on the payment of a duty of £2; penalty for any licensed person dealing in game before he has obtained his certificate, £20. If any licensed person is convicted of an offence against

the laws, his licence is void. An uncertificated person selling or offering game for sale, or a certificated person selling or offering game for sale to an unlicensed person, shall forfeit for every head of game a sum not exceeding £2, with costs. If any licensed dealer shall buy or obtain game from any person not authorized to sell it; or sell game not having a proper board affixed to his house with such notification inscribed on it; or fix such board to more than one house; or sell game at any other place than where the board is fixed; or if any unlicensed person shall, by fixing a board or exhibiting a certificate, pretend to be licensed, every such offender shall forfeit a sum not exceeding £10, with costs.

GAMING.—Where any cards, dice, balls, counters, tables, or other instruments of gaming, used in playing any unlawful game, shall be found in any house, room, or place suspected to be used as a common gaming-house, and entered under a warrant or order, or about the persons of those who shall be found therein, it shall be evidence, until the contrary be made appear, that such place is used as a common gaming-house, and that the persons found in the place where such have been discovered were playing therein, although no play was actually going on in the presence of the constable entering the same, such tables and instruments of gaming being forthwith destroyed. All contracts, whether by parole or in writing, by way of gaming or wagering, are null and void, and not recoverable in any court of law or equity; but this clause not to apply to any subscription or agreement towards any plate or prize to be awarded to the winner in any lawful game or pastime. All lotteries are declared public nuisances; if any person shall keep any office or place for lotteries, he shall forfeit £500. All private lotteries by tickets, cards, or dice, except backgammon, are prohibited, under a penalty of £200, by him that erects such lotteries, and £50 a time for the player. All raffles and other devices under the denomination of sales, which are equivalent to lotteries, are prohibited, under a heavy penalty by a great variety of statutes. All persons playing or betting in any open or public place, with any table or instrument of gaming, at any game or pretended game of chance, may be treated as vagrants. Betting-houses have recently been subjected to severe restrictions by the law. No house or office is to be kept or used for the purpose of betting, or for any assurance, promise, or agreement, expressed or implied, to pay or give any money or valuable thing on the event of any horse-race, fight, game, sport, or exercise; every house, office, room, or other place opened, kept, or used for such purposes, to be declared a common nuisance, and common gaming-house. Penalty on owner or occupier, a sum not exceeding £100, with costs; or on non-payment, to be committed to the House of Correction, with or without hard labour, for six months. Penalty on any owner or occupier of such house, office, &c., or of any person having the care or management thereof, or of conducting the business of such places, or receiving money or other valuables pertaining to the aforesaid contingencies, £50, with costs, or on non-payment, three months imprisonment with or without hard labour. Justices may order the search of suspected houses, and the metropolitan police may enter and search suspected houses. One month's notice to prosecute must be given, and the prosecution commenced within three months after the offence.

GANGRENE, OR MORTIFICATION, is the death of any part, limb, or portion of the body, resulting from inflammation, the benumbing effects of extreme cold, or the crushing influence of severe accidents. Gangrene is always indicated by a loss of warmth in the part, the diminution of pain, the discoloration and vesication of the cuticle, and the thin ichorous and fœtid discharge, that directly afterwards takes place. At the same time a line of demarcation is observed between the living and the dead part, pointing out in unmistakable characters the boundaries of the disease.

Gangrene never attacks a limb or part of the body, while the circulation is strong and active, but always prefers a part where the circulation is weak and languid, and if in the leg, the disease begins in the most remote part, the toes, and extending up the limb, killing all to the centre as it advances, until it reaches a part of the member where the circulation is strong enough to allow of an adhesive inflammation, and an effort of nature to arrest the spread of the deadly enemy; as soon as this is the case, coagulable lymph is thrown out in a circle around the member, showing the separation of the living and the dead, and after a time, the dead limb falls off, effecting a natural amputation.

There is a form of gangrene that often rages in hospitals and jails, and carries the patients off like a plague, called *hospital gangrene*, but of this it is not requisite here to speak; the disease will be found treated of under its proper head.

Treatment.—To be of any effect the treatment of gangrene must commence early, and before the ichorous discharge takes place, and consists mainly in supporting the strength of the system, and rousing the flagging circulation, so as to enable the blood in the diseased part to resist the further progress of the gangrene. For this purpose, the temperature of the part must be raised by warm emollient poultices, and the internal exhibition of wine, bark, quinine, and opium, and, when necessary, an altered and sustaining diet; while as an occasional diffusible stimulant a dose of the following mixture every three or four hours. Take of

Carbonate of ammonia . .	1 scruple,
Aromatic confection . . .	1 drachm,
Camphor water	6 ounces.

Mix, and add

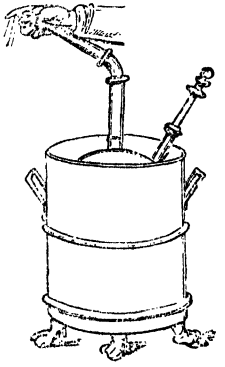
Aromatic tincture	3 drachms
Compound tincture of bark .	½ ounce,
Laudanum	1 drachm,
Sulphuric ether	½ drachm.

Mix, and give one tablespoonful every two, three, or four hours, according to the

urgency of the case, keeping the part in a state of emollient warmth, till reaction sets in and the cuticle exhibits returning vitality.

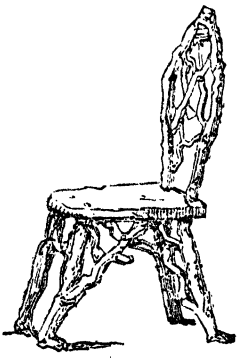
GARDEN. — See FLOWER GARDEN; KITCHEN GARDEN.

GARDEN ENGINE.—An implement designed for propelling water to a considerable distance, for the purposes of irrigation. The most desirable variety of this machine is that which is furnished with a sucking pipe, like the fire engine, by which means, if there be ponds or regular supplies by pipes or wells in a garden, the labour of carrying the water is avoided. By this construc-



tion the bore of the barrels may be formed in the lathe, and consequently made perfectly true; the piston-rods move exactly in the direction of the axis of the barrels; and therefore operate with the least possible friction.

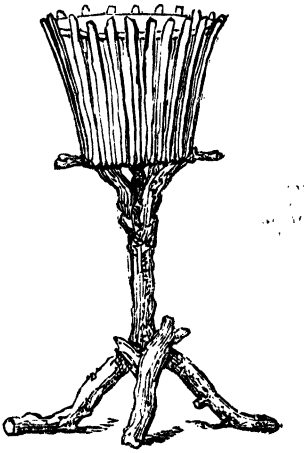
GARDEN SEAT.—The pleasure of a garden is considerably enhanced by having



appropriate seats placed in the most favourable position. These seats are made either of wood or iron, and are of every variety of design; it is more in keeping with the general character of the garden, however, that they should be as little formal as possible, and display somewhat of rusticity. That shown in the engraving is perhaps as well adapted for the purpose as any. Covered seats are also essential adiuncts; they are usually constructed from boards generally semi-octagonal, and placed so as to be open to the south. Sometimes they are portable, moving on wheels so as to be

placed in different positions, according to the hour of the day or the season of the year, which, in confined spots, is a desirable circumstance. Sometimes they turn on rollers, or on a central pivot, for the same object. In general they are opaque, but occasionally their sides are glazed, to admit the sun to the interior in winter.

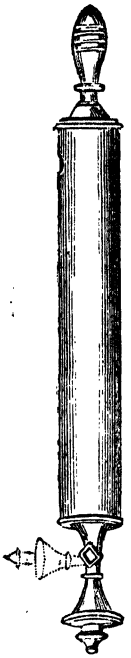
GARDEN STAND.—This receptacle for



flowers and plants grown in the garden

may be made of any design, according to fancy. The one shown in the engraving is suggestive of a rustic and inexpensive kind.

GARDEN SYRINGE.—Garden syringes are of different kinds; the common description is made of tinned iron, copper, or brass, and is generally about two feet in length and two inches in diameter. The implements shown in the engraving can instantly, by turning a pin, be applied so as to serve the purpose of four different caps or heads. A joint at the head enables the operator to turn it in any direction and to any angle. The pin by which these alterations are effected, is worked by a groove in the face of the rose; and by it a very fine shower, or a spreading stream, or a single jet from one opening, may be sent forth at pleasure. This is an elegant and useful instrument, more particularly for amateur gardeners, whether male or female. Macdougal's syringe is a very useful instrument for washing the under sides of the leaves of plants and shrubs; it also has the advantage of being converted into a straight syringe at pleasure.



GARDEN TABLE.—This, like all horticultural embellishments, should retain that

rustic character which brings a certain charm with it. Garden tables may be made

fixtures, or constructed so as to move; that depicted in the accompanying engraving being calculated for either condition.

GARDENER.—He who undertakes the profession of a gardener, takes upon himself a work of some importance, and which requires no small degree of knowledge, ingenuity, and exertion to perform well. There are few businesses which may not be learned in much less time than that of a gardener can possibly be. It is necessary that he should have had much practice in the various parts of horticulture, and that he should possess a genius and adroitness, fitting him for making experiments, and for getting him through difficulties that the existing circumstances of untoward seasons &c., may bring him into. He should possess a spirit of inquiry into the nature of plants and vegetation, and be acquainted with the resources of art that may be made available. The mode of growth, the pruning, the soil, the heat, and the moisture that suits particular plants, are not to be understood without a native taste, and close application of the mind. There are few things to be done in a garden which do not require a dexterity in operation, and a nicety in selecting the proper season for doing it. A gardener should be a sort of prophet, in foreseeing what will happen under certain circumstances, and wisely cautious to provide by the most reasonable means, against contingencies. A man cannot be a good gardener unless he be thoughtful, steady, and industrious; possessing a superior degree of sobriety and moral excellence, as well as genius, and knowledge adapted to his business. He should be modest in his manners and opinions, and ever ready to avail himself of the suggestions of others, when they are founded on experience and reason.

GARDENING.—As every person who is his own gardener is naturally anxious that the care and attention he bestows on his little plot of ground should be crowned with success, and that it should at all times present that appearance of neatness and order so pleasing to the eye, attention to the following general directions will go far to secure these advantages:—*Perform every operation at the proper season.* The natural, and therefore the best indications for the operation of sowing, reaping, transplanting, &c., are given by the plants themselves, or by the progress of the season as indicated by other plants. But there are artificial calendars or remembrancers, which serve to aid the memory, although they will not supply the place of a watchful and vigilant eye, and habits of attention, observation, reflection, and decision. *Perform every operation in the best manner.* This is to be acquired in part by practice, and partly also by reflection. For example, in digging over a piece of ground, it is a common practice with slovens to throw the weeds and stones on the dug ground, or on the adjoining alley or walk, with the intention of gathering them afterwards. A better way is to have a wheelbarrow, or, if that cannot be had, a large

basket, into which to put the weeds and extraneous matters, as they are taken out of the ground. *Complete every part of an operation as you proceed.* This is an essential point in garden operations; and though it cannot always be attended to, partly from the nature of the operation, partly from the weather, &c., yet the judicious gardener will keep it in view as much as possible. Suppose a compartment, or breadth of rows of potatoes, containing one-tenth of an acre, required to have the ground stirred by the Dutch hoe, the weeds raked off, and then the potatoes earthed-up with the forked hoe, the ordinary practice would be, first to hoe over the whole of the ground, then to rake it wholly over, and, lastly, to commence the operation of earthing-up. If the weather were certain of holding good for two days, this, on the principle of the division of labour, would certainly be somewhat the most economical mode. But supposing the weather dry, the part left hoed and not raked will for a time appear unfinished: and if rain should happen to fall in the night, the operation will be defeated in most soils. Better, therefore, to hoe, rake, and earth-up a small part at a time; so that, leave off where you will, that which is done will be complete. *Finish one job before you begin another.* This advice is trite, but it is of great importance; and there are few cases where it cannot be attended to. *In leaving off working at any job, leave your work and tools in an orderly manner.* Are you hoeing between rows, do not throw down your hoe blade upwards, or across the rows, and run off the nearest way to the walk. Lay your implement down parallel to the rows, with its face or blade to the ground; then walk regularly between one row to the alley, and along the alley to the path. In general, do not leave off in the middle of a row. Straighten your trenches in digging, because, independently of appearances, should a heavy rain of some days' duration intervene, the ground will have to be re-dug, and that will be more commodiously done with a straight than with a crooked, and consequently unequal, trench. *In passing to and from your work, or, on any occasion*, keep a vigilant look out for weeds, decayed leaves, or any other deformities, and remove them, or some of them, in passing along. Attend to this particularly on walks and edgings, and in passing through hothouses, &c. In like manner take off insects, or leaves infested by them. Much in large as well as in small gardens may be effected by this sort of timely or preventive attention, which induces suitable habits for a young gardener, and occupies very little time. *In gathering a crop, or any part of a crop,* remove at the same time the roots, leaves, stems, or whatever else belonging to the plants of which you have cropped the desired parts, is of no further use, or may appear slovenly, decaying, or offensive. In cutting cabbage, lettuce, borecoles, &c., pull up the stem (with exceptions) and roots, and take them at once with the outside leaves to the compost-heap. Do the same with the haulm of potatoes, leaves of turnips, carrots, celery, &c.. Do not suffer the haulm of peas and beans to remain a moment after the last gathering of the crop. *Cut down the stalks of all flowering plants,* with the proper exceptions, the moment they have fully done flowering, unless seed is an object. Cut off decayed roses, and all decaying double flowers, with their foot-stalks, the moment they begin to decay; and the same of single plants, when the seed is not wanted. From May to October the flower-garden and shrubbery ought to be looked over every day, as soon as the morning dews are evaporated, for this purpose and for gathering decayed leaves, tie up tall growing stems before they become straggling, &c. *Keep every part perfect in its kind.* Attend in spring and autumn to walls and buildings, and get them repaired, painted, and glazed where needed. Attend at all times to machines, implements, and tools, keeping them clean, sharp, and in perfect repair. See particularly that they are placed in their proper situations in the tool-house. House every implement, utensil, or machine not in use, both in winter and summer. Allow no blanks in edgings, rows, single specimens, drills, beds, &c. Keep edgings and hedges cut to the greatest nicety. Keep the shapes of wall trees filled with wood according to their kind, and let their training be in the first style of perfection. Keep all walks in perfect form, whether raised or flat, free from weeds, dry, and well rolled. *Finally, attend to personal habits and to cleanliness.* Never perform any operation without gloves on your hands that you can do with gloves on; even weeding is far more effectively and expeditiously performed by gloves the forefingers and thumbs of which terminate in wedge-like thimbles of steel, kept sharp. Most other operations may be performed with common gloves. Always use an iron head fastened to your shoe in digging; and generally wear a broad-brimmed light silk or straw hat, to serve both as a shelter from moisture and a shade from the sun. The labour of the feet will thus be lessened, the wear of the shoes spared, and rheumatism in the back and the neck avoided.—See DIGGING, HOEING, PLANTING, RAKING, WEEDING, &c.

Books: *Loudon's Encyclopædia*, 31*s.* 6*d.*; *Mc Intosh's Book of the Garden*, 50*s.*; *Johnson's Dictionary*, 10*s.* 6*d.*; *Jones's Receipt Book*, 2*s.* 6*d.*; *Loudon's Year Book*, 3*s.* 6*d.*; *Loudon's Self-Instructor*, 7*s.* 6*d.*; *Johns's Gardening for Children*, 2*s.* 6*d.*; *Glenny's Gardening for Cottagers*, 6*d.*; *Loudon's Gardening for Ladies*, 5*s.*; *Kemp's Handbook*, 2*s.*; *Downing's Landscape Gardening*, 18*s.*; *Doyle's Practical Gardening*, 3*s.* 6*d.*; *Paull's Villa Gardening*, 2*s.* 6*d.*; *Paxton's Flower-Garden*, 33*s.*; *Francis's Garden Favourites*, 6*s.*; *Formation of a Flower-Garden*, 3*s.* 6*d.* (*Grant & Griffiths*); *Lloyd's Fruit and Kitchen Garden*, 1*s.* 6*d.*; *Loudon's Flower-Garden Companion*, 7*s.*; *Milner's Garden, Grove, and Field*, 3*s.* 6*d.*; *Kemp's How to Lay Out a Small Garden*, 3*s.* 6*d.*; *Meduin's Garden Work for Every Day*, 1*s.* 6*d.*; *Burgess's Amateur Gardener*, 5*s.*; *Towers's Domestic Gardener*, 13*s.*; *Cobbett's English Gardener*, 6*s*; *Johnson's Every Lady Her Own Gardener*, 2*s.*; *Mawe's Every Man His Own Gardener*, 6*s.*; *Taylor's Working Man's Gardener*, 1*s.*; *Gardener's Almanack (annually)*, 1*s.*; *Loudon's Gardener's*

Calendar, 7s. 6d.; *Abercrombie's Pocket Journal* 2s.; *Bridgeman's Young Assistant*, 12s.; *Rennie's Alphabet*, 1s. 6d.; *Ferris's Ornamental Gardening*, 6s. 6d.; *Hofland's Ornamental Gardening*, 31s. 6d.; *Hayward's Geometrical Flower-beds*, 3s.

GARGLE.—A liquid medicine applied to the back part of the mouth or upper part of the throat. Gargles are applied by allowing a small mouthful to mix as much as possible over the affected part, by holding the head backwards, and breathing through it, by which means the liquid is agitated and its action promoted. Gargles are not to be swallowed. It often happens, however, that patients, either by accident or negligence, do swallow a certain quantity, notwithstanding the instructions given them to the contrary. Care should therefore be taken to avoid making gargles of such substances as may occasion unpleasant symptoms in small doses though they may not perhaps amount to poisoning. Gargles usually have for their basis either simple water, or milk, wine, or vinegar diluted with water, to which in both cases, sugar, honey, or syrup is generally added. The quantity used at a time under ordinary circumstances, may be about two-thirds of a wineglassful.—See MOUTH, AFFECTIONS OF, THROAT, AFFECTIONS OF, &c.

GARLIC.—A hardy perennial bulbous-rooted plant, growing naturally in Sicily and the south of France. It is cultivated for the sake of the bulb, which is used in various kinds of dishes, being in general introduced only for a short period into the dish while cooking, and withdrawn when a sufficient degree of flavour has been communicated. It is *propagated* by planting the cloves or subdivisions of the bulb, and prefers a light dry soil, rich, but not recently manured. In February, March, or beginning of April, having some large full bulbs, divide them into separate cloves, and plant them singly in beds, in rows lengthwise. Set them from six inches to nine inches asunder, two or three inches deep, either in drills or in holes made with a blunt-ended dibble. In placing the cloves in drills, thrust the bottom a little into the ground, and earth them over the proper depth. The plants will shortly appear; keep them clear of weeds. The bulbs will be full grown in July or the beginning of August. The maturity of the bulbs is discoverable by the leaves assuming a yellowish hue, when they may be taken up. Continue the stalky part of the leaves to each root; spread them in the sun to dry and harden, and then tie them in bunches by the stalks and house them, to keep for use as wanted.

GARLIC PICKLE.—Steep a quarter of a pound of ginger in strong salt and water for five days, then cut it into slices and dry it in the sun, put it into a large stone jar with a gallon of white wine vinegar. Peel one pound of garlic, salt it well, and let it stand in the salt for three days; wipe it and dry it in the sun, then put it into the pickle; add a quarter of a pound of long pepper steeped in salt and water and well dried, one pound of mustard seed bruised, and a quarter of a pound of turmeric. Shake these ingredients well in the jar, and add anything that it is desirable to pickle as it comes into season, salting and drying them previously in the sun. When completed, the pickle should be kept for a year or two before it is used.

GARLIC SAUCE.—Peel the garlic, divide it into cloves, boil it for five minutes in water, then pour it off; add boiling water and boil it for five minutes longer; repeat the process a third and fourth time, then strain the garlic and send it to table in white sauce. The strength of the flavour may be either increased or diminished according to the length of time in boiling.

GARLIC VINEGAR.—Steep a small clove of garlic, a nutmeg bruised, and two or three cloves in a quart of vinegar for a week, shaking it well every day; strain, and bottle it for use.

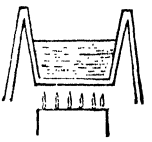
GARNET.—A well-known mineral, consisting essentially of crystallised alumina, with silica, magnesia, iron, &c. The most valuable is the *precious garnet*, almandine or carbuncle, which is commonly a transparent, red, and beautiful mineral, either crystallised or in roundish grains. The *pyrope*, a blood-red variety, is perfectly transparent, and, in roundish or angular grains, is the next in value. The common garnet is not transparent like the preceding, and is most frequently of a dull red or blackish brown. The black garnet is a mineral found in volcanic rocks, and worked into necklaces at Naples.

GAROTTING.—A species of personal assault chiefly practised by footpads and highwaymen for the purpose of robbery. The manner in which this kind of attack is committed is as follows:—A person walking along unsuspectingly is suddenly rushed upon from behind, and a pair of hands are tightly clenched around his throat, which effectually prevents him from making any resistance, and shortly produces insensibility through suffocation; in this state the person attacked is robbed, and left lying in the road to recover in the best way he may, without having once caught sight of his assailant, and consequently being unable to identify him. These dastardly attacks reached to such an extent a few years since, that numerous plans were originated by which the person attacked could defend himself and repel the assailant. A knife with a

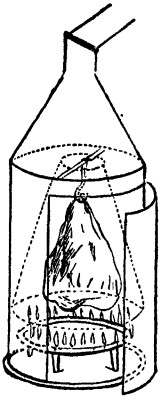
spring blade was made to fasten round the wrist, and with which the person assaulted was to stab the person behind until the hold was relinquished. A kind of collar was also invented to be worn round the throat which was made of iron, and studded with spikes, the first touch of which would effectually compel the cowardly robber to desist in his attempt. Foot passengers were also cautioned to walk as far from the wall and as near to the road as possible, so as to render the opportunity of springing out from ambush less favourable. In connection with this and any other attacks of a similar character, persons should be cautious when walking along an unfrequented road at night-time, not to linger by the way, or suffer themselves to be led aside by any casual foot passenger they may meet.

GARTERS.—Care should be taken not to fasten this part of attire too tightly, as from this apparently trivial cause serious inconvenience and dangerous consequences have been known to arise; it is better to garter below the knee than above it, as the shin bone is better capable of resisting the pressure it is subjected to, than the more fleshy part of the leg. Elastic garters are the most convenient to wear, as those that are tied are apt to become loose and fall, from the constant motion of the leg.

GAS COOKING.—The conducting of culinary operations through the medium of gas is, an introduction of comparatively modern date, and one that is variously appreciated according to the taste and prejudices of those who have given it a trial. To boil with gas on a small scale is obviously extremely easy; nothing more is necessary than to make the flame play against the bottom of the vessel set over it, as seen in the engraving. It will be best to have several jets of flame with separate stop-cocks, and the boiling may then be regulated by increasing or diminishing the number of jets. Stewing requires only less heat and consequently a smaller flame. Roasting by gas may be perfectly accomplished by an apparatus similar to that seen in the accompanying illustration. In this apparatus the meat is fixed upon a spike in the midst of a circle of little flames of gas, and a bright copper cone being brought over the whole, the current of heated air thus produced, together with the reflection of heat from the inside of the cone, are sufficient to effect the roasting.



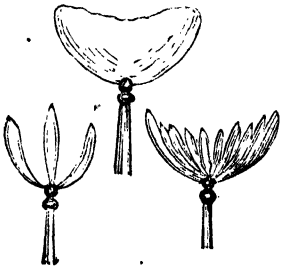
The circle of flame is produced by causing the gas to come up through a pipe *a*, which is fixed on a table, and fills a horizontal circular ring, like that of a table lamp, having a number of small perforations on the top, through which the gas issues. The copper cone not here represented, having an orifice at the top, comes over the stays, and is suspended by a balance weight, so that the cook can let it down until it comes below the flame, or raise it up higher, in order to examine and view the meat. Beneath the circular tube giving out the flames a shallow dish is placed into which the gravy and melted fat fall, and then run out into another dish; the meat is then impaled on the spike in the centre. This apparatus is both clean and elegant, and might be employed in an ordinary sitting-room without entailing any great degree of trouble or inconvenience. But it is obvious that one apparatus is only calculated for things of one size; and that for things of various sizes several cones or even several apparatus may be requisite. Cooking by gas has its advantages and its drawbacks; it certainly consumes less fuel and entails less trouble, and in summer time especially, is a convenient substitute for the fire that must otherwise be kept in. The great detriment, however, is, that articles cooked by gas, where the flame directly acts upon the article itself, are impregnated with the odour and taste of the gas, and consequently rendered extremely disagreeable to the palate.



GAS LIGHTING.—The success which has attended gas lighting, wherever it has been introduced, has now effected its adoption in every town and village of any importance, and causes it to be used not only for the purposes of commerce, but in private dwellings. The relative amount of illuminating power in comparison with the quantity of gas consumed, depends in a great measure on the kind of burner through which the flame is emitted. It is found by experiment that when an argand burner is constructed with holes of a proper size, and a proper distance from each other, with an internal tube so proportioned as to admit the exact quantity of air necessary for the perfect consumption of the gas, it gives more light than can be obtained from the same quantity of gas by any other method of burning.

Other burners in common use, are known by the names—single-jet, cockspur, union-jet or fan, fish-tail, and bat-wing. In the single-jet the gas issues from a single aperture; in the cockspur (1) from three apertures, as shown in the figure; in the union-jet (2), from a series of small holes, so that all the jets may unite laterally; in the bat-wing (3) from a slit instead of a series of holes; in the fish-tail, by making two jets cross each other and yet issue from the same hole; and the argand from a circle of small holes, the centre of which is an open space for the admission of air. The relative quality of light which they yield

from the combustion of similar quantities of gas is as follows: single-jet, 100; fish-tail, 140; bat-wing, 160; argand, 180. If the flame smoke in an argand it is evident that some adjustment is necessary, and the gas should either be lowered or the chimney contracted, until it gives a clear cylindrical flame of three or four inches in height. In the fish-tail burner if the flame flares or makes a noise in burning, the gas should



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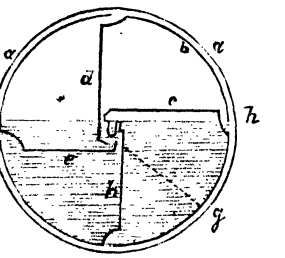
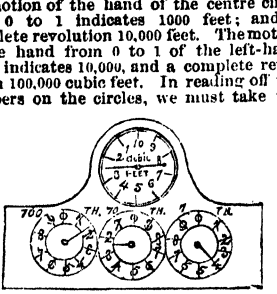
also be lowered; but to diminish either much below these points, does not effect a saving of gas in proportion to the diminution of light. Hence the important conclusion, that it is more economical when the light is too strong to procure a smaller kind of burner, or where several lights are used to put out some of them altogether, than to lower the flame on the whole. Various calculations of the relative expense of gas-light compared with other lights have been made. Thus, when tallow candles are 9d. per pound, wax candles three times the price of tallow, train oil 2s. per gallon, and coal gas 9s. per 1000 cubic feet, it is computed that the relative expense will be wax, 100; tallow, 25; oil, 5; gas, 3. In addition to its greater economy, gas-light may also be pronounced safer than any other ordinary light. It produces no sparks, it cannot be carelessly placed in contact with bed curtains or substances easily ignited, and it requires scarcely any attention. It may be turned down in an instant to the most minute speck of flame, ready to be restored when necessary by the simple turning of the stopcock; and even when it escapes by the carelessness of an attendant, or a defect in the fittings, it at once indicates the accident to the whole household by the disagreeable smell which it occasions. From the large quantity which must be mixed with the air before it becomes explosive, it is scarcely possible that this accident could occur in any ordinary apartment. And its smell so well indicates its presence in cellars and other confined situations, where it may have escaped in quantity from the accidental breakage or leakage of a pipe, it is only by the grossest carelessness or negligence that a light will be suffered to approach it, before it has been allowed to escape by the free admission of air. In order to prevent accident or waste, the master of the house should, every night, previously to retiring to rest, turn the gas off at the main with his own hands, and examine each stopcock, to see that it has been properly attended to.

GAS METER.—The water gas meter by which the consumer registers his consumption, may be thus illustrated. Within the



outer case *a a* more than half filled with water, there is a drum *b*, moving round upon two pivots, and divided into four compartments, *b*, *c*, *d*, *e*, by as many bent partitions, but enclosed at back and front by straight sides. The partitions are bent round, so as to form a central space *g*, and thus the gas can pass from one division into the next, and also escape into the outer case *a a*, by slits in the rim of the drum. The gas enters at the back of the outer case by a pipe, which proceeds into the central space, where it turns up and rises a little above the level of the water. One of the pivots on which the drum works is fixed in the bend of this tube. A peg on one of the straight sides at the back is the other pivot, and carries a toothed wheel. As one partition gets filled with gas, it becomes lighter and rises, thereby causing the drum to perform a portion of a revolution. In the accompanying engraving, the pipe *g* is pouring gas into the division in the direction of the arrow. As the gas accumulates in it, it gradually lifts this division out of the water and brings the compartment *b e* into the same position. As this gets filled and ascends, the compartment *d* comes round; then *c b*, which being filled, and rising, completes one whole revolution. Now, it will be seen, that as each compartment rises above the level of the water, the gas contained in it passes out through the slit into the outer case, and from that along a tube at the top of the case for supplying the burner. Thus, while one partition is rising, another is being brought under the water; and while the one is parting with its gas the other is being filled, and so on. A toothed wheel gives motion to a train of wheels, adjusted so as to represent the quantity of gas consumed on a dial. This dial consists of hands moving round circles which register the number of cubic feet of gas consumed, in units, tens, hundreds, thousands, &c. The top circle registers units; the right circle hundreds; that is, the motion of the hand from 0 to 1 shows

that 100 cubic feet of gas have passed through the meter; and ot course a complete revolution of this hand indicates ten times the quantity, or 1000 cubic feet. So the motion of the hand of the centre circle from 0 to 1 indicates 1000 feet; and a complete revolution 10,000 feet. The motion of the hand from 0 to 1 of the left-hand circle indicates 10,000, and a complete revolution 100,000 cubic feet. In reading off the numbers on the circles, we must take the



number at which the hand is pointing, or the *lower* of the two numbers that the hand may happen to be between. If, for example, the hand be anywhere between 5 and 6 on any one of the circles, 5 is to be taken. Commencing, then, at the left-hand, the hand is between 1 and 2: write down

10,000
2,000 for the middle circle
300 for the right-hand circle

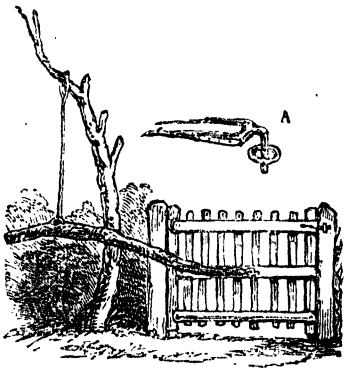
12,300

Now, supposing that in taking the register three months before, the quantity had been set down as 9100; then subtracting this from 12,300, gives 3200 cubic feet of gas as the consumption for three months. The top or units dial is not used in registering: its use is to indicate to the collector, and also to the consumer, that the meter is acting properly; for they could not, of course, wait while 100 feet were being registered. Gas consumers should not lose sight of their meters, but from time to time, take an account of the gas burned so as to ascertain that the amount consumed is in accordance with the time it extends over, and also if it bears the same ratio as the gas burned in former periods. For the want of this care, consumers have frequently to pay for gas which they do not consume, through some defect in the meter. Gas meters are usually supplied and fixed by gas companies, and a small sum charged for their annual use.

GATE.—The general principles upon which gates for fields and farms should be made, are as follows: they should always be made to fold back upon a fence, to open beyond the square, and not to shut of themselves. When they shut of themselves and are not far enough pushed back when opened, they are apt to catch the wheel of a cart when passing, and to be broken, or the post snapped asunder by the concussion; and as self-shutting gates are often left unfastened by people who pass through them, requiring greater attention than is usually bestowed on such matters, the stock, principally young horses, which seem to take a delight in loitering about the gates, would then escape from the field. A gate should be made of sufficient height, so that horses and large cattle, when pushing against it, cannot break it. This is a precaution which is very frequently neglected, so that however strong a gate may be, the back part coming in contact with that part of a horse's chest where the collar usually goes, he without inconvenience, leans his weight against the opposing bar and breaks it; but if it were a few inches higher it would press against the horse's neck and windpipe, and he could thus make no impression on it. The best description of gate, both as regards convenience and durability, is that commonly used in Suffolk. In this gate, suspending irons are used instead of the ordinary braces, by which means the gate is prevented from one of the most common defects, dropping at the head. These irons are made in one piece, go on both sides of the gate, are riveted through the back and ledges with thick leaden or zinc collars between the iron and the wood; clasp round the back head, to form the upper hanging iron without being welded into a close eye, by which the gate would be confined, and at the lower ledge turn up to form one of the pairs of iron uprights. The second pair of uprights are also riveted through the ledges with thick small leaden collars, to prevent the iron from injuring the wood: and with a thin piece of zinc for the same reason, between the iron and the back of the gates. A gate made with sawn young fir trees, and having the advantage of such irons, will last a great many years. If cut out of good timber, three-inch planks nine feet long, there is not an inch of stuff wasted. The eye for the hook in the lower iron is made oblong, to give the gate room to rise. The only fastenings used are chains, eighteen inches long, from near the top of the post to a hook near the middle of the fore head, which takes the whole weight off that end of the gate, and allows of it giving a little way outward. The *most convenient position* for a gate, for easy entrance into and egress from a field, is at the end of one or both head ridges, which are always regarded as the boundaries of fields.

GATE FASTENER.—Many contrivances are made use of to keep gates fastened; but of all these the following will be found the most simple and efficacious. An iron loop is driven into the middle cross rail of the gate, and a rope cast over the branch of a neighbouring tree. A rough pole may then be fitted at one end with a staple long enough to work in the iron loop of the gate without jumping out when jarred. To this pole, the rope is fixed at such a distance from the other end, that, when suspended and the staple is dropped into the iron loop, the rope and pole will remain oblique when the gate is shut. This will be explained by the accompanying sketch, the fig. A showing especially how the staple and iron loop fit together. When the gate is opened, the pole is at the same time pushed back: but as

soon as a person has passed through, the weight of the pole acting upon the middle

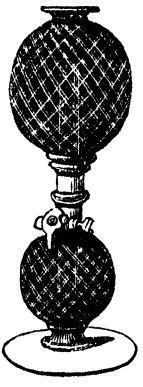


of the gate closes it again, and as the pole sways freely on the rope, this can never fail to happen.

GATE OPENER.—Any plan by which gates may be opened to admit vehicles to pass without obliging the driver to alight, must prove a great convenience. A contrivance by which this may be effected is designed as follows. On the approach of the vehicle the gate opens apparently by its own volition, and closes again after the carriage has passed through without any apparent cause. The effect is produced by small plates let into the ground at short distances from the gate, which, when the wheels of the vehicle roll over them, descend like a weighing machine, and act upon certain levers concealed under ground. By means of these levers a toothed wheel is made to revolve and to turn a toothed pinion affixed to the swinging post or axle of the gate, and thus to throw it open or close it.

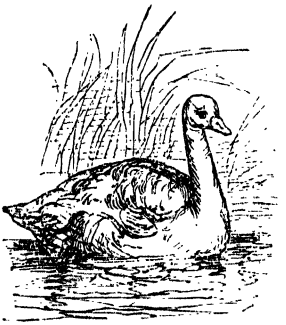
GAUFFERING.—A process somewhat similar to plaiting and crimping, differing only from the latter, by having the grooves much larger and less regular. For this operation, gauffering machines are commonly used, but the same effect may be produced by the following simple means:—Procure a board about a yard long and fifteen or eighteen inches wide; cover it with flannel, and fasten two tapes lengthwise, leaving a quarter of a yard between them; then pin the next to the flannel at one end, and place a straw over the tapes (between which the net is lying), and under the net; the next straw is laid under the tapes and over the net, and so on alternately, taking care that the upper straws are put close to each other upon the under ones, forming two layers of straw. When all the net is folded, dip a coarse cloth in water, and wring it as dry as you can, without splitting the straws; remove the cloth and place the board before the fire for half an hour, when the upper straws may be drawn out, and cotton run in to secure it; after which, the remaining straws may be taken away, and the work is then complete. Some persons hold the board over the steam of a kettle for some time, and then dry it before the fire, in preference to ironing; others sprinkle it with starch, gum, or rice water, before ironing.

GAZOGENE.—The gazogene consists of two glass vessels; one of these has a metal tube, which fits into its neck so as to be water-tight at the joint, and rises nearly to the top of the upper vessel from which, also, is a tap. In order to use it, the two powders (bicarbonate of soda and tarturic acid) are placed *dry* in the lower vessel, by removing the metal tube, which is then replaced and firmly pushed down into its socket. The upper vessel, being now turned with its mouth upwards, is filled to the top of the glass part with the water or other fluid to be rendered effervescent. After this, the lower part, as previously charged, is turned down into the vessel, and the two, while in this position, are securely screwed together. When this is done, they are turned up to their original position, when a little of the fluid immediately flows over the top of the tube, and runs down into the vessel, where it mixes with the two powders, and causes the one to decompose the other, and thus liberate the carbonic acid gas, which is done with considerable force, so as to rise through the tube, and mingle with the fluid in the vessel, which thus becomes charged, and when let out by the tap is highly effervescent. This machine, if well constructed, and especially if gilt, will produce soda-water, lemonade, orangeade, ginger-beer, currant-water, or any other flavoured beverage, in a state of effervescence.



GEESE.—The form of the common goose is too well known to need description. Its colour is usually white and grey mixed, sometimes quite white, especially among the males. The mixed or parti-coloured is supposed to be less vagrant in its habits than the grey goose, and the feathers are more valuable; but the latter is more prolific, and produces the finest young ones. The gander should be a pure white, and of a large size. A single breeding stock consists of a gander and five geese; these are enough for an ordinary farm-yard, as they will produce forty or fifty young during the season. They may be lodged in almost any common place or out-house; they are, however, partial to a clean and dry spot in which to pass the night; and a constant supply of fresh straw preserves them from vermin, and improves their health and condition. It is always

better that there should be a pond in the vicinity where geese are kept, to give them an opportunity of indulging in a natural liking for water, but this is not absolutely necessary. But when this is wanting, an abundant supply of clean water must be constantly supplied. The expense of feeding geese is very trifling, as they generally manage to procure the greater part of their food from the commons, lanes, and other places where they are in the habit of straying. The period of commencing laying is usually the beginning of February. An egg is laid every alternate day, or if the weather be warm, two in three days, until ten or



twelve are produced. If the eggs are removed as soon as they are deposited in the nest, the goose will continue to lay for a much longer period, or until there are from twenty to thirty eggs; and at harvest-time she will begin to lay again, and probably produce as many more. The laying of geese may be accelerated by feeding them well all through the winter upon good solid corn; in January other stimulating food should be given in addition, such as bread or pollard soaked in beer, barley-meal in milk, malt, fresh grains, or Indian corn, either whole or ground. The time of laying is known by the goose carrying straws to form her nest; when this is seen, a nest of straw, lined with soft hay, should be prepared in the place intended for her to deposit her eggs. Nettles strewed around are said to attract them to any desired spot, as they are fond of the smell. Food and water must be placed near the nest, and when one egg is laid, she will continue to lay in the same place. The number of eggs usually allowed is eleven, but there is no reason why more should not be given them, according as the goose may be able to cover them. If the goose should want to set after laying only a few eggs, she must be prevented until a sufficient number are ready for her. Where many geese are kept, the desired number may be made up from the nests of others. While the goose is sitting, food and water should be placed near her nest, that she may not be compelled to quit it any length of time, and thereby suffer the eggs to become cold and addled. About the thirtieth day, the eggs will begin to be hatched; as the young come forth irregularly, those first produced must be removed, if the goose will allow it, kept warm before a fire, and replaced with the parent when the whole are hatched. The goslings should not be fed for twelve hours. If the weather be warm, they, after two days, should be turned out into the open air, care being taken that they do not go out too early in the morning, that they do not remain out too late, and that they be well sheltered from the wind and rain. They must also be prevented from going into the water until they are a week or ten days old, as they are very liable to the cramp. Their food may be either warm bread and milk, or thin barley-meal and water, curdled milk with lettuce leaves, and the plant called goosegrass, which grows so plentifully in early spring, and of which they are very fond. After a few days they may be allowed to go abroad with the parent, but care must be taken to destroy all nightshade, hemlock, and henbane that may be growing near their haunts, as they will eat these noxious plants and poison themselves. Geese are subject to diarrhœa: for this complaint hot ale, in which acorns, quinces, or bark has been boiled, may be given them. When they are attacked by giddiness, the remedy is bleeding, by pricking with a needle a vein which is under the skin that separates the claws. Insects get into the ears and nostrils of goslings, and are a dreadful annoyance to them; in such a case give them barley at the bottom of a pan of water, so that when the goslings plunge in their heads to eat the barley, the insects will be destroyed or fly away.—Book: *Doyle's Rural Economy*, 2s.

GELATINE. — In chemistry the name given to an abundant proximate principle in animals. It is confined to the solid parts of the body, such as tendons, ligaments, cartilages, and bones, and exists nearly pure in the skin; but it is not contained in any healthy animal fluid. Its leading character is the formation of a tremulous jelly, when its solution in boiling water cools, and it may be repeatedly liquefied, and again gelatinized by the alternate application of heat and cold. Gelatine, as an article of food, is not so nutritious as is generally supposed.

GENEVA ROLLS.—Break down into very small particles three ounces of butter with two pounds of flour, add a little salt, and set the sponge with a tablespoonful of solid yeast, mixed with a pint of new milk. Let it rise for one hour, then stir to a couple of well-beaten eggs as much hot milk as will render them lukewarm, and wet the rolls with them, to lighten the dough; leave it from half to three-quarters of an hour: mould it into small rolls, brush them with beaten yolk of egg, and bake them for twenty minutes or half an hour. The addition of six ounces of sugar, three of butter, half a pound of currants, the grated rind of a large lemon, and two ounces of candied orange-peel, will convert these into excellent rolls.

☞ Flour, 2lbs.; butter, 3ozs.; yeast 1 tablespoonful; milk, 1 pint; eggs, 2; sugar, 6ozs.; butter, 3ozs.; currants, ½lb.; lemon, rind of 1; candied orange-peel, 2ozs.

GENTIAN.—A plant growing in great abundance in Switzerland and Germany; its root is highly esteemed as one of the most powerful and most useful of bitter tonics. It is a remedy very serviceable in indigestion, general debility, and tedious convalescence. It possesses the advantage of not being decomposed by acids, alkalies, or the other metallic salts of iron, zinc, or silver, and is therefore a useful vehicle for their administration. The dose of the *infusion* of gentian is two tablespoonfuls twice a day. Of the *extract* ten grains to half a drachm, twice or thrice a day; of the tincture, a teaspoonful in a wineglassful of cold water.

GENTLEMAN. The term gentleman is considered an inferior designation to that of esquire; but what is the generic difference between the two, writers are not agreed. According to Blackstone, it is a student at law, or in the university, one who professes the liberal sciences, or can live idly, without manual labour, and bear the charge and countenance of a gentleman. In the case of an appointment of a charitable allowance, a court of equity directed the master to include in the definition of gentleman "magistrates, esquires, members of the three learned professions, graduates of the universities, attorneys, surgeons, apothecaries, and *the like*." The social signification of this term is capable of a wider construction, a person being considered such, whose actions are governed by correct moral principle, or one whose language, manners, dress, and general outward bearing, are somewhat removed above that of the labouring classes.

GEOGRAPHY.—Books: *Butler's Geography*, 2s. 6d.; *Pinnock's*, 6d.; *Useful Geography*, 3d.; *Rougeat's Amusing Geography*, 1s. 6d.; *Baird's Ancient Geography*, 4s.; *Hildyard's Manual*, 2s. 6d.; *Putz's Mediæval*, 4s. 6d.; *Pinnock's Modern*, 5s. 6d.; *Evan's Australian*, 3s.; *Baker's Bible*, 2s. 6d.; *Hughes's British*, 2s.; *Gibbon's Catechism*, 9d.; *Hiley's Child's Geography*, 9d.; *Pettit's Classical*, 6s.; *Mangnall's Compendium*, 7s. 6d.; *Evans's Concise*, 2s. 6d.; *Knight's Cyclopædia*, 10s.; *Wooley's Descriptive*, 20s.; *Johnston's Dictionary*, 36s.; *Smith's Classical Dictionary*, 15s.; *Blackie's General Dictionary*, 95s.; *Butler's Easy Guide*, 1s. 6d.; *Hutchinson's Lessons*, 1s.; *Cobbin's Elements*, 1s. 6d.; *Gibson's Etymological*, 4s. 6d.; *Gaskin's European*, 1s. 6d.; *Guy's First Book*, 1s.; *Mrs. Stowe's Geography for Children*, 4s. 6d.; *Gilbert's Geography for Families and Schools*, 3s. 6d.; *Geography for the Use of the Blind*, 5s.; *Sullivan's Geography Generalized*, 2s.; *Goldsmith's Grammar*, 3s. 6d.; *Boardman's Historical*, 1s. 6d.; *Butler's Introduction*, 2s. 6d.; *Mrs. Slater's Lessons*, 6s.; *Guy's Illustrated*, 3s.: *Heale's Geography for Military Students*, 4s. 6d. *Hughes' Mathematical Geography*, 5s.; *Groves's Modern*, 6s.; *Steill's Pictorial*, 2s. 6d.; *Dower's Political*, 31s. 6d.; *Hiley's Progressive*, 2s.; *Somerville's Physical*, 12s.; *Wittich's Curiosities*, 2s.; *Woodbridge's Rudiments*, 3s. 6d.: *Sune's Sacred*, 5s.; *Wilson's Simplified*, 2s.; *Milner's Universal*, 5s.

Atlases.—*People's Atlas*, 21s.; *Butler's Ancient*, 4s. 6d.; *Butler's Ancient and Modern*, 2s. 6d.; *Philip's*, 10s. 6d.; *Findlay's Comparative*, 31s. 6d., *Hughes's Constructive*, 3s. 6d.; *Judd's Indestructible*, 3s.; *Parlour Atlas*, 6s. 6d.; *Johnston's Atlas of Physical Geography*, 12s. 6d.

Use of the Globes.—*Easy Lessons on the Terrestrial Globe*, 2s.; *Butler's Exercises on the Globes*, 2s. 6d.; *Butler's Geography of the Globes*, 4s. 6d.; *Molyneux's Knowledge of the Globes*, 3s.; *Howe's Lessons*, 6s.; *Bruce on the Use of*, 2s. 6d.; *Keith on the Use of*, 1s.; *Pinnock on the Use of*, 3s.; *De Morgan's Treatise*, 5s.

GEOLOGY.—Books: *Chambers's Course*, 2s. 6d.; *Richardson's*, 5s.; *Buckland's Geology and Mineralogy*, 35s.; *Nicol's Catechism*, 9d.; *Gibson's Certainties*, 10s. 6d.; *Humble's Dictionary*, 6s.; *Austed's Elementary*, 12s.; *Hitchcock's Elements*, 10s.; *Mantell's First Lessons*, 5s.; *Richardson's Geology for Beginners*, 10s. 6d.; *Phillips's Guide*, 6d.; *Tyas's Handbook*, 1s.; *De la Beche's How to Observe*, 10s. 6d.; *Bakewell's Introduction*, 21s.; *Mantell's Wonders*, 18s.; *McIntosh's Key*, 6d.; *McGillivray*, 4s. 6d.; *Jamieson's Mechanical*, 2s.; *Macfarlane's Modern*, 2s. 6d.; *Cockburn's New System*, 3s. 6d.; *Sullivan's Modern and Scripture*, 3s.; *Brande's Outlines*, 7s.; *Zornlin's Outlines*, 10d.; *Burr's Practical*, 6s. 6d.; *Zornlin's Recreations*, 4s. 6d.; *Orr's Rudiments*, 2s. 6d.; *Page's Text Book*, 1s. 6d.; *Portlock's Treatise*, 1s. 6d.; *Guiness's Views*, 6s.; *Lyell's Principles*, 18s.; *Schoedler's Physics*, 7s. 6d.

GEOMETRY.—Books: *Darley's Companion*, 4s. 6d.; *Minifie's Drawing*, 21s.; *Bland's Problems*, 10s. 6d.; *Colenso's Problems, with Key*, 3s. 6d.; *Gaskin's Cambridge Solutions*, 12s.; *Cooley's Proportions*, 3s. 6d.; *Wallace's Theorems*, 6s.; *Church's Analytical*, 8s. 6d.; *Fisher's Elements*, 3s.; *Keith's Elements*, 10s. 6d.; *Playfair's Elements*, 6s. 6d.; *Kirkman's Lessons*, 1s. 6d.; *Lardner's Euclid*, 7s.; *Thomson's Euclid*, 5s.; *Duncan's Plane Geometry*, 2s. 6d.; *Bennett's Practical*, 16s.; *Dallas's Practical*, 7s. 6d.; *Ritchie's Principles*, 1s. 6d.; *Darley's System*, 4s. 6d.; *Lardner's Treatise*, 4s. 6d.; *Bell's Key*, 2s.; *Newman's Elementary Difficulties*, 5s.; *Hall's Descriptive*, 6s. 6d.; *Christie's Course*, 10s.

GERANIUM.—A genus of beautiful plants, indigenous to the south of Africa. The ordinary mode of continuing each species and variety is by cuttings, but almost all the sorts produce ripe seeds in this country, by which they may be multiplied, and also new varieties produced. The seed, if ripe before midsummer, may be sown as soon as gathered in pots of light rich earth, and placed in a gentle hot-bed and shaded. The plants will soon come up, and if when they show two upper leaves they are transplanted singly into pots, and kept under a cold frame, several of them will flower in the following spring and summer. No plant grows more readily by cuttings than the shrubby species of this family; the cuttings may be taken off at a joint when the wood is beginning to ripen; laid in the shade for an hour or two until the wound heals, and then planted in sandy loam, and placed in a gentle heat. The hardier sorts, such as the

common scarlet geranium, will strike in the open air, or in any shaded situation, without being covered with a glass. Cuttings of the roots of such sorts strike readily; a small portion of the root being left above the ground. The culture of the geranium requires a light rich soil; they grow well in equal parts of sandy loam and manure in an advanced stage of decomposition; or they will grow in leaf-mould and sand, unmixed with any other material. As most species are rapid growers, the pots require to be examined in spring and autumn, and the roots and top reduced or the plant shifted into a larger pot. In general, the shrubby sorts should be kept low and bushy by pruning; but when they are allowed to grow tall and straggling, they are unsightly and do not flower well. When an extensive collection is kept, it is desirable to devote a house entirely to their culture; in this, the roof should be so constructed, as to admit as much light as possible; the stage should be near the glass, and there should be ample means of giving air and heat. Most of the species require rather more heat during the winter than evergreen woody exotics from the same climates, otherwise they are apt to lose their leaves, and rot at the points of the shoots; to prevent this, heat should be given in the day-time and the air admitted, and whenever any leaf begins to decay, it should be removed. The hardier species, like other greenhouse plants, are generally placed in the open air from May to September, but, as the flowers are much injured by heavy rains and winds, the more delicate sorts, and all those intended to flower in the best manner, should be kept in the house with abundance of air night and day. In warm situations it is customary to plant the scarlet geranium and other free-growing sorts, in the borders of the flower-garden or shrubbery; these, when attacked by frost, may be either protected where they stand, by a liberal supply of litter and mats, or they may be removed into single pots, and placed in the dry part of the greenhouse till the following spring.

GERMAN CAKE.—Mix well together a pound and a half of finely powdered loaf sugar, two pounds of well-dried flour, and an ounce of caraway seeds; make it into a stiff paste, with the whites of three eggs beaten in a quarter of a pint of milk; roll it out very thin, cut it into shapes, prick, and bake upon buttered tins.

☞ Loaf sugar, 1¼lb.; flour, 2lbs.; caraway seeds, 1oz.; eggs, 3 whites; milk, ¼ pint.

GERMAN LANGUAGE.—The acquisition of this language is next in point of importance to the French language for social and commercial purposes; while to the student it opens up a field of knowledge in every branch of literature and science, unequalled in the language of any other part of the world. Books: *Flügel's Dictionary*, 24s.; *Elwell's Dictionary*, 5s.; *Marcus's Vocabulary*, 3s. 6d.; *Ahn's Child's Book*, 3s.; *Arnold's First Book*, 5s. 6d.; *Ollendorff's Introductory*, 5s.; *Arnold's Second Book*, 6s. 6d.; *Bernays' Conversation*, 3s.; *Meeden's Correspondence*, 7s.; *Kaltschmid's Delectus*, 5s.; *Cassell's Pronouncing Delectus*, 5s.; *Tiark's Grammar*, 6s.; *Heerklotz's Extracts*, 3s.; *Habasak's Phrases*, 1s. 6d.; *Fischel's Reading Book*, 5s.; *Eulenstein's Speaking Exercises*, 2s. 6d.; *Franck's Letter Writer*, 3s. 6d.; *Wittich's German for Beginners*, 5s.; *Tyas's Handbook*, 1s.; *Moore's Interpreter*, 5s.; *Moschzisker's Guide*, 7s.; *Audlau's Key*, 3s. 6d.; *Nelson's Study Simplified*, 2s. 6d.; *Meissner's Idiomatic Phrase Book*, 2s. 6d.; *Bernstein's Reading Book*, 6s. 6d.; *Lebahn's Self Instructor*, 6s. 6d.; *Meidinger's Self Teacher*, 6s. 6d.; *De Porquet's Trésor*, 3s. 6d.; *Blanchard's Word Book*, 1s.

GERMAN PASTE.—A compound used as a food for larks, nightingales, and other cage birds; it is made as follows:—Pea-meal, 2lbs.; sweet almonds, blanched, 1lb.; fresh butter or lard, ½lb.; moist sugar, 5ozs.; hay saffron, ½ drachm; beat to a smooth paste with a sufficient quantity of cold water; granulate the mass by passing it through a cullender, and expose the product to the air, in a warm place until quite dry and hard. The addition of two or three eggs improves it.

GERMAN PUDDING.—Stew, until very tender and dry, three ounces of whole rice in a pint and a quarter of milk; when slightly cooled, mix with it three ounces of beef suet finely chopped, two ounces and a half of sugar, an ounce of candied orange or lemon-peel, six ounces of sultana raisins, and three eggs well beaten and strained. Boil the pudding in a buttered basin, or in a well-floured cloth, for two hours and a quarter, and serve it with the following sauce:—Dissolve an ounce and a half of sugar broken small into a gill of sherry, or of any other white wine, and stir them when quite hot to the beaten yolks of three fresh eggs; then stir the sauce in a small saucepan held high above the fire until it resembles custard, but by no means allow it to boil, or it will instantly curdle; pour it over the pudding, or, if preferred, send it to table in a tureen.

☞ Milk, 1¼ pint; rice, 3ozs.; suet, 3ozs.; sugar, 2½ozs.; candied peel, 1oz.; sultana raisins, 6ozs.; eggs, 3. *Sauce:* sherry, 1 gill; sugar, 1½oz.; eggs, 3 yolks.

GERMAN PUFFS.—Pound to a perfectly smooth paste two ounces of sweet almonds, and six bitter ones; mix with them, by slow degrees, the yolks of six and the whites of three eggs. Dissolve in half a pint of cream, four ounces of butter and two ounces of fine sugar; pour these hot to the eggs, stirring them briskly together, and when the mixture has become cool, flavour it with a tablespoonful of orange flower water. Butter some cups thickly, and strew into them a few slices of candied orange peel; pour on the mixture and bake the puffs for twenty minutes in a slow oven.

☞ Sweet almonds, 2 ozs.; bitter almonds, 6; eggs, 3 whites, 6 yolks; cream, ½ pint; butter, 4 ozs.; sugar, 2 ozs.; orange flower water, 1 tablespoonful.

GERMAN SAUCE.—Put some cullis into a stewpan with an equal quantity of good stock; add a little parsley chopped fine, the livers of two fowls braided, an anchovy washed and chopped, a piece of butter, some

salt, and whole pepper; thicken the whole over a slow fire, and use it as required. It forms a savoury adjunct to any dish.

GERMAN SILVER.—Spoons and forks made of this composition are extensively used; and when they are made from the best materials they closely resemble genuine silver, and are equally durable. The cost of these articles is comparatively trifling, and when taken care of and kept bright, they will continue to look very well. To this end, they should, immediately after use, be put into hot water, washed well, and wiped dry with a soft cloth. They should also be washed in soap-suds once a week, and then cleaned with plate-powder, which should afterwards be carefully brushed off. Should this metal become spotted or stained by vinegar or other acids, wash it first, and then clean it with sweet oil and powdered rottenstone. If the spoons or forks have become very much soiled or discoloured, a mixture should be made with a gill of vinegar, and half an ounce each of alum and cream of tartar; add to this a pint of boiling water, dip the plate into the mixture and rub it dry.

GERMAN YEAST.—This has in a great measure superseded the use of English beer yeast in London, and other places conveniently situated for receiving quickly and regularly the supplies of it which are imported from abroad; but as it speedily becomes putrid in sultry weather, and does not in any season remain good long after its arrival here, it is not suited for transmission to remote parts of the country. Bread, made with it while it is perfectly sweet, is extremely light and good; it also answers the purpose for light cakes and biscuits; an ounce of yeast to three pounds and a half of flour, will be found the best proportion to produce a successful baking. In using it, the yeast should be very gradually and perfectly moistened, and blended with the warm liquid in which it is usually mixed; for, unless this be done, and the whole rendered smooth as cream, the dough will not be of the uniform texture which it ought.

GHERKINS PICKLED.—Gather them on a dry day; place them into cold salt and water for four days, with a cabbage-leaf laid over them to keep them down; drain them, and put them into a perfectly clean pan, with vine or cabbage leaves at the bottom, and cover them with vinegar and water, strewing a little pounded alum, and putting more leaves over them; let the water become scalding hot, and repeat this as frequently as possible during the day. Put them into a basin at night, with fresh leaves and the same liquor; next morning, heat them twice with fresh leaves under and over them, and in the same liquor; then drain them; and if for six or eight dozen, put them into a pan with half a pint of vinegar and water sufficient to cover them, and some salt; scald them as before, and put them on and off the fire till they are of a bright green colour; drain, and pour over them boiling water; let them lie a short time in this, and put them into wide-mouthed bottles or stone jars; have ready vinegar boiled up with half an ounce of bruised nutmeg, and one ounce each of ginger, black peppercorns, and whole allspice; pour it upon the gherkins while hot; cover them till cold, and tie them down with bladders.

GHERKIN SAUCE.—Chop some gherkins, and put them into a stewpan with a little butter and spices according to taste; dust in a small portion of flour, and moisten with a little gravy or stock.

GIBLET PIE.—Cleanse two sets of goose giblets, divide the wings and necks into two, and cut the gizzards into three or four pieces, stew these in two quarts of water, with a few whole peppercorns, a little mace, some sweet herbs, and a large onion sliced, till they are tender. Line a dish with good paste and lay at the bottom a rumpsteak, on which place the stewed giblets; strain the liquor in which they were stewed into the pie, season with salt, lay on an upper crust, and bake for an hour and a half.

GIBLET SOUP.—Cleanse two sets of giblets, parboil them; take the skin off the feet; cut the gizzards into quarters, the necks into three pieces; the feet, pinions, and livers into two; and the head also into two, first taking off the bill; boil them till nearly done enough in a quart of weak gravy soup with an onion. Have ready boiling, some rich highly seasoned brown gravy soup; add the giblets and the liquor they have been boiled in, with some chopped parsley; take out the onion and thicken the soup with a bit of butter kneaded in flour. Half a pint of white wine may be added; but the soup is very good without this addition.

GIBLETS STEWED.—Divide each gizzard and liver into four, each neck into three, and each wing into two. Stew them until the gizzards are perfectly tender; season them with salt and pepper, a minced shalot, and a small piece of mace. Before serving, give them a boil with a cupful of cream, which has had a piece of butter and a teaspoonful of flour mixed with it.

GILDING LIQUOR.—This name has been given to various solutions of gold, and to other liquids employed in gilding. To produce a *dead gold* effect, the following is used: mercury, 1 part; aquafortis (sp. gr. 1·33), 3 parts; dissolve and add soft water, 7 parts. Apply this diluted to the articles, before spreading the amalgam over them in water gilding, or before placing them in the gilding liquor, in gilding by immersion. *Gildar's pickle, used to impart a rich colour to gold surfaces*, especially trinkets, is thus compounded: alum, 1oz.; common salt, 1 oz.; nitre, 2ozs.; dissolved in water, half pint. This application should not be too long continued, as it dissolves a portion of the gold. To give lustre and fire to distemper gilding, take annatto, 2ozs.; salt of tartar, 2ozs.; gamboge, 1oz.; vermilion, 1oz.; dragon's blood, ½oz.; water, 1 quart; simmer down to about one-fourth, add saffron, 20 grains, and when merely tepid, strain through fine muslin into a bottle. A little is floated over the surface of the article with a very soft flat camel-hair brush.

GILDING, TO IMPROVE.—Mix a gill of water with two ounces of purified nitre, one ounce of alum, and one ounce of common salt. Lay this over gilt articles with a brush, and their colour will be much improved.

GILDING, TO PRESERVE AND CLEAN.—Never touch gilding with water, but when about to clean it, blow off the light dust with a pair of bellows, and then pass a feather or light brush over it. If you wish to protect gilding from the flies during the summer season, pin oiled tarlatan over it. Tarlatan already prepared may be purchased at the upholsterer's. If it cannot be procured, it is easily made by brushing oiled silk over cheap tarlatan.

GIN.—A spirituous liquor, of which there is a large consumption in England. Gin is rarely sold to the public in the state in which it comes from the distillery; it would in fact be not so agreeable to the palate in that state; and publicans, therefore, are in the habit of "making up" this liquor for sale, the following being one among many recipes: Good gin (22 under proof) 90 gallons; oil of almonds, one drachm; oils of cassia, nutmeg and lemon, of each two drachms; oils of juniper, coriander, and caraway, of each three drachms; essences of orris-root and cardamoms, of each five fluid ounces; orange-flower water, three pints; lump sugar, 56 to 60lbs.; dissolved in water, four gallons. The essences are dissolved in two quarts of spirits of wine, and added gradually to the gin, until the requisite flavour is produced, when the sugar (dissolved) is mixed in along with a sufficient quantity of soft water, holding four ounces of alum in solution, to make up 100 gallons. When the whole is perfectly mixed, two ounces of salt of tartar, dissolved in two or three quarts of hot water, are added and the liquor is well stirred up; after which the cask is bunged up and the liquor allowed to repose. In a week it will become brilliant, and may be either "racked" or drawn from the same cask. *Gin sweetened*, prepared from unsweetened gin (22 under proof), 95 gallons; lump sugar, 40 to 45lbs.; dissolved in clear water, three gallons; mix well; and fine it down as above. It is almost needless to add that all gin is more or less adulterated before it is sold by the retail dealer; the ingredients employed by some are, however, harmless compared with the noxious compounds introduced by others; but the consumer has fortunately the means of detecting these adulterations by his palate.

GINGER.—The root-stock or underground stem of a plant which is a native of the mountain of Gingi in Hindoostan, whence the name. It was carried from India to Cayenne and the West Indies, where the greatest part of the ginger of Europe is cultivated. There are two kinds of ginger, but the difference consists chiefly in the mode of preparing it. White ginger consists of the best pieces, of which the outer skin has been scraped off; they are then well washed and dried in the sun: it breaks with a fibrous fracture, and is the strongest and best flavoured; good ginger should be compact and heavy. Black ginger is the inferior kind, which has only been scalded before it was dried. Ginger is an aromatic, stimulant, and stomachic, very useful in flatulence and spasms of the stomach and bowels, and in loss of appetite and dyspepsia, arising from debility or occurring in old and gouty subjects. It often relieves toothache, relaxation of the uvula, tender gums, and paralytic affections of the tongue. Made into a paste with warm water, and spread on paper it forms a useful and simple headache plaster, which frequently gives relief when applied to the forehead or temples. It is also one of the most agreeable and wholesome spices, and is extensively used as a condiment and flavouring ingredient. In this character it is stimulating to the digestive organs, and is less hurtful than pepper; but, like all excitants, it should be used with moderation.

GINGER BEER.—There are several recipes for making this beverage, the following being the best. 1. Lump sugar, 1lb.; Jamaica ginger, well bruised, 1oz.; cream of tartar, ½oz.; 2 lemons sliced; boiling water, 1 gallon. Macerate with frequent stirring, in a covered vessel, until barely lukewarm, then add of yeast, 1½ or 2ozs., and keep it in a moderately warm situation so as to excite a brisk fermentation; the next day rack the liquor and strain it through flannel; work for another day or two, according to the weather; then skim, or again strain, put it into bottles, and wire down the corks. 2. Loaf sugar, 5lb.; lemon-juice, 1 gill; honey, ½lb.; bruised ginger, 6ozs.; water, 5 gallons. Boil the ginger in three quarts of the water for half an hour; then add the sugar, the juice, and the honey, with the remainder of the water, and strain through a cloth. When cold, add the white of an egg and two drachms of essence of lemon; after standing three or four days, bottle it. 3. Take 1lb. of bruised ginger and the rind of 2 lemons; boil 14lbs. of loaf sugar and 1lb. of raisins in 11 gallons of water, pour this over the bruised ginger and lemon-rind, and add the juice of 18 lemons. When at a lukewarm temperature, add two or three spoonfuls of yeast, and let it ferment for a day or so; then put it into a cask to finish the fermentation, and when that is completed, fine it, and bung it down closely. It may be bottled in stone bottles almost immediately. 4. *Quickly made*; pour a gallon of boiling water over ½lb. of loaf sugar; 1½oz. of sliced ginger, and the peel of 1 lemon; when milk-warm, add the juice of a lemon, and a spoonful of yeast.

GINGER BEER POWDERS.—1. Powdered loaf sugar, 4ozs.; carbonate of soda, 5 drachms; powdered ginger, 1 drachm; mix these ingredients well together; divide into 12 equal parts, one of each of which put into a blue paper. Then take tartaric acid, 1oz.; divide into 12 equal parts, and put each into a white paper. Dissolve the contents of one of the blue and of one of the white papers, each in half a glass of spring water. Pour one upon the other, and drink while effervescing. 2. Powdered lump sugar, 2 drachms. carbonate of soda, ½ drachm; mix them together. Take of tartaric acid, ½ drachm; best ground ginger, 5 grains; essence of lemon, 1 drop; mix these together. Dis-

solve the above powders in separate tumblers, containing together about half a pint of spring water; when dissolved, mix the contents of each glass and let it be drunk immediately.

GINGER BISCUITS.—Take three ounces of fresh butter, two pounds of flour, three ounces of pounded sugar, and two of ginger finely powdered; knead these ingredients into a stiff paste, with new milk. Roll it thin, stamp out the biscuits with a cutter, and bake them in a slow oven until they are crisp right through, but keep them of a pale colour.

☞ Flour, 2lbs.; butter, 3ozs.; sugar, 3ozs.; ginger, 2ozs.

GINGERBREAD.—This well-known cake is made in a variety of ways; the recipes that hereafter follow being the most worthy of recommendation. 1. Treacle, 1lb.; sugar, ½lb.; butter, 6ozs.; boil these together for five minutes, and pour the mixture, when boiling, on 12ozs. of flour; and a teaspoonful of ginger and allspice, in powder, with the peel of 1 lemon grated; when cold, bake in tins. 2. Flour, 2lbs.; carbonate of magnesia, ½oz., mix; add treacle, 1½lb.; butter, 2ozs.; spice, to taste; tartaric acid, ½oz.; mix quickly and make it into forms. 3. Treacle, 2lbs.; flour, 2½lbs.; brown sugar, ¾lb.; butter, ¾lb.; caraway seeds, 4ozs.; candied orange peel, 4ozs.; eggs (well beaten), 4; pearlash, ½oz.; beat the butter to a cream, and mix it with the rest of the ingredients. The next day, work it well up, and bake it in a buttered tin. 5. Fresh butter melted, ¼lb.; flour (dried and sifted), 1½.; brown sugar, 1½lb.; bruised ginger, ½lb.; eggs, 9, the yolks and whites separately beaten; rose water, and white wine, two tablespoonfuls each; mix all these ingredients well together, and bake the mixture for an hour, then with a spoon spread it over flat tin pans to about the thickness of a penny-piece; bake it of a light brown, and while warm, cut it into oblong pieces, which place on end till they become cool and crisp. 6. Honey, 2lbs.; sugar, 1½lb.; flour, 2¾lbs.; almonds, chopped fine, ½lb.; orange and lemon-peel, chopped fine, ½lb. each; cinnamon, 1oz.; mace, ½oz.; cardamoms, ½oz.: cloves and nutmeg grated, ½oz. each. Melt the honey and sugar with one glassful of water; add to it the other ingredients, and make it into a stiff paste; roll it out thin and cut it into small square pieces.

GINGERBREAD NUTS.—1. Flour, dried and sifted, 1lb.; treacle, 1lb.; good moist sugar, 3ozs.; fresh butter, ½lb.; ground ginger, 1½oz.; citron and candied orange-peel cut small, ½oz. each; melt the butter with the treacle, and when it is about milk-warm, add it to the flour and other ingredients, and then mix all well together; with a spoon drop the nuts upon buttered tins, and bake them. 2. Dissolve ½lb. of butter in ½lb. treacle, put it into a pan large enough to contain the rest of the ingredients, and when almost cold, stir 1lb. of dried and sifted flour, ½lb. of coarse brown sugar, ½oz. of caraway seeds, ½oz. of ground ginger, and the peel of a lemon grated; mix all of these well together, and let it remain till the following day, then make it into nuts by pinching it into pieces with the finger and thumb. Bake them upon buttered tins in a quick oven. 3. Flour, 3lbs.; sugar, 1lb.; butter, 1½lb.; treacle, 3½lbs.; ginger, 2ozs.; allspice, 1oz.; candied orange and lemon-peel, 2ozs. each, chopped fine; 1 lemon-peel grated; and 1 nutmeg ground, and a wineglassful of brandy; rub the flour and butter together, add the other ingredients and mix the whole into a paste, divide it into pieces the size of a nut, and bake them on tins.

GINGER CAKES.—Take three-quarters of an ounce of powdered ginger, one pound of fine flour well dried, three-quarters of a pound of the best Lisbon sugar, and half a pound of butter; mix these ingredients with water to a stiff paste, roll it out, cut out the cakes, and bake them on a tin in a slow oven.

☞ Ginger, ½oz.; flour, 1lb.; sugar, ½lb.; butter, ½lb.; water, sufficient.

GINGER CANDY.—Break a pound of loaf sugar into pieces, put it into a preserving pan, and pour over it about a third of a pint of spring water, let it stand until the sugar is nearly dissolved, then set it over a perfectly clear fire, and boil it until it becomes a thin syrup. Have ready in a large cup a teaspoonful of powdered ginger; mix it smoothly and gradually with two or three spoonfuls of the syrup, and stir it well into the whole. Watch the mixture carefully, keep it stirred, and drop it often from a spoon, to ascertain the exact point of boiling it has reached. When it begins to fall in flakes, throw in the freshly grated rind of a large lemon, and work the sugar round quickly as it is added. The candy must now be stirred constantly until it is done; this will be when it falls in a mass from the spoon, and does not sink when placed in a small heap on a dish. It must be poured or ladled out as expeditiously as possible when ready, or it will fall into a mere powder. If this should happen, a little water may be added to it, and it must be reboiled to the requisite point. The candy if dropped in cakes upon sheets of very dry foolscap or other thick writing paper laid upon cold dishes, may be moved off without difficulty while it is just warm, but it must not be touched while quite hot, or it will break.

☞ Sugar, 1lb.; water, ½ pint; ginger, 1 teaspoonful; lemon, 1 rind.

GINGER CORDIAL.—Take one pound of raisins, the rind of one lemon and three-quarters of an ounce of bruised ginger. Steep these ingredients in a quart of the best brandy, then strain it, and add one pound of powdered loaf sugar to every quart of juice.

☞ Raisins, 1lb.; lemon, 1 rind; ginger, ½oz.; brandy, 1 quart; sugar, 1lb. to each quart.

GINGER DROPS.—Rub down half-a-dozen almonds, and half an ounce of citron

or orange peel; add a little sugar, and rub it till it becomes a fine paste; incorporate thoroughly half an ounce of the best powdered ginger; put a pound of sugar in a preserving pan over the fire, with a little water; skim it, and put in the paste. Let it boil to candy height, and then distribute it in drops.

☞ Almonds, 6; orange peel, ½oz.; ginger, ½oz.; sugar, 1lb.

GINGER, PRESERVED.—For two weeks, put the ginger every night and morning into fresh boiling water. Take off the outside skin with a sharp knife; boil the ginger in water till it is quite tender; slice it thin, prepare a syrup of one pound of sugar to half a pint of water; clarify it, and then put the ginger into it. Boil it until it is clear; leave it to cool, and set by in jars.

GINGER, PRESERVED, IMITATIVE.—Peel off the outer coat of the tender stems of lettuce, and throw it away; cut the remaining portion into pieces of one or two inches in length and place them in cold water; to each pound, put in a teaspoonful of cayenne, and a little salt; let it stand for one or two days, and allow an equal proportion of fine loaf sugar, clarified. Soak some good ginger in hot water; then take it out, slice it, and add it to the sugar, allowing an ounce and a half to the pound: boil it for a quarter of an hour. Strain off the water from the lettuce, and pour over it the syrup, keeping back the ginger, with which the syrup must be boiled three times, and poured over the lettuce, two or three days intervening between each boiling; at the last add the juice of a lemon. Put by in jars.

GINGER WINE.—Boil together for half an hour three gallons and a half of water, twelve pounds of sugar, a quarter of a pound of the best ginger bruised, and the thin rinds of six large lemons. Put the whole when milk-warm into a clean dry cask, with the juice of the lemons, and half a pound of sultana raisins: add one tablespoonful of thick yeast, and stir the wine every day for ten days. When it has ceased to ferment, add an ounce of isinglass, and a pint of brandy; bung the wine close, and in two months it will be fit to bottle.

☞ Water, 3½ gallons; sugar, 12lbs.; lemon rinds, 6; ginger, ¼lb.; juice of lemons, 6; raisins, ¼lb.; yeast, 1 tablespoonful; isinglass, 1oz.; brandy, 1 pint.

GIRDLE CAKE.—Rub six ounces of sugar into two pounds of flour; add a little salt, make the whole into a paste with a sufficient quantity of milk; roll it out, cut it into shapes and bake on a girdle.

GLASS.—The various processes in connection with glass may be performed as follows:—*Annealing* is the operation by which the brittleness of glass is remedied, and it is rendered capable of enduring any alternations of temperature to which it may be exposed. To accomplish this, the glass is immersed in a bath of oil, or a concentrated solution of chloride of calcium or common salt, heating the whole gradually and cautiously to boiling point, and letting it again cool by very slow degrees. *Cleaning*—Windows, looking-glasses, &c., are best cleaned by dipping a moistened rag into whiting, fuller's earth, or rottenstone in impalpable powder, with which the glass must be smeared and wiped off with a dry soft cloth. This will answer well when the surface is very dirty. In other cases, a little thumb blue, whiting, or chalk in fine powder, tied up in muslin, may be dusted on the glass, and then polished off with chamois leather. *Cutting*—This may be easily accomplished with a common well-hardened steel file, provided it be moistened with oil of turpentine, or plunged under water. It may also be perforated with a common steel bradawl in the same way. Glass vessels, as bottles and tubes, may be readily cut or shortened, by placing a heated iron ring over the spot, or a piece of loose string or cotton dipped in oil of turpentine and set on fire, and immediately on the withdrawal of either applying cold water to the part. Glass vessels of a tubular form, thus treated, will generally crack round, and may be readily divided into two parts. *Grinding*—This may be accomplished on a small scale by friction with powdered emery and water and a flat rubber of wood; care being taken that the article, if in plate, is laid on a perfectly flat surface; or, if hollow, that it be supported by a case of cement or plaster. The *frosted appearance* on glass is given to the panes of windows by gently dabbing the glass over with a piece of glazier's putty, stuck on the ends of the fingers. *Packing*—Procure some soft hay or straw for this purpose; and if the articles are to be sent a long way, the hay or straw should be slightly damped, which will prevent their slipping about. As a general rule, however, it is always better to employ some person who thoroughly understands this.

GLASSES.—When purchasing glasses for table furniture, it is always better to select such as are of superior material and make, as they are not so liable to crack or break as the inferior kinds, and always much more inviting. In cleaning glasses, they should not be washed in hot water, as that is liable to break them, nor in warm water, as that leaves a dull polish on the surface. Cold water is always to be preferred, and if the articles are not more than usually soiled, this fluid alone will suffice; wiping them afterwards with a clean glass cloth, or a leather, if they are required to be very bright. Stains in glass may be removed by dissolving soda in the water in which the articles are washed.

GLAZE.—The highly condensed extract of meat, forming a kind of culinary varnish or glue. To produce it, make a strong consommé, which, when done, pass through a cloth into a basin; fill the stewpan up a second time with boiling water, and let it boil for four hours longer, to obtain all the succulence from the meat, then pour it through a cloth, the same as the first; then pour both stocks into a large stewpan together,

set it over the fire, and let it boil as fast as possible, leaving a large spoon in, to stir occasionally and prevent it boiling over; when reduced to about three pints, pour it into a smaller stewpan, set again to boil by the side of the fire, skimming well if required; when reduced to a quart, place it quite over the fire, well stirring with a wooden spoon until forming a thickish glaze (which will adhere to the spoon) of a fine yellowish-brown colour: pour it into a basin, or, if for keeping any time, into a long bladder, from which a slice may be cut as required. Dishes to be glazed should first be well dried on the surface. Have, on the small scale, the glaze melted in a small jar set in boiling water, and brush the article to be glazed, smoothly over with one coat: this dried, lay on another, and a third, if needful. The process is best performed by a brush made for this purpose, as seen in the engraving; but if this be wanting, the operation may be performed with a bunch of feathers.

GLOUCESTER JELLY.—Boil in two quarts of water, till reduced to one quart, the following ingredients: hartshorn shavings, isinglass, ivory shavings, barley, and rice, one ounce of each. When done, strain it: it may be dissolved at pleasure in milk, wine, soup, &c.; it is very light and nourishing, and forms an excellent breakfast for invalids, when warmed in milk and sweetened.

GLOVES.—Gloves are made of a variety of materials adapted for various seasons, and certain occasions. In winter, cloth or buckskin gloves are the most comfortable wear, and in summer, thread or silk. Kid gloves are adapted for intermediate seasons, as also for visits, parties, and other occasions of ceremony. French kid gloves are generally considered the best, and, as a consequence, are much dearer than the ordinary English make. The size of the kid glove should neither be too small nor too large, as the former occasions awkward holes and rents, to say nothing of the discomforts and cramping of the hand, while the latter makes the glove look baggy and unguinly after being worn a few times. When gloves are being put on they should not be pulled violently at the wrist, but coaxed on finger by finger, and finally adjusted by passing the gloved hand through the other. When gloves are taken off, the fingers and thumbs first, and the whole glove afterwards should be pulled out, so that they may regain their original shape, and then be put by. On ordinary occasions, black or dark coloured kid gloves may be worn, but at dress parties, concerts, balls, &c., white or primrose colour are invariably worn. *The etiquette of glove-wearing* dictates, that it is always a mark of vulgarity to be seen out of doors without gloves. It is also considered bad taste to take off the glove just before shaking hands with a person; but this is a rule frequently disregarded by warm-hearted people, and by those between whom a close degree of friendship exists. The worst taste of all, is shaking hands with a person, and immediately afterwards remarking, "Excuse my glove;" because, it it be unpolite to shake hands with the glove on, why not take it off? and if it be proper to do so, why make any remark about it?

GLOVES, TO CLEAN.—Damp them slightly, stretch them gently over a wooden hand of appropriate size, and clean them with a sponge dipped in recently rectified oil of turpentine or camphine; as soon as they are dry, withdraw them gently from the stretcher, and suspend them in a current of air for a few days, or until they cease to smell of the turpentine. Heat must be avoided. If ordinary oil of turpentine be used, a little essence of lemon may be added to it. The oil should be used liberally, and the first dirty portion should be sponged off with clean oil. *Doeskin, buckskin, and washleather gloves*, are cleaned as follows:—Stretch them on a hand, or lay them flat on a table, and rub into them a mixture of finely powdered fuller's earth and alum; sweep this off with a brush, sprinkle them with a mixture of dry bran and whiting, and lastly, dust them well off. But if the gloves are very much soiled they must be treated as follows:—Wash them in lukewarm soft water, with a little curd soap, ox-gall, or bran-tea, then stretch them on wooden hands, or pull them into shape without wringing them; next rub them with pipe-clay and yellow ochre made into a paste with ale or beer; let them dry gradually, and, when about half dry, rub them well, so as to smooth them and put them into shape; when they are dry, brush out the superfluous colour, cover them with paper, and smooth them with a warm iron. *For washing gloves*, the best application is a strong lather made of curd soap with new milk; or water will do. A very small quantity of liquid will suffice. Before wetting the glove, run a strong thread through the opposite sides, close to the wrist binding. Leave it about a quarter of a yard long, and make a large knot at each end. This is to form a loop or handle by which to hang up the glove to dry, and keep it open. Having prepared the lather, put one glove on the hand, and apply the lather by means of a shaving brush or piece of fine flannel, carrying the strokes downwards—that is, from the wrist or arm to the tips of the fingers. Continue this process till the dirt disappears; then dab the glove with a clean soft towel till the soap is removed. Take off the glove, blow into it to open all the fingers, and, by means of the aforesaid loop, hang it to dry in a shady but airy place. The loop should be fixed on two pegs, or by strings fastened to a line in such a manner as to keep the sides of the glove apart while drying. When dry, they will have regained their original colour and be smooth, glossy, soft, and of the proper shape.

GLUE.—The common kind of glue is prepared from the chippings of the hides, hoofs, &c., of animals. These are first soaked for two or three weeks in lime water, and afterwards boiled and skimmed; the solution is then strained through baskets, and gently evaporated to a due consistence, then cooled in wooden moulds, cut into slices, and dried upon nets. *Liquid glue* may be made as follows: Dissolve an ounce and a quarter of shellac in a fluid ounce of naphtha; put the shellac broken finely into a wide-mouthed bottle, stir it with a wire until dissolved, and keep it corked. If thicker than cream, add more naphtha. This glue will be found always ready for use. It is perfectly waterproof, and applicable to the purposes of the carpenter, joiner, and turner. It is used in the same way as common glue, the only difference being that the surfaces that are to be joined must be quite dry. *A mouth-glue* has recently been introduced, which is made in small cakes, so that it may be carried in the waistcoat pocket. When required for use the glue has simply to be wetted with the tongue, and passed over the surface to be operated upon, and the desired result will be effected.

GLUTEN.—The viscid elastic substance which remains when wheat flour is wrapped in a coarse cloth, and washed under a stream of water, so as to carry off the starch and soluble matters. Gluten exists in many grains, and occasionally in other parts of vegetables; but it is a characteristic ingredient in wheat, giving wheat flour its peculiar toughness and tenacity, which particularly fits it for the manufacture of bread, and for viscid pastes, such as macaroni and vermicelli.

GNATS.—A genus of insects comprising several species, which are well known by the severe punishment they inflict. The common gnat, as a larva, is generated in stagnant waters. The larva retains its form for a fortnight or three weeks, when it is converted into the chrysalis, in which state it continues three or four days, floating on the surface of the water, till it assumes the form of the gnat. The most efficacious remedies for the sting of a gnat are, olive oil, unsalted butter, or fresh hogs' lard, timely rubbed in.

GOAT.—A useful domesticated animal, which more than repays the little that it requires. Goats are of a hardy nature, and inexpensive to keep; they will lie in any outhouse or other place, and will eat any refuse, or be contented with the browsings off commons and pastures. In Britain the goat generally produces two young at a time, sometimes three, rarely four. In warmer climates it is more prolific, and produces four or five at once. The term of gestation is five months. The male is capable of propagating at one year old, and the female at seven months; but their best time is at the age of two years, or eighteen months at the earliest. A goat is generally accounted old at six years, although its life sometimes extends to fifteen. The skin of the goat is convertible to several useful purposes, and the flesh of the full-grown goat is good, though scarcely equal in quality to that of the sheep. But it is for the milk chiefly that the goat is prized; the qualities of that secretion being not only very nutritious, but even medicinal. This milk is sweet, and not so apt to curdle upon the stomach as that of the cow; it is therefore preferable for those whose digestion is weak. The quantity of milk produced daily by a goat is from a pint and a half to a quart, which yields rich and excellent cream; and if properly attended to, a goat will yield milk for eleven months in the year.

GODFREY'S CORDIAL.—A well-known patent medicine, chiefly used to administer to infants, for the purpose of soothing them and inducing sleep. Although by employing this mixture the desired end may be attained, it should always be borne in mind that the remedy having this immediate effect is calculated to bring about bad consequences in the system generally, so much so, that repeated doses of this or any other medicament of a similar character, will deprive the child of its natural vigour, depress his spirits, and finally engender an enervated condition of the system, which will be most difficult of eradication. The original formula of Godfrey's cordial is as follows: Opium sliced, ½oz.; sassafras chips, 1oz.; English brandy, 1 quart; maccrate for four or five days, then add of water, 1 quart; treacle, 3½lbs.; simmer the whole gently for a few minutes; on the following day decant the clear portion.

GOITRE, BRONCHOCELE, OR THE DERBYSHIRE NECK, as the disease is variously called, is a chronic enlargement of the thyroid gland, a small glandular body lying in front of the organ of voice in the throat, and which in a natural state presents no external features, but when diseased, is capable of an almost incredible enlargement. Goitre is distinguished by a diffused soft, elastic swelling, extending either quite across the neck, presenting larger prominence on either side than in the centre, or the enlargement may be all on one side, according as the whole gland, or only one of its lobes is affected. The swelling is entirely devoid of pain, and completely detached from the skin, which preserves its natural colour and appearance. Goitres usually make their appearance about the seventh or eighth year, and at first grow very slowly, but after a time develope more rapidly, extending in all directions, and frequently hanging over the chest. The disease is seldom dangerous, unless, from the size it attains when by pressing on the large blood-vessels of the neck, and retarding the return of blood from the head, or by compressing the windpipe, it produce dangerous symptoms. Women are more subject to this disease than men, though in many countries where it is always endemic, both sexes and all ages are found affected with it.

Treatment.—Of all the remedies that have at various times been employed with the

hope of curing this unsightly deformity, one only has ever produced any permanent benefit, namely, *Iodine*, in one or other of its forms. All operations are inadmissible and dangerous; and the cure is to be effected solely by a combination of external and internal remedies. In the first place, where possible, the patient should be removed from the neighbourhood where the disease was produced, the tumour is then to be gently excited by the application of three or four leeches, and the following ointment rubbed well into all parts of the swelling every night, intermitting for a day or two, whenever the skin becomes tender from the rubbing. Take of

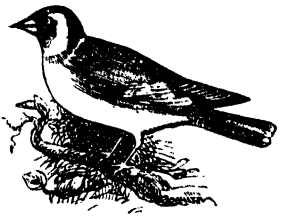
Powdered camphor .	15 grains.
Calomel	1 scruple.
Iodine	30 grains.
Spermaceti ointment .	1 ounce.

Mix thoroughly, and make an ointment. At the same time a tablespoonful of the following mixture is to be taken three times every day. Take of the hydriodate of potassa, one drachm, mint-water, six ounces, mix. This system should be persevered in for several weeks, the patient, however, carefully taking the measurement of the throat and tumour before commencing either course of treatment; and having accurately recorded the number of inches in circumference, test the diminution every week by remeasuring the tumour till its absorption, and the restoration of the throat to its natural figure.

GOLD ARTICLES, TO CLEAN.—Make a lather of soap and water, boil the article in it for a few minutes, and immediately on taking it out, lay it in magnesia powder which has been heated by the fire; when dry, rub it with flannel; if embossed, use a brush: or, the articles may be simply washed in soap and water, and while wet, put into a bag with some clean fresh bran, then shaken well for a few minutes.

GOLD, TO TEST.—Articles made of gold, have their value regulated according to a certain standard. Articles of pure gold, for instance, are represented to be of twenty-four parts or *carats*, but if there is any alloy, then this is deducted from the whole. Plate is not legally sold as gold, except it be of standard purity, and to ascertain this, it undergoes an examination of the assay master of the Goldsmiths' Company, and if found of the correct standard, it is stamped with what is termed *the hall mark*. This mark is a peculiar and distinctive one, and although many close imitations of it appear on spurious metals, yet if it is once closely observed, it will always serve as an infallible guide to persons who are purchasing gold plate and other articles. Gold, or what is represented to be such, may be readily tested by applying a drop of aqua fortis to it; if the fluid remains upon the metal in a colourless state, the metal is pure; but if upon applying the aqua fortis, a green colour appears, the metal is spurious. Another test consists of a smooth black stone called the touchstone; and upon the article to be tested being rubbed upon it, the colour of the mark left by pure gold, differing from that made by any of its alloys, at once furnishes a test of the comparative merits of the metals. With respect to many ornaments made and sold by jewellers without the proper stamp, and called gold, they contain only a portion of the precious metal, having as much alloy as jewellers can possibly add without losing the appearance of gold; these articles look very well when new, but frequently soon tarnish and lose their colour.

GOLDFINCH. — This bird is attractive from the beauty of its plumage, the sweetness of its song, its great docility, and the readiness with which it breeds with other birds. It may either be kept in the cage or



allowed to run about the room. In the former case, an ordinary small sized chaffinch cage is preferable to a bell-shaped one, as the goldfinch is not fond of hopping about the higher perches, and is apt to become dizzy. In the latter case, a place separated from the rest of the room by a grating, or a small tree or bush, should be provided for its sleeping-place. The food of the goldfinch should be chiefly confined to hemp and poppy seed, especially the latter. A little green food should be occasionally given, as lettuce or cabbage-leaves, groundsel, watercress, &c. The female goldfinch lays once a year five or six pale green eggs, spotted with light red, and often surrounded at the thick end with a circle of small blackish stripes. The males, may at a very early period be distinguished by a narrow white ring round the beak. When taken from the nest, they may be reared on poppy seed, and bread soaked in milk and water. The disease to which the goldfinch is most liable, is epilepsy. Sore and swollen eyes, to which they are also subject, may be cured by an application of unsalted butter. Stupor and giddiness are occasionally produced by the immoderate use of hemp seed, and may be cured by the substitution of soaked lettuce and thistledown. In general, it will conduce to their health, if they be allowed now and then to pull the seeds from a thistle head.

GOLD FISH.—See FISH, GOLD.

GOLD LACE, TO CLEAN.—Burn some rock-alum and sift it to a very fine powder, dip a soft brush in this, and rub the gold lace with it, the colour and brilliancy will be almost immediately improved.

GOLF.—A game played with a club and a ball. The club is from three to four feet in length, according to the stature of the player

and the length of his arm. To the lower part of the club is united, by compact tying, a flattish curved end, which is the striking part; it is faced with horn, and to give force, is loaded with lead. To supply a hold to the hands of the striker the upper extremity of the club is enveloped in a strip of cloth. The ball is about the size of an egg, and is made very firm. It is composed of stout leather, which having been previously soaked in boiling water, allows of it being first very securely sewed, and then turned inside out, leaving a small opening only, by which it is very forcibly stuffed with feathers. The outside is smooth and painted white. In the game of golf there are generally two players, one matched against the other. Each has his own ball. The game consists in driving the ball into certain holes made in the ground, and he who achieves this with the fewest strokes, gains the victory. When four persons play, two of them are sometimes partners, and have but one ball, which they strike alternately. The holes are situated at the different ends and sides of the green at irregular distances, and their number is optional. The usual number is five. A player must never touch his ball with his hand or foot, unless in very particular circumstances, or when he takes it out of one of the holes. When commencing from a hole, the ball may be cogged up on the point of a protuberance of mud or turf, to allow of a commanding stroke, and this is called *teeing* the ball; but on all other occasions the ball must be struck or impelled by the golf from the place in which happens to lie. Much depends on the first blow, and it should be given with considerable firmness and a steady arm. Properly performed, the first stroke will send the ball two hundred yards, while at other times a weak or awk-

ward blow will advance the ball only a few feet. When the balls at length get near a hole, great skill is shown in *putting* or giving those delicate strokes which will not force the ball beyond the hole, but, if possible, into it. A knowledge of the value of forces, the nature of the ground, the influence of the wind or weather, &c., is important in this and all other parts of the game, and is only to be gained by long experience.

GOLOSHES.—A kind of waterproof shoe made to wear over ordinary boots or shoes, to protect the feet from wet and damp. They are especially adapted for female wear, as the boots and shoes usually worn by females are too thin to resist the penetration of wet, even after a few minutes' wear. Goloshes will last a long time, and only require an occasional rubbing with a damp flannel, to clean them.

GOOSE BAKED.—Prepare the goose in the same manner as for roasting, and set it on a stand, with a tin underneath; when the underside is done, turn the upper side downwards; and when that is completed, remove the goose from the oven and serve.

GOOSE BOILED.—Singe and draw a goose and pour over it a quart of boiling milk; let it lie in this all night, then take it out and dry it thoroughly with a cloth; cut a large onion with some sage into small pieces; put them into the goose, sew it up at the neck and vent, and hang it up by the legs until next day; then put it into a saucepan of cold water, cover it close, set it over the fire, and let it boil gently for an hour. Serve with onion sauce.

GOOSE BRAISED.—Truss the goose, cover it with bacon, and tie it up; line the stewpan with thin slices of bacon, and lay in the goose with giblets and seasoning. Moisten with a little white wine and as much stock as will cover the goose; let it boil closely covered up for an hour and a half. Serve with apple sauce, or onion sauce mollified with turnip.

GOOSE HAMS.—Divide the goose down the back, and rub into it a quarter of an ounce of saltpetre: then rub it with common salt and coarse brown sugar. After this, let it be in pickle for ten days; rub it and turn it every day, roll it in sawdust, and smoke it by hanging it in the chimney.

GOOSE HASHED.—Put into a stewpan half of an onion chopped, with an ounce of butter; fry the onions until they become slightly browned, then stir in a tablespoonful of flour; put in the remains of a goose left from a previous dinner, cut into neat pieces and well flavour it with pepper and salt: add a pint of stock, let the whole simmer for about ten minutes, then serve.

GOOSE MARINADED.—Bone the goose and stuff it with the ordinary ingredients, together with two or three very acid apples, some beef marrow, the crumb of a penny loaf, pepper, salt, nutmeg, and lemon-peel, all chopped fine and mixed with the yolks of three or four eggs, and a glass of wine; it should then be fried until it is lightly browned, and afterwards stewed in two quarts of good gravy for two hours; the goose must then be taken out, the fat taken off the gravy, to which are added a little lemon-juice, some browning, a gill of red wine, an anchovy chopped, bruised mace, pepper, and salt. Pour this over the goose and serve

GOOSE, PROPERTIES AND USES OF.—Goose forms a popular and favourite dish, especially in England. It is a very savoury and nutritious food; and although it has the reputation of being injurious to weak stomachs, this consequence is more frequently caused by unskilful cooking or too highly seasoning; it is also notorious that in this case, as in all others where savoury dishes appear, persons are apt to partake of larger quantities than they otherwise would of ordinary food. The *fat of the goose* has healing qualities for certain wounds, and mixed with honey is often successfully employed as a salve for bites of dogs, &c.; when scented, it also affords an excellent pomade.

GOOSE PIE.—Prepare a very stiff raised crust, and make the sides also thick and stiff. Take the bones out of a goose, a turkey, and a fowl, and season with pepper, salt, mace, cloves, and nutmeg, all finely pounded and well mixed. Lay the goose upon a dish, with the breast downwards; on this, place the turkey, then some slices of boiled ham and tongue, and then the fowl; cover the whole with small pieces of ham or bacon. Make the pie of an oval form, with the sides standing an inch and a half above the meat, &c.; put on the top and make a hole in the centre of it. Brush the outside of the pie all over with the beaten whites of eggs, and envelope it in three folds of buttered paper; paste the top over in the same way, place it in the oven till it has attained a fine brown colour, then remove the paper, and pour into the centre of the pie, through a funnel, a pound and a half of melted butter; then serve.

GOOSE PUDDING.—Soak half a pound of bread crumb in milk; when cold, add two or three eggs, a little salt, pepper, marjoram, and thyme, a spoonful of oatmeal, a quarter of a pound of suet, and an onion chopped fine. Mix them well together, spread the mass in a dripping-pan, and bake it under the goose.

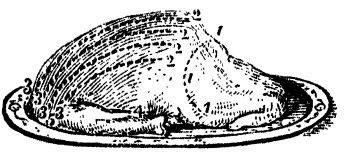
GOOSE RAGOUT.—Break the breast-bone of the goose until it is quite flat; skin it, and dip it into boiling water; season it with pepper and salt, and a little pounded mace; lard and flour it all over; put three-quarters of a pound of beef suet into a stew-pan, and when melted and boiling hot lay in the goose; when it is thoroughly brown, add a quart of hot beef gravy, a bunch of sweet herbs, a blade of mace, a few cloves, some whole pepper, three or four small onions, and a bay leaf; cover it closely, and let it stew gently for an hour or an hour and a half, according to the size of the goose. For the ragout, cut some turnips, carrots, and onions small, and boil them with a pint of rich beef gravy; put them all into a saucepan with some pepper, salt, and a piece of butter rolled in flour; after boiling, let them stew gently for a quarter of an hour; take the goose out of the stewpan when done, drain it well from the liquor in which it has been stewed, put it into a dish, and serve it with the ragout poured over it.

GOOSE ROASTED.—Boil two ounces of onion with a few sage leaves, chop them fine with a breakfast-cupful of stale bread crumbs and half an apple; mix with it a piece of butter, and a little pepper and salt, with the yolk of an egg, stuff the goose, and tie up the end; set it down to roast before a clear fire, dredge it with flour, and when hot, baste it with butter. An hour and a half or an hour and three-quarters will be sufficient to roast it. Serve with apple sauce, onion sauce, and gravy. *The French mode of roasting a goose* is as follows:—Roast a hundred chestnuts over the fire; remove the two outer skins, chop half of the nuts and put them into a stewpan with half a pound of sausage meat, the goose liver chopped, a small piece of butter, some parsley, chives, shalots, and a clove of garlic, all finely chopped. Put this mixture on the fire for a quarter of an hour; then stuff the goose with it and proceed to roast it; it will require two hours to dress it. Put the rest of the chestnuts into a stewpan with a tablespoonful of white wine, two tablespoonfuls of coulis, and a little salt; when done sufficiently, serve this around the goose, or in a turcen separately.

GOOSE SAUCE.—For roasted goose, put into a saucepan a tablespoonful of made mustard, half a teaspoonful of cayenne pepper, a glass of port wine, and a gill of gravy; mix and warm it up, and pour it through a slit made in the apron of the goose into the body. Serve immediately.

GOOSE STEWED.—The geese generally chosen for stewing, are those that are not sufficiently tender to be otherwise dressed. After trussing it, lard it well with bacon rolled in parsley, chives, two shalots, thyme, bay leaf, basilic finely chopped, salt, pepper, and grated nutmeg; put some of the stuffing inside the goose, then lay it in a stewpan that just holds it, with a gill of water, a gill of wine, and a tablespoonful of brandy; add salt and pepper, cover the stewpan closely, and let the contents stew for four hours. Serve hot with the sauce.

GOOSE, TO CARVE.—Cut off the apron 1, 1, 1, of the goose, and pour into the body a large spoonful of gravy, which should be mixed with stuffing. Cut as many slices



from the breast 3, 2, as possible, and serve with a portion of the apron to each plate. When the breast is all served, cut off the joints.

GOOSE, TO CHOOSE.—The flesh of a fine goose should be of a clear pink colour, the liver pale, the feet and the bill yellow and free from hair, and the claws pliable. When contrary characteristics to these are noted, the bird is sure to be old and tough.

GOOSE, TO TRUSS.—Having well picked the goose, cut the feet off at the joints, and the pinion at the first joint; sever the neck close to the back, leaving all the skin you can; pull out the throat and tie a knot at the end; insert your middle finger into the breast, loosen the liver, &c., cut it close to the vent, and draw out all the inside except the soul, wipe it thoroughly, and beat the breast-bone flat; put a skewer in the wings and draw the legs close up, running a skewer through the middle of both legs and the body; draw the small of the leg close down to the side bone, and run a skewer through; make a hole in the skin large enough to admit the crop, and when stuffed place it through.

GOOSEBERRY CHEESE.—Gather the rough red gooseberries when quite ripe; bake them until they are a perfect mash; pass them through a hair sieve, then put them into a preserving pan, and boil them gently. To every pound of gooseberries put three ounces of sugar, which should be strewed in every now and then, a little at a time. It will take several hours to boil in order to maintain the proper consistence.

GOOSEBERRY COMPOTE.—Put a pint of green gooseberries into a stewpan with two ounces of sugar and a gill of syrup, place them over a brisk fire, as the quicker they are cooked the better colour they will keep; when tender, but not broken, pour them into a basin, and when cold they are ready to serve.

GOOSEBERRY CREAM.—Boil a quart of gooseberries quickly in as much water as will cover them, stir in about half an ounce of good butter; when they are soft, pulp them through a sieve; sweeten the pulp with sugar while it is hot, then beat it up with the yolks of four eggs; serve in a dish, cups, or glasses.

GOOSEBERRY, CULTURE OF.—Of this fruit there are several varieties; but the following selection for a small garden is recommended:—*Reds.*—Old rough red, Melling's crown lob, Farmer's roaring lion, Knight's Marquis of Stafford, champagne and Capper's top sawyer; one of the best of the red gooseberries is the Scotch ironmonger. *Yellows.*—Hardcastle's gunner, Hill's golden gourd, Prophet's rockwood, Hamlet's kilton, Dixon's golden yellow, Gordon's viper. *Greens.*—Edwards's jolly tar, Massey's heart of oak, Nixon's green myrtle, Parkinson's laurel, Wainwright's ocean. *Whites.*—Coleworth's white lion, Moore's white bear, Crompton's Sheba queen, Saunders's Cheshire lass, Wellington's glory, Woodward's whitesmith. The gooseberry may be propagated by all the modes applicable to trees and shrubs, even by pieces of the roots; but the mode by cuttings is usually adopted for continuing varieties, and that by seeds for procuring them. When the first-named method is adopted, the cuttings should be taken from bearing shoots, rather than from the main stem. Cut them to such a length as the strength and ripeness of the wood will bear; cut off all the buds, with the exception of three or four at the top, and train the plants with a single stem nine or ten inches high, from the top of which the branches should radiate upwards at an angle of forty or forty-five degrees. Immediate planting, watering, and shading are requisite to secure a successful growth; and, if a little moss be tied around the lower part of the cutting, it will cause it to strike stronger roots. When *propagation by seed* is adopted, the seed of some choice variety, thoroughly ripe, should be taken and sown in autumn or early in spring, in beds or pots of rich light mellow earth. When the plants are a year old, they are planted out in nursery rows, to be cultivated and trained there a year or two; in general, they will bear a third year. The gooseberry will succeed in almost any *soil*, where the ground is soft and moist, and situated on a dry subsoil. *The situation* should not be under the drip of trees, over-much shaded, or confined, otherwise the fruit will be small, ill-flavoured, and the plants probably mildewed. The season for *planting gooseberries* is any time during open weather, from October till February. In large gardens or orchards they should be planted from eight feet to ten feet apart from row to row, and six feet from plant to plant in the rows. In small gardens they should be planted in a compartment by themselves, at the distance of six feet between the rows, and four feet apart from each other. The bushes will require *pruning* twice a year. In summer, when any bushes are crowded with cross or water shoots of the same year, shading the fruit from the sun, and preventing the access of air, thin the heart of the plant and other tufted parts moderately, pinching off, or cutting out close what spray is removed; but do not touch the summer shoots in general. It will greatly contribute to the perfection of the fruit, if the very small berries are taken away with a pair of scissors, about the middle or end of May. Winter pruning may be performed any time, from November until the end of February, or until the buds are so swelled that further delay would endanger their being rubbed off in the operation. Cut out the cross shoots and water shoots of the preceding summer, and the superfluous among crowded branches. Prune long ramblers and low stragglers to some well-placed lateral or eye; or if an under-straggler stray very low, cut it away. Of last year's shoots, retain a sufficiency of the best well-placed laterals and terminals in vacant parts, to form successional bearers. Mostly retain a leading shoot at the end of a principal branch. The superfluous young laterals on the good main branches, instead of being taken off clean, may be cut into stabs of one or two eyes, which will send out fruit-buds and spurs. Of the supply reserved for new bearers, a small number will probably require shortening, where too extended or curvated incommodiously; leave these from eight to twelve inches in length, according to strength and situation. Too close cutting, or general shortening, occasions a great superfluity of wood in summer for the multiplied laterals thus forced from the eyes of the shortened branches, increase

to a thicket, so as to retard the growth and prevent the ripening of the fruit; on which account it is an important part of pruning to keep the middle of the head open and clear, and to let the occasional shortening of the shoots be sparing and moderate. Between the bearing branches, keep a regulated distance of at least six inches at the extremities, which will ensure fertile bearers of good fruit. Gooseberries may be said to be in season from April to August. Some late kinds, either planted in shady situations or shielded with mats from the sun in their ripening state, continue good on the tree till September.

GOOSEBERRY FOOL.—Blanch a quart of gooseberries, closely covered, with just sufficient water to pulp them through a sieve; beat six eggs well, and add to them a pint of cream (or milk may be substituted with the addition of an extra egg), a tablespoonful of orange-flower water, a seasoning of cloves, cinnamon, or nutmeg, and sugar to sweeten: stir it over a slow fire till it is of a proper thickness; dish it, and sift sugar thickly over it.

☞ Gooseberries, 1 quart; eggs, 6; cream, 1 pint; orange-flower water, 1 tablespoonful; cloves, cinnamon, or nutmeg, to flavour; sugar, sufficient.

GOOSEBERRY FRITTERS. — Make a thick batter, composed of six eggs well beaten, three-quarters of a pint of cream, a tablespoonful of yeast, a tablespoonful of orange-flower water, and a little grated nutmeg, adding as much flour as may be necessary to produce the proper consistence. Stew some gooseberries till quite tender; mix them with the batter, chop it into boiling lard, and fry to a good colour. Strew sugar over them, and serve.

☞ Eggs, 6; cream, ¾ pint; yeast, 1 tablespoonful; orange-flower water, 1 tablespoonful; nutmeg, to flavour; flour, sufficient.

GOOSEBERRY JAM.—Select six pounds of the small, red, rough gooseberry. Clip the stalks and tops from them, and put the fruit into a preserving pan, stirring and bruising them as they warm, to extract the juice. Let them boil for ten minutes; then add four pounds of sugar, and place the stewpan over the fire again; let it boil, and continue boiling for two hours longer, stirring it in the meantime to prevent it burning, and removing the scum that arises. When it thickens, and will form into a jelly on a plate, it is sufficiently done. Put it by in pots, allow it to remain uncovered for one day, and then tie the pots down with bladder.

☞ Gooseberries, 6lbs.; sugar, 4lbs.

GOOSEBERRY JELLY.—Remove the stalks and tops from a gallon or more of well-flavoured, ripe, red gooseberries, and keep them stirred gently in a stewpan over a clear fire, until they have yielded all their juice, which should then be poured off without pressing the fruit, and passed first through a fine sieve, and afterwards through a double muslin strainer, or a jelly-bag. Next weigh it, and to every three pounds add one pound of white currant juice, which has previously been prepared in the same way. Boil these quickly for a quarter of an hour; then take it from the fire and stir it to half the weight of sugar. When this is dissolved, boil the jelly for six minutes longer, skim it thoroughly, and pour it into jars or moulds. For the *unmixed gooseberry jelly:* Boil rapidly for ten minutes four pounds of the juice of red gooseberries, prepared as before directed. Take it from the fire, and stir in it until dissolved three pounds of sugar. Boil it again for five minutes, keeping it constantly stirred and thoroughly skimmed.

☞ *Mixed jelly.* Juice of gooseberries, 3lb.; juice of white currants, 1lb.; sugar, 2lb. *Unmixed jelly.* Juice of gooseberries, 4lb.; sugar, 3lb.

GOOSEBERRY PIE. — Pick and wash the gooseberries and stew them in enough water to prevent their burning; when tender, and while hot, sweeten them with sugar and let them stand until they become cold; then pour them into a pie-dish lined with paste; add sugar sufficient to sweeten, dredge flour upon them, cover them with a paste, of which wet and pinch the edges together, and cut a slit in the centre. Bake for twenty minutes or half an hour.

GOOSEBERRY PUDDING, BAKED.—Stew a pound and a half of ripe red gooseberries in a jar, until they pulp, express a pint of the juice through a sieve, mix it with four ounces of Naples biscuit, three eggs well beaten, and an ounce and a half of butter; sweeten, and bake in a dish lined with a thin paste.

☞ Juice of gooseberries, 1 pint; Naples biscuit, 4ozs.; eggs, 3; butter, 1½oz.; sugar, to sweeten.

GOOSEBERRY PUDDING, BOILED.—Make a stiff paste of a pound of flour, half a pound of beef suet, chopped fine, or the same quantity of dripping, butter, or lard mixed together with a little salt and water or milk. An egg may be added if desired; knead the mixture well together and roll it out thinly. Rub the inside of a basin with butter, and line it with the paste, fill it with gooseberries, cover the top over with paste, tie it in a cloth, and boil it for an hour and three-quarters. When done, cut a hole in the top, and stir a little sugar into it.

GOOSEBERRY SAUCE.—Clip off the tops and stems of a half pint of small unripe green gooseberries; scald them, drain them, and stir them into melted butter, with a little sorrel-juice or vinegar. A sprinkle of ginger may be added.

GOOSEBERRY TRIFLE.—Scald such a quantity of gooseberries as, when passed through a sieve, will make a thick layer at the bottom of the dish; add sugar to sweeten, and a little nutmeg. Mix together half a pint of cream, half a pint of milk, and the yolk of one egg; give it a scald over the fire, and stir it all the time; do not let it boil; add a little sugar only, and let it grow cold. Pour this over the gooseberries, and put on it a whip made the day before of a pint of cream, two eggs, sugar to sweeten, and lemon-peel to flavour.

GOOSEBERRY VINEGAR.—Boil three quarts of spring water, and when cold, add one quart of bruised gooseberries, let them remain for two or three days, stirring frequently, then strain through a hair bag, and to every quart of liquor add a quarter of a pound of coarse sugar. Put it into a cask with a toast of yeast, and cover the bung-hole with a piece of slate. Set the cask in the sun, and when the liquid has acquired its proper degree of tartness, set it by in the cellar.

GOOSEBERRY WINE.—This wine may be made from either ripe or unripe gooseberries; in the former process, bruise ten gallons of ripe gooseberries in a tub, leave them in that state for twenty-four hours, then press the pulp through a hair-cloth or canvas bag; return the remaining pulp into the tub, and pour on it four gallons of hot water, stir this well up, leave it for twelve hours, and express the liquor as before. Mix the first and second liquors together, and throw away the exhausted pulp. To every four gallons of the mixed liquor add fourteen pounds of white sugar, or fifteen of moist; dissolve and mix this thoroughly with the liquor, and leave it to ferment. Should the weather be very cool place the liquor near the fire. As the fermentation proceeds, the liquor becomes less and less sweet, till at the completion of the fermentation, the sweetness will have entirely disappeared, and consequently, the progress of the fermentation may be readily tested by tasting the liquor from time to time. When the fermentation has ceased, rack the wine off as clear as possible, and completely fill a cask with it; then bung it closely, and set it by in a cellar. Five years in the wood will not be any too long; at the end of this period it may be bottled, and will be in high perfection. For *unripe gooseberry wine.*—Take eight gallons of green gooseberries, bruise them well, add eight gallons of cold water; let them stand for twenty-four hours, drain the liquor well from the gooseberries through a sieve, put three pounds and a half of loaf sugar to every gallon of liquor; pour it into a cask, add a quart of the best gin; let it stand for six months, and then bottle it.—See CHAMPAGNE, BRITISH.

GOOSEBERRIES, TO PRESERVE.—Gather gooseberries that are full grown but not ripe, cut off the stems and tops, and put the fruit into wide-mouthed bottles; gently cork them with corks that are quite new, put them into a pan of boiling water, and let them remain until they are shrunken one fourth part; then beat the corks in tightly, cut off the tops, and pour hot resin over them; set the bottles in a dry place, and the fruit will thus keep for a year.

GOOSEBERRIES, USES AND PROPERTIES OF.—This fruit is employed in a variety of culinary forms. The unripe fruit is cold and acidulous; the ripe fruit is wholesome and slightly laxative, but the seeds and skins should not be eaten, as they are very indigestible.

GOULARD WATER.—This wash is used for a variety of purposes, and may be compounded as follows: Extract of lead, 1 drachm; distilled vinegar, 2ozs.; spirit of wine, ½oz.; water, 1 pint. As an evaporant this wash is not to be recommended, as it renders the skin dry and harsh. When used as a lotion for the eyes, it may be simply made by mixing two grains of sugar of lead with two tablespoonfuls of water.

GOURD.—This fruit is cultivated in England chiefly as an ornament, and occasionally for use. It is propagated by seed, which should be sown in March upon a moderate bottom heat, using rich soil, and covering the seed to the depth of an inch. Where the number of plants is not great, it is advisable to plant one seed in a large 60-sized pot, and when about three inches high to repot into a 48-sized pot, which will be sufficient for the plants until they are planted out for good—which can rarely be, without protection, before the middle or end of May.

GOURD SOUP.—Pare and slice the gourds; boil them in gravy broth to a mash and strain the liquor off. Put the strained soup into a stewpan over the fire; season with salt and pepper, and boil it for half an hour; put three or four tablespoonfuls of Parmesan cheese into a tureen, pour the soup over it, and stirring both well together, serve.

GOURDS STEWED.—Take gourds when no larger than cucumbers, and cut them in four lengthwise; clear off any pulp. If tender, only blanch them, but if hard, parboil. Brown two ounces of butter, with a tablespoonful of flour in good gravy; stew the gourds in this, and season with pepper and salt.

GOUT.—The chain of symptoms which give rise to those general and local affections, which are professionally denominated gout, proceed from some constitutional disturbance, of the nature of which medical science is yet completely ignorant. The symptoms have hitherto been regarded as the disease, and it has been found, that whenever these have been duly developed and have passed away, the system as if relieved of some acrid poison, has recovered its elasticity and tone; leaving the patient in the enjoyment of a state of health superior to that usually possessed. Gout appears to be a state of diseased action, gradually vitiating the humours of the body, and accumulating a morbid condition of the system, till the impaired or overcharged organs becoming unable to perform their functions, that disturbance in the physical economy takes place known to us as gout, that is, the symptoms, which indicate the first of the three varieties into which the disease is divided, namely, the acute; the second is, when these symptoms suddenly cease in the part where they commenced, and fly to some internal organ, when it is called retrocedent; and the third, when the system becomes habituated to the malady, which, though mitigated as respects suffering, continues in a permanent but subdued force, when it is called chronic gout. Gout is usually divided into four species or distinctive forms, as—1. *Regular gout*, attended with violent inflammation of the joints, enduring for several days, and then receding

gradually, with swelling, itching, and disquamation or peeling off of the cuticle. 2. *Atonic gout*, attended with debility of stomach or some other internal part, either with or without the inflammation of the joints, accompanied with flying pains and considerable dyspepsia or indigestion. 3. *Retrocedent gout*, marked by inflammation of the joints, suddenly disappearing and followed by immediate debility of the stomach or some other internal organ. 4. *Misplaced gout*, shown by inflammation of some internal part, preceded or not by some affection of the joints, which, however, quickly disappears.

General Symptoms.—Dyspepsia, flatulence, lassitude, torpor, low spirits, cold and numbed extremities, with pricking and gnawing sensations in the part, cramps, turgescence of the veins of the foot and leg; the paroxysms usually coming on about two in the morning, with excruciating pains in the joint of the great toe, succeeded by shiverings, a sense of horror and general fever; the pain goes on increasing till the following evening, when it reaches its acme of suffering, from which time it gradually declines, a moisture breaks out on the body, and the patient begins to breathe in freedom, he falls into a tranquil sleep, and discovers on waking that the part so lately in torture is entirely free from pain, but swollen and inflamed.

Treatment.—In this disease the first indication is, to alleviate pain, which must be effected by giving an opiate of sufficient strength to effect that purpose, and at the same time to shorten the paroxysm, exciting an action on the skin. To effect both these objects at once, doses of the following mixture should be taken every two hours till the desired result has been attained:—

Take of

Solution of acetate of ammonia	2 ounces.
Spirits of nitre	3 drachms.
Antimonial wine, tincture of squills, laudanum, of each	2 drachms.
Camphor water	3 ounces.

Mix; two tablespoonfuls to be taken for a dose. The affected part is to be enveloped in soft wool or flannel, and the patient's mind soothed; the limb kept at perfect rest, all exciting aliment discontinued, and where the patient is young, a low and abstemious dietary insisted on, and, if necessary, once or twice a week giving a mild purgative of magnesia and Epsom salts. When the paroxysms have been subdued, the colchicum, which some regard with so much favour, may be given either in half drachm doses of the wine or tincture, or in, what is better, the following formulary; but however taken, this drug should be always preceded by an aperient medicine. Take of

Epsom salts	½ ounce.
Magnesia	2 drachms.
Peppermint water	6 ounces.
Wine of colchicum	3 drachms.

Mix, and take one tablespoonful three times a day. When the joint will bear friction, the flesh-brush should be used daily, a milk and vegetable diet pursued, exercise and change of air adopted, and, where possible, the bath or chalybeate waters moderately taken. The gouty deposits, or concretions formed in joints of persons afflicted with gout, or chalk stones, as they are commonly called, consisting of an insoluble *urate of soda*, can only be dissipated in one way, by the steady use of benzoic acid, which, in doses of one scruple combined with two drachms of the carbonate of potass, is to be taken dissolved in water every day an hour after breakfast and dinner, and continued till the depositions are absorbed.

GRAFTING.—The art of causing one plant to grow upon another. The most common application of grafting, is the propagation of valuable orchard fruits, the grafts or scions of which are made to grow upon worthless varieties. This operation is performed in the spring, just when the bark begins to run. A young healthy branch is selected from the plant to be propagated, and divided into lengths or scions, each of which bears about three or four well-formed buds; the lower end of the scion is cut in a sloping manner, to the extent of an inch and a half or two inches, and an oblique incision is made in the cut so as to form a "tongue." The plant to be operated upon, called the "stock," has next a branch, of the same diameter, if possible, as the scion, cut back to the firm sound wood, and then shaved obliquely upwards, till it presents a face of the same dimensions and form as that of the scion; on that face an incision is made obliquely downwards, to receive the tongue of the scion. The two are then fitted together, care being taken that the divided bark of the scion is exactly adapted to the divided bark of the stock; the two are bound firmly together with bark or worsted; the bandage is carefully covered with well-tempered clay, in order to keep the parts damp and to exclude air from the wound; and the operation is finally left to nature, with this precaution, that any buds from the stock below the scion are removed as soon as they begin to sprout. In about six weeks or two months the young scion will have made growth, the union is then effected, and the ligature, as well as the clay, may be removed, care being still taken that the scion is not blown off the stock by the winds. Such is the general nature of the operation in its most common form; but it may be varied in many ways, of which the following are the chief. *Whip-grafting* is the most common mode, and is especially to be recommended when the stock and the scion are of the same size. The head of the stock is pruned off at the desired height, and then a slip of bark and wood removed at the upper portion of the stock, with a very clean cut, to fit exactly with the corresponding cut which must be made in the scion. A very small amount of wood must be cut away and the surface made quite smooth. Care must be taken that no

dirt lodges upon the cuts. A sloping cut must now be made in the scion corresponding with that on the stock, and a slit made to fit in a cleft made in the stock when heading it. Care must be taken that the scion fits

bark to bark, on one side at least. Where the stock and the scion differ in point of size, of course only one side can touch, and great care should be taken in this part of the operation; and in the case of a young scion on an old tree, some allowance must be made for the ruggedness of the bark. The scion being thus adjusted, the whole is bound close, but not too tightly, with a shred of matting, care being taken that the inner barks coincide. The clay is now applied, in order to keep the parts moist. *Saddle grafting* is practised only where the stock is of moderate dimensions. The stock is cut into a wedge-like form, and the scion slit up the middle, so adapted that it shall be seated across or ride upon the former. The advantage of this mode consists in offering the largest surface for the junction of the scion and stock, but, as in whip-grafting, the bark must, at least on one side, be neatly fitted to the bark on the other. *Cleft-grafting:* in this operation a cleft or division is made in the stock to receive the scion, which is cut like a wedge; again taking care, in case of irregularity of size, to make one side fit bark to bark. The process of tying and claying, goes on in the usual manner, with this exception, that a small hole is left in the clay opposite the bud of the scion, to allow that bud to develope itself freely. When the scion has grown fourteen or fifteen days, it is then headed back to one bud, which is left to draw up the sap until the union has fairly taken place between the stock and the scion. *Crown grafting* is merely a variety of cleft grafting. It is practised upon old trees, either for their total renewal, or upon large amputated branches, to renew by degrees. It is, upon the whole, a better mode than cleft grafting, because the stock, if old, is not subjected to the chance of being split; the scions in this case being placed between the bark and the wood, as in the engraving. In this kind of grafting, great care must be taken that the bark of the stock be not bruised during the process of opening the bark for the reception of the scion, and for this purpose a proper spatula or grafting knife should be used. *Shoulder grafting* is not frequently resorted to in England, there being little occasion for its practice. When the stock and scion are equal in size, however, it offers an opportunity of gaining the advantage of an extra amount of alburnous union, as explained by the accompanying illustration. *Side grafting* is, in general, performed on a stock, the head of which is not cut off, or on a branch without its being shortened. The great utility of this mode is the facility it offers of supplying branches to parts of trees where they may have become too thin, or making a branch in case of accidents. It is well adapted for the insertion of new kinds of pears, or other fruits, on established trees, in order to increase the collection, or hasten fruit-bearing. It is also usefully employed upon wall or espalier trees that have become naked of fruit-buds towards the centre, while they may have abundance towards their extremities. *Peg grafting* is one of the oldest varieties of this mode of propagation, although now seldom used.

The stock is cut over horizontally at the desired height, and a hole is drilled in the centre to receive the end of the scion; this hole must be in proportion to the size of the tree to be operated upon; if for a small tree or plant, a ¼-inch gimlet will be sufficient; but for one of larger dimensions and spreading head an auger of two or three inches may be used. The depth to which this perforation should be made, must be determined by the size of the scion. The scion should also be of the same diameter with the stock, and so fashioned that a portion of its lower end is reduced, leaving only so much of the centre as will form a peg, to fit exactly into the perforation. When the scion is thus fitted on the top of the stock, the graft or top of the tree is supported firmly in its upright position by props, to secure it against winds, &c.

In the various processes of grafting explained above, the following main principles have a general application, and should be kept steadily in view: 1. Cuttings intended for scions should be taken from the trees before the movement of the sap commences in spring, and put in moderately moist earth or sand, in a shady situation. If the stocks be cut down at the same time it will be so

much the better; any large limbs of trees which it may be found necessary to graft, should by all means be cut in before vegetation becomes active, otherwise extravasation takes place, and canker is in consequence induced. 2. In bringing together the scion and stock, the bark of one should be united with the greatest nicety to the bark of the other. 3. All the processes should be performed with a very clean and exceedingly sharp knife, taking care that nothing, such as dirt or chips, intrude itself between the scion and the stock. 4. Apply the bandage equally and firmly; not so tight as to cut or bruise the bark. The best ligature is formed by broad strips of bast matting. 5. In selecting grafts, be careful in the choice of wood, avoiding, on the one hand, exhausted or badly barked scions, and on the other, the immature watery spray, which frequently springs from the old trunks of exhausted or diseased trees.

GRAFTING CLAY may be made from any smooth clay, or adhesive clayey yellow loam, or brick earth mixed with from one-third to one-half of cow droppings, free from litter, excepting that of hay, and if it contain none of the latter, some fine hay must be beaten up with the mixture. By some, a mixture of clay and horsedung is preferred. The fact is, that any composition will answer the purpose, that will exclude the air, retain some degree of moisture, and, at the same time, prove not injurious to the barks of the stock and scion which it surrounds.

GRAFTING WAX is a compound of pitch, rosin, beeswax, hog's lard, and turpentine; it is reputed the best means of fixing the scion to the stock, but it is liable to two serious objections. In the first place it does not adhere and exclude air, unless both stock and scion are perfectly dry, when it is used; secondly, the winds which prevail at the season of grafting, being very drying, render the absorption of moisture by the scion necessary for its preservation; and as resinous substances do not admit of this absorption, they are on this account less suitable than clay. — See BUDDING and INARCHING.

GRAINS.—The refuse left in the operation of brewing, consisting chiefly of the husk and other insoluble matters of the corn employed. Grains are extensively used for feeding live stock, and when mixed with rough clover, chaff, and wash, will fatten to any extent. They may be given occasionally either alone or mixed with oats or chaff, to horses. Grains form an excellent dressing for grass land, increasing the quantity, improving the quality, and accelerating the ripening of the crop.

GRAMMAR. — Books: *Lindley Murray's Grammar*, 2s.; *Lovechild's Child's*, 9d.; *Thring's Elements*, 2s.; *Martin's Intellectual*, 1s.; *Goulborn's Philosophy*, 2s.; *Lessons by a Lady*, 2s. 6d.; *Smart's Manual*, 2s. 6d.; *Murray's Reformed*, 1s. 6d.; *Burbury's School Boy's*, 4s.; *Bromby's Pupil Teacher's*, 2s. 6d.; *Griffith's Theory*, 3s.; *Stoddart's Universal*, 5s.; *Lambe's Westminster Handbook*, 2s. 6d.; *Young Ladies' Grammar*, 1s. 6d. For grammars of foreign languages see FRENCH, GERMAN, ITALIAN, &c.

GRANARY.—A place where corn is stored. The best situation for a granary is over the threshing-floor. In order to secure it from vermin, the flooring should be made of the Lombard poplar. A trap-door in the floor, with a roof and pulley, raises and lowers the load in the most easy manner, besides securing it more effectually from depredators; and strong wire windows at each end ventilate it sufficiently.—See BARN.

GRAPE, CULTURE OF.—In cultivating this well-known fruit, especial attention should be paid to various points, in order to accelerate the growth, and improve the flavour of the fruit. The warmer the *aspect*, the greater perfection does the grape attain in our climate, provided all other circumstances are propitious. Shelter from the withering winds is as necessary as warmth. The best aspects are those that range from the eastern to the south-eastern, both inclusive; the next best are those from south-east to south. The *soil* which is most congenial to the growth of the vine and the perfection of its fruit in this country, is a light, porous, rich, sandy loam, not more than eighteen inches in depth, on a dry bottom of gravel, stones, or rock. All borders, therefore, made expressly for the reception of vines ought to be composed of a sufficient quantity of dry materials, as stones and pieces of brick, lumps of old mortar, broken pottery, oyster shells, &c., to enable the roots to extend themselves freely in their search after food and nourishment; to keep them dry and warm by the free admission of air and solar heat; and to admit of heavy rains passing quickly through, without being retained sufficiently long to saturate the roots, and thereby injure their tender extremities. The construction of the walls against which grapes grow, vary under different situations and circumstances. If built for the express purpose of rearing grapes, low walls of not more than six feet in height are to be preferred, as more convenient for pruning and training the vines. Brick walls are undoubtedly the best, the surface being smooth and even. A considerable heat is obtained by blackening the wall. Vines are propagated in the open ground by layers and by cuttings. The former is the most expeditious mode, provided the shoots be laid down in pots, and planted out the same summer. The latter mode is much the best. To provide cuttings to be planted at the proper season, select at the autumnal pruning a sufficient number of shoots of the preceding summer's growth. Choose such as are well ripened, of a medium size, and moderately short-jointed. Cut them into convenient lengths of six or eight buds each, leaving at the ends not less than a couple of inches of the blank wood for the protection of the terminal buds. Stick these temporary cuttings about nine inches in the ground, in a warm and sheltered situation, where they will be effectually protected from the severity of the winter. The best time to plant them out is about the middle of March, but any time from the 1st of that month to the 10th of April will answer very well. *Pruning* and *training* are so closely connected together,

and so mutually dependent on each other, that they almost constitute one operation. The judicious pruning of a vine is one of the most important points of culture throughout the whole routine of its management. The object is to get rid of all the useless and superabundant wood, for those shoots of a vine which bear fruit one year never bear afterwards. As the sole object in view in pruning a vine is to increase its fertility, the best method to accomplish this is to leave a sufficient supply of bearing shoots on the best possible proportionate quantity of old wood. The following general rules should be observed in pruning:—Always cut upwards, and in a sloping direction. Always leave an inch of blank wood beyond the terminal bud, and let the cut be on the opposite side of the bud. Prune so as to leave as few wounds as possible, and let the surface of every cut be perfectly smooth. In cutting out an old branch, prune it even with the parent limb, that the wound may quickly heal. Prune so as to obtain the quantity of fruit desired on the smallest number of shoots possible. Never prune in frosty weather, nor when a frost is expected. Never prune in the months of March, April, or May, as bleeding is then caused, and a consequent wasteful and injurious expenditure of sap. Let the general autumnal pruning take place as soon after the 1st of October as the gathering of the fruit will permit. Lastly, use a pruning knife of the best description, and let it be, if possible, as sharp as a razor. The principal object in training is to regulate the position of the branches so as to protect them from the influence of the wind; to bring them into close contact with the wall, for the purpose of receiving the benefit of its warmth; to spread them at proper distances from each other, that the foliage and fruit may receive the full benefit of the sun's rays, and to retard the motion of the sap for the purpose of inducing the formation of fruit buds. For this reason, the method of serpentine training may be considered preferable to every other, being calculated in a greater degree to check the too rapid ascent of the sap, and to make it flow more equally into the fruiting shoots, and those intended for future bearers. On walls that are much less than five feet high, a portion of the shoots must be trained horizontally. The advantages of *propagation by grafting* are many and important. It improves the various kinds of grapes, especially the sound kind, so that by grafting a weak and delicate growing vine upon a robust and vigorous stock, well-sized handsome bunches of grapes will be produced. At the pruning season, select cuttings for grafts from the best bearing branches, in general preferring the bottom part of last year's shoot. Preserve them by inserting them three parts of their length in pots till wanted. The season for grafting in stoves is the middle of January; in the open air, the middle of March. On small stocks not more than one inch in diameter, cleft-grafting will be found the most proper; but upon larger stocks, whip-grafting is to be preferred. For cultivation of the grape by *forcing*, the following directions will be found, generally speaking, the best to follow:—Let the temperature at the commencement be fifty or fifty-two degrees; increase gradually, but do not exceed sixty degrees till the buds are expanded and bursting into leaf. When the buds have burst, and the leaves are slightly developed, the temperature may be raised to sixty-five degrees and progress to seventy; and when the branches are formed, and the bloom about to expand, seventy-five degrees will not be too much, and this should be continued as the minimum till the fruit ripens. By sun-heat the temperature may be safely raised as high as eighty or even ninety degrees in the summer season, provided that fire-heat is not in use at the same time. Air should be freely admitted; but in doing so the temperature of the house should never be lowered; that is to say, the air should be given in time to prevent the accumulation of too much heat, and not used in order to disperse it after the heat has, by neglect, been allowed to accumulate to too great a degree. The air of the house should be kept moist, except when the fruit is ripening. The syringe may be used for the branches and leaves from the commencement of forcing till the fruit begins to colour, excepting while the fruit is in bloom. Recourse should also be had to steaming, and more especially when the fruit is setting; to this end water should be poured on the floor, if there be no bed of soil within the house, and if there be, the bed should be stirred on the surface and watered, but not with water of low temperature.

GRAPE JAM.—Stew grapes till they become a soft pulp, and strain them through a sieve. Weigh the fruit, and to every pound, put a pound of sugar. Boil twenty minutes together, stirring often. Then remove from the fire, and put by in jars.

GRAPE PIE.—Select grapes that are half grown, wash them, and cut them into halves; line a pie dish with paste; fill it with grapes, add four tablespoonfuls of sugar, and a tablespoonful of water; cover with paste, make an incision in the top, and bake for thirty-five minutes.

GRAPE WINE.—The best kind of grape for wine in this country is the Sweetwater, because it ripens better than any other. The grapes should be gathered when they are fully ripe, freed from the stalks, and thoroughly bruised, care being taken not to crush the stones, which would impart a rough and disagreeable taste to the wine; they must have the juice completely pressed out of them, either by wringing them in a coarse cloth or by means of a press. To every gallon of the juice from one to two pounds of sugar must be added, or even more, if the juice does not possess considerable sweetness. Set the liquor in a place where the temperature is about sixty degrees, which is the usual warmth of rooms. The fermentation will begin in a day or two, when the wine may be put into the cask designed to receive it. As the fermentation proceeds, the scum will be thrown up, and the cask must be kept filled up with some reserved juice. If the temperature should be

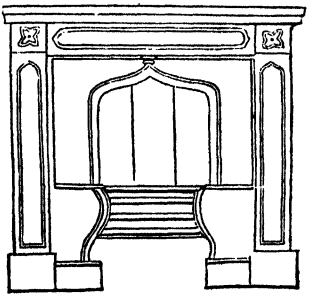
below sixty degrees, or the fermentation be scarcely perceptible, a small portion of yeast must be used, so as to make it work before it is put into the cask. When it has been sufficiently long in the cask for the fermentation to subside, or nearly so, the bung must be driven in, first clearing away all impurities from around the bung-hole, and filling up the cask. The vent-peg must be left out for a few days; it should afterwards be inserted slightly, and occasionally loosened, to admit of the escape of carbonic acid gas. When all fermentation has entirely ceased, which will be known by hearing no hissing noise at the bung-hole, the peg must be driven in tightly, and the wine may then be left throughout the winter, or longer, as may be desired If the fermentation has been perfect, the wine may be bottled in December, but it is much better for being kept longer.

GRAPES, TO PICKLE.—Let the grapes be at their full growth, but not ripe; cut them into small bunches, put them into a stone jar, with vine leaves between every layer of grapes, till the jar is full; then heat as much spring water as will cover the grapes and leaves, and put to it a brine strong enough to float an egg; when this boils, skim it, run it through a flannel bag and let it stand to settle; when cold, strain it again through the bag, and then pour into the jar over the grapes leaving them well covered; fill the jar with vine leaves, then tie it over with a double cloth, and set a plate upon it; let it stand two days, then take off the cloth, pour away the brine, take out the leaves and the fruit, and lay them between two cloths to dry. Boil together two quarts of vinegar, one quart of spring water, and one pound of coarse sugar; let it boil a little while, skim it very clean as it boils; let it stand till it is quite cold; wipe the jar very clean and dry, put some fresh vine leaves at the bottom between every bunch of grapes and on the top, then pour and strain the pickle on the grapes; tie on a thin piece of board in a bit of flannel, and lay it on the top of the grapes, to keep them under the pickle; tie them down with bladder first, and leather afterwards.

GRAPES, TO PRESERVE.—Gather the grapes in the afternoon of a dry day, before they are perfectly ripe. Have ready a clean dry barrel and some wheat bran. Place in the barrel a layer of bran, then a layer of grapes, followed by a layer of bran, and so on alternately till the barrel is filled, taking care that the grapes do not touch each other, and to let the last layer be of bran; then close the barrel so that the air may not be able to penetrate, this being a very essential point. Grapes thus packed will keep for nine or twelve months. To restore them to their original freshness, cut the end of the stalk of each bunch of grapes, and put that of white grapes into white wine, and that of black grapes into red wine, in the same manner as flowers are put into water, to revive or refreshen them.

GRASS.—The general culture of grasses, though one of the most simple departments in agriculture, requires some judgment in the appropriate execution of the design, according to the ultimate view of the cultivator. Thus the selection and treatment of grasses for temporary and for permanent uses, demand distinct treatment, and will be found under the respective heads of HAY and PASTURE.

GRATE.—Grates are made in every variety of form and of different materials. The principal improvement introduced of late years is in the setting of a grate, which is now usually placed within eight or ten inches of the hearth, instead of being raised two or three feet, as formerly. By this means a greater amount of heat is radiated through the apartment, instead of being suffered to escape up the chimney. It is always better to have a grate lined with fire brick, instead of being wholly constructed of iron; because, in the latter case, the iron constantly parting with its heat, prevents the fuel in its vicinity acquiring the temperature necessary for perfect combustion. But when the grate is lined with fire brick of considerable thickness, the brick retains the heat imparted to it, and reacts upon the fuel until both are heated up to a clear bright fire, free from smoke, and giving out treble the heat that can be obtained from a grate holding the same quantity of fuel, but lined with iron. Sometimes the space beneath the grate is filled up with fire bricks, which has the effect of increasing the heat-producing power very considerably. When the grate is raised somewhat higher than ordinarily, a drawer may be added to the front bars, and bottom grate under the latter for receiving the ashes, so as to prevent them from raising a dust, by falling from the grate to the hearth, and at the same time to retain more heat about the fire. The ashes may also be carried away in the drawer, in furtherance of the same object; and by drawing it out more or less, or keeping it closely shut, the burning of the fire may be accelerated or retarded. In cases where chimneys smoke and cannot be remedied, as for instance, in low-roofed cottages situated among high trees, a simple and economical grate may be constructed to remedy the existing evil. In these grates



the jambs are generally formed of a kind of fire stone; the fire chamber is wide in

front, but not deep; in consequence of which it consumes but few coals in proportion to the heat it throws out. The upper part of the fireplace behind and at its sides is formed of the same stone, and in front there is fixed a cast iron plate with an opening in it. Grates thus constructed draw well; but it must be obvious that, in proportion as this is the case, a greater amount of heat must be carried up the chimney. Persons of limited means, and who cannot afford to keep a large establishment of servants, should not select grates with burnished steel fronts, as they require a great deal of care in cleaning, and are very liable to rust during the summer when not in use. See ARNOTT'S STOVE, RANGE, STOVE, &c.

GRATES, TO CLEAN.—Grates which are not polished must first be rubbed with a hard brush and fine sand, if there be rust or dirt; a quarter of a pound of black lead is then to be rubbed up in a mortar, with a teacupful of vinegar, to be laid on, and when dry to be polished off with a dry brush. For *polished grates*, make a paste of one ounce of soft soap and two ounces of emery powder; put this on the steel, and afterwards rub it with a dry wash leather, and a brilliant polish will be produced. In the summer when fires are not used, finish off with rottenstone. To prevent rust, the steel should be daily rubbed with leather.

GRAVEL.—A term applied to a well known natural production. It is chiefly employed in making walks for gardens, pleasure grounds, &c. In these cases, the foundation of the walks should consist of lime rubbish, large flints, broken earthenware, or pottery, to the depth of sixteen or eighteen inches. This substratum should then be well rolled, so that it may never afterwards vary its position, either with the weight of the covering or any weight that may pass over it. The covering of gravel need seldom be thicker than four or five inches; and in order that it may bind, it should be freed from very large stones. Where gravel does not contain a sufficient quantity of soil or earthy matter to cause it to bind, this quality may be imparted by clay burnt, and then reduced to a state of powder, and mixed with the gravel before it is laid on, or mixed with water, and thrown over the walks after they have been covered with gravel; in both cases rolling the whole firmly immediately after the clay has been applied.

GRAVEL WALKS, TO PRESERVE.—In order to protect gravel walks from both moss and worms, and also to prevent weeds springing up, a simple remedy consists in mixing three parts of water to one of brine, from the salting tub, and pouring the mixture on with a watering-pot. Every autumn and spring the walks should be liberally watered for a week, and occasionally sprinkled over in summer.

GRAVY.—A variety of gravies are made to suit different dishes. *Beef gravy.* Put some slices of lean beef into a stewpan with an onion and a little pepper and salt; cover them with water, take off the scum, and let the gravy simmer until the juice of the meat is wholly extracted. Put a crust of toasted bread into it, and strain the gravy when done. *Brown gravy.* Cut a piece of lean beef or veal into thin slices, and put them into a stewpan, with a piece of butter or a slice of fat bacon, and an onion sliced; brown the meat lightly and cover it with sufficient water or broth for the gravy; take off the scum, add pepper and salt, sweet herbs, &c., and stew the whole until the meat is thoroughly done. Strain the gravy, and if desired, thicken with flour. It may also be flavoured to suit the dish for which it is required, with ketchup, lemon-juice, cayenne, &c. *Gravy for roast meat* may be made by putting any trimmings of the joint into a small stewpan, and stewing them before the meat is done. Gravy is commonly made by pouring a little water over the brown parts of the joint about half an hour before it is done. Another way is to pour a little boiling water over the inferior parts of the meat, after it is taken from the fire. Care should be taken in following these methods, that the meat is not soddened, by using too much water. *Gravy for boiled meat* is usually made by putting a little of the liquor in which the meat is boiled into the dish. *Gravy from bones.* Break into pieces a pound of beef, mutton, or veal bones; if mixed together, so much the better; boil them in two quarts of water, and after it boils, let it simmer for nearly three hours; boil with it two onions, a bunch of sweet herbs, some salt and pepper; strain, and keep it for making gravy or sauces. The bones of boiled and roasted meat being scraped, washed clean, and boiled in less water, answer equally well for this purpose. *Gravy for poultry* may be made by stewing the neck, gizzard, &c., with the liver bruised; a bit of lemon-peel should be added, and a spoonful of ketchup; strain it when done. *Gravy for game.* Use brown gravy, add a bit of lemon-peel to it, a glass of wine, &c. *Gravy for venison* is best made with the trimmings of the meat, or with mutton. Brown the pieces of meat in a stewpan, or broil them a little; cover with boiling water, take off the scum, and season with a little salt; when quite done, take the fat off. *Gravy for wild fowl.* Add a piece of lemon-peel to some brown gravy, put in also a glass of wine and a little lemon-juice. As a *ready made and portable gravy*, that sold in bottles under the name of "Scarlett's Concentrated Essence of Meats" is very excellent. For giving a rich flavour to impromptu dishes, and for economising the use of cold meats and other remnants, it is very valuable, and should be included in the housewife's list of essentials.

GRAVY SOUP.—Dry a pound of flour in the oven until it is quite brown, then mix it with cold water, and put it to six quarts of stock, with two teaspoonfuls of salt, and one of pepper; put into a stewpan four onions, two carrots, one turnip, an ounce of allspice, an ounce of butter, and a few sprigs of thyme and marjoram; fry these until they assume a dark brown colour; then put them into the stock, and let the whole boil for an hour; then strain it through a sieve, and

serve with fried bread cut as dice. *Clear gravy soup* may be made as follows: Take five or six pounds of the thick fleshy part of the shin of beef, put it into a large saucepan and pour in three quarts of cold water, and when it has been brought slowly to boil, and has been well skimmed, add an ounce and a half of salt, half a teaspoonful of pepper, eight cloves, two blades of mace, a bunch of savoury herbs, a couple of small carrots, the heart of a root of celery, and an onion. When the whole has stewed very gently for four hours, probe the meat, and if quite tender, take it out; let the soup simmer for two or three hours longer, and then strain it through a fine sieve into a clean pan. When it is quite cold, clear off every particle of fat; heat two quarts of the liquor, stir in when it boils half an ounce of sugar, a tablespoonful of soy, and two tablespoonfuls of ketchup. If properly made, the soup will be perfectly transparent. A savoury dish may be made from the beef and fragments left, by adding a few fresh vegetables and a little liquor, and boiling the whole again

GRAYLING OR UMBER, scientifically termed, *salmo thymalis*, from a smell that it emits when newly caught, somewhat similar to that of thyme (some say like cucumber), is perhaps the most gracefully and elegantly formed of our fresh-water fish, and from being exceedingly quick in its motions, rushing within the sphere of vision, and then gliding out of sight more like a shadow or ghost than a fish, it has acquired its second name of Umber or shadow. It has a peculiarly large back fin and the lower portion of the tail is larger and longer than the upper, which enable it to perform such rapid evolutions. It is to be found in but few of our rivers, the Test, Teme, Lug, and the Dove (the classic Dove), being perhaps the best; it is also found in the Itchen, Avon, and Stour in Hampshire; in the Wye and Severn, in the west; and in the Trent, Wye, Irvon, Hidder, and the Wharf in the north, and a few others. It has lately been introduced into the Kennet in Berkshire, where it appears likely to thrive although its culture has failed in the Thames, and also successfully into the Clyde, and one or two other Scotch rivers. The grayling spawns from the end of March to the end of April, and does not come into good season again until September; it is in its best season from this time until February, and will feed at the surface on flies, at midwater and at the bottom on worms, gentles, caddis, wasp grubs, caterpillars, &c. The rod for grayling fishing should be (for fly fishing) similar to that used for trout fishing; and for bait fishing similar to that used for dace fishing; both the running or casting line and the gut bottom should be as fine as the skill of the angler will allow, and as near the colour of the water fished in as can be procured. The grayling is to be found in somewhat quieter and deeper water than the trout, but still in the immediate neighbourhood of sharp streams, to which it will occasionally resort. The best months for grayling fishing are, from September to February, and they may be taken both with the artificial fly and with gentles, even in frosty weather in the middle of the day, if the sun shines out cheerily; although at other times cloudy weather is preferable. The angler should strike and play a grayling very gently and cautiously, as its mouth is more tender than that of any other fish.—Books: *Davy's Salmonia*; *Ephemera*; *Walton & Cotton*; *Ronalds, &c.*

GRAZING.—In stocking grazing inclosures, it will be found most expedient to separate the cattle in the following manner: Supposing there are four fields, each containing a nearly equal quantity of land, one of them should be kept entirely free from stock until the grass has reached its full growth, when the prime or fattening cattle should be put into it, in order that they may obtain the best of the food; the second best should then follow; and after them either the working or the store stock, with lean sheep, to eat the pasture close down; thus making the whole of the stock feed over the four inclosures in this succession: No. 1. Clear of stock, and reserved for the fattening beasts. No. 2. For the fattening beasts until sent to No. 1. No. 3. For the second best cattle until forwarded successively to Nos. 2 and 1. No. 4. For stores and sheep to follow the other cattle; then to be shut up until the grass is again ready, as at No. 1, for the fattening beasts. By this expedient the fattening cattle will cull the choicest parts of the grass, and will advance rapidly towards a state of maturity. It is also advisable to divide the fattening enclosures by hurdles, so as to confine the beasts within one-half of it at a time, and to allow them the other half at the other, so that they may continually have fresh pasture. Shade and pure water are essentially necessary; and where there are no trees, rubbing posts should be set up, to prevent the cattle from making that use of the gates and fences

GREASE.—The mixture known by this name, and which is used for lubricating the several parts of carts, waggons, and other implements in connection with agriculture and rural economy, consists of equal parts of tallow or train oil and common tar. It is usually kept in a deep narrow tub, and applied with a broad pointed stick. When a cart is to be greased, the linchpin and washer are removed from the projecting point of the axle; the upper part of the wheel is then pulled towards the person from the cart with such a jerk as to allow the lower edge of the wheel to remain on the same spot of ground where it was, and the point of the axle-arm will then lean upon the edge of the bush at the back of the nave. The grease is then spread upon the upper side of the axle-arm with the stick, the wheel pushed back to its proper point, and the washer and linchpin restored to their respective places.

GREASE STAINS. — These unsightly marks may be removed from various surfaces as follows: *From floorings of wood or stone.* Make a strong infusion of potash with boiling water; add to it as much quicklime

as will bring it to the consistence of thick cream; let it stand for a night, then pour off the clear part and bottle it for use. When wanted, warm a little of it; pour it upon the spots, and after it has been on them for a few minutes, scour it off with warm water and soap. When put upon stone, it is best to let it remain all night; and if the stain be a very bad one, a little powdered hot lime may be sprinkled over it before the infusion is applied. From *cloth*. Moisten the stains with a few drops of concentrated solution of subcarbonate of potash; rub the parts between the fingers, and then wash the cloth with a little warm water. From *leather*. Apply the white of egg to the stain, and dry it in the sun; or mix two tablespoonfuls of spirit of turpentine, half an ounce of mealy potato, and a little of the best mustard. Apply this mixture to the stain and rub it off when dry. The addition of a little vinegar renders it more efficacious. From *paper*. Warm the greased part of the paper, and then press it upon pieces of blotting paper, one after another, so as to absorb as much of the grease as possible; have ready some fine, clear, essential oil of turpentine, heated almost to a boiling state, and apply a little of it with a soft clean brush to both sides of the greased paper; repeat this application until the grease is extracted. Lastly, with another brush, dipped in rectified spirits of wine, go over the spot, and there will be neither grease nor discoloration remaining. From *silk*. Lay the silk, with the right side downwards, upon a table covered with a piece of woollen cloth or baize, upon which lay smoothly the part stained. Place a piece of brown paper upon the top of the silk, and press it with a flat iron just hot enough to scorch the paper. Remove the iron after five or six seconds, then rub the stained part briskly with a piece of cap-paper.

GREEN DYE.—The goods are first dyed blue, regulating the shade according to that of the intended green; they are then dried, rinsed, and passed through a yellow bath, with the like precautions, until the proper shade is produced.

GREENFINCH.—This bird is somewhat longer than the chaffinch. The general

colour is yellowish green; the under part of the body is usually tinged with white; the quill feathers are blackish bordered with yellow. The female is smaller, and easily distinguished from the male by having the upper part of the body of a browner green, and the lower part of an ashen grey. It should not be allowed to mingle with other birds, unless it is well supplied with food, as its nature is so rapacious and spiteful that it will appropriate the food drawer to itself and effectually drive other birds away. Its food should consist chiefly of rape seed, with a little hemp seed after moulting. It also thrives well upon paste; and requires occasionally a little green-meat. The tameness of the greenfinch is its chief attraction, as it may not only be accustomed to flying in and out, but even to breeding either in a room which lies near a garden, or in a summerhouse.

GREENGAGE COMPOTE.—Cut greengages in half, scald them until they are tender; drain and cover with clarified sugar; boil to a strong blow, with the juice of lemon, and a few kernels of the greengages blanched, and boil them up twice; take them out and dress them on a dish.

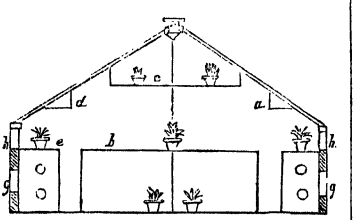
GREENGAGE, CULTURE OF.—See PLUM.

GREENGAGE JAM.—Rub ripe greengages through a hair sieve, and put them into a preserving pan: then to a pound of pulp, add a pound of sifted sugar; after which, boil to a proper consistence, skim it thoroughly, and put it into small pots.

GREENGAGES, TO PRESERVE.—Take unripe greengages, prick them all over with a pin, and put in cold water sufficient to cover them well; add a tablespoonful of sugar; put them over the fire, stirring them gently; when near boiling they will float and become tender, and will then be done sufficiently; put them into a tub with the liquor they were scalded in, for two days, to sour; drain them, and put in copper pans well covered with vine or cabbage leaves; cover them over with an equal quantity of syrup and water, mixed: heat them gently on the fire till they become green; strain them off and put them in earthen pans; pour as much syrup boiled to a little blow, as will cover them; next day drain, place them in the pans again, add more syrup, boil to a blow and cover them again; repeat this boiling once more on the next day; if wanted for pots boil them twice in as much of the jelly as will cover them; if wanted for brandy, strain them off from the syrup, and cover them with brandy.

GREENHOUSE.—A light airy structure designed for plants, which can sustain a somewhat low temperature, but cannot withstand the vicissitudes from frost to sunshine, and from damp to dry, of our ordinary winters. It is distinguished from a plant-stove in requiring but little artificial heat; and from a conservatory, in having all the plants grown in portable tubs or pots, and these generally set upon a stage, to bring them nearer to the glass. The annexed diagram represents a most economical and commodious structure. On the floor, fuchsias, hydrangias, and other deci-

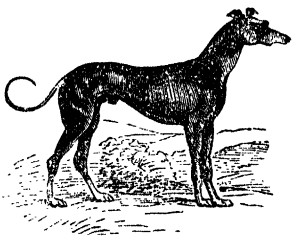
duous plants may be wintered. On the principal platform, *b*, camellias, oranges, mangolias, and such plants as do not require a direct light, may be grown. On *c*, which is a broad shelf suspended from the roof, geraniums, heaths, verbenas, &c., may be placed, as well as on the two side shelves *d d*; and other plants on the side tables *e*, under which the flues or hot-water pipes are to be placed. Ventilation is to be effected by opening the ridge on the top of the house, and also at the side *g g*; and in summer, when an increase of ventilation is required, by opening the upper ventilators *h h*. No side lights being required, the whole might be erected at little cost. Green-



houses may be designed in any form, and placed in almost any situation as regards aspect. In the management of a greenhouse, *ventilation* forms a chief care. Abundance of air must be admitted on all favourable occasions, more especially after those plants which have been set out for a season are brought in again, that the transition to them may be the less experienced. The best means of heating is by hot water; for this purpose a compact boiler, well set, with a flow and return pipe, will be found most serviceable. Care must be taken that a temperature is preserved most favourable to the object in view; if it be intended to preserve the plants, the temperature should be from thirty-five to forty degrees. Where it is desired slowly to grow the shoots, and to keep a winter display of plants in bloom, the temperature must not sink below forty-five degrees. *Potting* should take place early in spring, when an examination should be made, and those plants intended to be grown as specimens should be shifted into pots two sizes larger than those they have been growing in. *Watering* must be regulated by the growth of the plants, the quantity of water at the roots being increased as vegetation advances. The time chosen for watering should be morning in the winter, and evening in summer. The arrangement of the stages is a matter of great importance. For a general collection, the stage may be from five to six feet from the glass roof; for ensuring dwarf, compact, bushy plants, the distance should be from three to four feet. The lowest shelf of the stage should be a little higher than the shelf that surrounds the house next the front glass. In a wide greenhouse it is always preferable to have several stages, in the shape of circles, ovals or triangles, with walks between them. All crowding of plants should be avoided, nothing tending more to retard vegetation, and mar successful cultivation.

GREY DYE.—Grey is dyed with the same materials as black, but both the bath and mordant are used in a more diluted state. Sometimes a furnishing bath of archil or annatto is given, to soften and beautify them.

GREYHOUND.—The various points of this well-known hound may be stated as follows:—The head should be fine, long, and lean; the nose sharp, and the nostrils wide apart; the ear small, close, and falling; the



neck should be long, round, and flexible; the eyes should be large, upraised, clear, and strikingly bright; the chest should be broad, and the shoulders also stand wide apart from each other, loose and free. The legs should be straight and well-jointed; the sides strong; the loins broad, firm, and sinewy, but not fleshy; upper flanks loose and supple; hips wide apart; and the lower flanks hollow; the tail should be fine, long, and flexible, as well as hairy throughout, but especially so towards the tip. The texture of the coat should be soft and fine; the colour is not a material object, and there are various opinions respecting it. The breeding and rearing of greyhounds is to a great extent the same as that of other sporting dogs; especially observing that as greyhounds are peculiarly susceptible to cold, they should always be provided with sufficient warmth, to keep them in good condition and perfect health. The feeding of greyhounds forms an important part of training, and should be as follows; breakfast, half a pound of raw horseflesh by itself, and then a little ship biscuit. Dinner, two parts oatmeal, and one part flour, stirred with strong jelly of ox or calf's feet. This dietary may be varied thus. Breakfast, broken down toasted bread (consisting of two parts flour, one part oatmeal), eggs, and aniseed, half a pound of underdone horseflesh and the jelly. Dinner, firm oatmeal porridge; well-boiled barley and carrots; and the meat with which these were boiled broken up in the liquid. Greyhounds, in training, should be taken out for exercise in the forepart of each day, with a man on horseback. Daily rubbing or brushing is salutary for the greyhound, as it conduces to the firmness and strength of his limbs, and renders his hair and skin soft and supple

GREY POWDER.—A preparation of chalk and mercury. The great and peculiar difference between the grey powder and all other medicinal preparations of mercury, lies in the fact that this, to a certain extent, is a mechanical mixture of the ingredients, all others being chemical compounds; it is consequently far less potent, more admissible for all ages, and in every way less hazardous in its exhibition. This fact will be better understood when it is known that the difference of one or two grains in the dose of many of the chemical preparations of mercury, may prove not only dangerous, but even fatal; whereas all the harm that could accrue from an excess in the prescribed quantity of grey powder, would be a brisk action on the bowels; which, unless extreme debility existed at the time in the patient's body, could by no possibility do harm, but more probably would result in benefit. The grey powder is prepared by rubbing three ounces of the pure mercury, with five ounces of prepared chalk, in a mortar, till every globule of the metal has disappeared; and when spread out on a sheet of paper, and examined through a magnifying glass, presents a uniform grey appearance, devoid of any glistening metallic particles. The mercury is then said to be killed, and the two previously inert ingredients converted into a product of medicinal value. Many hours, and even days, are necessary to effect this change, and completely obliterate all traces of the mercury: though the state of the atmosphere at the time has much to do in the labour or facility of preparing the powder. During the process of trituration or rubbing, a certain portion of oxygen is absorbed from the atmosphere, converting the mercury into an oxide, which imparts the dark greyish colour to the chalk; but the greater part is only mechanically, and very minutely, divided, and remains in its pure state—the product containing about one part of protoxide of mercury in every three parts of the powder. Medicinally considered, there are few preparations more safe or useful than grey powder; and in the diseases and ailments of infancy and childhood, no medicine that the mother can administer with more confidence and certainty of benefit, either alone or in combination; for, to its medicinal influence it adds the advantage of being devoid of taste or smell, and requiring a very small amount in bulk—under any age—for a dose. In all cases, and there are many, occurring in childhood, where it is necessary to correct the state of the secretions by acting on the liver, grey powder, by repeated daily doses for a short time, is invaluable. In scrofulous children, when the abdomen becomes enlarged and the body emaciated, this preparation of mercury forms the physician's chief dependence as a means of cure. Wherever an alterative or mild aperient is required, the grey powder forms an indispensable necessary in the treatment, and at whatever period of life, though especially serviceable in childhood. When given alone, the dose in infancy ranges from *one* to *three* grains, according to age and the object sought to be attained; if as an alterative, one or two grains daily, for several days in succession, ending the course by an aperient. If intended to act on the bowels, the quantity should be at least doubled. From the decomposing power of liquids, the grey powder should be always given in some solid substance, as honey, jam, or other tenacious substance.

Alterative Powders.—Take of

Grey powder	20 grains.
Rhubarb powder . . .	10 grains.

Mix, and divide into eight powders: one powder to be given every day to an infant from one to two years, and twice a day to one from three to four years.

Aperient Powders.—Take of

Grey powder	24 grains.
Scammony	16 grains.
Julap	12 grains.

Mix, and divide into six powders: giving one to a child of two years; to one of four years two powders may be given at once, or a second powder repeated three hours after the first. In the same manner with other children; either let two powders be taken at once, and a third some hours later, or give one every three hours for three or more times. For the more specific use of the grey powder, see ALTERATIVE MEDICINES, MESENTERIC DISEASE, &c.

GRIDIRON.—This is one of the simplest of culinary implements. It should be kept scrupulously clean, and when used the bars should be allowed to get warm before the meat is placed on them, otherwise the parts of the meat resting on the bars will be underdone. The ordinary gridiron is placed over the fire; but there is another kind that hangs before the fire, with a pan at the bottom to catch the gravy.—See BROILING.

GROOM, DUTIES OF.—To the groom is committed the business of feeding and dressing the horses of his master's establishment; and for the performance of this duty practice and dexterity are essential. The first duty of the groom in the morning, which generally commences at six, is to clean the stable and feed the horses. The hay should be lightly put into the rack, and the usual feed of oats placed in the manger. The morning allowance of water is usually reserved until after dressing; but sometimes horses refuse to feed except they drink first, and then a small quantity of water should be given. Careful grooming is an essential requisite, both as regards the health and appearance of horses. After the application of the curry comb, the horse should be well rubbed, to remove all loose hairs, and again rubbed with wet hands, which will impart a glossy appearance to the coat. The mane, foretop, and tail should then be combed; and should the feet and legs be stained, they must be washed with soap and water, and trimmed with the scissors. Before the horses are put to the carriage, the brush and a cloth are to be passed over their coats to remove any dust; the wet sponge should be applied to the eyes, nostrils, &c., and the comb put through the mane and tail. The shoes ought to be examined, the harness then put on,

and the horses attached to the carriage. On those days when the carriage is not taken out, the horses should be exercised for a couple of hours every day. At noon the horses are fed and watered; again sometimes at four o'clock; and at eight in the evening a little hay is put into the rack for the night. When the carriage returns home, they should not be fed immediately if their work has been fatiguing, but wait until they are cool. If fed too soon, particularly if they have fasted for a long time, indigestion may be produced. In such case it is proper that they should be first rubbed down and dressed. If they are heated, the water used to wash their legs should be lukewarm, and they should be walked about till the temperature is lowered, before being put into the stable. When horses are much confined to the stable, their hoofs are apt to become dry and to crack; to prevent this, it is necessary to stop their feet occasionally during the night with some moist substance, such as a mixture of cow-dung with loamy earth.—See CURRYCOMB.

GROUNDSEL.—A plant that grows wild in waste grounds, on dry banks, wall-tops, &c. Cage birds, particularly goldfinches and linnets, are fed with the young buds, seeds,

and leaves, which are cooling, and have a salt herbaceous flavour. A weak infusion of groundsel is a common purge; a strong infusion is used as an emetic, and sometimes given to horses to free them from bots.

GROUSE.—This bird is to be found in most parts of England, but especially in Northumberland and Cumberland. In the highlands of Scotland they are also to be met with in large numbers, and supply the sportsman with an easy and profitable day's shooting. The best weather for shooting grouse is that which is dry, clear, and warm; wet makes them lie on the ground. The times of day best suited for grouse shooting are the morning and the evening, when the birds are in quest of food. The flight of grouse is generally about half a mile. Their favourite haunts when undisturbed are those patches of ground where the young heather is most luxuriant; and it is in this that they most frequently feed. During the middle of the day, the shooter should range the sunny side of the hill, and avoid plains. No species of shooting requires the aid of good dogs more than this; and in no sport does so much annoyance arise from the employment of bad dogs. The best dog for the moors is a well-bred pointer, not more than five years old, and well tutored. The setter is occasionally used with success; but if he cannot find water wherein to wet his feet every half hour, he will not be able to undergo much fatigue. The law enacts that grouse may not be shot, taken or pursued before the 12th of August, or after the 9th of December, without incurring a penalty.

GROUSE PIE.—Having picked and well cleaned as many grouse as will be necessary, season them with cayenne pepper, salt, whole pepper, and two or three cloves pounded; put a bit of butter into each bird, and lay them closely into a pie dish, with a little stock or good brown gravy, and a glass of port wine; cover the dish with puff paste, and bake it for an hour and a quarter. If intended to be eaten cold, have ready a little rich veal gravy, and pour into the dish when it comes out of the oven.

GROUSE POTTED.—Clean the birds thoroughly, and season them with allspice, salt, mace, and white pepper. Rub each part well with this seasoning, then lay the breasts downward in a pan, and pack the birds as closely as possible. Put plenty of butter on them; then cover the pan with a close flour paste, tie a paper over, and bake. When cold, cut into small pieces, pack them closely in a large potting jar, press down, cover with batter, and tie securely.

GROUSE ROASTED.—In plucking the birds, handle them very lightly, draw them, and wipe the insides with a clean damp cloth. Truss the grouse as you would a pheasant, and roast them for about half an hour at a clear and brisk fire, keeping them basted almost without intermission. Serve them on a buttered toast, which has been laid under them in the pan for ten minutes, or with gravy and bread sauce only.

GROUSE SOUP.—Boil four grouse until tender; cut up the best parts of the birds into small slices, and set them on one side. Pound the inferior parts finely, until it may be pressed through a sieve into the stock; put into the stewpan six onions, three carrots, two turnips, three bay leaves, six cloves, an ounce of allspice, a few sprigs of thyme and marjoram, and two ounces of butter; fry them altogether until they become of a fine brown; then put them into the stock, and boil the whole for one hour. Mix two pounds of dry flour with cold water and put it into the stock; boil it for ten minutes, strain it through a sieve, put in the pieces of grouse which have been cut up, give the whole a boil up, and serve.

GROUSE, TO CARVE.—The grouse is so small that it will scarcely admit of disjointing, and it is usual to separate it at once into the breast portion and the back

and legs, which may be readily done without cutting, by inserting the fork in the former and raising it while depressing the latter. When this is done, the knife may be carried longitudinally through the breast, so as to divide it into two equal portions; after which, the back and legs may be divided in the same way.

GRUB.—The common name of worms or maggots hatched from the eggs of beetles. Land newly brought into cultivation is generally most subject to the grub. The best way of destroying it is by frequent and thorough ploughings, and the application of lime in pretty large proportions in its caustic or most active state; common salt, also, will answer the same purpose; irrigation is likewise beneficial in tending to destroy grubs. Sometimes grubs will infest orchard trees and fruit bushes in sufficient numbers to damage a whole crop; in these cases a bonfire should be made with dry stocks and weeds on the windward side of the orchard, so that the smoke may blow among the trees, and thousands will be thus destroyed.

GRUEL.—Mix in a basin two tablespoonfuls of oatmeal with a little cold water, then pour on it about a quart of boiling water; stir it well and let it settle for a few minutes; pour off the water into a saucepan, and boil it for ten or fifteen minutes, stirring it, and taking off the scum as it rises. Season with salt or sugar, according to taste. Milk may be used instead of water, if preferred. The best gruel for invalids or delicate persons is made from what are called Emden groats, which are the crushed oats deprived of their outer skin. These are very gently boiled for a long time, and being passed through a sieve, the gruel is then fit to eat, and is usually eaten with sugar, sometimes adding, when there are no inflammatory symptoms, a little sherry or brandy. As an article of diet, gruel is better calculated for occasional use than to be taken habitually, as when taken to excess, it has a tendency to impoverish the blood and induce cutaneous diseases.

GUANO.—A substance found upon certain small islands, especially in the South Sea, which are the resort of large flocks of birds, and chiefly composed of their excrement. As a manure, it possesses certain valuable properties beyond any other. The usual manner of applying guano is by first mixing it with six or seven times its weight of sandy loam, and then digging it into the ground before the crops are sown; when used for top dressing, it should be watered as soon as applied, unless the weather happens to be wet. When used diluted with water, the usual proportion is an ounce of guano to a gallon of water for kitchen crops, and half an ounce to a gallon for flowers.

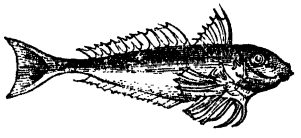
GUARANTEE.—An undertaking to answer for the failure or default of another. No person is liable to answer for the debt, default, or miscarriage of another person, unless a written agreement or some memorandum in writing for such promise, shall be signed by the party making the promise, or some other person lawfully authorized by him for the purpose. In the construction of a guarantee, it is a general rule that the surety shall not be bound beyond the extent of the express words of the engagement into which he has entered. A guarantee to or for a *firm* will cease upon a change of the members of a firm, unless it appear to be the intention of the parties that, by express stipulation or implication, the guarantee shall be binding notwithstanding the change in the firm. Every person who is surety for the debt or duty of another, who discharges his liability, is entitled to the assignment of all securities held by creditors.

GUARANTEE SOCIETIES have been established within the last few years, which take upon themselves the responsibility and liability above mentioned, charging a certain amount of premium, according to the amount of guarantee. Such societies are a great boon to persons compelled to furnish a guarantee, because there exists a natural reluctance on the part of one person to become surety for another; and besides, many persons, although occupying a good position themselves, have neither friends nor relations of sufficient means to become surety for another. Through this medium, also, employers are assured of the continued solvency of the surety, and the guarantee, instead of being subject to the change and instability attaching to an individual, becomes a permanent and valuable one.

GUARDIAN.—In law, generally signifies one who has the charge of the person, education, and property of children, or of any one labouring under some incapacity for managing his own affairs. A father is by nature the guardian of his children. On his death, the office devolves on those who may have been appointed by him. A guardian thus appointed supersedes all other guardians, except those by the custom of London, or any city or corporate town in favour of which an exception is made, and is entitled to the custody of the infant's person, and his estate real and personal. If persons, appointed as guardians by the father, decline to accept the office, the law appoints the nearest relatives on the father's side. In such cases, the estate only is intrusted to the heir apparent; the person being transferred to the custody of the mother if alive, or, if dead, to the nearest relatives on the mother's side. Guardians may also be appointed to a stranger for the management of an estate left to a minor by such stranger, or by a judge before whom a suit may depend, in which a father may have an interest adverse to his child; and in all cases where, from any cause, a person cannot manage his own affairs, and his relatives are unwilling or disqualified to act for him, the law, in one form or the other, provides a manager or guardian. In these last cases, security for the faithful discharge of his duty is exacted from the guardian, and he is accountable for the due management of his ward's property, and is answerable not only for fraud, but for negligence or omission. The guardianship of a father over his minor daughter is at an end when she marries a person who has attained majority the husband being the guardian of his wife.

GUAVA JELLY, ENGLISH.—Strip the stalks from a gallon or two of the large kind of bullaces called the "shepherds' bullace;" give part of them a cut, put them into stone jars, and throw into one of them a pound or two of plums; put the jars into pans of water, and set them over the fire until they boil. Drain off the juice; pass it through a thick strainer or jelly bag, and weigh it; boil it quickly for a quarter of an hour or twenty minutes, take it from the fire, and stir in, till dissolved, three-quarters of a pound of sugar to each pound of juice; remove the scum with care, and boil the preserve again quickly from eight to twelve minutes, or longer, should it not then jelly firmly on the skimmer. When the fruit is very acid, an equal weight of juice and sugar may be mixed together in the first instance, and boiled briskly for about twenty minutes. When done, it should be very transparent and firm; it should then be poured into shallow pans or moulds, and turned from them before it is served.

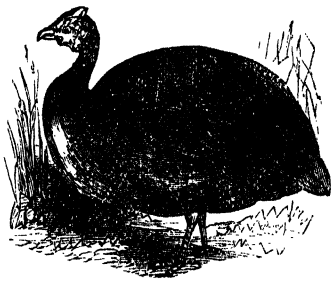
GUDGEON.—Angling for gudgeon is much practised in the hot summer months, when other more wary fish seek shelter in sequestered nooks, and secure retreats from the glare of a midsummer sun, until "evening's twilight gathering round" tempts them from their haunts to recruit exhausted nature. The rod should be nine or ten feet long, light and stiff, the line of gut, and the hook No. 12 for gentles, and No. 10 for worms; a running line should be used, as a



trout, perch, or barbel is frequently tempted to take the worm bait, and the two former are also attracted to the spot by the concourse of gudgeon drawn thereto by the use of ground bait or the rake by the angler. The ground bait should be carrion gentles or worms chopped up into small pieces. When fishing from a punt, gudgeon are attracted to the spot by using a strong iron rake attached to a long and strong pole, to displace the gravel at the bottom of the river, and thus enable the stream to disperse and carry down worms, larvæ, and small insects which had sought shelter in the interstices between the stones. The foregoing will show that within an inch of the bottom is the proper depth to swim the bait. If a punt is not available, walk into the river, where it is from two to four feet deep, with or without waterproof boots; large nails driven into the sole will prove useful; and commence stirring up the gravel with your feet, fishing before you, and as the fish leave off biting, again stir up the gravel (this also applies to the use of the rake). A shorter rod will do for this plan, which is very killing, and is called "muddling."

GUDGEON, TO DRESS.—This fish is exceedingly delicate and fine flavoured; the smaller sized gudgeon, especially, being but slightly inferior to white bait. There is but one way of dressing this fish to perfection, namely, by frying. Make an incision first beneath the gills, extract the inside, and carefully dry the fish on a clean cloth: then brush the fish over with egg rolled in fine bread crumbs, and fry it in lard, fresh butter, or oil.

GUINEA-FOWL.—Although this fowl is but seldom recognised by the keepers of poultry, there is no reason why it should not be included in every collection, for it is



useful and ornamental during its life, and when dead forms a desirable addition for the dinner table, at a time when all other poultry is scarce. The best way to begin keeping Guinea-fowls is to procure a setting of eggs from some friend or neighbour on whom you can depend for their freshness, and also, if possible, from a place where only a single pair is kept. A bantam hen is the best mother, she is lighter and less likely to injure them by treading on them than a full-sized fowl. She will cover nine eggs, and incubation will last a month. The food of the young, should consist of ants' eggs (so called), hard-boiled egg chopped fine, small worms, maggots, bread crumbs, chopped meat or suet: whatever, in short, is most nutritious is their most appropriate food. This should not be offered to them in large quantities, as it would only be devoured by the mother bantam as soon as she saw that the little ones had for the time satisfied their appetites, or would be stolen by sparrows, &c.; but it should be frequently administered to them in small supplies. Feed them every half hour, as they possess an extraordinary power and quickness of digestion, and their growth is very rapid. A dry sunny corner of the garden will be the best place to coop the chicks with their bantam hen. As they increase in strength they will do no harm, but, on the contrary, a great deal of good, by devouring worms, grubs, caterpillars, maggots, and all other sorts of insects. By the time their bodies are little bigger than those of sparrows, they will be able to fly with some degree of strength. When they are about the size of thrushes, they should be transferred from the garden

into the orchard or shrubbery, to prevent their doing mischief to the flowers. During all this time they must receive a bountiful and frequent supply of food; oatmeal, cooked potatoes, boiled rice, anything in short that is eatable may be thrown down to them; they will even pick the bones left from a meal, with apparent relish. At a certain period they will have got beyond the management of their foster-parent, and will form a "pack" among themselves, prowling about in a body in search after food and insects. Birds thus reared on the spot where they are meant to be kept, are sure to thrive better and give less trouble than those procured from a distance, which sometimes will not remain in their new home, but wander about in search of their old haunts, till they either find them, or are themselves lost, destroyed, or stolen. In the case where a German cock and two hens are kept—the usual number—it will be found that though the three keep together, yet that the cock and one hen will be unkind and stingy to the other unfortunate female. In such cases the eggs of the despised hen will in all probability turn out failures; therefore, all those who wish to succeed with Guinea-fowls should match their birds in such a manner as is likely to conduce to their general well-being and happiness. An unerring rule by which the cock may be distinguished from the hen, is, that the latter uses the call note "come-ba'ck, come-ba'ck," accenting the second syllable strongly; while the cock has only the harsh shrill cry of alarm, which is common also to the female. * The Guinea-fowl is one of the most prolific of known birds. Week after week, and month after month, sees no, or very rare, intermission of the daily deposit; and even during the process of moulting it will continue to lay as when in ordinary health. One objection to this bird is, that it is of a wild, shy, rambling disposition. It loves to wander along hedgerows, over meadows, through clover or corn-fields, and amidst copses and shrubberies; hence these birds require careful watching, for the hens will lay in secret places, and sometimes absent themselves from their accustomed haunts, until they return with a young brood around them. One disadvantage results from this, namely, that the bird will often sit at a late period of the year, and bring forth her brood when the season begins to be too cold for the tender chickens; besides which, a great portion of her eggs will be lost. The best plan is to contrive that the hens shall lay in a quiet, secluded place, and to give about twenty of the earliest eggs to a common hen ready to receive them, and who will perform the duties of incubation with steadiness. In this way a brood in June may be easily obtained. Guinea-fowl are in season from the middle of December till April, but are usually reserved till the latter part of that term, in order to occupy the gap caused by the deficiency of game. In order to fatten them, it is useless to attempt shutting them up, unless they have previously been made particularly tame, as they would sulk, pine, and die, before they became reconciled to confinement, in spite of their extra diet. But if they have become familiar, the whole pack may be confined in company together in a roomy outhouse, and be supplied with all the oats they can eat, with considerable advantage. The sure plan, therefore, is to keep them in high condition during the winter by liberal hand-feeding.

GUINEA-FOWL, TO DRESS.—The manner of killing Guinea-fowls is usually by dislocating their necks instead of using the knife, thus leaving the blood in them to remedy the natural dryness of their flesh. They should also remain in the larder as long as possible before being cooked. They must be young, or they will be scarcely eatable, and should never be more than twelve months old. They are trussed like the common fowl, with the exception that the head is sometimes left on and tucked under the wing. They are generally larded and roasted, requiring to be well done and taking about three-quarters of an hour.

GUINEA-PIG.—This is an extremely timid, delicate, docile, and elegant animal, and is chiefly kept for amusement by young persons. They are remarkably cleanly in their habits, but emit nevertheless a disagreeable smell, which renders their admission into the dwelling-house offensive. They possess amazing fecundity, bringing forth six or eight times in the course of the year, and from four to twelve young ones at a birth; beginning at the age of two months. Their coats are extremely beautiful, being sleek and glossy and variously coloured, black, white, orange, and mixtures of the three, called orange tortoiseshell; these latter are the most highly prized, particularly

where the dark colours predominate. The most appropriate place to keep them in, is a hutch similar to that used for rabbits; only somewhat smaller. Their ordinary food should be oats given twice a day, and sparingly, that the animals may not get cloyed and waste the grain: greenmeat should also form a part of their usual diet, particularly the wild sorts, as dandelion, sowthistle, plantain, &c.; they are also exceedingly fond of tea leaves, which, however, should only be given to them occasionally. They are also partial to parsley, carrots, and fruits of all kinds, especially apples; bread dipped in milk or water is much relished by them; of milk they are extremely fond, and never refuse water when offered to them. Though naturally tame and gentle, they are incapable of strong attachment. They affect dark and intricate

retreats, and seldom venture out of concealment when danger is apprehended. Some persons have an idea that rats have a great dread of Guinea-pigs, and are afraid to venture out of their hiding places in their presence; this supposition, however, is proved to be groundless.

GUM.—A vegetable product distinguished by solubility in water and insolubility in alcohol. Gum arabic, which is the produce of the *acacia vera*, may be taken as a sample of the purest kind of gum. As a medicinal agent this gum is valuable in colds and other affections, where it is necessary to shield the membranes from the effect of acrid substances; if, however, taken to excess it is liable to produce constipation.

GUM STARCH.—Pound two ounces of fine white gum arabic to powder, put it into a jug and pour on it a pint or more of boiling water, according to the degree of tenacity required; cover the jug and let it remain for the night. On the following morning, pour the liquid carefully from the dregs into a clean bottle, cork it, and keep it for use. A tablespoonful of this, stirred into a pint of starch which has been made in the usual manner, will give to shirt-fronts, waistbands, collars, &c., a fine gloss which not only enhances their appearance, but tends to preserve them for a longer period than ordinarily.

GUM SYRUP.—Boil two pounds and a half of loaf sugar in a pint of water; when the syrup boils, stir in the whites of six eggs, previously beaten up with half a pint of water; having skimmed the syrup, add a quarter of a pound of gum arabic previously dissolved in a quarter of a pint of cold water; boil for a few minutes; when about half cold, strain through a jelly-bag, and put into bottles. This preparation is chiefly used for confectionery, but a teaspoonful of it taken occasionally in cases of obstinate coughs and irritation of the chest and throat, is frequently found efficacious.

GUM WATER.—This preparation is used in a variety of minor domestic and household operations. It is usually made by simply dissolving gum arabic in water till it acquires the desired degree of strength; a better kind, however, may be made as follows: Put half an ounce of *gum tragacanth* into a wide-mouthed four-ounce bottle, pour upon the gum a quarter of a pint of hot water, let it stand for twelve hours, stirring it frequently, and then fill up the bottle with gin. This preparation will keep for years, and never become mildewed or offensive. When it becomes too stiff, a little more gin may be added.

GUN, CARE AND MANAGEMENT OF.—Every gun, if only moderately used, requires occasionally to be taken entirely to pieces. Twice a year the breech or breeches of a gun which is much used should be taken out; the pivots and locks will require more frequent attention. The following instructions relative to the care and management of the gun will be found useful. *In taking off the mainspring*, first put the lock on full cock; next cramp the mainspring, then let down the cock, and the mainspring will fall off. When the cock is to be put on again, first let the cock be left down; then hook the end of the mainspring on the swivel or chain; then move it up and place it into its position on the lock-plate; this done, unscrew the cramp, and the lock is once more fit for action. When the hammer is to be taken off, first shut down the hammer carefully, cramp the spring, until by shaking the lock the hammer is heard to rattle; then take out the screw behind, and the hammer will fall off. To put it on again, replace it in its former situation; turn in the screw, and set the spring free. If the hammer-spring is to be taken out, the hammer and mainspring must be released, in order to reach the screw behind; the hammer spring must then be cramped, till it is taken out and put on again to receive the hammer. *In taking to pieces the small works of a gun-lock*, be careful to keep the screws distinct. Commence by taking off the mainspring, next unscrew and take out the scear, by half-cocking the lock; clasp the forepart of the lock, firmly pressing the thumb at the same time against the hinder part of the cock, directing it forward, while the scear and scear-spring, being now pressed together with the forefinger and thumb, will facilitate the taking out of the scear-screw. Then undo the two screws, take off the bridle, unscrew and take out the scear spring; next unscrew and take off the cock, which will readily separate from the tumbler if it be gently tapped or shaken; this done, take out the tumbler, and the process is finished. *When it is required to put the lock together again.* First put the tumbler in its place and screw on the cock; next do the same by the scear spring; set on the bridle with the two upper screws, put in the scear, let down the cock, to admit of putting on the mainspring, and the operation is complete. The locks do not require to be taken off every time a gun is used; once a fortnight is quite sufficient. Put a little fine oil to the parts where there is friction; but if the gun has been used on a wet day, the lock should be taken off, cleaned, and oiled immediately. *Gun cleaning* is practised in a variety of ways, but the following directions will probably be found as good as any; place the breech end of the barrels in a bucket, in which there is cold water about three inches deep; then, after wetting the sponge, cloth, or tow, introduce the rod into the barrels, and work it well; next apply the wire brush attached to the cleaning rod with some clean hot water, which will take out all the lead. Wipe the rod and the outside of the barrels dry, and set the latter upright, muzzle downwards, for two minutes to drain, after which rub them perfectly dry. Wipe the barrels out clean, then pass an oiled rag down the inside, and rub over the outside, leave them a little only, which will prevent rust. The frequency with which a gun should be cleaned depends upon circumstances. Some guns foul sooner than others. Some powder also fouls more than others; and as a rule small shot fouls a gun sooner than large shot. Under all circumstances, a gun should be wiped out after

every twenty shots; its more effective use after the operation amply compensating for the trouble. *When a gun is put by for the season*, care should be taken to place it where no damp can come to it; the best preventative for this evil, is to have iron rods made of the length and diameter of the barrel, leaving just sufficient room to cover the rod with kerseymere, or some other woollen material; the rod thus furnished should be placed within the barrel; in addition to this, a little wax should be placed over the touch-hole, and no damp can then possibly penetrate. Never put a gun by for the season without having taken the breech out. Remove, clean, and thoroughly dry the screws, lubricate the threads with pure tallow and return them. *To remove rust from the outside of the barrel*, adopt the following method: Have an ashen rod turned a few inches longer than the barrel, and nearly the size of the bore. Let one end of the rod be cut lengthwise, so as to make a slit of six inches long; into which insert as much fine emery paper as will completely fill up the bore of the barrel, taking care in folding the paper tightly round the wood, that the emery surface is outward. Force it into the barrel by screwing it downwards from the top to the bottom; repeat this process until the barrels show a perfectly clean and polished surface. Sand and other coarse materials should never be used for this purpose, as they abrade the surface of the barrel. To prevent accidents it is always better to fire the gun off before entering a house.

GUN, LICENCE TO USE.—Any person carrying a gun elsewhere than in a dwelling-house is required to be provided with a yearly licence, which may be obtained from an officer of Inland Revenue. The licences cost 10s. each, and can be taken out at any time, but all expire on the 31st of March in each year. The only persons exempt are Members of the Naval, Military, Volunteer, or Police forces in performance of duty; any one having an excise licence to kill game; the occupier of land, or person authorised by him, who uses a gun only to scare birds or kill vermin on his own grounds; a gunsmith or his servant, or a carrier in the course of trade.

GUN, USE OF.—See SHOOTING.

GUNPOWDER.—A substance composed of three ingredients, saltpetre, charcoal, and sulphur. The quality of gunpowder is best estimated by actual trial of its power and cleanliness in use. It should be dry, hard, and free from dust; the grains should be of a uniform size, and glossy, and the colour a dark grey, or brownish grey, not perfectly black. A very little placed on a piece of paper and fired, should instantly explode with a flash, and neither leave a perceptible residue on the paper, nor burn it. Dried by the heat of boiling water it should not lose more than $\frac{1}{2}$ to $1\frac{0}{0}$ of its weight. From the aptitude which gunpowder has for absorbing moisture, it is extremely difficult to make it retain its original strength without extreme care. Gunpowder used in this deteriorated state, has also a tendency to foul the gun-barrels. On all occasions, therefore, where gunpowder has been exposed to the air, it should be dried previously to being used, and especially so when the atmosphere is known to be superabundantly charged with moisture. Gunpowder should be bought in canisters only, and as fresh as possible. In keeping it, it should be guarded as carefully as possible from exposure to the air. The common tin case, however closely prepared, is not sufficient for the purpose, unless it be rendered waterproof, and closed either by a soft velvet cork, or a fine threaded screw; the former is preferable. An excellent plan is to divide large quantities into smaller ones, and put them into bottles, each containing about four ounces; which being corked and sealed prevents exposing more than is wanted for immediate consumption. Sportsmen and others should take care to purchase their gunpowder from such sources as will secure its genuineness; if possible, from the maker direct, but at any rate through a channel having a direct communication with the powder-mill. The method resorted to by powder merchants for restoring damaged gunpowder is, to put part of the gunpowder on a sail-cloth, and add to it an equal weight of good powder; the two are then mingled together, then dried in the sun, barreled up, and set by in a dry place. When it is found to be very bad, it is restored by moistening it with vinegar or brandy; then beat fine and sifted; and to every pound of powder is added an ounce, or an ounce and a half, or two ounces (according to its stage of decay) of melted nitre. These ingredients are afterwards well moistened, thoroughly mixed, and granulated in the ordinary way. *The law relating to gunpowder* enacts that no one is to keep more than two hundred pounds of gunpowder, nor any person, not a dealer, more than fifty pounds, in the cities of London and Westminster, nor within three miles thereof; nor within any other city, borough, or market town, within one mile thereof; nor within two miles of the royal palaces or magazines, or half a mile of any parish church, on pain of forfeiture, and two shillings for every pound. Licensed mills are, however, exempt.

GURNARD.—A salt-water fish. It has a scaly body of a uniform shape, compressed laterally, and attenuated towards the tail. The head is broader than the body, and slopes towards the snout, where it is armed

with spines; the upper jaw is divided, and extends beyond the lower, the eyes are near the top of the head, large and prominent, particularly the upper margin of the orbits. The dorsal fins are unequal, the first short and high, the second long and sloping.

Many of the species utter a peculiar noise when taken, and some of them are provided with pectoral fins sufficiently large to enable them to spring out of the water. It is a fish that affords excellent food.

GURNARD BAKED.—Fill the interior of the fish with veal stuffing, sew it up with packthread, and truss it with the tail in its mouth; lay them in a baking dish with thin slices of bacon over them, and bake for half an hour or more (according to size) in a hot oven. When done, serve with a sauce made as follows: put a tablespoonful of chopped onions into a stewpan, with a tablespoonful of vinegar, place this over the fire for a few minutes, add half a pint of melted butter, two tablespoonfuls of ketchup, and two of water, reduce until rather thick, season with a little pepper, cut the fillets of an anchovy into strips, put them into the sauce, which pour around the fish, and serve.

GURNARD BOILED.—The fish may be boiled either with or without stuffing, in very salt water; it will require rather more than half an hour; serve with anchovy sauce.

GURNARD BROILED.—Cut off the heads of the fish, dip the bodies into melted butter with salt, and broil them over a moderate fire. Serve them either with plain anchovy sauce, or with a sauce made as follows: put a piece of fresh butter, a little flour, and a leek into a saucepan, with salt, pepper, and nutmeg, moisten with vinegar and water, add two anchovies, keep it on the fire, stirring it constantly until the fish are done, pour the sauce over them and serve.

GUT, an article used by anglers, is manufactured from the silkworm, and can be obtained at all tackle shops. The clearest, brightest, and roundest links are the best; it is used for that portion of the line nearest to the hook of lengths varying from one foot to four yards; and to distinguish its appearance from the fish, it is frequently dyed to a colour as nearly approaching that of the water it is used in as possible. A brown colour is produced by soaking it in coffee grounds; a blue colour by steeping in ink, diluted with water as required; and a green colour by the use of water in which a piece of green baize has been boiled.

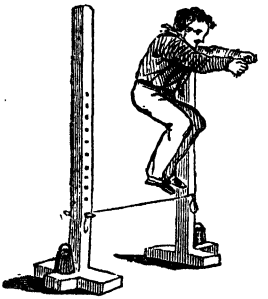
GUTTA PERCHA.—A substance formed by the concrete juice of a tree growing in the Indian Archipelago. In order to procure this substance, the largest-sized trees are felled, the bark stripped off, and a milky juice, which exudes from the lacerated surfaces, is collected and poured into a trough, formed by the hollow stem of the plantain leaf. On exposure to the air, the juice quickly coagulates. The gutta percha arrives in this country in lumps or blocks of several pounds' weight, but these often contain impurities, introduced for the purpose of increasing its weight. When pure, the slips are transparent and somewhat elastic, varying in colour from a whitish-yellow to a pink. It is purified by being submitted to the action of hot water, and is then ready for use. The purposes to which gutta percha is applied are numerous. It resists the action of water, and is at the same time a bad conductor of electricity; it is therefore employed for enclosing the metallic wires used in the Electric Telegraph. The efficiency of the Submarine Telegraph is largely due to this valuable substance. Manufacturers and agriculturists have applied gutta percha to use in bands and straps for machinery, tubes, buckets, &c. It is also used for household decoration; for the manufacture of various articles of daily use; and employed even in the fixing and stopping of teeth. A solution of gutta percha in chloroform or bi-sulphuret of carbon forms an excellent dressing for incised wounds, and a protection for abraded surfaces, burns, &c.

GUTTA PERCHA SOLES, TO FASTEN.—Dry the old sole, and make it rough with a rasp, after which put on a thin coat of warm solution with the finger, rub it well in; let it dry, then hold it to the fire, and, whilst warm, put on a second coat of solution thicker than the first; let it dry. Then take the gutta percha sole, and soak it in hot water until it is soft; take it out, wipe it, and hold the sole in one hand and the shoe in the other towards the fire; when sufficiently melted, apply the gutta percha sole to the shoe, beginning at the toe and proceeding gradually towards the heel. When it has been on half an hour, pare it evenly all round. The solution should be warmed by putting the quantity required for use into a cup, and placing it in hot water, taking care that none of the water mixes with the solution.

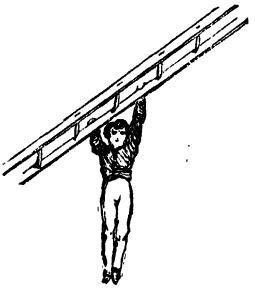
GUTTER.—Gutters form a part of the roofs of houses, and by them the rain and snow water is let down by a pipe into the street drain. Great attention must be paid to these gutters on the roof, not only with regard to their original construction, but that they are always kept in proper repair; otherwise if they are imperfectly formed, or improperly neglected, the water will penetrate into the house, and injure the apartments. In order to carry off the water readily, gutters should be made with a slope of from half to three-quarters of an inch in the yard. When gutters are made of lead, the sheets should never be joined by solder, because, if confined, the expansion in warm weather would cause the lead to crack; they should be connected by drops, a kind of step of two inches, made in laying the boards for the lead; the lead over this is only hammered close, and not soldered. When wet appears in the ceiling of the upper story, it is frequently owing to defective construction, and sometimes to a crack in the lead. The whole should, therefore, be carefully examined by a plumber; but if the defect arises from the lead of the gutter having been originally cut too narrow, there is no effectual remedy but taking it up and putting down wider lead. *Cast iron gutters*, as substitutes for leaden ones, are found economical and effective, and are more particularly adapted for ridge and furrow hot-house roofs.

GYMNASTICS.—A species of exercise tending to develope the frame, and strengthen the muscles, and especially adapted for the human body before it has become "set." The best age to commence the practice of this exercise is about eight years. The prac-

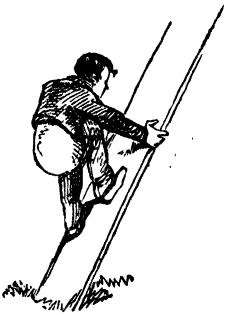
tice should be gentle at first, and gradually increase in proportion to age and strength. Gymnastics are better practised before meals than after them, the early part of the day being perhaps the best time of any. Care should be taken not to lie on the damp ground, nor stand in a draught, nor drink cold water immediately after the exercises have been gone through; these exercises consisting of every variety of active employment of the body, including walking, running, jumping, leaping, &c. Of all the corporeal exercises, *jumping* is one of the most useful; to jump with ease and confidence, one should always fall on the toes, taking especial care to bend the knees on the hips; the upper part of the body should be inclined forwards, and the arms extended towards the ground. In jumping we should hold the breath and never alight on the heels. In *leaping*, the object is to pass over an obstacle; in this case, also, the breath should be held, while the hands should be clenched, and the arms pendant. To facilitate this exercise a leaping-stand may be



formed, as seen in the engraving. The high leap should be practised, first standing, and then with a short run; in the standing leap the feet must be kept close together; and in the leap with a run, the leaper should take about twelve paces, and go fairly over the cord, without veering to either side, and descend on the ball of the foot. *Vaulting* is performed by springing over some stationary object, such as a gate or bar by the aid of the hands which bear upon it. To perform it, the vaulter may approach the object with a slight run, and placing his hands upon it, heave himself up and throw his legs obliquely over it. The legs should be kept close together; while the body is in suspension over the bar, the right hand supports and guides it, leaving the left hand free. *Climbing the rope.* To do this, cross the feet and hold the rope firmly between them; move the hands one above the other alternately, and draw the feet up between each movement of the hands. In the sailor's manner of climbing, the rope from the hands passes between the thighs, and twists round one leg, just below the knee and over the instep, as shown in the annexed figure; the other foot then presses upon the rope, and thus an extremely firm support is obtained. In climbing trees both the hands and feet are to be used, but the climber should never forget that it is to the hands that he has to trust. He should carefully look upwards, and select the branches for his hands, and the knobs and other excrescences for his feet; he should also mark the best openings for the advance of his body; he should also be particularly cautious in laying hold of withered branches, or those that have suffered decay at their junction with the trunk. In descending, he should be even more cautious than in ascending, and hold fast by his hands. *In climbing the wooden ladder*, the learner should seize each side of the ladder, and by moving his hands alternately, ascend as far as his



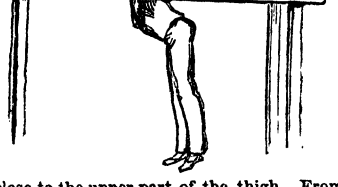
strength will permit. He should next try to climb the ladder by the rundles, by bringing the elbow of his lower arm firmly down to the ribs previously to pulling himself up by the other. In performing this exercise the legs must be kept close, and as straight and steady as possible. *Climbing the inclined board.* For this purpose, the board should be about two feet wide



and resting at an angle of thirty degrees. The climber must seize both sides of the

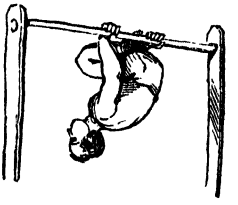
board with his hands, and placing his feet flat in the middle, ascend by moving his hands and feet alternately. When the gymnast has, through practice, acquired power and precision in his movements, the plank may be raised until it is almost perpendicular. *Climbing the pole.* The pole should be about nine inches in diameter, and firmly fixed in the ground in a perpendicular position. In mounting, the pole is to be grasped firmly with both hands, the right above the left. The legs should alternately grasp the pole in the ascent by means of the great toe, which is turned towards the pole. In descending, the friction is thrown on the inner parts of the thighs, and the hands are left comparatively free.

PARALLEL BARS. Are two pieces of wood, from six to eight feet in length, and about four inches square, the edges rounded. For lads they are fixed at about eighteen inches apart, and supported by two round standards, fairly fixed in the ground, from three to four feet high, according to the stature of the boys. By the aid of these bars several feats may be performed, among which are the following: *Balancing.* Being placed between the bars and in the centre, put your hands right and left on the bars at the same time. After a little jump upwards, preserve your equilibrium on both wrists, the legs close; this is called the first position. Then communicate to your body a gentle movement of balancing from behind, forwards, and continue this several times, the body moving as it were on a pivot. This should be practised until the body swings freely backwards and forwards. *To rise and sink.* Being in equilibrium in the middle of the bars, place the legs backwards, the heels

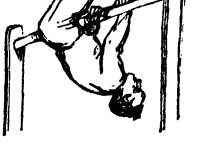


close to the upper part of the thigh. From this position, come gently down, till the elbows nearly meet behind the back, then rise up gently without any impulse or touching the ground with your feet. *To kiss the bar behind the hands.* In the same position as before, bring the body gently down between the bars without touching the ground with your knees; kiss the bar behind each hand alternately, and then rise up in the first position.

THE HORIZONTAL BAR. In the exercises on the horizontal bar, the first position is assumed by taking hold, with both hands, of the side of the bar towards you, and raising yourself until you can look over it. When you can perform this easily, place the hands on the farther side of the bar, and raise yourself as before. In the next exercise, place your hands on each side of the bar, then raise the body off the ground and endeavour to pass from one end of the bar to the other, by making a succession of small springs with the hands, and afterwards by passing the hands alternately; the legs being, in the meantime, kept close and as straight as possible. *Kicking the bar.* To perform this, hang by the hands and draw



up the feet very slowly until the instep touches the pole. This is difficult at first, but is soon learned; do not kick or jerk violently, or you may injure yourself. Next practise hanging by the right arm and right leg, while the left hang down; then by the right arm and left leg, and left arm and right leg. When perfect in these exercises, take hold of the bar firmly by the right hand, throw the right leg over the bar, hold on steadily by the joint of the knee, and next raise the body and get the left armpit over the bar; then by a little exertion you will be able to assume a riding position on it. *Circling the bar.* In doing this, hang by the hands, and curl the body gently over



the bar. If too difficult at first, stop for a minute or two and try something else, and after an interval try it again; it will soon be learned.

THE BALANCING BAR. Foremost among the preliminary exercises of balancing are the following: Standing on one leg, holding one foot high in the hand, kissing the toe, and sitting down. The two first, explain themselves sufficiently; to kiss the toe, lift one foot with both hands and raise it towards the chin, which should be slightly lowered to meet it; in sitting down, both arms and one leg should be thrust forward, and the other leg bent until the feat is performed; after which, he should carefully rise up, keeping his arms and legs out-

stretched, and steadily preserving his balance all the time. In dry weather, the soles of the shoes should be damped, as then the upper bar is smooth and slippery. Mount the bar either from the ground, or from a riding position on the bar itself; in the latter case, place the right foot on the bar, keeping the heel close to the upper part of the thigh, and allow the left foot only to hang perpendicularly down, with the toes pointing to the ground; then stretch both arms forward, and gradually rise on the foot, keeping your balance for a minute or two before you begin to walk. First, try to walk with assistance, then alone, balancing by extending the arms, and afterwards with the arms folded behind. When you can walk steadily and easily, endeavour to turn round on the bar, first trying at the broad and then at the narrow end, and lastly walk backward. When two persons in walking the bar, wish to pass each other, they should join arms, place their right feet forward, and turn quite round, by each stepping with the left foot round the right of the other. Other exercises are performed through the medium of the horse, the chair, &c.; and an exercise termed giant strides, consists of a pole set up with four ropes one of which each pupil grasps, and vaults or steps out in a circle, increasing the velocity by degrees, until at length a complete circle is made in the air without touching the ground with the feet.

II.

HABEAS CORPUS.—In English law a celebrated writ, used for various purposes, but chiefly put in force for the release or bailing of a person who considers himself illegally imprisoned, or entitled to be discharged on bail. The *Habeas Corpus Act* enacts—1. That on complaint and request in writing by or on behalf of any person committed and charged with any crime (unless committed for treason or felony expressed in the warrant), or as accessory, or on suspicion of being accessory before the fact, to any peti-treason or felony, plainly expressed in the warrant, or unless he is convicted or charged in execution by legal process; the Lord Chancellor, or any of the twelve judges in vacation, upon viewing a copy of the warrant, or affidavit that a copy is denied, shall, unless the party has neglected for two terms to apply to any court for his enlargement, award a *habeas corpus* for such prisoner, returnable immediately before himself, or any other of the judges; and, upon the return being made, shall discharge the party, if bailable, upon giving security to appear and answer to the accusation in the proper court of judication. 2. That the writ of *habeas corpus* shall be returned, and the prisoner brought up, within a limited time, according to the distance, not exceeding in any case twenty days. 3. That officers and keepers neglecting to make due returns, or not delivering to the prisoner or his agent, within six hours after demand, a copy of the warrant of commitment, or shifting the custody of a prisoner from one to another without sufficient reason or authority, shall, for the first offence, forfeit £100, and for the second offence £200, to the party grieved, and be disabled to hold his office. 4. That no person, once delivered by *habeas corpus*, shall be re-committed for the same offence, on penalty of £500. 5. That every person committed for treason or felony shall, if he require it the first week of the next term, or the first day of the next session of *oyer* and *terminer*, be indicted in that term or session, or else admitted to bail, unless the Crown witnesses cannot be produced at that time; and if acquitted, or if not indicted and tried in the second term or session, he shall be discharged from his imprisonment for such imputed offence; but that no person, after the assizes shall be opened for the county in which he is detained, shall be removed by *habeas corpus* until after the assizes are ended, but shall be left to the justice of the judges of the assize. This is the substance of that great and important statute, which extends only to the case of commitments for such criminal charges as can produce no inconvenience to public justice, by a temporary enlargement of the prisoner; all other cases of unjust imprisonment being left to the *habeas corpus* at common law. But even in these latter, it is expected by the Court that the writ should be immediately obeyed, otherwise an attachment will issue. By this law, a complete remedy is provided for removing the injury of unjust or illegal confinement; a remedy rendered the more necessary because the oppression arises in some cases equally from oversight as from design. For it has happened in England, and might so happen again, but for the strict enforcement of this law, that during the temporary suspension of the statute, persons apprehended upon suspicion have suffered a long imprisonment merely because they were forgotten.

HACKNEY CARRIAGE.—Under this term are included every carriage, except a stage carriage, or a carriage impelled by the power of steam, or otherwise than by animal power, with two or more wheels, which is used for the purpose of standing or plying for hire, at any place within the distance of ten miles from the General Post Office in the City of London. All hackney carriages must have four plates, namely, on the back, each side, and inside, to contain the name and address of the proprietor. Names and places of abode of proprietors, and number of plates, to be registered at Guildhall, in the City, under a penalty of forty shillings. The weekly duty of ten shillings to be paid monthly, on the first Monday of every calendar month. Plates to be delivered up on the discontinuance or revocation of licence, under a penalty of £10. Carriages, horses, harness, and other articles may be seized for duties and penalties incurred. Concealing plates, or preventing persons inspecting and taking number thereof, a penalty of £5.

Penalty of £10 for keeping or using a hackney carriage without licence, or without plate, and not delivering up plate when recalled. Penalty on the driver of a carriage plying for hire without plate, £5; or if the owner, £10. Forging the Stamp Office plate, a misdemeanour, subjecting to fine or imprisonment, or both. Upon complaint before a justice, the proprietor may be summoned to produce the driver, and failing so to do, subjects to a penalty of forty shillings. Any person desirous of obtaining a licence to keep, use, or let to hire a hackney carriage, must apply in writing to the Commissioners of the Police of the Metropolis, who, if on inspection, deem the carriage fit, and in proper condition for public use, shall grant the necessary certificate. Upon the production of such certificate at the office of *Inland Revenue*, a licence will be granted. After grant of licence, police may inspect carriages and horses; and if unfit for use, licence may be suspended. Penalty for using them after notice of suspension, £3 for each day.—See CAB-FARES, CAB-HIRING.

HADDOCK.—This fish is an inhabitant of the northern seas of Europe, and visits our coasts in December. The haddock resembles the cod in some of its properties. The small ones when boiled are less firm than the cod, and rather watery, but the larger fish are firm, and of a fine flavour. They are better for being hung up for a day or two with a sprinkling of salt. *Finnan haddocks* are cured at Findhorn (pronounced Finnan), a fishing village near to Aberdeen, famous for this fish. They are split, dried for a day or two in the sun, and hung up for a few days on wooden spits up a wide chimney filled with smoke from a fire made of peat and sea-weed, so as to receive a very slight flavour. They may be obtained in London; but great care must be employed in selecting them genuine. An imitation of these is said to be effected by laying the fish in salt for two hours, and then washing them over with pyroligneous acid, and, lastly, hanging them in a dry place for a few days. Haddocks may be kept in salt-water ponds, or preserves, and will become so tame as to feed from the hand. They are in season during the last three months of the year.

HADDOCK BAKED.—Clean and season three or four haddocks; place them evenly on a flat dish, with a border of paste or of mashed potatoes, neatly marked. Glaze with an egg, and place bits of butter here and there over the fish, and a piece inside of each. Garnish with potato balls, and bake for half an hour. Pour a little melted butter and ketchup over the dish, and serve.

HADDOCK BOILED.—Fill a fish kettle with cold spring water, to which add a little salt, vinegar, and horseradish, which improves the look of the fish, and prevents the skin breaking. Serve hot with oyster sauce.

HADDOCK BROILED.—Either score or skin the fish, and split it up; brush it over with a feather dipped in oil, peppered and salted, lay it whole upon the gridiron without either egg or crumb of bread, and eat, if fresh, with a squeeze of lemon; if dried and salted, they are eaten as a relish for breakfast or tea, with the addition of a piece of butter spread over them.

HADDOCK DRIED.—Scrape the fish, and take out the entrails; cut the fish open considerably below the vent, so that the blood may be entirely scraped from the backbone: cut off the points of the tails, take out the eyes and gills, wash the fish, and put some salt into the bodies; let them remain for twenty-four hours, then run a string through the eyes, and hang them in a dry place.

HADDOCK FRIED.—When perfectly fresh, take off the head and skin, and cut out the bones very carefully; divide each side into two, wash them well, and lay them in a cloth to dry; have the yolk of an egg beat up in a plate, dip the fish into it, and strew over it sifted bread crumbs, mixed with chopped parsley that has been boiled; fry the fish in fresh beef dripping or lard; garnish with fried parsley, and serve.

HADDOCK PIE.—Clean, skin, and wash the haddocks; take off the heads and tails, and cut the fish into two or three pieces; season them highly with finely minced onion, parsley, salt, and pepper; make forcemeat balls with a small boiled haddock. Put into the bottom of a dish some bits of butter, add the fish and forcemeat balls, with rather more than half a pint of white stock, and a little lemon-juice; put puff paste round the edge of the dish, and cover it with the same.

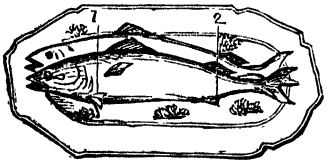
HADDOCK SMOKED.—Clean the haddocks thoroughly and split them; take off the heads, put some salt on the bodies, and let them lie all night; hang them in the open air the next morning for two or three hours, then smoke them in a chimney over peat or hardwood sawdust. When there is not a chimney suitable for the purpose, they may be smoked in an old cask, open at both ends, into which put some sawdust with a redhot iron in the midst; place rods of wood across the top of the cask, tie the haddocks by their tails in pairs, and hang them on the sticks to smoke. During the process, the heat should be kept as uniform as possible, as it spoils the fish when the temperature alternates between hot and cold. When done they should be of a fine yellow colour, which they should acquire in twelve hours at the furthest.

HADDOCK SOUP.—Take the meat from a haddock, pound it in a mortar, with half a pint of shrimps shelled; shred some parsley, and pound the whole with the crumb of a roll previously soaked in milk; form the mixture into balls with an egg, season with mace and pepper; and stew down two or three haddocks into good broth; strain it, take out the meat, press it through a sieve, boil it with parsley roots, thicken the soup, and serve with the forcemeat balls.

HADDOCK STEWED.—Skin and cut off the heads of three or four haddocks, divide each haddock into three or four pieces, and wash them clean. Put a tablespoonful of butter, with two tablespoonfuls of flour, into a frying-pan; fry till brown; mince two small onions, season them with pepper and salt, and put them in the pan with as much boiling water as will nearly

cover the pieces of fish: let it boil, put in the fish, and when one side is done, turn the other. Dish it hot, and pour the sauce over it; garnish with parsley. Omit the onions, if the flavour be not liked, and substitute a tablespoonful of ketchup and one of lemon-pickle.

HADDOCK, TO CARVE.—Deprive the fish of their heads and tails, by passing the slice across in the directions 1—2; then



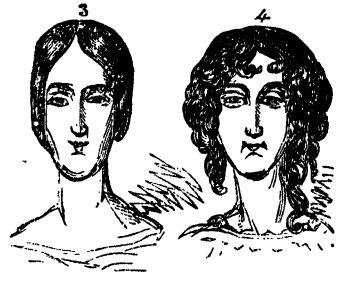
divide them down the back, so as to assist each person to a side; but if less be required, the thicker end should be given, as it is more esteemed. If the roe be asked for, it will be found between 1—2.

HAGGIS.—A dish peculiar to Scotland, and one that is prepared in a variety of ways. The Scotch haggis, as it is generally known, is made as follows:—Clean a fat sheep's pluck thoroughly. Make incisions in the heart and liver to allow the blood to flow out, and parboil the whole, letting the windpipe lie over the side of the pot to permit the phlegm and blood to disgorge from the lungs; after ten minutes' boiling, change the water for fresh. The lights cannot be overboiled. A half-hour's boiling will be sufficient for the rest; but throw back half the liver to boil, till, when cold, it will grate easily. Take the heart, the half of the liver, and part of the lights, trimming away all skins and black-looking parts, and mince them together finely. Mince also a pound of good beef suet, grate the other half of the liver. Have four mild large onions, peeled, scalded, and minced, to mix with the haggis mince. Have also ready a large teacupful of finely-ground oatmeal, toasted slowly before the fire till it is of a light brown colour, and perfectly crisp and dry. Spread the mince on a board, and strew the meal lightly over it, with a high seasoning of black pepper, salt, and a little cayenne. Have a sheep's paunch perfectly cleansed, and see that there be no thin part or cracks in it that will endanger its bursting. Sometimes two bags are used by way of security, or a cloth as an outer case. Put in the meat with half a pint of good beef gravy, or as much strong stock. Be careful not to fill the bag too full, but allow the meat and meal room to swell; add the juice of a lemon or a little good vinegar; press out the air, and sew up the bag; prick it with a long needle when it first swells in the pot, to prevent bursting; let it boil slowly for three hours. For *Lamb's Haggis*, slit up all the little fat tripes with scissors, and clean them thoroughly. Clean the kernels also, parboil the whole, and cut them into little bits. Clean and shred the web and kidney fat, and mix it with the tripes. Seasor with salt, pepper, and grated nutmeg. Make a thin batter with two eggs, half a pint of milk, and the necessary quantity of flour. Season with chopped chives or young onions. Mix the whole together. Sew up the bag, which must be very clean, and boil for an hour and a half. For *Calf's Haggis*, take the web of fat, the udder, the kidney, and best part of the calf's pluck. Blanch and boil the udder, and the split kidney and pluck, for twenty minutes. When cool, mince the whole. Blanch and chop two dozen sprigs of fresh young parsley, a few young green onions, and a few mushrooms. Stew the herbs in butter for three or four minutes, and moisten them with a little stock. When it becomes dry, season with salt and pepper. Mix the herbs and minced meat together, and put the mixture into a bag as before directed. Mix meanwhile the beaten yolks of two eggs with half a pint of rich and highly-seasoned veal or beef gravy, and two tablespoonfuls of pounded and soaked rusks. Put this into the bag with the other ingredients; add a little lemon-juice, and when the bag is sewn up, toss it about to blend the materials. Boil for three hours.

HAIR, ARRANGEMENT OF.—The manner in which the hair of the head should be arranged is an important subject of consideration. This is especially the case with females, whose hair has always been considered a personal ornament, which is capable of adding to the beauty of the face, or compensating in some cases for the absence of beauty, by its luxurious and its appropriate arrangement. The arrangement of the hair, in a physiological point of view, is governed by a law as precise as that which regulates any other of the secondary vital functions. Thus, on the head, the hair radiates from a single point—the crown—to every part of the circumference, making a gentle sweep behind towards the left, and in front to the right. In making our toilet, this natural arrangement of the hair should be interfered with as little as possible. Combing it or braiding it in an opposite direction to that which it naturally assumes, is highly prejudicial to its healthy growth, and if long persevered in, leads to its premature and rapid decay. The arrangement of the hair, in its artistic sense, is governed by certain general principles in relation to the face and figure. In all cases the oval should be sedulously observed by any and by all means of art. When the line of beauty does not exist, let the hair be so humoured that the deficiency shall not be remarked. In dressing of the hair, certain styles are adopted, which are termed the fashion for the time being; but as the fashion is never confined to one style, but always admits of some three or four, every female has it in her power to adopt that style which appears to her the most becoming. Nevertheless, the arrangement of the hair in many cases betrays an unpardonable ignorance of the general principles of taste, and a want of judgment in its individual application. For instance, nothing is more common than to see a face which is somewhat too large below, made to look grossly large and coarse

by contracting the hair on the forehead and cheeks, and then bringing it to an abrupt check, whereas such a face should have the forehead and cheek enlarged, and the hair suffered only partially to fall over, so as to shade and soften down the lower exuberance. The present prevailing style of brushing the hair back from off the forehead, although favourable to some faces, is in many instances detrimental to the form and expression of the features. This is the case where a large forehead and masculine features exist, and which are thus exaggerated and made to appear unnaturally obtrusive and prominent. In such cases it would be much better to arrange the hair in a band about the cheeks, gracefully sweeping around the ears, and terminating with a few careless curls behind. In the accompanying engravings *fig.* 1 represents a narrow brow and broad base visage, rendered more obtrusively prominent by dressing the hair close to the head, and turning it back. *Fig.* 2

displays the same face, much more advantageously set off by a classical mode of treatment. In *fig.* 3 it will be observed that the thinness and length of the face are considerably increased by the hard mechanical lines imparted to it by the injudicious arrangement of the hair. *Fig.* 4 furnishes a



correction of the error, and certainly gives to the face a more pleasing and plastic expression. The large curvilinear lines of the hair tend to carry out the natural sweep of a full face; in fact they repeat the original defective form. Dressing the hair close to a round plump face is therefore inappropriate; but on the other hand, if the hair is allowed to break up into small curves, the play of line will be found to impart a great improvement. *Fig.* 5 illustrates a style of dressing the hair exceedingly unbecoming to a short stout person, as it shortens both face and neck. *Fig.* 6 displays an obviously

better result produced by narrowing and giving apparent length to the facial lines. In cases where a plait or coronet is worn, it should not be placed too low on the forehead, as by dividing the forehead it may be said to cut up and consequently mar its breadth and beauty. All extreme styles of wearing the hair should, as a matter of course, be avoided, as they are offences against good taste and propriety, and only serve to excite ridicule. Among these errors may be mentioned bringing the hair close about the eyes, and letting it fall in long straggling loops below the chin; piling it up to an inordinate height, and sticking combs or enormous pins in it; parting it on one side, as worn by men; and other modes more or less eccentric and unbecoming. But even these defective arrangements are to be excused rather than one oversight which some females, with inconceivably bad taste, are apt to foster, namely, slovenliness. Sometimes the hair of females is to be seen hanging about the face and shoulders in a dishevelled state. With others it presents that bristly condition arising from the absence of the brush known as "fuzzy;" whilst some females are not ashamed to be seen in public with their hair screwed up in paper, as though they had just arisen from their beds. It ought to be certainly known that each and all of these offences against taste and propriety, not only detract from personal beauty, but have with them certain disagreeable associations, and never fail to produce a repulsive effect upon persons of ordinary refinement and good breeding.

HAIR-BRUSH. — In making the toilet two good hair-brushes are essentially necessary The best kind of hair-brush is that where the bristles are so arranged that they penetrate the hair and act upon the skin. A brush made upon this principle and which will be found very efficient, is easily procurable. After brushes are used they should be gently tapped together, to free them of the dust, dandriff, &c., and then

carefully put by, where they cannot be come at by other and possibly less cleanly persons. *When hair-brushes require washing*, never use soap. Dissolve a piece of soda in warm water, and set the brush in it in such a manner that the water only covers the bristles; the brush will almost immediately become clean and bleached. Dry the brush in the open air with the bristles downwards, and it will be found to be as firm as a new brush.

HAIR-DYEING.—The dyeing of the hair entails the necessity of a disagreeable process being frequently undergone, say at weekly intervals, in order to ensure the effect intended. This fact is sufficiently obvious, since the dye acts only on the hair above the level of the surface, and the hair that grows afterwards is naturally of the objectionable colour. It should also be remembered, that the powerful chemical agency employed to change the colour of the hair, may act detrimentally in some other direction, and derange some important functions at the expense of personal decoration. These drawbacks do not alter the main fact of the possibility of altering the colour of the hair by the application of certain ingredients, and the following is the process by which the end in view is attained:—Take some lime and reduce it to powder by throwing a little water upon it, mix this with litharge, in the proportion of one-fourth to three-fourths of lime; then sift it through a fine hair sieve. To apply it, put a quantity of it into a saucer, pour boiling water upon it, and mix it up with a knife to the consistence of thick paste; divide the hair into thin layers by the aid of the comb, and lay the mixture thickly into the layers to the roots, and all over the hair. When the head is completely covered, lay over it a piece of damp blue or brown paper, then bind a handkerchief closely over it, draw a nightcap over all, and retire to rest. In the morning, brush out the powder, wash the hair thoroughly with soap and warm water, then dry thoroughly, and apply oil or pomatum to it. A less disagreeable mode than the foregoing, and perhaps an equally efficacious one is as follows:—Take hydrosulphuret of ammonia, one ounce; solution of potash, three drachms; distilled or rain-water, one ounce. Mix and put it into a small bottle, labelling it No. 1. Then take nitrate of silver, one drachm; distilled or rain-water, two ounces; dissolve and label No. 2. In using it, apply solution No. 1 to the roots of the hair with a tooth-brush, continuing the application for fifteen or twenty minutes. Then separate the hair into whisps, and brush in solution No. 2, allowing the liquid to come in contact with every part. In this latter application, care must be taken that solution No. 2 does not penetrate to the skin, or a permanent dark stain will be produced. Previously to applying the dye, the hair must be freed from all grease; whilst in order to test the effect of the dye before applying it, a lock of hair may be cut off, and treated according to the foregoing directions; failure will then be guarded against and success guaranteed.

HAIR OILS.—*Rose oil.* Olive oil, one pint; attar of roses, ten drops. Essence of bergamot being much cheaper than the attar of roses, is very frequently substituted. *Macassar oil.* Oil of behn, one pint; oil of nuts, one pint; spirits of wine, one gill; essence of bergamot, a quarter of an ounce; essence of musk, a quarter of an ounce; essence of Portugal, a quarter of an ounce; attar of roses, ten drops. Infuse in a bottle near the fire for two or three hours; then set the bottle for a week, agitating it frequently.—See BANDOLINE; POMATUM.

HAIR PRESERVATION OF.—Under ordinary circumstances the hair may be preserved by the most simple means. In a sound and healthy constitution, the best preserver and beautifier of the hair is regular and careful cleaning. As a general rule, *the head cannot be too much brushed*, brushing acting as an active and healthy stimulant upon the skin, rendering the functions more healthy, and, as a consequence, the production of hair more easy and its maintenance more certain. On this account, hard and penetrating brushes are useful, but in using them it should be borne in mind that it is the *head* which requires brushing more than the hair; while, therefore, the brush is actively applied to the roots of the hair, the surface should be brushed with a light and gentle hand. Occasional washing with pure water is to be recommended, providing the hair is not very long, so as to render drying difficult. To assist in drying it thoroughly, dip the brush into a very little hair powder and brush it out again; after that, a little pomatum may be brushed in. With regard to *cutting the hair*, it is an operation which should not be performed too frequently, nor delayed too long; in ordinary cases it would be as well to have a small portion of the hair removed every month or six weeks. Where the hair is in an unhealthy condition, especially where much has fallen off, and a partial and impoverished growth has risen up to represent that which is lost, the short and impoverished hairs should be carefully and persistently cut, with the view of giving them bulk and strength, and improving their growth. The frequent plucking out of withered hairs is, also, productive of benefit, as the process is necessarily accompanied by much stimulation of the skin, which promotes the growth of the hairs individually and generally. *The excessive use of grease* in dressing the hair, is a common error which cannot fail to be productive of injurious consequences. There is a natural oil secreted by the hair, which in a healthy state should supply the requisite amount of moisture; sometimes this is defective, and the hair becomes dry and harsh, it is then proper to supply the deficiency by a little pomatum or oil. When the artificial grease is applied in excessive quantities, it produces a matting of the hair, prevents the pores of the scalp from acting freely, and thus prevents the supply of natural moisture from being communicated freely to the hair. *The kind of grease to be used*, should be animal fats in preference to vegetable oils, the latter being apt to become rancid, and not possessing such

active stimulant properties as the former. *The use of soap* in washing the hair, should be cautiously and sparingly observed, as it is apt to change the colour and texture of the hair. A little white soap dissolved in spirits of wine, is more effectual and less injurious than soap alone. After this the hair should be well washed with pure water. When *greyness of the hair* shows itself, it is an indication of want of tone in the hair-producing organs, and if this tone can be restored, the hair will cease to change, and at the same time further change will be prevented. The plan of cutting as previously recommended, combined with judicious plucking, tends very much to prevent the extension of greyness. *Keeping the head too much covered* is calculated to prove injurious to the hair, as by this means an excessive amount of heat is generated, which tends to enervate and relax the hair-producing organs, and consequently weaken and thin the hair; for this reason the wearing of nightcaps is to be condemned, and the practice of wearing the hat throughout the day is attended with similar evil consequences. *Curling the hair*, especially when frequently resorted to, is a most pernicious custom, the inordinate amount of heat that is employed to produce the desired effect, drying up the natural oils, and otherwise injuring the roots and texture of the hair. *Sudden heats and chills* of all kinds are also productive of ill consequences, and in short whatever accident or operation the hair is subjected to, widely differing from its normal state, must produce, more or less, those diseases and that decay to which it is peculiarly liable In every case it should be remembered, that the preservation of the hair depends not only on local stimulation, but also on constitutional treatment. This truth is the more to be insisted upon, as a common notion prevails that the mere application of certain specifics will remedy defects without any other aid. Above all, the advertised nostrums, which boast of being able to effect such extraordinary results, are not to be relied upon, and in many cases should be cautiously avoided. The simple truth is, that these specifics owe their boasted productive and restorative powers to precisely the same principle that attends the simplest formula, namely, the stimulation of the skin; and the application, therefore, must be governed by the same laws, and attended with the same results in the one case as in the other.—See BALDNESS.

HAKE.—A fish taken in considerable numbers in our seas, and sometimes used by the people dwelling on our coasts; but it is seldom brought inland and is not generally esteemed as an article of food. Nevertheless hake possesses nutritious qualities, and is easily digestible.

HAKE FRIED.—Hake is in general considered best fried, because it has otherwise an insipid taste. Cut a moderate sized hake into cutlets, lengthwise, about the size of ordinary veal cutlets, dry them well with a cloth, brush them over with egg and bread crumbs, and fry to a light brown; serve hot on a napkin with a garnish of fried parsley

HALIBUT.—A large fish resembling the turbot somewhat in flavour, but much coarser; it is sometimes caught weighing more than a hundredweight; the best size is, however, from twenty to forty pounds, as beyond this extent the fish becomes coarse. The most esteemed parts are the flakes over the fins, and the pickings about the head; but on account of its great bulk, the fish is commonly cut up and sold in pieces of a few pounds weight.

HALIBUT BOILED.—Put the fish into the fish-kettle, with the back undermost, cover it with cold water, and add to it a handful of salt. When it begins to boil, skim it carefully, and then let it just simmer till it is done. Drain it, garnish with horse-radish or parsley, and serve with plain melted butter, or with egg sauce.

HALIBUT FRIED.—Cut the fish into slices, and proceed as directed with HAKE.

HAM BAKED.—Soak the ham for an hour in water, take it out, and wipe it perfectly dry, cover it all over with a paste such as is made for a pie, and bake it in a moderately heated oven till the paste is of a deep brown colour. Hams, thus dressed, will have a richer flavour, and keep much longer than when boiled in the ordinary way.

HAM BOILED.—For a ham weighing twelve pounds, allow a quarter of an hour to the pound for boiling it; when of a larger size they will require a little longer time in proportion; during the boiling, keep it well covered with water; and when done, peel off the rind, powder baker's raspings over it, dress the knuckle bone with a frill made of white pepper, and serve.

HAM BROILED.—Cut ham into thin slices, and broil on a gridiron. If the ham is too salt, soak the slices in water before broiling, and afterwards dry them well with a cloth.

HAM COLD.—Procure a small ham of about nine pounds in weight, and soak it in cold water for about ten hours; then let it simmer for three hours by the side of the fire; when done, take it out and let it remain till cold; then cut off the skin as thinly as possible, but without leaving traces of it; let a piece remain upon the knuckle about two inches and a half in breadth, decorate the part with a festoon or vandyke of paper, carve the fat neatly to form a shell, and glaze it over lightly; garnish with savoury jelly; and decorate the dish with a few bunches of fresh parsley.

HAM ESSENCE.—This condiment may be obtained from an undressed ham, or from a ham which has been boiled; the first will give the most perfect essence of the meat; the last may be the most economical. Take a pound of the undressed lean of a ham, cut it into small pieces, and put it into a stew-pan with sufficient water to cover it; let it simmer till it is about three parts done; then add to it a pint of boiling water, and boil it till it is tender; strain it through a sieve, and take off all the fat; then boil it till it is reduced to about a quarter of a pint, and when cold put it into a bottle for use.

HAM FRIED, WITH EGGS.—First ascertain that the frying-pan is delicately clean; this may be known by melting a little fat on the pan, pouring it out, and wiping the pan briskly while still hot. The tenderness of the ham is improved by soaking the slices for a few minutes in lukewarm water, just previously to being dressed; they must afterwards be wiped quite dry in a cloth. Put the ham into a pan, and let it remain until nearly fried, draw it on one side, break the eggs on the edge of the pan, and slip them gently in; ladle the frying fat over them with an iron tinned spoon. When the eggs are done on the under side, place the ham on a hot dish, and either turn the eggs, or hold them before the fire for a minute, to take the rawness off from the upper side. Trim them as they lie in the pan; then take them up with a slice, and drain the grease off before dishing them with the ham. The dish is served either with the eggs lying on the slices of ham or with the eggs in the centre, and the ham, arranged neatly around them.

HAM PATTIES, WITH CHICKEN.—Skin and mince very finely, the breast or white fleshy parts of a chicken that has been either roasted or boiled, and about half the quantity of lean ham. Have ready in a small saucepan, a little good gravy, extracted from bones or trimmings, thickened with a bit of butter rolled in flour, add a little grated lemon-peel, white pepper, salt, a very little cayenne, and a teaspoonful of lemon-juice. Stir the mince in this till quite hot, fill up the patty-pans which have been previously lined with paste, cover with a crust, and bake to a light brown.

HAM PATTIES, WITH EGG.—In these, bread is used for paste. Scoop out part from thick slices of a quartern loaf; fill the patty-pans with ham finely minced, and lay a poached egg on the top. Bake till done.

HAM PATTIES, WITH VEAL.—Mince finely about six ounces of ready-dressed lean veal, and three ounces of ham; put it into a stewpan with an ounce of butter rolled in flour, half a gill of cream, half a gill of veal stock, a little grated nutmeg and lemon-peel, some cayenne pepper and salt, a spoonful of essence of ham, a little lemon-juice, stir this over the fire for some time, taking care that it does not burn; and when sufficiently done, fill up the patty-pans, and bake.

HAM PIE.—Half boil a ham, skin it, and take out the bone; fill the space with a rich forcemeat, and season the ham with pepper, mace, cinnamon, and cloves, pounded and well mixed; put this into a raised crust made of an oval shape, and lay over it a few bay leaves and some slices of fat bacon; cover it with a crust, and bake it for four or five hours.

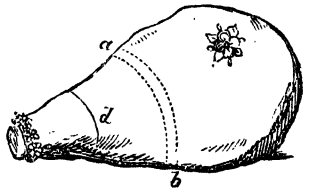
HAM POTTED.—To each pound of cold lean ham, add six ounces of cold roast veal. Mince these together finely; and afterwards pound it in a mortar with half a pound of fresh butter, which must be added by degrees. When thoroughly beaten, strew over it a teaspoonful of freshly pounded mace, a small nutmeg grated, and the third of a teaspoonful of cayenne pepper well mixed together. When perfectly pounded, press the meat into small potting-pans, and pour clarified butter over the top. If kept in a cool and dry place, this meat will remain good for a fortnight or three weeks.

HAM SAUCE.—Mince the lean part of a dressed ham, and then beat it into a pulp; stew it over a slow fire for half an hour in good gravy sufficient to cover it; then add some sweet herbs, pepper, and some beef gravy, and stew for half an hour longer. Cover it slowly during the stewing, and when done strain off any fat there may be upon it, and strain it through a hair sieve. This sauce is employed for those dishes that require to have a savoury and piquant flavour imparted to them.

HAM STEWED.—Soak a small ham for about three hours in cold water; boil it slowly for the usual length of time; trim it and put it into a stewpan, with some slices of veal underneath, with carrots, parsnips, and parsley, chopped, a seasoning of pepper and salt, and two or three bay leaves; add a quart of rich gravy, and let the ham simmer for about three hours; then take it up, and serve it with its own sauce, the fat having been previously well skimmed off.

HAM TOAST.—Mix with some lean ham grated, the yolk of an egg beaten up, and a seasoning of pepper; put some clarified butter into a fryingpan, and fry some slices of bread, which place before the fire afterwards to drain; then fry the ham mixture, cover the slices of bread with it, and serve.

HAM, TO CARVE.—Serve it with the back upwards, sometimes ornamented, and generally having the knuckle bone frilled with paper. Begin in the middle by cutting long and very thin slices from *a* to *b*, con-



tinuing down to the thick fat at the broad end. The first slice should be wedge-shaped, in order that all the others may be cut slantingly, which gives them an inviting appearance. Many persons, however, prefer the hock at *d*, as having more flavour; in which case it is cut lengthwise from *c* to *d*.

HAM, TO CHOOSE.—Hams with short shanks are best. To test the freshness of the meat, insert a knife under the bone, and if it comes out clean and smells fresh, the ham is good; but if the knife is daubed, and has a rank and disagreeable odour, the ham is bad.

HAM, TO CURE.—Choose the short thick legs of well-fed hogs. To each large ham allow half a pound of bay salt, an ounce of

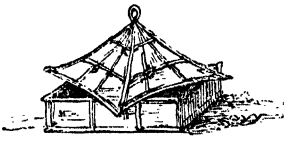
saltpetre, half a pound of coarse sugar, half a pound of common salt, a quarter of a pound of pepper, and an ounce of coriander seeds. Pound the ingredients, and beat and mix them well; but first rub in about six ounces of the salt and the saltpetre, and after two days, drain and rub in the remainder of the salt and the spices. Rub for half an hour; lay the hams in a trough, keep them carefully covered, and baste them with the brine every day; turn them occasionally, and rub the brine well in. When this is done, hang the ham in a cool dry place, where there is a thorough current of air, and let it remain there until it is perfectly dry; then remove it into the store closet, and lay it by in clean straw. *Another method* is as follows: Rub the ham well with common salt, and drain for three days; then dry it; and for a ham weighing eighteen pounds, take half a pound of moist sugar, half a pound of salt, and an ounce of saltpetre. Mix these ingredients, and rub the ham well with it; put it into a trough, and treat as other hams; but in three days pour a bottle of good vinegar over it. The ham will be ready in a month after this for drying, which operation is performed as previously directed. The smoking of hams is effected over the fumes of green birch, oak, broom-tops, oak-sawdust, or any perfumed wood.

HAM, TO PRESERVE.—The most effective method of preserving hams is, to brush over the whole of the cut parts with a paste made of quicklime and water; this will keep out the flies; but as it will not readily wash off before dressing, some little waste is entailed in removing it, and renders the method, therefore, open to this objection. The next best plan is to sew up the ham in canvas, which will also prevent the flies from contaminating the meat. In any case, the ham should be hung in a dry but cool room, out of the reach of the fire, which causes the fat to turn rancid. There should be a thorough ventilation through the apartment, without draught. Where there is no convenience for hanging, the ham should be cured in wood-ashes or straw.

HAMBURG BEEF.—Set a brisket of beef over the fire in a saucepan full of cold water; when it boils, skim well, then take out the beef, let it cool, and rub in three handfuls of salt, and two teaspoonfuls of saltpetre; beat it with a rolling-pin for half an hour; put it into a pickling tub, strew over it a small handful of salt, let it lie for four days, then turn it; add the same quantity of salt as before, and let it lie for four days more, after which sew it up in a piece of linen, and let it hang in smoke for a fortnight.

HAMMER.—A well-known tool, and one that is frequently called into requisition for household purposes. The best kind of hammer for these latter uses is that made wholly of iron, with the ordinary head or front, a nail-extractor behind, and the extreme portion of the handle fashioned as a chisel; several operations may thus be accomplished with this one tool.

HAND GLASS.—A portable glass case used for sheltering cauliflowers and other plants in winter, and during early spring, or to retain a regular supply of moisture to cuttings, and to otherwise preserve them until they have taken root. The most durable and convenient are made with cast iron framing of the form shown in the engraving, and are frequently constructed with



moveable tops, as here represented; but the only advantage which this affords is, that several of the lower portions may be placed upon each other, to protect any tall-growing shrub in severe weather, otherwise they are more troublesome to move, and more liable to break than if made entire.

HANDKERCHIEF.—Handkerchiefs are made of silk, cotton, and linen. Silk is the most durable, and preferred for common wear. White handkerchiefs are made of lawn or cambric; French cambric is considered the best. Handkerchiefs should be always marked with the owner's name or initials, as they are articles which are exceedingly liable to be mislaid.

The *Etiquette of the handkerchief* is as follows: Always use a white handkerchief on occasions of full dress, let it be of fine texture, and if ornamented with a pattern, it should be a neat one, and the colours subdued. In carrying the handkerchief, hold it freely by the hand in the centre, allowing the corners to form a fanlike expansion; do not roll it into a ball, twirl it into a rope, or twist it into fantastic shapes. Avoid using it too much, and especially refrain from doing so during meal-times; but if compelled to use it, observe extreme delicacy, turn the head away from the table, and make as little commotion as possible. If the handkerchief be scented, apply a moderate portion of perfume only; excess in this particular is associated with vulgarity.

HANDS, CARE OF.—It is acknowledged, by common consent, that dirty and coarse hands are marks of slothfulness and low breeding; while, on the contrary, clean and delicate hands are evidences of cleanliness and refinement. The person who has much manual labour to perform, cannot, of course, be expected to keep his hands of that delicate shape and texture, which another person, whose employment is light, may do. But, at the same time, it is always possible, under any circumstances, to keep the hands in that state during the intervals of labour, so that they shall not appear displeasing to the eye. To promote the *softness* and *whiteness* of the skin, mild emollient soaps, or those abounding in oil, should alone be used, by which means, also, chaps and chilblains will generally be avoided. The coarse strong kinds of soap, or those abounding in alkali, should,

for a like reason, be rejected, as they tend to render the skin rough, dry, and brittle. The immersion of the hands in alkaline lyes, or strongly acidulated water, has a like effect. *Roughness of the skin* may generally be removed by a little sand being mixed with the soap, or by rubbing the hands with pumice stone previously to applying the soap; in this operation, care should be taken not to allow the gritty particles to come into contact with the nails, or they will scratch them. *Dirt from the hands* is more effectually removed by warm water than cold: the hands however, are liable to become dirty sooner afterwards, and perhaps the best plan is, to remove the dirt with warm water, and afterwards rinse the hands in cold. *Washing the hands too frequently* has a tendency to discolour them with a brown or tawny hue. Under ordinary circumstances it will be sufficient to wash the hands three times a day, namely, on rising, before dinner, and on retiring to rest. After washing, the hands should be carefully dried with a moderately coarse towel; this will promote a free circulation through them, which will ultimately tend to enhance their appearance. Exposure to cold winds and rain is detrimental to the appearance of the hands, and gloves should always be worn. *Fruit and ink stains* may be eradicated from the hands, by immersing them in water, slightly acidulated with oxalic acid, or a few drops of oil of vitriol, or to which a little pearlash or chloride of lime has been added; observing afterwards to rinse them thoroughly in clean water, and not to touch them with soap for some hours, as any alkaline matter will bring back the stains. The hands may be *preserved dry* for delicate work, by rubbing a little club moss, in fine powder, over them. *Hands that perspire, and are inordinately hot*, may arise from some temporary derangement of the system, or from a constitutional peculiarity; this may be partially remedied, by inserting the hands into a water-jug full of water, and lowering them gradually until the elbows reach, letting them remain at this point for two or three minutes; this operation will, in general, keep the hands pleasantly cool for some hours afterwards. In conclusion, it must be observed that an over-anxious care for the state of the hands is to be deprecated. Some persons who are possessed of a small and delicate hand are so vain of it that they are constantly displaying it in an obtrusive manner, which is very offensive to the looker-on. And in some instances the fear of putting the shape and outline of the hand out of form, is so great, that every kind of work is avoided, and even accomplishments, such as the harp, piano, and guitar, are avoided, for fear of expanding the hand, and flattening the extremities of the fingers; this is a preposterous error, for the beauty of the hand does not alone consist in whiteness and a statue-like contour, but in certain indurations, which may be termed "expression," and which are imparted by the pursuit of suitable occupations, and appropriate accomplishments.—See CHAPPED HANDS, CHILBLAINS, WARTS, &c.

HANDWRITING.—See PENMANSHIP.

HANGING, RECOVERY FROM.—As hanging is a very frequent means of committing suicide in this country, it is highly desirable that all persons should be put in possession of the best remedies for restoring animation to a body so found; and that their services may be directed in a proper and beneficial course to the unhappy person, it is necessary that all should know the physiological cause of the suspended animation, so that their efforts may be directed on sound principles, and with scientific views of affording aid. In the first place, the cause of partial or complete death by hanging is not, as erroneously supposed, the consequence of a broken neck, and the pressure of a dislocated bone of the vertebral column on the spinal marrow; for if such were the case, no person could ever by any possibility recover; as surgical art has never yet, nor can discover a means of reducing a luxation of the spinal vertebræ. The cause, then, of death by hanging, results entirely from the pressure of the rope or ligature employed on the large veins returning with their impure blood from the head to the heart; these vessels are called the jugular veins, and the effect of this pressure or obstruction is to cause a rapid collection of blood in the veins of the head face, and on and in the brain. The arterial supply of blood to these parts being still the same, and the discharging channels blocked up, causes a rapid distension of the veins, which goes on for a few seconds till the delicate texture of which their coats are composed, being unable to bear further dilation, bursts, and their contents are effused into the cavities of the brain, where it immediately presses on the origin of all the vital nerves, and produces that disorganization which results in death; the person dying from apoplexy or venous effusion on the brain. At the same time the blood having been checked at the points of external pressure, forms a clot in the jugular veins, of itself presenting a barrier to the return of blood, should the ligature be removed. *Treatment.*—Immediately cut down the body, or hold it up while another cuts the cord and remove the stricture from the throat; lay the body on its back, bleed from one or other of the jugular veins, or from both arms at once; open the waistcoat and dash cold water in sudden splashes on the face and chest, apply hot bricks close to the soles of the feet, imitate artificial breathing by inflating the lungs by a pair of bellows through one of the nostrils, closing the lips with the hand, and then by pressure on the stomach, expelling the air. As soon as a sufficient number of tiles or bricks can have been heated, place them in a row under the spine, and let the body rest on them; rub the neck sharply where most discoloured with sweet oil and brandy, to cause absorption of the clot formed by the pressure, and place hot bottles or heated bricks between the thighs, and finally extend the friction of oil and brandy with or without hartshorn, over the region of the heart and stomach. These means vigorously applied, without confusion, but with despatch, and

in regular order, will, if persevered in sufficiently long, restore animation if any spark of life is left in the body. There is but one other means, the most powerful, but unfortunately the least available, and that is electricity or galvanism. When this agent can be procured the galvanic current is to be passed from the back of the neck and discharged through the stomach, or made to traverse the chest. To recapitulate: the moment the body has been taken down, and the pressure removed, while the bottles are being filled with water and the bricks or tiles placed in the fire to heat, bleed as directed to the extent of twelve or twenty ounces, dash the cold water on the face and chest, and having dried the latter, using the embrocation vigorously, while the lungs are being inflated, and as soon as possible bring into operation the efficacy of heat to the spine, feet, and thighs, continuing at short intervals the artificial respiration, the friction, and cold effusions on the face.

HARE BAKED.—To bake whole, prepare as for roasting, putting a few pieces of butter, and a little milk into the dish; bake it in a moderate oven, and baste it several times during the baking. Another method of baking a hare, is to cut it up, season it with pepper, salt, and dress it with a little butter, and then bake it for about three hours in a covered jar or pan.

HARE BOILED.—Put the hare into salt and water, together with a beef marrow-bone and a piece of bacon; when the hare is nearly done, take it out; bruise some peas, boil them in the broth; take out the beef bone, put in the hare, and boil again till the peas are done, then strain; and serve the hare with the clear stock poured over it.

HARE BROILED.—Cut off the legs and shoulders of cold dressed hare; flatten and season them highly; broil them on a quick clear fire; froth with cold butter, and serve them hot with venison-sauce.

HARE CAKES.—Mince the best parts of the hare with a little firm mutton-suet. Season the mince highly. Pound it in a mortar, and make up the cakes with raw eggs, as small cakes or sausage-rolls; flour and fry them, or bake them in a Dutch oven.

HARE COURSING AND SHOOTING.—The hare is naturally a timid animal, and extremely swift in motion when pursued by dogs. Hare hunting requires no ordinary capacity to overcome its difficulties. In the first place, a hare, when found, generally describes a circle in the course, which is in itself not only more difficult to follow, but it naturally brings her upon her foil, which is the greatest trial for hounds. Secondly, the scent of the hare is weaker than that of any other animal hunted, and it is always fainter the nearer she is to her end. When the hare is started, those engaged in hunting her cannot keep too quiet; for if she be greatly alarmed, she is very apt to be headed back, and the dogs are rendered liable to overrun the scent every instant. Instead of pressing closely upon the dogs, it is better to keep wide of them. Through the whole of the run the hounds should be left almost entirely to themselves, nor should they even be much hallooed. If the hare doubles, let the dogs hunt through the doubles. On high roads and dry paths the huntsman should always be doubtful of the scent, nor give his dogs much encouragement; but when a hit is made on either side, it is then right to encourage them by cheering. Thick hedges form favourite hiding places for the hunted hare, they should, therefore, be well beaten for some distance before the hounds; but this should be done by an attendant, for if the huntsman beat the hedge himself, the hounds will be on the watch, and the hare is likely to be chopped. When hares set off down the wind, they rarely return; and hounds cannot be pushed on too much, particularly when the hare is sinking. *Hare shooting* is generally practised in connection with shooting other game, a true sportsman rarely taking the field for the express purpose of shooting the hare. If, however, one should run before the sportsman or cross his path, and the temptation is irresistible, let the sportsman aim at her head, and she will be a more certain shot, and much cleaner killed than by any other aim; do the same, also, if she be running in a straight line from you. If you have a double gun, and the second barrel is loaded with shot, one or two sizes larger than those in the first barrel, give her that; she will be cleaner killed in that way, and will certainly be pulled up at any distance within sixty yards. When a hare is making towards you, it is better not to shoot until she approaches very close, otherwise her skull will ward off the shot. *The law relating to the taking or killing hares*, enacts: that if any person shall, in the night-time, take or kill any hare in any warren or ground lawfully used for the breeding or keeping of hares, whether enclosed or not, every such offender shall be deemed guilty of a misdemeanour; and if any person shall unlawfully and wilfully in the daytime take or kill any hare, in any warren or ground, or shall at any time set or use therein any snare or engine for the taking of hares, every such offender being convicted thereof before a justice of the peace, shall forfeit and pay such sum of money, not exceeding five pounds, as to the justice shall seem meet: provided always, that nothing herein contained shall affect any person taking or killing in the daytime any conies on any sea-bank or river-bank in the county of Lincoln, so far as the tide shall extend, or within one furlong of such bank.

HARE FRIED.—When the hare is skinned, lay it on a gridiron till heated through; then quarter it, and fry it to a nice colour in lard; soak some toasted bread in beef stock and white wine, with pounded ginger and cloves; strain it, add a little verjuice; and serve up the hare with butter, sugar, mustard, and lemon-juice.

HARE HASHED.—Skin and stuff a hare, tie some thin slices of bacon over it, and spit it; set it before the fire, and half-roast it, then cut it in pieces, and put it into good beef gravy; simmer it for two hours, then add a gill of port wine; let it stand a little

time longer over the fire, and then serve it with currant-jelly.

HARE JUGGED.—Cut up the hare, and put it into an earthen pipkin, with one quart of stock gravy, a large onion stuck with cloves, pepper, and salt, and a slice of lemon. Cover it close; set it into a pan of boiling water, and keep it boiling for three hours, until the hare is tender; then pour the gravy into a saucepan; put into it a glass of port wine, and a little more stock gravy, if there be not sufficient; season with pepper and salt, and thicken with flour; boil it up and pour it over the hare, and serve immediately.

HARE MINCED.—Mince the flesh of cold dressed hare finely, laying aside bones, &c.; season with salt, pepper, and mixed spices. Mix it up thoroughly with a little water or stock; and, having browned some butter in a saucepan, put them into it; and mash them well with a wooden spoon, till they are nearly ready, to keep them from running into lumps. Put more gravy to it, stew for twelve or fifteen minutes, and serve.

HARE PIE.—Cut a hare into pieces; season it with pepper, salt, nutmeg, and mace. Put it into a jug with half a pound of butter; close it, set it in a pan of boiling water, and make a forcemeat with a quarter of a pound of scraped bacon, two onions, a glass of red wine, some crumbs of bread, a bunch of sweet herbs, and the liver of the hare cut small. Mix this with the yolks of three eggs, raise the pie, and lay the forcemeat at the bottom of the dish. Then put in the hare, together with the gravy extracted from it; put on the lid, and bake it for an hour and a half in a moderate oven.

HARE POTTED.—Let the hare hang for some days; cut it into pieces; bake it with a little beer at the bottom of the pan, and some butter on the top; pick the bones and sinews from it; having strained it from the gravy, beat it in a mortar with the butter from the top of the gravy; add salt, pepper, and pounded cloves. Put it into pots; set it in a slack oven for a few minutes, and pour over it clarified butter; let it stand to cool, then tie it down; it will thus keep a long time.

HARE ROASTED.—Stuff the hare with the following mixture:—Bread crumbs, suet, the liver parboiled, pepper, salt, grated lemon-peel, parsley, lemon-thyme, nutmeg, and the yolks of two eggs, all chopped and mixed together. Put this inside the hare, and skewer it up; boil the hare for an hour, then take it up and roast it for an hour, by which means it will be thoroughly done without being over-roasted. Make a gravy by taking a pint of stock gravy, a little flour to thicken it, a tablespoonful of ketchup, half a gill of port wine, two tablespoonfuls of currant jelly, a little pepper and salt, and a bit of butter; pour it into the dish with the hare, and serve.

HARE SAUCE.—1. Stew the liver of the hare in some good beef gravy; when quite tender, chop it fine, with a shalot, and a bunch of pot-herbs; add a teaspoonful of chili-vinegar, half a gill of port wine, and two tablespoonfuls of red-currant jelly. 2. Steep the crumb of a penny roll in port wine; put it on the fire with a piece of butter: beat it smoothly, add pepper, salt, and currant jelly, with a tablespoonful of vinegar; let it boil, and serve it up hot. 3. Simmer together half a pint of red wine and a quarter of a pound of sugar, in a covered saucepan for twenty minutes; serve hot.

HARE SOUP.—This soup may be made either clear or thick as desired. For *clear hare soup*. Cut a large hare into pieces, and put it into a saucepan with a knuckle of veal, and a cowheel; add five or six quarts of water, herbs, onions, &c., and a little mace; stew it over a slow fire for two hours, or until the gravy is good; then take out the back and legs, cut the meat off, returning the bones, and stewing the whole until the meat is nearly dissolved. Then strain off the gravy, put a glass of wine to every quart of the soup, and send it to table with the meat cut into small pieces.

For *thick hare soup*. Cut the hare into pieces and lay them at the bottom of a large jar with a slice or two of lean ham, an onion, a head of celery, and a bunch of sweet herbs, with about three quarts of boiling water. Put the jar into an oven, and let it remain until the hare is stewed to shreds. Strain off the liquor, take the meat from the bones and pound it in a mortar, mixing it with the soup until it is quite thick. Let it boil up once, with a tablespoonful of ketchup, a glass of port wine and a little cayenne pepper. Send it to table with forcemeat balls in the tureen, made with the chopped liver, and fried. The same kind of soup may be made in a more economical way, by cutting off the head and shoulders of the hare, and roasting only the hind quarters; then, on the following day, stew down the bones along with the head and shoulders, and make the whole into a soup, as previously directed. A pound or two of shin of beef will increase the quantity, and a few minced roots, with a mushroom, will improve the flavour.

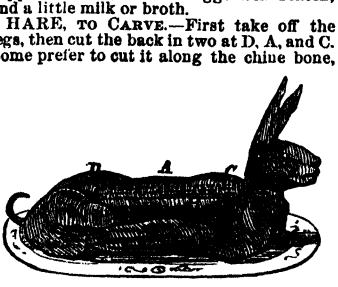
HARE STEWED.—Divide the hare just below the ribs; cut the fore part into pieces, and put them into a stewpan with a little mace, an onion stuck with cloves, a few peppercorns, an anchovy, and a bunch of sweet herbs; add sufficient water to cover them, and let them stew gently. In the meantime, put some stuffing into the hind part: tie it up, lard it, and roast it; flour it well, and baste with butter. When the stew is tender, take out the meat, strain the liquor, add to it a glass of red wine, a tablespoonful of ketchup, and a piece of butter rolled in flour; stir it over the fire till somewhat thick; then take up the roasted portion of the hare, lay it in a dish, place the stewed pieces around, and pour the sauce over. Serve with some good gravy, separately, in a sauce tureen.

HARE STOCK.—Cut up the fillet from a sirloin of beef; steep it in port wine and vinegar; cut it open and stuff it with hare stuffing; make it up as nearly as possible

into the shape of a hare; roast it before a brisk but not a fierce fire; baste with port wine and vinegar, in which a clove of garlic has been bruised, and afterwards with butter and a little mace. Take up the gravy that is in the dripping-pan, work it well with melted butter, and put it into the dish. Serve it with hare sauce.

HARE STUFFING.—1. Parboil the liver of a hare, and mince it; add an equal quantity of grated bread crumbs, double the quantity of fat bacon chopped, and a piece of butter the size of a walnut. Season with pepper, salt, nutmeg, chopped lemon, thyme, and parsley; bind with an egg well beaten. 2. Boil the liver and finely mince it with two ounces of beef suet; chop also a little parsley, some sweet herbs, with a little grated lemon-peel; season with pepper and salt, and mix the whole together with an egg. 3. The crumb of a penny loaf grated, three ounces of marrow, a small quantity of minced parsley, a shalot, and a boned anchovy; a teaspoonful of lemon-peel, and the same quantity of nutmeg; add salt, pepper, and cayenne to taste; parboil the liver and mince it finely. Mix the ingredients with the yolk of an egg, and the crumbs soaked in a very little red wine. 4. Chop, and afterwards pound in a mortar, half a pound of beef suet, an equal bulk of soaked bread crumbs, lemon-peel, parsley, and a sprig of thyme chopped: season with pepper and salt, add two eggs well beaten, and a little milk or broth.

HARE, TO CARVE.—First take off the legs, then cut the back in two at D, A, and C. Some prefer to cut it along the chine bone,



as dotted in the engraving. Next take off the shoulders, and split the head in two; to hold it firmly, stick the fork into one of the eyes, which will render the operation more easy of accomplishment. Serve with ample gravy on each plate.

HARE, TO CHOOSE.—A hare is stiff when freshly killed, and, if young, the ears tear easily, and the claws are smooth and sharp; a narrow cleft is also to be observed in the lip. It should be kept for five or six days before it is dressed; and in cold weather it will remain good for ten or fourteen days.

HARE, TO PREPARE FOR ROASTING.—As soon as the hare is received, take out the liver, &c., wipe the inside of the hare thoroughly, season it with a little pepper, and hang it up. When required for dressing, cut off the fore-legs at the first joint, raise the skin of the back, and draw it over the hind legs; leave the tail whole, then draw the skin over the back, and slip out the fore-legs; cut it from the neck and head; skin the ears, and leave them on. Clean the vent. Cut the sinews under the hind-legs; bring them forward, run a skewer through one hind leg, the body, and another hind leg; do the same with the fore legs; lay the head rather back; put a skewer in at the mouth, through the back of the head, and between the shoulders; put in the stuffing, and tie the hare round with a string, passing the string over the legs to keep them in their places.

HARE-LIP.—This disease, so called from a fancied resemblance to the appearance of that animal, is one of those distressing malformations that are born with a child. Hare-lip is more frequently found in the upper than in the under lip, and fortunately it is so, for, in the latter case, the child is unable to articulate, or retain the saliva in the mouth, creating a source of ceaseless discomfort and pain. The disease consists of a fissure or longitudinal division of one or both lips, having a space between, wider at the bottom and narrowing to an apex at the gum, resembling the outline of the letter V reversed, A. This condition is called the simple hare-lip, but sometimes the fissure is double, having a pendant piece of the lip in the centre of both fissures. The compound hare-lip is that condition of deformity where the cleft extends along the bones of the palate, over the whole arch of the mouth, while in some cases the bones of the palate are entirely wanting—a most distressing malady, as the child can never articulate, and only with great difficulty eat or drink, as all sustenance passes into the nostrils. Independent of the deformity attending this malformation, the infant so afflicted is prevented from sucking, and must be reared by hand.

The *treatment* of this misfortune is very simple and most satisfactory, and no mother out of apprehension of her child's suffering should neglect to have the deformity cured; which, when in the simple form of the cleft lip, can be effectually done. The operation consists in making the two edges of the fissure even, bringing them together by means of two short silver needles, and keeping them in that position by silk thread passed over their ends like the figure 8, till the process of union has taken place, requiring about eight or ten days, when the needles are withdrawn, and in a week longer the permanent cure will be effected. The best period for performing the operation is between the age of six and twelve months, before the child can entertain any alarm at what is to be done, or by cries and restlessness materially interfere with the success of the operation.

HARICOT.—See BEEF, MUTTON, VEAL, &c.

HARICOT BEAN.—This species of pulse is extensively used in French cookery: it is, however, but little used in England, although its nutritious qualities, have been proved by experiments to be greater than those of any other garden vegetable, and nearly equal to bread. They also possess

the advantage of being very cheap, and easy to procure, and they may be obtained for about fourpence a quart of cornchandlers or seedsmen. They will grow freely in many soils, but are very liable to the slug; it is therefore advisable, when they spring from the ground, to protect them on each side by a layer of soot and lime. When fully ripe, the beans should be taken out of the pods, put into bags, and kept in a dry situation.

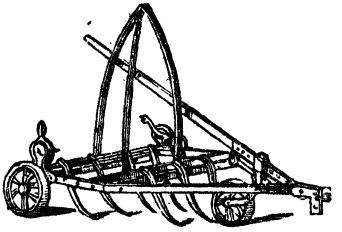
HARICOT BEANS, TO DRESS. — There are several modes of dressing haricot beans; the following are the most approved: 1. Put a quart of beans into half a gallon of cold soft water, with an ounce of butter; simmer them slowly for about three hours, drain them, and put them into a stewpan, with a little salt, pepper, chopped parsley, two ounces of butter, and the juice of a lemon; place them on the fire for a few minutes, stir well, and serve. 2. Boil some water in a saucepan, with some salt and a little butter; then put in the haricots, and when they are quite tender, strain off the water; then add a good-sized piece of butter, and let them simmer for a short time, taking care that they do not become brown; then add a cupful of good gravy; season with pepper and salt, and just previously to serving, thicken with white of egg. 3. Boil a quart of haricot beans in water as directed in the preceding receipt, but with the addition of salt, pepper, sweet herbs, two cloves, and a bay leaf; when the beans are boiled, drain them in a cullender; then boil for a short time, a pint of rich milk, and a few tablespoonfuls of cream, with a little salt and pepper; put in the haricots, let them boil for a few minutes, then serve.

HARNESS.—See BIT, BRIDLE, REINS, SADDLE, &c.

HARRIER.—A species of dog occupying an intermediate station between the beagle and the foxhound. The character and speed of the hound depend greatly upon the nature of the country hunted over. The smaller harrier will best suit a deeply enclosed country; but where there is little cover, and less doubling, greater size and

fleetness are requisite. The characteristics of a good harrier are, a clean and closely trimmed neck, the head fine, but not too sharp; the ear-flaps thin; the nostrils open; and the deep chest embraced by shoulders broad but light, and well thrown back. The fore-legs should be quite straight, clean, long, and terminated by a round ball-like foot. The hind limbs should be angular, and the thighs powerful.

HARROW.—An agricultural implement employed to pulverize the ground which has been moved by the plough, to disengage from it the weeds and roots which it may contain, or to cover the seeds of the cultivated plants when sown. According to the diversity of soils, and the particular use to which the harrow is to be applied, its form undergoes considerable modification. Strong heavy lands require heavier harrows than those of a light nature. When the land is very foul, and calculated to choke the teeth of the harrow, a powerful and effective instrument is generally used, known as *Finlayson's harrow*, as represented in the annexed engraving. This instrument possesses the



following advantages:—From the position in which the tines are fixed, their points hanging nearly on a parallel with the surface of the land, the instrument is drawn with the least possible waste of power. From the curved form of the tines, all stubble, couch, &c., is brought up to the surface, and rolled over them—the instrument thus relieving itself in its progress. The readiness with which the cultivator can be adjusted, so as to work to any depth, renders it of great value, inasmuch as the regulator or lever can be moved up and down with the greatest ease, each notch upwards giving the tines an additional depth of one and a half or two inches. The axle-tree of the wheels is also capable of being moved up and down by a screw, so that the whole implement can be easily adjusted to work at any depth, from four to ten inches. In turning at the headlands the lever is pressed down to the lowest notch, thereby elevating the front tines out of the soil, and allowing the instrument to be easily moved round. *Armstrong's harrow* differs from others in the form of its framing, which is of iron and of a zig-zag shape, so arranged that the tooth or tine shall be fixed at each angle, in such manner that the lines formed by them shall be equidistant over the breadth of the land they are intended to cover. They can be adapted either for heavy or light work. *Morton's revolving brake harrow* proves an effective implement on light sandy soils. The principle is somewhat similar to

that of the hay-making machine, except that, in place of the surface, it goes to the very bottom of the furrows, bringing up a far greater quantity of weeds than any fixed harrow could be expected to accomplish. *Biddell's extirpating harrow* is intended for breaking up land when it is too hard for the heaviest harrows, and for bringing winter fallows into a fine state of tillage. In working summer lands, by the shape of its teeth it is calculated to bring to the surface all grass and rubbish; it is also found generally useful for accomplishing fine tillage. *The Norwegian harrow* is to be met with in two or three varieties. It is most valuable immediately after ploughing; it breaks and pulverizes the land, leaving three or four inches' depth of fine mould, well prepared for seed; it saves the use of the heavy and middle-sized ordinary harrows, the small seed harrows, once after sowing, being sufficient.

HARROWING.—In performing this operation, it is not only necessary that the implements should be of different sizes, but that they should be worked in different ways, according to the strength and condition of the soil on which they are employed, and the nature of the work to be executed. When employed to reduce a strong obdurate soil, not more than two harrows of the old or common sort should be yoked together, because they are apt to ride and tumble upon each other, and thus impede the work, and execute it imperfectly. On rough soils, harrows should be driven as fast as the horses can walk, because their effect is in direct proportion to the degree of velocity with which they are driven. In ordinary cases, and in every case where harrowing is meant for covering the seeds, and the common implement is used, three harrows are the best yoke, because they fill up the ground more effectually, and leave fewer vacancies than when a smaller number is employed. The harrow-man's attention, at the seed process, should be constantly directed to prevent these implements from riding upon each other, and to keep them clear of every impediment, from stones, lumps of earth, clods, &c.; for any of these, prevents the perfect working of the implement, and causes a mark or trail upon the surface, always unpleasing to the eye, and generally detrimental to the vegetation of the seed. Harrowing is usually performed first in length, then across, and finally in length, as at first. In the first part of the process the harrows should be drawn in a straight line, without suffering the horses to go in a zig-zag manner; the horses should also enter fairly upon the ridge, witnout making a curve at the outset. In some instances an excess of harrowing has been found prejudicial to the crop; but it is always necessary to give so much as to break the furrow and level the surface, otherwise the operation is imperfectly performed. The proper juncture for harrowing is a consideration of the greatest importance. It should be executed when the soil is in a proper state, between wet and dry, and according to the nature of the land; for, if too wet, it will often do more harm than good; and if too dry, it will, on tenacious land, have very little effect. In a climate like that of this country, where the opportunities for many of the processes of husbandry are so transient and precarious, it must indeed occur to every farmer that this is one that should never be neglected, and that, particularly at seed time, he should always possess the power of putting the crop into the ground within the shortest possible space of time. Sometimes the soil, soon after ploughing, or after rain, is found in such a state of adhesion as not to be broken readily; a day or two after, it may, perchance, be found in exact temper; if at that moment it is not harrowed, the right time is lost. A drying north-east wind may spring up, and in two days the temper of the soil is gone; each piece of earth that now moves is a clod, and the effect of the harrow upon them is nearly lost.

HARTSHORN.—A medicinal agent obtained from the antlers of the stag, or any kind of bone, by distillation. The salt of hartshorn has a pungent odour, a hot and saline taste, and powerful alkaline reaction; it is used as a stimulant and antiacid. Spirit of hartshorn is the old name for water of ammonia. Hartshorn shavings are used for a variety of purposes in the arts and manufactures. A decoction is frequently employed for fining beer and other liquors, it being preferable to isinglass on account of its cheapness.

HARTSHORN JELLY.—Boil half a pound of hartshorn in three quarts of water, over a gentle fire, till it becomes a jelly; when a little hangs on a spoon it is done enough. Strain it into a well-tinned saucepan, and add to it half a pint of white wine, and a quarter of a pound of loaf sugar. Beat the whites of four eggs to a froth, stir it sufficiently for the whites to mix intimately with the jelly, and pour it in as it cooling it; boil it for two or three minutes, then put in the juice of four lemons, and let it boil for two minutes longer. When it is finely curdled and of a pure white, pour it backwards and forwards into a jelly-bag until it becomes quite clear; fill the jelly-glasses, put some thin lemon-rind into the basin, and when the jelly is all run out of the bag, fill the rest of the glasses, and they will appear of a bright amber colour. Add sugar and lemon-juice agreeably to the palate. This jelly is lighter of digestion than isinglass, and very nutritive. It may be employed for all the purposes of diet in the same way as isinglass.

HARVESTING.—The operation of gathering, cutting, or rooting-up field crops, and drying, or otherwise preparing them for winter use. The first harvest which occurs in Britain and similar places is that of the forage grasses or other plants made into hay; the next is the harvest of corn crops; and the third the harvest of root crops, such as potatoes, turnips, carrots, mangold-wurzels, &c. The commencement of harvest is necessarily regulated by the state of the weather, and varies in different seasons. It is, therefore, an object of importance to the farmer to ascertain the exact time when it may be begun, for he must

employ extra hands to perform the work; and as it only lasts during a comparatively short period, the labourers receive high wages, and are maintained at heavy cost. It is also attended with the most anxious solicitude, for it is a business which cannot for a moment be neglected; and personal superintendence, from the dawn of the day to its close, is necessary for its proper management. To facilitate the particular operations of farming, all other work should be previously disposed of, and every preparation made for the performance of this; the barns should be thoroughly swept out, the stack frames repaired, and every tool in complete condition. The straw bands should be in readiness for tying the sheaves, as well as the ropes for securing the stacks; and arrangements should be made in the house for the regular supply of whatever is to be furnished to the labourers, so that every unnecessary delay may be avoided.—See BARLEY, CORN, HAYMAKING, OATS, REAPING, &c.

HASH.—See BEEF, FOWL, LAMB, MUTTON, &c.

HASTY PUDDING.—Boil, in a quart of good milk, about a quarter of a pound of flour, until it becomes somewhat thick, put it into a basin with some butter and a little ground nutmeg, and sweeten to taste; when quite cold, mix in six eggs, well beaten; line a dish with thin puff paste, covering the bottom of it with any kind of preserve; pour the pudding over it, and bake in a slow oven for three-quarters of an hour.

HAT.—A hat should be chosen possessing a short, smooth, fine nap, of a good black colour, and sufficiently elastic to resist ordinary wear and tear, without breaking or giving way. The shape of the hat should correspond with the contour of the face; persons with large features should never wear a broad-brimmed hat; while those whose faces are thin should wear a hat with a narrow brim. Although much greater latitude is now allowed in the fashion of hats than formerly, still all eccentricity should be avoided, and a person should not be hasty in adopting a new style because it happens to be in vogue, without first ascertaining whether that style is suitable for him. During the summer months, white hats will be found more pleasant and cool to wear than black ones. A shabby hat should never be worn, as it is the most conspicuous part of the attire, and not only looks bad in itself, but imparts a mean appearance to the whole person. The care and preservation of a hat will be found to depend in a great measure upon the following precautions:—If your hat be wet, shake it out as much as possible, then brush with a soft brush quite smooth, or with a linen cloth or handkerchief; wipe it very carefully, keep the surface flat and smooth in its ordinary direction; then with a small cane beat the nap gently up, and hang the hat up to dry in a cool place. When it is dry, place it on a table, and brush it round several times with a soft brush in the proper direction. If the gloss be somewhat dulled, pass a flat iron moderately heated over it two or three times, and brush it afterwards. Hats should be brushed daily with a soft brush, and when not in use should be put by in a box. New hats generally press unpleasantly on the head for the first few days that they are worn, and sometimes they can never be made to adapt themselves to the head. This defect is occasioned by hats being fitted to the head by the means of general capacity only, without any regard being paid to the peculiarities of conformation. As a remedy for this evil, an instrument, called *the configurotype*, has been

recently introduced, by the aid of which, in a few seconds and without inconvenience, an exact model of the head is obtained, as seen in the engraving. By this means a perfect fit is ensured, free from pressure on any part of the head, and unattended by headache, excessive perspiration, and other annoyances, which are inseparable from an imperfectly fitting hat. For persons who ride much on horseback, or who are engaged in out-of-door pursuits, and who in tempestuous weather are now compelled to thrust the hat forcibly over the temples, that it may not blow off, a hat made upon these principles will be found to be unusually comfortable and pleasant.

HATCHING.—When eggs are to be hatched, they should be as fresh as possible; if laid the very same day, so much the better. This is not always practicable, when a particular stock is required to be increased; but if a numerous and healthy brood is all that is wanted, the most recent should be selected. In the meanwhile, the air should be excluded from the eggs as much as possible; it is best to set them on end, and not to suffer them to lie and roll on one side. Dry sand or hard wood sawdust (not deal, on account of the turpentine) is the best packing. But when choice eggs are expected, it is more prudent to have a hen waiting for them, than to let them wait for her. Eggs sent any distance to be hatched, should be tightly enclosed in a wooden box, and packed so as neither to touch each other nor the sides of the box. Oats form an excellent vehicle for this purpose, filling all interstices, and moreover

being useful at the journey's end. When eggs are left to be brought forth by the hen, a certain number is placed under her in the nest, when she is in full inclination to sit. From nine to twelve eggs are placed, according to the extent of the breast and wings. Three weeks is the period of hatching with the common hen. Sometimes when she does not sit close for the first day or two, or in early spring, it will be some hours longer; more rarely in this climate, when the hen is assiduous and the weather is hot, the time will be a trifle shorter. Sometimes a hen will desert her eggs, a circumstance which may occasionally be traced to an uncomfortable condition of the skin, caused by vermin or want of cleanliness, and this affords a strong reason for keeping the hen-house clean, and giving the animals the opportunity of purifying their feathers. Occasionally the hen is vicious, or in short, a bad sitter; and experience in selecting the best hatching hen is the only remedy. Sometimes a hen will break the eggs with her feet; and in such cases the broken eggs must be removed as soon as observed, otherwise she may eat them, and from that be tempted to break and eat the sound ones, and thus spoil the whole. It has generally been found that hens which are the best layers are the worst sitters. Those best adapted, have short legs, a broad body well furnished with feathers, their nails and spurs not too long or sharp. The desire to sit is made known by a particular sort of clacking; and a feverish state ensues, in which the natural heat of the hen's body is very much increased. The inclination soon becomes a strong ungovernable passion. The hen flutters about, hangs her wings, bristles up her feathers, searches everywhere for eggs to sit upon; and if she find any, whether laid by herself or others, she immediately seats herself upon them, and continues the incubation. With a proper provision of food at hand, warmth, quiet, and dryness, a good hatching hen will give little trouble, and in due time the brood will come forth; one or two eggs may perhaps remain unhatched or addled, but their loss is of little consequence. As soon as the hen hears the chirp of her young, she has a tendency to walk off with them, leaving the unhatched eggs to their fate; it is, therefore, advisable to watch the birth of the chicks, and to remove each as soon as it becomes dry, which may be in a few hours afterwards. By this means the hen will sit to hatch the whole; yet she should not be wearied by too long sitting. If all the eggs are not hatched at the end of twelve or fifteen hours after the first chick makes its appearance, in all probability they are addled, and may be abandoned. Sometimes the chicks will experience a little difficulty in emerging from the shell, and will require some assistance. The difficulty is to know when to render this aid. The chicks often succeed in making the first breach, but appear unable to fracture the shell any further. A rash attempt to help them by breaking the shell, particularly in a downward direction towards the smaller end, is often followed by a loss of blood, which can ill be spared. It is better to wait awhile, and not to interfere with any of them till it is apparent that a part of the brood have been hatched some time, say twelve hours, and that the rest cannot succeed in making their appearance. After such wise delay, it will generally be found that the whole fluid contents of the egg, yolk and all, are taken up into the body of the chick, and that weakness alone has prevented it forcing itself out. The causes of such weakness are various; sometimes insufficient warmth, from the hen having sat on too many eggs; sometimes the original feebleness of the vital spark included in the egg; but most frequently staleness of the eggs employed for incubation. The chances of rearing such chicks are small; but if they get over the first twenty-four hours they may be considered safe.

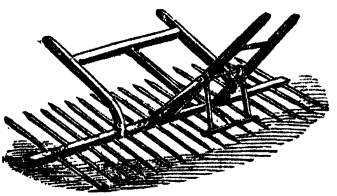
ARTIFICIAL HATCHING is a mode by which incubation is effected by the application of heat, and without the intervention of the hen. An establishment for this purpose was set on foot in London some years since, with generally successful results, and in which the following process was adopted: An oven consisting of eight floors or compartments, was employed to contain the eggs, while they were subjected to heat from steam pipes. Each compartment held upwards of two hundred eggs, and the whole exhibited the hatching process in all its various stages. The regularity with which the temperature was maintained, as well as accommodated to each peculiar stage of the process, brought out the chick with much greater certainty than when the incubation was performed by the hen. When the chicks emerge from the shell they are immediately removed from the oven, but are allowed to remain for a few hours until they become dry; these are then removed and put into a glass case at the end of the room. They are here for the first time fed, though not for twenty-four hours after being hatched; the material scattered among them consists of small bruised grits, or particles little larger than meal; these they eagerly pick up without any teaching, their instinctive desire for food being a sufficient monitor. After the brood has been kept in the glass case, which is partially open, for two or three days, and been thus gradually accustomed to the atmosphere, they are removed to one of the divisions of a railed enclosure on the floor. At six in the evening they are put to rest for the night in coops, twelve together in a coop: these coops are small wooden boxes lined with flannel, and furnished with a flannel curtain in front, to seclude and keep warm the inmates as comfortably and securely as if under the wing of the mother. At six or seven in the morning, they are again allowed to come forth into their court-yard, which being strewed with sand, and provided with food and water, affords them all the advantages of a run in an open ground.—See CHICKENS, DUCKS, GEESE, GUINEA FOWL, POULTRY, &c.

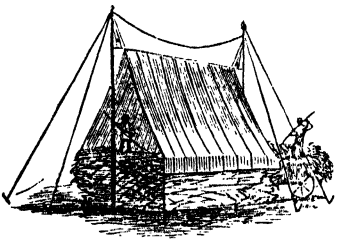
HAWKER.—An itinerant trader who proclaims his wares through the street, or from town to town. In order to protect settled traders and shopkeepers, the avocations of hawkers are placed under strict penal regulation. Every hawker has to pay an annual licence duty of £4; and if he travel with a horse, ass, or other beast bearing or drawing burden, he is subjected to an additional duty of £4 for each beast so employed. Unless householders or residents in the place, they are not allowed to sell by auction, under a penalty of £50. But nothing in the Act extends to hinder *any* person from selling or exposing for sale any sort of goods in any public market or fair. Every hawker, before he is licensed, must produce a certificate of good character and reputation, signed by a clergyman and two reputable inhabitants of the place where he usually resides. He must have inscribed, in Roman capitals, on the most conspicuous part of every pack, box, trunk, case, cart, or other vehicle in which he shall carry his wares, and on every room and shop in which he shall trade, and likewise on every handbill which he shall distribute, the words "Licensed Hawker." Penalty in default, £10. Unlicensed persons wrongfully using this designation, £10. Hawkers dealing in smuggled goods, or in goods fraudulently or dishonestly procured, are punishable by forfeiture of licence, and incapacitated from obtaining one in future. Hawkers trading without licence are liable to a penalty of £10. So, also, if they refuse to show their licence on the demand of any person to whom they offer their goods for sale, or on the demand of any justice, mayor, or constable, or other peace officer, or any officer of the Customs or excise. To forge or counterfeit a hawker's licence incurs a penalty of £300. To lend or hire a hawker's licence subjects the lender and borrower to a penalty of £40 each, and the licence becomes forfeited. But the servant of a licensed hawker may travel with the licence of his master, provided he usually reside in the house of his employer as a member of his family. Hawkers trading without a licence are liable to be seized and detained by any person, who may give notice to a constable, in order to their being carried before a justice of the peace. Nothing in the Act extends to prohibit persons from selling fish, fruit, or victuals; nor to hinder the hawker of any home manufacture from exposing his goods for sale in any market or fair, and in every city, borough, town corporate, and market town. A single act of selling, as a parcel of handkerchiefs to a particular person, is not sufficient to constitute a hawker within the meaning of the statute. No person being a trader in any goods, wares, or manufactures of Great Britain, and selling the same by *wholesale*, shall be deemed a hawker; and all such persons or their agents, selling by wholesale only, may go from house to house to any of their customers, who sell again by wholesale or retail, without being subject to any of the penalties contained in any act touching hawkers, pedlars, and petty chapmen.

HAWTHORN.—A common small tree, or shrub, which grows almost everywhere in thickets, copses, hedges, and high open fields. The common hawthorn blows in May, and can be propagated from seed, which must be kept in sand through the winter, and sown in spring. The young plants will be fit to place out in two years. There are several varieties of this species, among others the Glastonbury thorn, which blossoms sometimes as early as Christmas. The double-blossomed hawthorn is one of the greatest ornaments of our pleasure-grounds, whether it be kept as a shrub, or trained as a tree. The yellow-berried hawthorn is peculiarly available for shrubberies, for its buds are of a fine yellow in the spring, and its fruit, which is of the colour of pure gold, hang on the branches nearly the whole of the winter, giving great variety to the plantation. Evergreens should never be planted without a few of these shrubs being intermixed, to enliven them in the winter months. The hawthorn is excellently well adapted for small lawns or paddocks, where larger trees cannot be admitted. In husbandry, these shrubs are called quicksets; and when kept well cut, they form hedges scarcely less impregnable than those composed of holly.

HAY.—Any kind of grass cut and dried as fodder for cattle. When horses are fed on hay, it is a matter of dispute whether the light and apparently acrid grasses of uplands, or that of mere fertile natural meadow ground, or the rich produce of the artificial grasses, is to be preferred. This must, however, depend on the quantity of corn with which the horses are supplied. When that is abundantly furnished, there can be no doubt that the former will be found better for their general health, and especially for their wind; but as farm horses are usually limited in their consumption of grain, and the slowness of their movements renders the clearness of their wind a matter of comparatively little moment, the other kinds of hay will be found the best adapted to support their strength. In gentlemen's stables, no other than meadow hay is generally admitted; and it is in all respects the best. Sainfoin is commonly esteemed the first, and clover the next, in quality; but tare hay, if well made, is very hearty food. Old hay, from having undergone that slow process of fermentation by which the sugar that it contains is developed, is far more nutritive and wholesome than new hay. Good old hay is long and large, hard and tough; colour inclining to green rather than to white; it has a sweet taste, and fragrant smell. In damp weather it absorbs moisture and becomes heavier. Bad hay will change a horse's appearance in two days, even with an unlimited quantity of corn. It is an excellent plan, especially when hay has been exposed to continued wet weather, to add to it a portion of common salt. This admixture not only induces live stock to consume the hay with avidity, but it prevents mouldiness and mowburning; it is usual to put about half a bushel of salt to every load of hay; it may be spread by hand, or through a sieve.

HAYMAKING.—The period of mowing and the mode of making hay of the different grasses—both natural and artificial—vary not only according to the state of the weather and the practice of separate districts, but also according to the uses to which the hay is intended to be applied. The proper time for cutting the meadow grasses is when the saccharine juices are in the greatest abundance, which appears to be when the seed is formed, but before it has arrived at maturity, for, if allowed to grow thoroughly ripe, not only will a nutritive portion of the plant be wasted, but the land will become more exhausted than if the crop had been cut earlier. In the *making* of hay the greatest amount of care and vigilance are required, for the weather can never be depended upon, whilst the process is often necessarily left to people who understand nothing about it, and who, if not closely watched, will spoil the hay or idle away their time. *Mowing* commences at the earliest dawn of day, while the dew is upon the ground; and when the grass is down, if the weather be favourable, the swaths should be opened with forks, and evenly spread over the meadow during the same morning, if it be cut early. If the weather continue hot, the swaths should be immediately shaken out and tedded, or thrown about once or twice in the course of the same day, by which means the hay will be cured in the least time possible, and its colour and essential juices more effectually retained than if it be exposed in the same position to the sun. It should then be gathered with rakes, to effect which the common hand-rake is sometimes used, and at other times a horse-rake is employed similar to that represented in the engraving. On the following day, it must again be thrown out to the air, and if then judged sufficiently dry, it should be brought together later in the evening in large heaps, after which it may be carried on the third day, without any further process, to the stack. The chief points to be observed are, always to preserve the hay as much as possible from dew and rain; therefore, to bring it into windrows, if not to cock it at nightfall; never to open it in the morning till the dew has evaporated; and not to allow it to remain too long under the scorching heat of the sun without being turned. The degree to which hay requires to be dried depends on its quality; coarse hay should be allowed to heat more in the stack, and, therefore, should be less made than that of fine succulent herbage. An economical mode of *carrying the hay to the stack* is for a ploughman, with a cart and single horse, to load his cart with the hay on the field, forked to him by the person who builds the stack, and for the ploughman, in his turn, to fork the hay from the cart to the builder of the stack. A field-worker rakes the bottom of the small ricks forked in the field, and then carries the hay on the stack to the builder from the forker. In this way three persons, working the whole day, day after day, will carry a large quantity of hay in the course of a week, and the quantities passing from hand to hand being small at a time, dry effectually during the operation, while the stack augments slowly. Great caution is requisite in the *stacking of hay;* for, if not put together perfectly dry, it is liable to ferment, and from this being exposed, to catch fire. Hay-stacks are generally built of an oblong form, as the hay can





thus be more accurately cut into square trusses than when the stack is round. The ground upon which the stack is built should be either raised with stones and hard compost, or with chalk, to secure the bottom from wet; or a sill of stout timber, with the bark on, should be laid down of the exact size of the stack, and afterwards be filled up with faggots or with furze, covered with hurdles, for a floor. The ricks should stand parallel to each other, at least ten or twelve feet asunder, that carts may have room to pass between them, as well as to afford a free circulation of air in all directions. While forming, the stack should always be covered with rick-cloths supported by poles and ropes, in the manner illustrated. Immediately after the stack of hay has been built, a heat will arise in it corresponding with the degree of fermentation the hay is undergoing. While this is proceeding, the stack subsides in bulk, and after the fermentation and subsidence have ceased, the stack should be thatched. But should fermentation continue so long as to affect the quality of the hay, means should be used to put a stop to it, by shoring up the stack on both sides with stout posts, to admit of the free access of cool air. As a preparatory operation to the thatching, after the removal of the rick-cloth, the sides and ends of the stacks are neatly trimmed from angle to angle, with a small increase of breadth to the eaves. This operation simply consists of pulling out the straggling ends of hay, which give a rough appearance to the exterior, in order to render it smooth; and its

use is twofold—to preserve the hay pulled out, which would otherwise be rendered useless by exposure to rain, and to prevent damp hanging about the stack. The heading or thatching is performed with straw and straw-ropes; and these should be prepared beforehand, so as to be ready by the time they are wanted. The thatching should be carried on both sides of the stack simultaneously by two, and begun at the same end. *Hay barns* possess the decided advantage of not only forming a secure receptacle for hay, but also affording considerable convenience during changeable weather in carrying small quantities at a time as soon as ready, as well as in unloading the waggons under cover, when it could not be done with safety in an exposed yard. In winter, hay barns also admit of the hay being cut out of the stack, weighed and bound in perfect safety, which could not sometimes be done out of doors, either with regard to the security of the crop, or the comfort of the people preparing it for market. Under these circumstances, also, the hay may be put together earlier, even by a day, than it would be safe to do in a stack. A hay barn of the most secure and convenient kind is usually constructed as follows:—The roof is tiled, and the structure is boarded to some distance below the eaves: the entrance being in the centre, it forms two large bays for the reception of the crop, and affords complete shelter to a couple of waggons. *Hay is sold* in London, and generally throughout the southern markets, by the load, containing thirty-six trusses, each weighing sixty pounds, until Michaelmas, and fifty-six pounds after that period, or eighteen hundredweight to the load. In many country places it is, however, estimated by the ton: at Edinburgh it is disposed of by the stone of twenty-four pounds avoirdupois, delivered in bulk.

HEADACHE.—These painful affections are either the consequence of an overloaded state of the stomach, indigestion, some chronic affection of that organ (when it can only be relieved by a treatment directed to remove the primary cause), or it proceeds from some crude and indigestible aliment in the stomach and bowels; besides these causes, headache is an attendant symptom of all fevers, and not unfrequently results from extreme lassitude and debility, when it is called a *nervous headache.*

Treatment.—For all cases the consequence of indigestible food or acrid substances in the digestive organs, the best and most permanent remedy is a colocynth, or a blue and colocynth pill, in the proportion of equal parts, three or five grains of either made into one or two pills. When a torpid liver is the cause, a three grain blue pill should be taken at bed-time for three or four nights; and a black draught or a seidlitz powder on the morning after the last pill. For the headache proceeding from a weak stomach, flatulence, and dyspepsia, a teaspoonful of Gregory's powder, in a small quantity of peppermint water, twice a day, will be found eminently serviceable. For nervous headache, either half a drachm of citric acid dissolved in a little water, and taken after each meal, for a few times, or thirty drops of sal volatile, in a wineglass of water, will be found efficacious. If the pain, however, is settled, and confined to one part, either a blister should be applied behind the ears, or one or two leeches placed on either temple.

HEALTH, PRESERVATION OF.—The preservation of health depends in a great measure upon ourselves, that is to say, in observing certain rules and adopting definite principles in every condition of life, which reason and experience alike teach as being salutary and beneficial. It becomes, therefore, important to ascertain what are the conditions essential to health; a general acquaintance with these conditions may be easily attained by all, and the putting them into practice is much more within the power of individuals than is commonly supposed. The leading conditions essential to health are:—1. A constant supply of pure air. 2. A sufficiency of nourishing food, rightly taken. 3. Ample and appropriate clothing for the various seasons. 4. A sufficiency of exercise to the various organs of the system. 5. A proper temperature. 6. Constant employment of the mind. 7. Occasional relaxation from labour, and a sufficiency of cheerful and innocent enjoyments. In keeping with these principles for the preservation of health, the following particular rules are worthy of being borne in mind and followed out. Rise early and retire to rest early. Wash the whole body every morning with cold water, and rub it well with a rough towel. Drink water generally, and avoid excess of spirits, wine, and fermented liquors. Sleep in a room which has free access to the open air, and is well ventilated. When symptoms of uneasiness, fulness, or indigestion are felt, practise abstinence before having recourse to medicine. Never eat a hearty supper, especially of animal food or hot viands; and do not retire to rest until two hours at least after the meal has been taken. Take exercise daily, when able to do so, no matter what the state of the weather may be. Keep all impurities away from your abode, and insist upon the utmost cleanliness being observed in every department of the household. Avoid sudden alternations of temperature or any unnecessary exposure to evil influences, such as standing in a draught, sleeping immediately beneath an open window, and other obvious imprudences. Endeavour to preserve an equable frame of mind, a good temper, and a cheerful disposition, and do not suffer business anxieties or other cares to engross the mind too much. Observe this rule when sitting down to a meal or retiring to rest; for, if passion or ill-temper distract the system on these occasions, in the one instance the food introduced into the body will do more harm than good, and in the other, sleep will forsake the pillow, or if it come, it will be of that feverish and restless nature, which leaves the frame exhausted and unrefreshed, when it should resume its functions with renewed vigour. Employ the mind in useful and elevating pursuits, and the hands in such

occupations as are congenial. Above all remember the word "moderation;" and whether in eating, drinking, or exercise—in business, pleasure, or in any act or pursuit—obey that impulse which whispers "enough," and cries "forbear."—See ABLUTION, AIR, CLEANLINESS, EXERCISE, EXPOSURE.

HEART, DISEASES OF.—There are many affections of this vital organ that, professionally speaking, do not merit the name of disease, being in fact but temporary inconveniences, symptomatic derangements, or, as has been said, affections; but which, nevertheless, for the sake of perspicuity, it will be better to class generally under the one name of diseases of the heart, separating them, however, from the graver maladies by a distinct heading, and, as they form the lighter part of the subject, treating of them before considering the more serious form of this class of ailments. The heart, as the centre and source of the circulating system, is liable to a considerable number of affections, both simple and complex, which may be divided into two heads—the functional or nervous, and the structural or organic.

Functional, or nervous affections of the heart.—Under this head are comprehended palpitation, syncope or fainting, angina pectoris, and neuralgia of the heart; all of which, though occasionally very distressing, and sometimes most alarming to the sufferer, are often only symptoms of other affections, and consequently of minor importance; and even when spontaneous, and producing considerable bodily disturbance, seldom causing any real apprehension, and still more rarely resulting in positive danger, and in this respect bear a marked contrast to those diseases of the opposite class.

Palpitation.—By this term is understood those frequent, strong, and irregular movements of the heart, occurring in individuals who have no indications of organic disease; these movements may be transient or continuous, frequently accompanied with an audible sound, so loud, as to be heard at several yards from the patient. Palpitation is often attended with a feeling of sinking and anxiety, accompanied with fainting fits or syncope, and sometimes with a pulsation at the pit of the stomach. The causes of palpitation, irrespective of a naturally nervous temperament, hysteria and weakness, are any strong emotions of the mind, long study, violent exercise, or a continued passive repose, the debility consequent on fever, or whatever weakens the standard of health. Besides these causes, palpitation may also be a symptom of organic disease of the heart. The persons most frequently affected with palpitation are females; the slightest extra exertion, or exposure to damp foggy weather, often suddenly producing a paroxysm, attended with pain in the head, and a sense of numbness in the left side or arm. Persons who suffer from spinal irritation are also liable to palpitation, attended in such cases with a remarkable acceleration of the pulse, often amounting to 160 beats in a minute. The respiration is generally difficult, or easily rendered so, on the slightest exertion or mental emotion, and frequently induced by the slightest pressure, such as that of the stays on the chest, waist, or lower part of the spine, the pain often being intolerable. Palpitation is very common in young females between the ages of 15 and 25, especially where the occupation is long and sedentary, as in factories, or in dressmakers' establishments. Indeed, palpitation, with very rare exceptions, may be said to be a complaint peculiar to the female sex, and the more the occupation of young women confines them to a close unvarying atmosphere, the more prone are they to attacks of this troublesome disorder; and the more exposed they are to the open air, the less frequent and the less severe are all such maladies.

There are few affections, even of the gravest character, whose symptoms give rise to greater alarm in the mind of the patient, or doubt and uncertainty to the inexperienced practitioner, than those of a severe attack of palpitation: often before seeing his patient he hears the irregular throbbing of the heart; on looking on the white or lividly anxious countenance of the sufferer, fancies he reads the external characters of the most formidable organic mischief, while, in truth, a cheerful aspect, a few confident words, and the simplest remedies will not only remove all the unpleasant symptoms, but restore the apparently diseased patient to health and ultimately to strength. It is only when the pulse is intermittent that any organic disease is to be apprehended, the velocity or strength of the pulse depending entirely on some accidental cause, more or less easily removed. *Treatment.*—Though the causes that excite palpitation are numerous, they may all be reduced to two heads—that of inflammation or a state of plethora; and a state of local or constitutional debility. When palpitation can be traced to an inflammatory condition of body, it will be necessary, according to the age and the condition of the patient, to reduce the circulation by bleeding, either from the arm, or, what is more usual, by leeches, or cupping glasses over the region of the heart, or still better between the shoulders, low down on the spinal column, at the same time giving nauseating doses of tartar emetic, hydrocyanic acid or tincture of digitalis, or foxglove. The following mixture, containing all the advantages to be obtained from each may be safely substituted for one or either, having the power to allay inflammatory action, reduce the circulation, subdue pain, and promote a beneficial action on the skin:—Take of

Camphor-water	6 ounces.
Powdered nitre	1 scruple.
Tartar emetic	3 grains.
Laudanum	1 drachm.

Dissolve and mix. Give two tablespoonfuls at once, and one spoonful every two or three hours afterwards. At the same time a low diet, rest, quietude, and strict attention to the state of the stomach and digestive organs are imperatively necessary.

Where, however, the exciting cause is debility, the system must be in the first case braced by cold bathing or the shower bath, followed by vigorous friction along the spine with the flesh-brush; tonics and steel in all shapes, as chalybeate waters, or steel wine or pills, or the usual iron and myrrh mixture: to this must be added change of air, a rich and liberal diet, and exercise either on horseback or by walking. The next affection of the heart is

Syncope, or fainting, which is characterised by an indescribable sense of distress and feeling of faintness; the eyes grow dim, and are covered with a kind of film, attended with noises in the ears, the face and lips are pale, a cold perspiration breaks out on the body, the mind succumbs and grows confused, the body totters, and, if not supported, falls; respiration becomes imperceptible, and the pulse is reduced to an irregular flutter. For a further account and treatment, see FAINTING.

Angina pectoris.—The first symptoms of this distressing complaint are a sudden and violent pain across the chest, coming on upon any slight exertion, such as going upstairs, or after a hearty meal. The pain gradually extends to the shoulder, and runs down to about the middle of the arm, accompanied with a sense of stricture or tightness across the chest, the pain becoming so acute as to threaten the patient with instant death. The pulse sinks and becomes weak and irregular, the countenance is colourless, cold sweats succeed, and a constant cough, and after a time an expectoration of a scanty viscid mucus. When the paroxysm first comes on, the patient is compelled to stand perfectly still, as the only relief he can obtain from the agony of his suffering is an absolute repose. After a time the fit comes on from the slightest cause or mental excitement, and often attacks him in the night upon waking from his first sleep. Angina pectoris is generally a disease of advanced life, and is often accompanied with flatulence, and common to gouty or rheumatic and sedentary habits of body; and though sometimes a symptom of functional derangement, is more frequently a characteristic of serious organic disease. *Treatment.*—The first indication is to relieve the urgency of the symptoms, and then between the pauses of the paroxysm administer remedies, to prevent the return of the disease. Bleeding is occasionally beneficial in this affection, but it must be employed in the earliest stage, and only a small quantity of blood taken from the patient, who is to be kept in a recumbent position, and as quiet as possible. Where there is much dyspepsia or gastric disturbance, an emetic is useful; but the main dependence for relief lies in the employment of antispasmodics and carminatives.

The following mixture, as containing the best of both classes, may be taken in the manner directed. Take of

Aromatic confection . .	1 drachm.
Peppermint water . .	6 ounces.

Rub smoothly down in a mortar, and add

Tincture of cardamoms, compound	1 ounce.
Laudanum	1 drachm.
Compound spirits of ether, or Hoffman's anodyne	2 drachms.

Mix. If the pain is very severe, take three tablespoonfuls, two more in three hours, and one every four hours afterwards; or, when the symptoms are less urgent, two tablespoonfuls every four or six hours. Concurrent with the mixture, a blister or strong warming plaster should be laid over the left breast, according to the severity of the pain, and the spine between the shoulders rubbed with warm turpentine, or an embrocation composed of equal parts of camphorated oil, turpentine, and oil of amber. Having by these means, and strict repose, subdued the paroxysms, means must be adopted to prevent, if possible, a recurrence of the disease. This may be effected by removing all the exciting causes; by diminishing plethora, through aperients and low diet, by a diminution of animal and a preponderance of vegetable food; by avoiding all stimulants, spices, and heating substances, and by guarding against all violent emotions of the mind, or sudden and undue exertion or exercise. As all the symptoms of angina pectoris may be caused by dyspepsia, the state of the stomach should always command the first and most important consideration.

The next and last of the functional diseases of this organ is *neuralgia of the heart*, which differs chiefly from angina pectoris in being characterised by sharp darting pains in the left breast, but unattended by any obstruction in the respiration, and in most cases without any change in the heart's action or the pulse. It is purely a nervous complaint, and, like the previous affections, most frequently dependent on dyspepsia or flatulence, and a constipated state of the system. The *treatment* must be regulated by the causes that may seem to have induced the neuralgia; though, as a local application, to allay the pain of the paroxysms, a plaster of belladonna or opium and litharge will, in all cases, be found of very great advantage, and may, irrespective of any mode of internal treatment, be kept on the chest for some considerable time. There is also another form of heart affection sometimes met with, though not universally acknowledged by the profession, called spasm of the heart, in which the treatment must depend upon the age, sex, and strength of the patient; the chief remedies, however, being the hot bath, stimulants, such as ether and ammonia, and counter irritation by friction.

The other class of diseases to which the heart is liable are those which affect the tissue or substance of the organ itself, and are known as structural or organic diseases; all of them are, consequently, highly dangerous and often mortal maladies, and are called:—1. Inflammation, chronic and acute, of the bag of the heart—Pericarditis. 2. Of the substance of the heart—Carditis. 3. Hypertrophy, or enlargement of the heart,

either of the whole organ or a part, and frequently accompanied with ossification, softening, or dilatation, sometimes regarded as a distinct disease. 4. Atrophy, or wasting of the heart, a species of emaciation of the organ by which the heart of a full-grown man or woman becomes as reduced as that of a child—in other words, less than half its natural dimensions—and its texture growing so attenuated as to be as thin as tissue or bank paper. Nearly all these affections of the heart, however distressing their symptoms may be, almost always, when not the result of structural mischief, proceed from a faulty state of the digestive organs, and are frequently entirely cured by an assafœtida pill taken two or three times a week at bed-time, and a little burnt soda and rhubarb in the morning; and it is only when pain and great oppression occur that recourse need be had to ether, opium, or antispasmodics.

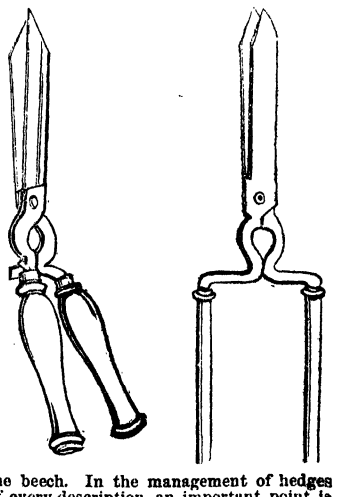
HEARTSEASE.—See PANSY.

HEARTH, TO CLEAN.—Stone hearths should be first washed clean in soapsuds; then rubbed with a paste made of finely powdered sand; when this is dried on, the hearth should be brushed.

HEAT.—See *Dictionary of Useful Knowledge*.

HEATH.—Under this name are included an extensive assemblage of low shrubbery, evergreen plants, much valued for the beauty of their flowers, and the blossoming of many of them in the winter season. A number of the sorts ripen their seeds in this country, and may be so propagated: but the greater number are struck from cuttings, and some few by layers, which require two years to strike out roots. For *propagation by seed*, place potsherds at the bottom of the pots, cover them with siftings, then add sand, and mix the top layer with heath-mould. Make the surface smooth, and sow the seed in spring on the surface, covering it as lightly as possible; water gently with the finest syringe; place the pots near the glass, shade them from the bright sun, and keep the surface just moist. When the shoots begin to appear, give them air daily. As soon as they can be handled, transplant them into 5-inch pots, rather thickly, but standing clear of each other. In this state they may remain for six or eight months; and then be potted off into 3-inch pots, four in a pot; afterwards to be managed in the same way as cuttings. For *propagation by cuttings*, the month of July is the best time to commence the operation; but the cuttings must not be taken off till the young wood is firm. Take the cuttings off the plants about three-quarters of an inch long, pulling them downwards; strip off the leaves nearly half the length of the cuttings; place the cutting on the nail of the thumb, and, with a sharp knife, at right angles, cut off the small end close to the joint, or at the place where it was pulled from off the plant. Having done this, plant them in a pot filled with small pit or river sand, giving them a good watering to settle the sand about them. Set them on a shelf where they are a little shaded, cover them with glasses, and take care to keep the sand always moist. Some sorts will be rooted in three months; others will require six. When the plants become large, several of them will continue in good health for three or four years without shifting, and will flower well. Cold pits or frames, in spring and autumn, are the best protection to place heaths in during their youth; and an airy, light, span-roofed greenhouse the most appropriate for them through winter and spring, when they are too large for the frames. No kind of plant is more injured by being kept in a chamber than heaths, nor will they thrive in a greenhouse, or in the open air, within the influence of the smoke of large towns. In the best situations, and under the the most favourable circumstances, many of the species are short-lived, and, therefore, require to be frequently renewed by cuttings or seed.

HEDGE.—A living wall formed of woody plants, sown or planted in a line, and cut or clipped in such a manner as to form a compact mass of any degree of width or height that may be required, either for the purpose of shelter, separation, or defence. The hedges most generally used in agriculture are made of the whitethorn, because it has spring branches, and forms a strong defence against cattle. Hedges for the purposes of shelter and separation are chiefly used in gardening, and, for the most part, are formed of evergreen shrubs, such as the holly, yew, box, &c.; or if sub-evergreens, such as the privet; or if deciduous shrubs, or trees with persistent leaves, such as the hornbeam and



the beech. In the management of hedges of every description, an important point is to keep them dense, and impervious both to the wind and to animals, near the ground; for which purpose the section of the hedge requires to be made broader at the base than at the top, in order that the exterior leaves in every part of the hedge, may enjoy in an

equal degree the influence of light, air, and moisture. For keeping hedges in order, implements known as hedge-shears, as seen in the engraving, are required, especially for the privet and the yew; but when the twigs or shoots are longer, as in the hollow thorn or beech, the hedge-bill or pruning shears are preferable, as producing wounds more easily healed, and as not thickening the outer surface of the hedge; which should always be avoided, as it often causes the interior shoots to rot for want of air, especially in thorn and other deciduous hedges.

HEIR APPARENT.—A person so called in the lifetime of his ancestor, whose right of succession is indefeasible, provided he outlive the ancestor; as the right of the next heir to the throne, or to an estate under a deed of entail, or under the marriage contract of his parents.

HEIR-AT-LAW.—A person who succeeds to another by descent. Both in England and Scotland, estates, in the absence of a different special destination, descend to heirs in the direct line, however remote. A landed estate descends to sons, in the order of their seniority, the issue of the elder son always excluding the intermediate younger son, and so on through the whole of the sons. It is only in default of such issue that daughters succeed, and then they succeed equally. By this rule the son of an eldest son, and failing him and his issue, the daughters of an eldest son, equally among them and their descendants, exclude the other sons and daughters of the ancestor, and so on through all the ancestor's children. On the entire failure of lineal descendants, the estate goes to collateral heirs, that is, the ancestor's younger brothers, in the order above mentioned, and their issue. On the entire failure of collateral descendants, the heirship devolves upon the ancestor's father, then collaterally to the ancestor's uncles and their descendants; whom failing, to his aunts (the latter equally) and their descendants. It is only on the failure of all these that the succession opens to the grandfather, and next, to his relatives. There is no succession by or through the mother, unless the estate came from her.

HEIR BY DESTINATION, sometimes called "heir of provision," is a person called to succeed by the will of the proprietor, either directly, or on the failure of persons to whom the estate is primarily conveyed. Any absolute proprietor executing a conveyance of his estate can regulate the order of succession; but, unless the specified destination be protected and enforced by certain legal prohibitions and restraints, a hope of succession is merely created, which may be defeated by each heir as he enters on the possession.

HEIR PRESUMPTIVE.—One who, if his ancestor should die under certain circumstances, would be his heir, but whose right of succession may be defeated by various contingencies, such as the subsequent discovery of a nearer heir, even though by posthumous birth, or the special conveyance of the estate by the ancestor to another person.

HELLEBORE.—A poisonous plant deriving its name from *helein*, to cause death, and *bora*, food. There are two species of this plant found wild in England, *The green hellebore* grows in woods and thickets, on a chalky soil, blowing drooping green flowers in April and May. The root is fleshy, black, with numerous long stout fibres, very acrid and purgative. The stem is erect, round, and forked, about eighteen inches in height. The fruit consists of three to four short wrinkled capsules. *The stinking hellebore*, also known under the various names of bear's foot, bitter wort, ox-heel, &c., like the last-named species, grows in meadows, shady places, and hedges, particularly on a chalky soil, producing numerous green flowers tinged with purple at the edges, which bloom from February to April. The flowers stand each upon a single bare stalk. The leaves are large, each rising singly from the root, on a footstalk of six inches in length. *Hellebore is sometimes medicinally employed*, but it should never be administered without the sanction of a properly qualified practitioner. In case of *poisoning by hellebore*, besides inducing immediate vomiting, the proper antidotes are mucilaginous drinks in very large quantities, such as the decoctions of oatmeal, pearl barley, linseed, marshmallows, or milk and water; topical bleeding over the stomach, when the tenderness is great, may also be advantageously resorted to; after which the poisonous matter will be most effectually counteracted by diluted vinegar, juice of lemon, or other vegetable acids.

HEMLOCK.—A poisonous plant, of which there are two kinds, the water hemlock and the common. The common hemlock grows upon a stalk, rising to the height of five or six feet. It is hollow, jointed, and thickly marked externally with brown spots. The lower leaves are very large, of a shining green colour, with long concave footstalks. The upper leaves are much smaller. *The water hemlock* is found growing on the borders of pools and rivers; it strongly resembles the before-mentioned species, only that the stem is not spotted, and the odour of the plant resembles that of parsley; while that of the common hemlock is nauseous and peculiarly unpleasant. In small doses it is found useful for affording relief in malignant diseases. The usual remedies resorted to in cases of vegetable poisonings are to be administered when hemlock has been incautiously introduced into the stomach.

HEMP.—A very valuable plant of the nettle tribe. It is not cultivated to any extent in England, and is chiefly confined to the counties of Suffolk, Norfolk, and Lincolnshire, where it has proved successful and remunerative. The objections to this crop are, that its coming in the midst of harvest is embarrassing, and that the attention it demands in every stage of its progress is too great, where it is only a secondary consideration. One of the valuable properties of hemp is, that it effectually expels vermin from plantations of cabbages; if it be sown on the borders of fields, &c.,

planted with that vegetable, no caterpillar will infest it. It also possesses the anomalous property of growing, without degenerating for a series of years, on the same ground, provided the land is well manured. It may be grown in the following rotation:—1. Fallow. 2. Wheat. 3. Grasses. 4. Hemp. 5. Oats. The soils most suitable are those of the deep, black, putrid vegetable kind, which have a situation low, and somewhat inclined to moisture, as well as the deep mellow, loamy, or sandy sorts. The seed may be sown in April or May, from two to three bushels per acre, either broadcast, and hoeing out the plants to a distance of sixteen or seventeen inches, or by the drill, at the space of two feet and a half. In the autumn the plants are pulled, the male plants first, and the female plants six or seven weeks afterwards, when they have ripened their seed. Thus there are two harvests of the hemp crop. The male plants are readily known by their faded flowers and yellowish colour. They are then tied in small bundles, and carried to the pool where they are to be steeped. The process of steeping, commonly lasts five or six days, and is continued until the outside coat of the hemp readily separates. It is then carefully and evenly spread on some grass turf, where it remains for three or four weeks, being turned over about twice every week, by which the decomposition of the woody part of the stem is materially accelerated. It is next carried to the barn, where it is bruised by the break, and then bound up into bundles, and carried to market.

HENBANE.—An annual herb, found growing in hedges and at the roadsides. The root is spindle-shaped, the leaves soft, pliant, sharply lobed, downy, and viscid, exhaling the powerful and oppressive odour which is emitted by all the rest of the plant. The flowers, which appear in July, are numerous, of an elegant straw colour, streaked with dark purple veins. This plant is peculiarly fatal to poultry, hence its name; it intoxicates hogs; but cows, horses, dogs, and goats are able to bear a tolerable proportion before they are affected. If more than a small portion of the leaves have been swallowed, brisk emetics ought instantly to be taken; and after discharging the contents of the stomach, it will be necessary to administer emollient and oily clysters, to repeat them as often as they are ejected, and to drink large quantities of vinegar or lemon-juice diluted with water, in a degree proportioned to the state of the stomach.

HERALDRY.—The science of conventional distinctions impressed on shields, banners, and other military accoutrements. Books: *Evans's Grammar*, 12*s.*; *Tyas's Flowers*, 7*s.* 6*d.*; *Planche's Facts*, 12*s.*; *Montagu's Guide*, 18*s.*; *Tyas's Handbook*, 1*s.*; *Barrington's Illustrated*, 5*s.*; *Clarke's Introduction*, 18*s.*; *Hamerton's Observations*, 3*s.*; *Glossary of Forms*, 16*s.*; *Book of Crests*, 21*s.*—See ARMS, COATS OF; also *Dictionary of Useful Knowledge*, article HERALDRY.

HERB ESSENCE.—Put into a saucepan, two tablespoonfuls of tarragon vinegar, a quart of good consommé, a bunch of fine herbs, and a little pepper; simmer very slowly till reduced to one-half; then take out the herbs, and add a tablespoonful of chervil and tarragon, chopped very fine; having simmered again for a few minutes, squeeze in the juice of a lemon. This is excellent as a sauce for chops, steaks, &c.

HERB PUDDING.—Pick two handfuls of parsley leaves from the stems, one handful of spinach, two hearts of lettuce, a handful of mustard and cress, half a dozen leaves of white beet, and a small handful of chives: wash, and boil all together for three minutes; drain the water from them, and wash them very fine; mix well, and add salt and pepper. Have ready a batter made of an ounce of flour, a pint of thin cream, and two eggs; stir it into the herbs, cover the dish with a good crust, and bake in a moderate oven.

☞ Parsley leaves, 2 handfuls; spinach, 1 handful; lettuce, 2 hearts; mustard and cress, 1 handful; white beet, 6 leaves; chives (small), 1 handful; salt and pepper, to flavour. *Batter:* flour, 1oz.; cream, 1 pint; eggs, 2; crust, sufficient.

HERBS.—The various uses to which herbs are put, is a fact pretty well known to every housewife. In the majority of cases herbs are purchased at shops, but it would always be as well, where practicable, to set by a certain portion of the kitchen garden for the culture of this useful class of plants. *When herbs are to be dried*, they should be gathered when they begin to flower, on a dry day, as soon as the dew is off. The tops, leaves, or the whole herbs, should at once be cleared from discoloured or decayed leaves; screened from earth or dust; placed on hurdles covered with blotting-paper, and exposed to the sun or the heat of a stove, in a dry, airy, place. The quicker they are dried the better, as they have less time to become mildewed, or ferment; hence, they should be spread thin, and frequently turned. When dried, they should be well shaken in a large sieve or basket, to get rid of the insects and other foreign bodies. Almost all herbs in drying, give out a certain portion of their aromatic properties; and hence, they should not be continued in the sun, or near the stove, longer than necessary. When dry, they should be coarsely powdered and at once put into wide-mouthed glass bottles, and well corked for future use. In this way, they may be kept with their flavour unimpared for twelve months at least; but if they are exposed to the air by being hung up in bundles, as is the usual practice, they become too much dried, and their flavour is soon dissipated.—See BASIL, FENNEL, MARJORAM, MINT, PARSLEY, THYME, &c.

HERRING.—A well-known small sea-fish. As an article of food, fresh herrings, although somewhat oily, are wholesome and agreeable if partaken of moderately; but if kept long they are apt to offend the stomach, and are only fit to be eaten by persons of strong digestion. A large admixture of po-

tatoes or other vegetable food, tends, however, to counteract, to a certain extent, the unwholesome properties of this fish when dried.

HERRINGS BAKED.—Take off the heads of the fish; remove the entrails; wash and dry them with a cloth; sprinkle them with a seasoning of black pepper, cloves, and salt, mixed; tie paper over them; put them in a pan with a few bay leaves, and bake in a moderate oven. They may be eaten either hot or cold, and will keep for many months.

HERRINGS BOILED.—After the herrings have been gutted, cleansed, and dried, rub them over with a little salt and vinegar. Skewer their tails in their mouths, and put them into boiling water; in about ten minutes they will be done. Serve them with melted butter and parsley.

HERRINGS BROILED.—Having prepared them as in the preceding receipt, dredge flour over them, and lay them upon a gridiron over a clear fire; they will soon be dressed, and need only be turned once. They may be served with vinegar and mustard.

HERRINGS FRIED.—Scale and prepare the herrings; take out the soft roes and fry them till they attain a light brown colour, to form a garnish. Fry the fish in butter, with or without onions, according to taste, and serve with melted butter and parsley.

HERRINGS RED, TO DRESS.—Skin, open, and trim red herrings. If old and dry, pour some hot small beer or water over them; and let them steep for half an hour. Yarmouth bloaters seldom need soaking. Broil them over a clear fire at a considerable distance, or before the fire; rub them with good oil or fresh butter while broiling, and rub on a little more when they are served. Serve them very hot, with scooped cold butter; or with melted butter and mustard, and mashed potatoes and parsnips.

HICCOUGH OR HICCUP.—A spasmodic affection of the stomach and diaphragm, arising from some peculiar irritation. It is generally symptomatic, but in some instances it appears as a primary disease. When prevailing as a primary affection, hiccough is never attended with danger, and may, in general, be easily removed; but when it arises in any acute disorder, or after a mortification has taken place, it may always be looked upon as the forerunner of death.

Treatment.—A common hiccough is often removed by taking a few sips of cold water in quick succession, or by a sudden excitement of some degree of fear or surprise. When simple means do not answer, recourse must be had to anti-spasmodics, the most useful for which, in this instance, seem to be ether, musk, and opium, combined, or given separately. In the hiccough incidental to youth or old age, an almost certain remedy is, a small quantity of any powerful acid, as a teaspoonful of vinegar or lemon-juice, or a little peppermint water acidulated with a few drops of sulphuric acid.

HISTORY, ENGLISH.—Books: *Hume & Smollett's*, 80s.; *Ditto, continued by Farr*, 52s. 6d.; *Continued by Hughes*, 68s.; *Lingard's*, 35s.; *Abridged by Burke*, 5s.; *Mackintosh's*, 21s.; *Mahon's*, 94s.; *Martineau's*, 42s.; *Macaulay's*, 68s.; *Knight's*, £5 12s.; *Gleig's*, 19s. 6d.; *Goldsmith's (Pinnock's)*, 6s.; *Corner's*, 4s.; *Hamilton's*, 4s.; *Macfarlane's*, 39s.; *Marcet's*, 5s. *Markham's*, 6s.; *Mylius's*, 4s.; *Palgrave's*, 3s. 6d.; *Trimmer's*, 5s.; *Hallam's*, 18s.; *Selby's Events*, 3s.; *White's Landmarks*, 1s. 6d.; *Troutbeck's Abridged*, 2s.; *White's, for Junior Classes*, 1s. 6d.; *Bond's, for Young Persons*, 3s.; *Dickens's, for Children*, 10s. 6d.; *Wootton's Conversations*, 4s.; *Bayy's Letters*, 2s. 6d.; *Pinnock's Made Easy*, 2s. 6d.; *Catechism*, 1s.; *Historical Reason Why*, 2s. 6d.; *Vade Mecum*, 2s.; *Useful History*, 3d.

HISTORY, GRECIAN.—Books: *Goldsmith's (Pinnock's)*, 5s. 6d.; *Grote's*, 16s.; *Wordsworth's Pictorial*, 31s. 6d; *Mitford's*, 38s.; *Keightley's*, 6s. 6d.; *Smith's*, 7s. 6d.; *Corner's*, 3s.; *Finlay's*, 12s.; *Chambers's Course*, 2s. 6d.; *Carr's*, 7s. 6d.; *Schmitz*, 7s. 6d.; *Thirlwall's*, 37s. 6d.; *Guy's Catechism*, 9d.; *Sewell's First* 3s. 6d.; *Hendry's, for Children*, 2s.; *Levien's Outlines*, 2s. 6d.; *Neale's, for the Young*, 3s.; *Carr's Questions*, 1s.; *Taylor's Prints*, 2s. 6d.; *Keightley's Elementary*, 3s. 6d.; *Keightley's Questions*, 1s.

HISTORY, MISCELLANEOUS.—Books: FRENCH: *Michelet's*, 28s.; *Bussey's Pictorial*, 30s.; *Bonnechose*, 6s.; *De Porquet's*, 3s. 6d.; *Des Carrières'*, 7s.; *Roche's*, 15s.; *Crowe's*, 18s.; *White's*, 3s. 6d.; *Corner's, with Questions*, 2s. 6d.; *Sedgwick's, for Schools*, 3s. 6d.; *Cockayne's Outlines*, 3s. 6d.; *Cranbourne's, for Children*, 2s. 6d. GERMAN: *Dunham's*, 18s.; *Markham's*, 6s.; *Kohlrausch's*, 14s.; *Menzel's*, 10s. 6d.; *Corner's, for Schools*, 3s. 6d.; *Kugler's Pictorial*, 12s.; *Hawkins's Spirit*, 10s. 6d. ITALIAN: *Crockford's* 6s.; *Urquhart's*, 25s.; *Marrotti's*, 14s. RUSSIAN: *Bell's*, 10s. 6d.; *Kelly's*, 7s.; *Rabbe's*, 2s. 6d.; *Schnitzler's*, 28s. SPANISH: *Knight's*, 2s.; *Callcott's*, 12s.; *John's*, 2s. 6d.; *De Castro's*, 6s.; *Dunlop's*, 26s.

HISTORY, ROMAN.—Books: *Arnold's*, 48s.; *Lardner's Cyclopædia*, 7s. 6d.; *Liddell's*, 28s.; *Niebuhr's*, 24s.; *Schmitz's*, 7s. 6d.; *Strickland's*, 10s. 6d.; *Keightley's*, 6s. 6d.; *Goldsmith's (Pinnock's)*, 5s. 6d.; *Pinnock's Questions*, 2s. 6d.; *Guy's Elementary*, 9d.; *Hendry's, for Children*, 2s.; *Fox's, for Young Persons*, 3s.; *Corner's Youth's*, 3s. 6d.; *Child's First*, 2s. 6d.

HISTORY, UNIVERSAL.—Books: *Tytler's*, 21s.; *Bunsen's*, 33s.; *Field's*, 11s.; *Weber's*, 9s.; *White's*, 6s.; *Wright's*, 3s. 6d.; *Stafford's*, 3s. 6d.; *Harding's*, 5s.; *Gerard's, with Tourrier's Charts*, 25s.; *Stoddart's*, 5s.; *Willard's*, 9s.; *Quin's*, 6s.; *Compendium*, 3s. 6d.; *Cyclopædia*, 10s. 6d.; *Epitome*, 1s.; *Beckmore's Instruction*, 7s.; *Patton's*, 2s.; *Peter Parley's Wonders*, 3s. 6d.

HIVE.—See APIARY.

HODGE PODGE.—A savoury dish, prepared as follows:—Cut a piece of brisket of beef into pieces, put water to it, a bunch of sweet herbs, an onion, some whole pepper in a piece of muffin, a carrot, and two or three heads of celery, cut into pieces; stew all till tender. Lettuce may be added, young cabbage, and a few green peas.

HOEING.—An operation performed in gardening and agriculture. The purposes of this operation are fourfold; namely, to cut

down weeds at or under the surface, and to open the surface of the ground, so as to render it pervious to heat, air, and moisture, and to draw up or accumulate the soil about the stems of plants; and, lastly, to form a hollow gutter or drill, in which to sow or insert the seeds of plants. The use of the hoe for any of these purposes requires dry weather. The best hoe, when deep stirring the soil between drilled crops is performed, is the Spanish hoe, *fig.* 1, or the Vernon hoe,

1 2

fig. 2. The flat, or common hoe, is only useful in cutting down weeds; and, as it is used in general, it performs little more. Hoeing between rows of crops is sometimes performed by what is called a hoe-plough, which is a small plough having a share with double fins, drawn by one man and pushed by another. The Dutch hoe is very useful for this service, and may also be efficiently used for the purpose of cleaning walks, or scraping turf or mud from roads or courtyards.

HOG.—See PIG.

HOLLY.—A hardy evergreen shrub, of

which there are several varieties. The holly will thrive only in a strong deep, dry, loamy soil. If grown as single ornamental shrubs, they should not be overshadowed by other trees; and if the land is manured, so much the better. The best way of forming holly-hedges is to procure large plants from some nursery; but a less expensive mode, although requiring more time, is as follows:—Gather a sufficient quantity of holly berries when ripe; then dig a hole three or four feet deep, and throw the berries in, crushing and mixing them with some fine soil at the same time; close the hole with the soil taken out, and throw some litter, or other covering, over the whole, to prevent the wet or frost penetrating. Take them up and sow them in March. They will produce fine little plants the first season, and will arrive at perfection in about three years. The best time for cutting hollies is early in the spring, about the end of February, before they have commenced shooting. Never clip them with shears, but cut them with a very sharp knife.

HOLLYHOCK.—This plant requires good old garden soil, well trenched over to the depth of two feet, with plenty of thoroughly decomposed manure, such as old cucumber-beds, or nightsoil mixed with the earth. If the subsoil is wet, they will thrive remarkably well in the summer, but in the winter, wet is very injurious to them when old plants are allowed to remain; to prevent which remove the mould to the depth of one or two inches round the neck of the plant, and fill up with white sand, about six inches round the stem, level with the surface. It is simply to preserve them from wet, insects, and slugs, from which, in the winter, they are apt to suffer very much, if not killed. Young plants should be planted every year, as you would dahlias, if you wish to secure fine flowers. They may be propagated by single eyes in July and August; also by cuttings in the spring, placed on a slight bottom heat. Young plants raised from summer cuttings are best preserved by re-potting them in October into large pots, the larger the better, in light, rich, sandy earth, and placed in a cold frame—thus they will grow during the winter. In March or April turn them out into the open ground, and they will bloom as fine and as early as if planted in the autumn. Plant them not less than four feet from row to row, and three feet apart in the row; if grouped in beds, not nearer than three feet each way. They will grow well in the shade of distant trees, but by no means must the roots interfere. In May, when the spikes are grown a foot high, thin them out according to the strength of the plant; if well established and very strong, leave four spikes; if weak, two or three. The perfection of this flower consists in the petals being of thick substance, the edges smooth and even. The florets occupying the centre must be compact, closely arranged, rising in the middle to a half globular form, with a stiff guard petal extending about half an inch, or in proportion to the size of the centre ball, so that the different parts of the flower have a uniform appearance. Second—the arrangement of

the flowers on the spike should be regular, not crowded together into a confused mass, nor loosely hanging with open spaces between each flower, but so disposed that the shape of each may be distinctly seen, and fully blown, the uppermost covering the top; and nothing can add more to its beauty than a few small green leaves between the flowers, which give it an elegant and graceful appearance. The third point is colour—the brightest, strongest, and most distinct stand first; but it is desirable to obtain all imaginable shades. Stake them before they get too high, and secure them well in by tying, and they will grow erect. The most robust grower does not require a stake higher than four feet from the ground. If the weather is dry, they must be watered with a solution of guano, or any other liquid manure, poured carefully round the roots, avoiding pouring it on or too near the stems. To grow the flowers fine, cut off the lateral shoots, thin the flower buds, if crowded together, and take out the top of the spike, according to the height desired, paying attention to the usual height and habit of the plant. Observe, by topping it you may increase the size of the flower, but at the same time shorten its duration of flowering, and perhaps disfigure its appearance.

HOME.—The word "home" brings with it a certain charm to English ears, and awakens associations of domestic peace, comfort, and happiness. There are, however, exceptional cases, where, owing to the existence of some discordant elements, home is the reverse of enjoyable, and a man is driven to seek for comforts elsewhere than in his natural abiding place. It is an undoubted truth that the happiness of home depends upon the management and tact of the housewife, and her guiding principle should be to create, if possible, such charms and pleasures in the home over which she presides, as shall not be attainable elsewhere. When this subject is examined more closely, it will be found that the proper management of a home is as much the *business* of a wife, as the going forth to labour is that of the husband; and it is, therefore, the duty of every woman, as it should be her pleasure, to provide home enjoyment for a man as a recognition of his just claims, and a recompense for his daily toil. This duty is not only based upon broad principles, but it also consists in the exercise of many trifling acts, and the performance of many minor offices, which depend upon the peculiar circumstances in which a wedded pair happen to be placed. Among the numerous golden rules, however, which go far to secure domestic happiness, the following may not be inappropriately enumerated:—Keep the house clean and tidy, and the rooms snug and comfortable. Never create a commotion in the household while your husband is at home; but defer all domestic operations, such as washing, removing furniture, &c., until he goes out, and bring your labours to a conclusion before he returns. Do not interfere with your husband's arrangement of any articles of use, or alter the disposition of his books, papers, &c. Have the dinner, tea, or whatever meal your husband partakes of, ready for him by the time he comes home; the number of unhappy contentions which have been caused by a disregard of this rule, is beyond conception. Endeavour to discover your husband's tastes and predilections; and, having discovered them, miss no opportunity of administering to them. Learn to discern his character and disposition, so that you may regulate your conduct in such a manner as not to offend or displease him. Do not scold your servants before your husband; this is a common method by which bad housewives endeavour to excuse their own shortcomings. Contrive, from time to time, new pleasures and fresh gratifications; these are certain to be appreciated, and may be projected by an ordinary exercise of judgment and intelligence. Suffer no one, not even the nearest relative or dearest friend, to interfere in the management of your domestic concerns; do that which you consider to be right, and it is almost certain to be so. Discourage the visits of mere gossips, who, by uselessly monopolising your time, prevent you from paying proper attention to your domestic duties. Remedy all defects of the household the moment that they are perceived; among these may be mentioned smoky chimneys, creaking doors, shaky windows, stubborn locks and bolts, and rickety furniture; the existence of these defects form a fruitful source of discomfort and grumbling. Provide articles of constant requirement in time; the neglecting to send for this or that until the very moment when it is wanted, occasions waste of time, inconvenience, and commotion. Be always cheerful and good tempered; do not make any little ailments, with which you may be visited, the theme of your conversation; and endeavour to bear the crosses and vexations of life with resignation, equanimity, and fortitude. *To husbands* we would say, regard your home as the place where both duty and inclination should lead you; do not suffer yourself to be weaned from it by fleeting and unstable attractions abroad, for these cannot conduce to any permanent pleasure, and are calculated to be productive of much unhappiness to you and yours. Forget all business cares when you enter your home, and enter cheerfully into such amusement and conversation as you think are calculated to please. Show that you appreciate the efforts which are being made to promote your comfort, by a few words of encouragement and gratitude, timely spoken and tenderly expressed. Avoid fault-finding and a display of petulance and ill-temper, at any little accident or irregularity. Remember that perfection is an impossibility, and a good housewife is sufficiently grieved by a domestic misadventure, without needing your reproach by way of aggravation. Endeavour to conform your habits to the arrangements made, and do not scruple to make any little personal sacrifices that may conduce to the comfort of the household generally. Do not intermeddle with the purely domestic regulations of the

house; as, for instance, giving orders directly contrary to those already given by your wife; such a step as this is not only offensive to her, but is calculated to engender confusion and disrespect among the servants. If you have any complaint to make against the domestics, let it be made through the medium of your wife, and not by you directly; the less a master speaks to a female servant the better will he be served and respected. Second the efforts that are made for order and regularity, by being orderly and regular yourself; thus, instead of throwing articles of wearing apparel, or books and papers about in all directions, put them in the place usually appointed for them. Do not occupy yourself too much in reading newspapers or books, or in any other exclusive and selfish pursuit. Entertain company occasionally, and have a few friends now and then to grace your fireside; it is possible for two persons with the best intentions and the most amiable of tempers, to fail in amusing and interesting each other, if constantly left to their own resources. Lastly—and this applies equally to husband and wife—do nothing surreptitiously, and discountenance anything like separate interests. Repose the strongest faith and confidence in each other, and strive to avoid any act or deed which can in any way disturb this mutual reliance.

HOMŒOPATHY.—A system in medicine of comparatively recent introduction, which professes to cure diseases by minute doses of medicine, capable of producing in healthy persons affections similar to those which it is intended to remove. Books: *Laurie's Domestic Homœopathic Medicine, 5s., and 16s.*; *Jahr's Pharmacopœia, 12s.*; *Newman's Family Assistant, 5s.*; *Jahr's Handbook, 12s.*; *Henrique's Dictionary, 4s. 6d.*; *Pulte's Physician, 7s. 6d.*; *Mother's Guide, 1s. 6d.*; *Curtis's Practice, 4s.*; *Dunsford's Remedies, 9s.*; *Hamilton's Guide, 5s.*; *Curie's Principles, 5s.*; *Sampson's Truths, 5s. 6d.*

HONEY.—The sweet substance elaborated by the bee from the juices of the nectaries of flowers, and deposited in the cells of wax, forming the honeycomb. The nature of honey is very much influenced by the species of flowers from which it is obtained, and the vegetation which supplies the bees with food. The honey afforded by bees that have access to wild thyme, lavender, rosemary, and some other flowers, abounding in aromatic and essential oils, is of the first quality; while it is said to be very bad when the bees are located near to fields of buckwheat. The common honey of Britain being chiefly derived from agricultural crops or wild plants of the leguminous kind, such as clover, beans, gorse, and broom, is, when pure, of excellent quality; the Hampshire honey is reckoned the best in England. New honey appears a uniform transparent syrup, varying considerably in colour from nearly white to a yellowish brown, intensely sweet to the taste, but always having more or less of a peculiar flavour and an aromatic odour; and, besides its sweetness, it has a sharp acidulous taste, which becomes sharper with age, at the same time that the colour grows deeper. Virgin honey is that which is made in a new clean hive by bees that have never swarmed. In taking honey from the hive, pressure is generally employed, by which a larger quantity of honey is obtained, but at the same time particles of wax, and the intrusion of the bee maggot deteriorate its quality and flavour. As an article of food, honey is found to be wholesome, if moderately employed; but when indulged in freely, it proves to be laxative, and in some habits produces colic. The custom of giving an excess of honey to children is to be particularly discountenanced, as a most injurious practice. As a medicine, honey is employed in the preparation of oxymels and gargles; it is also employed as a vehicle for administering nauseous and unsightly medicines. In affections of the throat and lungs, it is frequently found to be remarkably efficacious. If fermentation should take place in honey, it is no longer calculated for ordinary use, and is only fit to be converted into mead or vinegar.

HONEY CAKES.—Take a pound and a half of dried and sifted flour, three-quarters of a pound of honey, half a pound of finely powdered loaf sugar, a quarter of a pound of citron, half an ounce of orange peel, cut small, half an ounce of ginger, and half an ounce of cinnamon. Melt the sugar with the honey, and mix in the other ingredients; roll out the paste, cut it into small cakes of any form, and bake on tins in a moderate oven.

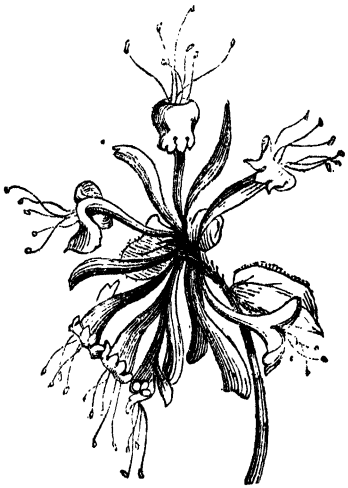
☞ Flour, 1½lb.; honey, ¾lb.; sugar, ¾lb.; citron, ¼lb.; orange peel, ½oz.; ginger, ½oz.; cinnamon, ½oz.

HONEY-DEW.—An exudation either from the leaves of plants or from insects, and which proves highly injurious to vegetation, by covering the surface of leaves with a thick glutinous substance, and causing, by its adhesiveness, dust and other filth to accumulate upon them, till their pores are at last completely sealed up, and their functions become suspended. The formation of honey-dew may be in a great measure prevented by applying salt and water to the soil where the plant is growing, one ounce of sea salt (chloride of sodium) to a gallon of water is sufficiently powerful for this purpose. When honey-dew has really appeared, the only remedy is to syringe and wash the leaves of the plant as soon after the discovery as possible.

HONEY SOAP.—Cut into thin shavings, two pounds of common yellow or white soap; set it over the fire with just enough water to keep it from burning: when quite melted, add a quarter of a pound of honey, and stir the mixture till it boils; then take it off and add a few drops of any agreeable perfume: pour it into a deep dish to cool, and then cut it into squares.

HONEYSUCKLE.—A twining plant, of which there are several varieties; all the sorts may be propagated by layers or cuttings. Each cutting should have four joints, and only one joint should be left above ground; they should be taken off in autumn, and

inserted in a shady border; tender and scarcer kinds should have the assistance of a hand-light, as the wood is generally pithy.



The honeysuckle will grow in almost any soil, provided it be not too dry.

HONEY, TO PURIFY.—Take, for every five pounds of honey, three ounces of powdered chalk, five ounces of charcoal powder, previously washed and dried, and the whites of fifteen eggs beaten up in a pint of water; set the honey, the chalk, and a quart of water, to boil for two minutes in a vessel, larger by one-third than the bulk of its contents; then throw in the charcoal mixed with the white of egg, and boil for two minutes longer, stirring well the whole time. When boiled, set it to cool for about a quarter of an hour, and then pass it through a hair sieve or bag; as the honey which runs off first will be discoloured a little by the charcoal, return it to the bag until all comes away clear.

HONEY WATER.—Take of rectified spirits, eight ounces; oil of cloves, bergamot, and lavender, of each half a drachm; musk, three grains; yellow sanders shavings, four drachms. Digest for eight days; add two ounces each of orange-flower water and rose water.

HOOPING COUGH.—This disease comes on with difficulty of breathing, thirst, quick pulse, hoarseness, cough, and the usual symptoms of a common cold, aggravated. This condition may endure for two or three weeks, till at length the expirations made in coughing become longer, and more rapid and violent; the child, in its sudden gasp to recover breath, making in the larynx and glottis, that peculiar whoop that has given name to the disease. This whoop or hoop, once established, the cough becomes spasmodic, and is continued with rapid persistency till a little mucus is expelled, or the contents of the stomach are ejected, when the paroxysm ceases, and the child for some hours has no return of the symptoms. As this is both a spasmodic and an imitative disease, children who are in health should be carefully kept from the sight and sound of a patient affected with it.

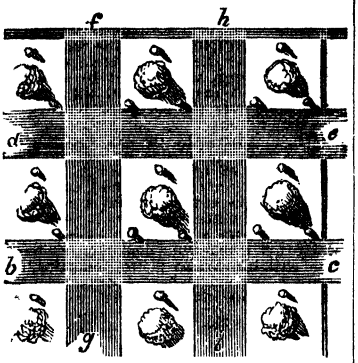
The great object to be obtained in the *treatment* of this disease, is, to procure a free expectoration and vomiting, so as to reduce the length and severity of the paroxysms. This effect is to be obtained by repeated small doses of tartar emetic, so as to keep up a constant state of nausea and relaxation. For this purpose the following powders are to be employed, one being given every three or four hours:—Take of

Powdered sugar . . .	1 scruple.
Tartar emetic	2 grains.
Grey powder	15 grains.

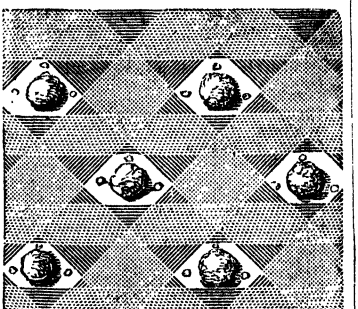
Mix well, and divide into twelve powders, for a child from two to three years; into eight powders for a child from three to five years; and into six powders to all above that age. To youths and adults affected with hooping cough, a dose of laudanum varying from fifteen to thirty drops, by suspending the spasmodic action, will generally be found all that is necessary to cure the disease. In no affection of childhood is change of air more necessary; and, if the weather is congenial, the patient cannot be too soon removed. Benefit is sometimes derived by rubbing the throat and chest of the child with a stimulating embrocation, though as a general rule, nothing is required beyond the tartar emetic, and keeping the stomach and bowels regular.

HOP.—A perennial-rooted plant with an annual twining stem, which, on poles or in hedges, will reach the height of from twelve to twenty feet, or more. The hop is propagated by dividing the roots in autumn and spring. It requires a deep rich soil, which should be frequently stirred, and kept quite free of weeds. The plantation should be renewed every seven or ten years, according to circumstances. In field-culture the hop-ground should be harrowed and rolled, and reduced to as fine a state as possible about the end of March; and from one hundred and fifty to two hundred bushels of lime to the acre, according to the nature of the soil, should be applied to the surface, and harrowed in. There are two methods of arranging the plants in a hop-ground, one in squares, and the other in quincunx; and of these two modes the quincunx is the preferable, because the plants, standing independently, are more exposed to sun and air; a greater number of plants can be placed on the same extent of ground, and the soil can be cleaned nearer the plants with the horse-hoe. In the accompanying engraving is shown the square method of planting, in which the hills of hops, such as *a*, are each surrounded in a triangular form by three poles. In clearing the ground with the horse-hoe from *b* to *c*, one pole is closely

passed at each hill on the right, and two poles are as closely passed on the left hand; and the same happens in clearing the ground from *d* to *e*. On clearing the ground in the

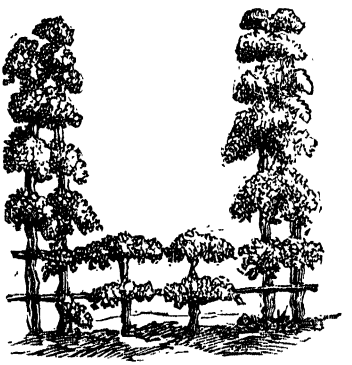


direction at right angles to the former, as from *f* to *g* and *h* to *i*, one pole is passed closely on both hands at each hill. The intersecting lines *b c*, and *d e*, by *f g* and *h i*, represent the space of ground stirred by the horse-hoe; and it will be observed that while a square piece of ground included by every four hills is stirred twice, a considerable space in the angles on each side of the single poles in the square piece of ground surrounding each hill is left untouched by the hoe, which must be cleared by manual labour at an enhanced cost. The quincunx method is illustrated in the following engraving. Of the two methods, there-



fore, the quincunx not only saves much manual labour in clearing the land, but stirs it the oftener. *In dressing the hop plant*, the operations of the first year are confined to twisting and removing the haulm. The operation of twisting is confined to such plants as have been planted in the spring,

and are not expected to produce any crop that season. It is performed at the end of June or in July, and consists in twisting the young bines into a bunch or knot, so that by discouraging their growth, the roots are enabled to spread out more vigorously, and to acquire strength previously to the approach of the winter season. Removing the haulm takes place soon after Michaelmas, and consists simply in cutting it over with a sickle, and carrying it off the field for litter or burning. The yearly operation of stacking or setting the poles commences towards the end of April, or at whatever period, earlier or later, the shoots may have risen two or three inches. Particular attention should be paid to proportion the length of the poles to the probable strength of the bines; for, if the pole be too long, it draws up the bine, and makes it bear less; if it be too short, the bines entangle when they get beyond the poles, and cause confusion in the picking. Hops are sometimes trained successfully in the espalier form, as seen in the engraving, on poles five feet high



and three feet apart, with a long pole or two at such intervals as may be desired, fixed to the top of the horizontal ones, to keep them steady. A plant is set at each stake, and the rows are formed one way across the field. This method may be adopted with success where poles are scarce, and where the ground is exposed to winds. All the male plants should be placed on the long poles, that their farina may drop on the female flowers on the lower ones. *The taking of the crops* is a most important operation in hop economy. Hops are known to be ready for pulling when they acquire a strong scent, and the seeds become firm and of a brown colour, which, in ordinary seasons, happens in the first or second week of September. When the pulling season arrives, the utmost assiduity is necessary on the part of the planter, in order that the different operations may be carried on with regularity and despatch, as the least neglect in any department of the business proves, in a great degree, ruinous to the most abun-

dant crop, especially in precarious seasons. *The operation of drying hops* requires much experience and practice, to perform it successfully. The hops are spread on a hair cloth, and from eight to ten, sometimes twelve inches deep, according to the dryness and wetness of the season, and the ripeness of the hops. The general rules are, to begin with a slow fire, and to increase it gradually till, by the heat on the kiln, and the warmth of the hops, it is known to have arrived at a proper height. An even steady fire is then continued for eight or ten hours, according to the state or circumstances of the hops, by which time the end of the hop-stalks become quite shrivelled and dry, which is the chief sign by which to ascertain that the hops are properly and sufficiently dried. They are then taken off the kiln, and laid in a large room or loft till they become quite cool. *In the choice of hops* care should be taken to select those that have large cones, that are most powerfully odorous, and most free from leaves, stems, scaly fragments, and sticks, and which, when rubbed between the hands, impart, in the greatest degree, a yellowish tint and glutinous feeling to the skin. The tightness with which they are packed should also be noticed, as without being very firmly pressed together, and quite solid, they soon spoil by keeping. The finest flavoured hops are those grown in East Kent, and termed the "golden bine;" these possess a lively golden yellow colour. "Countrys" and Farnham hops have a greenish yellow colour, and are more expensive than any other variety.

HOP-TOPS.—Hop-tops may be served as a substitute for asparagus. Break off the young shoots of hops, tie them in bundles, boil them with a little meat in the water for twenty minutes; serve as asparagus.

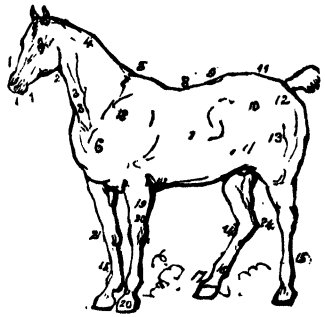
HOPS, MEDICAL USES OF.—Hops are narcotic, tonic, and diuretic; they reduce the frequency of the pulse, and do not affect the head like most anodynes. Used externally they act as an anodyne and discutient, and are useful as a fomentation for painful tumours, rheumatic affections of the joints, and severe contusions. A pillow stuffed with hops also acts as an excellent narcotic, and will frequently procure sleep and ease when all other means have failed. When the powder of hops is mixed with lard, it acts as an anodyne dressing in painful ulcers.

HOREHOUND.—This herb has long been a popular remedy in chronic pulmonary complaints, and is commonly resorted to in cases of coughs and colds. *Horehound tea* is made by infusing an ounce of the herb in a pint of water, for an hour. *Syrup of horehound*, is the tea sweetened and thickened with sugar. *Candied horehound:* mix a pint of horehound juice with eight or ten pounds of white sugar; boil the mixture to a candy height, and pour it, whilst warm, into moulds or small paper cases, well dusted with finely powdered sugar.

HORN.—Among the numerous purposes to which this material is put, is that of converting it into a manure. The shavings and trimmings of horn are excellently adapted for this purpose; the animal matter in them seems to be of the nature of coagulated albumen, and it is slowly rendered soluble by the action of water; the earthy matter in horn forms the most valuable portion of the manure, and renders it very durable in its effects.

HORNET-STING.—Press the barrel of a watch-key over the part affected, so as to expose the sting, which must be then removed. Lay a rag moistened with hartshorn and oil over the part, and moisten it from time to time.

HORSE, CRITERIA OF.—In choosing a horse, a just knowledge of the exterior conformation of horses generally, and of the essential points in the animal, according to the employment for which he is destined, are necessary matters for every person who intends keeping a horse, to know. The accompanying engraving depicts an ordinary horse, with his various points indicated by certain figures, which bear a corresponding reference to the numbered list below the engraving.

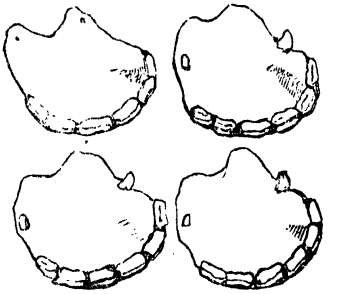


1 1 1. Muzzle parts about the mouth.
2. Gullet.
3 3. Windpipe.
4. Crest.
5. Withers.
6. Chest, or Counter.
7 7. Girth.
8. Back.
9. Loins.
10. Hip, or Ilium.
11. Croup.
12. Haunch, or Quarters.
13. Thigh.
14. Hock.
15. Shand, or Cannon.
16. Fetlock.
17. Pastern.
18. Shoulder bone, or Scapula.
19. Elbow.
20. Fore-thigh, or Fore-arm.
21. Knee.
22. Coronet.
23. Point of the hock.
24. Ham-string.

The proper conformation of horses in general is as follows: The head should not be

disproportionately large, and should be well set on, that is, the lower jawbones should be sufficiently far apart to enable the head to form that angle with the neck, which gives free motion, and a graceful carriage to it, and prevents its being too heavy on the hand. The eye should be large and slightly prominent, and the eyelid fine and thin. The ear should be small and erect, and quick in motion. The lop-ear indicates dulness or stubbornness; and when it is habitually laid too far on the back, it frequently evinces a tendency to mischief. The nostril in every breed should be somewhat expanded. The neck should be long, rather than short. It should be muscular at its base, and gradually become fine as it approaches the head. The withers should be somewhat high in every horse. The shoulder should be formed in a slanting direction, as it confers mechanical advantage, and easy and pleasant action, and a greater degree of safety. It must not, however, exist in any considerable degree, in the horse of draught, and particularly of heavy draught. The chest must be capacious, for it contains the heart and the lungs, the organs on which the speed and endurance of the horse depend. The loins should be broad, the quarters long, the thighs muscular, and the hocks well bent, and well under the horse. With regard *to the colour of a horse*, there is no certain rule by which this can be connected with his capacity. As a general principle, dark are preferable to light horses, except in the instance of black, which has fewer good horses within its range, particularly in the lighter breeds, than any other. Grey horses are, also, in some degree, an exception to the rule; for there are many good greys. Bay and brown are esteemed good colours. *The criteria of hardiness* are derived from the form of the carcass, which should be circular or barrelled; by which conformation, a greater extent of food is retained, and strength gained to perform the labour required. *The criteria of vigour, spirit, or mettle*, are best derived from trial. It should always be borne in mind that a hot fiery horse is as objectionable as a horse of good courage is desirable. Hot horses may be known by their disinclination to stand still; by their mettle being roused by the slightest exercise, especially when in company. Such horses seldom last long, and under accident are impetuous and frightened in the extreme. A good couraged horse, on the contrary, moves with readiness, as well alone as in company; he carries one ear forward and one backward; is attentive and cheerful, loves to be talked to and caressed, and if in double harness will play with his mate. *The criteria of the racehorse*, derived from form, are, that he have the greatest possible quantity of bone, muscle, and sinew, in the most condensed form. There should be a general length of parts to afford stretch, scope, and elasticity, with great muscles hardened by condition, to act on the length of these parts advantageously. In particular, his hind limbs should be furnished with ample thighs and broad hocks, which should be low set. His fore-arm ought also to be broad, and the knee, like the hock, should be near the ground. *The hunter* should have somewhat similar proportions to the racer, but with more bulk, to enable him to continue his exertions longer, and to carry more weight. In him a good carcass is essentially necessary, to enable him to go through a long chase, and the more if he be required to hunt more than one day in the week. The hunter should be well formed in his loins, and well let down in his thighs, to propel him forward in his gallop, and give him strength to rise sufficiently to cover his leaps. *The hackney* should be well formed behind, to give him strength, and to propel him forward, it is even of more consequence that he be well formed before; and in this kind of horse the hind parts are somewhat subordinate to the fore, as safety is of more consequence than speed. The head of the hackney should be small, and placed on a neck of due length and substance, so as to form that firmness, and proper resistance to the hand, so pleasant to the feel, and necessary for ease and safety. The shoulders should be oblique and well furnished with muscle, but not too heavy, and the withers in particular should be high. The elbows should be turned rather out than in, and the legs should stand out straight, and by no means fall under the horse, or it betokens a stumbler. The pasterns should be neither too oblique, which bespeaks weakness, nor too straight, which wears the horse out and is unpleasant to the rider. The carcass should be round; the loins straight, wide, and ribbed home; and the thighs of good substance. *Road horses for quick draught*, as coach, chariot, stage, and post horses, require a rising fore-arm, a straight back, and a short quick step. As they approach the hunter form, they are best fitted for quick work; and, as they resemble the best kind of light agricultural horses, they are calculated for heavy draught, as for coaches, &c. But in all, a portion of blood gives courage and durability, and condenses strength into lessened bulk; by which activity is gained. *The criteria of a horse best suited for agricultural labour* are, the head as small as the proportion of the animal will admit; the nostrils expanded, and the muzzle fine; eyes cheerful and prominent; ears small, upright, and placed together; neck rising out from between the shoulders with an easy tapering curve, and joining gracefully to the head; shoulders well thrown back; fore-thigh muscular, and tapering from the shoulder, to meet a fine, straight, sinewy, and bony leg; the hoof circular, and wide at the heel; chest deep and full at the girth; loins or fillets broad and straight, and body round; hips by no means wide, but quarters long, and the tail set on so as to be nearly in the same right line as the back; thighs strong and muscular; legs clean and fine-boned; leg-bones not round, but what is called lathy or flat. The horse attains maturity at five years old, and he is in his prime till eight or nine. If no unfair play be practised, his age may be judged of from his teeth, or, as it is called, *mark of mouth*. The horse is foaled with six molar or grinding teeth in each

Jaw; the tenth or twelfth day after, the two front nippers appear above and below, and in fourteen or fifteen days from this, the two intermediate are pushed forward; the corner ones are not cut till three months after. At ten months the incisive or nippers are on a level with each other, the front less than the middle, and these, again, less than the corners; they, at this time, have a very sensible cavity. At twelve months this cavity becomes smaller, and the animal appears with four molar teeth on each side, above and below, three of the temporaneous or colt's, and one permanent or horse tooth; at eighteen months the cavity in the nippers is filled up, and there are five grinders, two of the horse, and three temporaneous; at two years the first of the colt's molar teeth in each jaw, above and below, are displaced; at two years and a half or three years, the front nippers fall, and give place to the permanent ones; at three and a half, the middle nippers are likewise removed, at which period the second milk molar falls; at four years the horse is found with six molar



teeth, five of his new set, and one of his last; at four and a half the corner nippers of the colt fall, and give place to the permanent set (as seen in the engraving), and the last temporaneous grinder disappears. At five years old, when the teeth have been fully developed, the horse possesses six teeth in the front of each jaw, called incisors; a short distance from each end of the row of incisors, and in each jaw, there is a solitary canine tooth; these canine teeth are technically called *tushes*. At a greater distance inward, in each jaw, and on each side, there are six grinders. At five and a half years old, the nippers are marked by a natural cavity found in the substance between the outer and inner walls, and it is the presence or absence of these darkish marks that certifies the age of the animal. When the horse reaches six years, the marks in the two front nippers of the nether jaw are filled up, and the tushes are blunted. At seven years, the two nippers next the middle ones are also filled up; at eight, the two outer ones are filled up also, and the tushes are round and shortened. The lower nipper teeth are now all smooth; the marks are gone; but in the teeth of the upper jaw the marks remain for a year or two longer. Although the mark of the horse's teeth furnishes the ordinary criterion of his age, yet this is sometimes apt to deceive, owing to a disgraceful practice which prevails among dishonest dealers, of making an artificial mark on the horse's teeth to resemble the natural one: by which inexperienced persons are apt to be misled. But no art can restore the tushes to their form and height, or re-furnish their internal grooves. The best judges, therefore, thrust one of their fingers into the horse's mouth, contenting themselves with merely feeling the tush. To less experienced judges other appearances present themselves as aids. Horses, when aged, usually become hollow above the eyes, the hoofs appear rugged, the under lip falls, and if grey be the colour of the horse, it becomes white. The appearance of a horse will be influenced by the treatment which he has received, and the work he has performed; it is not uncommon to find a horse at six years old feeble, debilitated, and exhibiting all the marks of old age. On the contrary, when the animal falls into other hands, at ten or twelve he has all the vigour of youth, and his teeth are the only parts that present an indication of age; it is therefore more useful to examine the general appearance of the animal, than to be guided absolutely by the marks on the teeth. *In buying a horse*, one of the chief requisites to be attended to is, the degree of nervous energy which the animal possesses; and it is the union of this energy with good conformation that completes the value of the horse. Its absence or presence, however, is not likely to be discovered without a trial; and, to avoid disappointment in this respect, it is absolutely necessary that a trial should be obtained previous to purchase. The horse should be set to the work which he is designed to perform; and if he be intended for the saddle, or for single harness, he should have no companion on his trial, for many horses work well in company, who are sluggish and slow when alone. Some horses have an awkward and unpleasant way of going, or are difficult to manage, or have some vice, which is only displayed when at work. In short, defects too numerous to mention may exist, which render a trial, previous to the conclusion of the bargain, an essential proceeding. But if that cannot be obtained, some sort of conclusion regarding the animal's spirit may be arrived at by his general appearance. The manner in which he carries his head, his attention to surrounding objects, his gait, and the lively motion of his ears, may all or each be looked to as indicative of "bottom," or willingness to work. It is only, however, in a private stable or in that of a respectable dealer, that these criteria can be depended upon; for, in a market-place, the animal is too much excited by the cracking of whips, and the too frequent application of them, to be judged of as regards his temper. Neither must the buyer be thrown off his guard by the animation which horses display at an auction, or on coming out of the stable of a petty dealer; for it is a fact, which cannot be too well made known, that there are

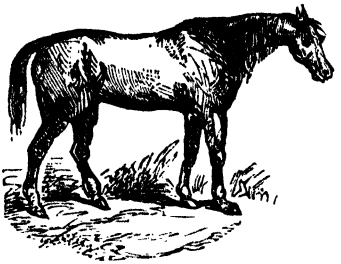
many unprincipled dealers, who make it their business, before showing a horse, "to put some life in him"—that is, they torture him with the lash, till, between pain and fear, the poor animal is so much excited as to bound from side to side with the utmost agility, at the least sound or movement of the bystanders. Minute attention should be bestowed upon the fore-legs and feet; these in fact, are the great trying points. If the feet be not round and full, so as to stand firmly and flatly on the ground, and if tender or thin in the hoofs, the animal is not to be trusted for saddle-work. Weakness in the fetlock joint will, also, cause a horse to stumble and come down, and is therefore an equally serious defect. Horses are sold with or without warranty at sales held at repositories; the terms of warranty are generally announced in a public manner; but when the sale is private, no warranty is binding which is not expressed in writing in the receipt.

HORSE, DISEASES OF.—The labour to which a horse is doomed, accompanied by his artificial state of living, exposes him to a number of formidable diseases. *Glanders* is the most destructive of all the maladies to which the horse is exposed; it is the consequence of breathing the air of foul and vitiated stables; and, in every stage of it, is most contagious. The disease takes the form of an irritation of the delicate membranes of the nostrils, accompanied by an offensive discharge of gluey matter from the nose, an enlargement and induration of the glands beneath and within the lower jaw, on one or on both sides, and small circular ulcers covering the cartilage of the nose. These are the general symptoms, but they vary greatly. Sometimes the discharge will be so slight as scarcely to be perceived, and be known only by its adhesiveness; and the glands will not be in the least degree enlarged; at others a very small enlarged gland may be found, adhering to the jaw, and may be stationary month after month, without any apparent discharge from the nose. The contagiousness of glanders renders it a disease to be particularly dreaded, for if a glandered horse be introduced into the stable, or work in the team, the greater part of the stud will, sooner or later, be lost. It should be known, also, that glanders may be communicated to human beings; and there are cases on record of persons having met with their death through inadvertently applying to their own faces a handkerchief or sponge which had been used for a glandered horse. Although every variety of remedy has been devised for this disease, it may, notwithstanding, be said to be almost incurable. Under these circumstances, the chief care is the prevention of the malady, which may generally be attained by proper stable management. Cleanliness and ventilation, therefore, are highly essential, and the atmosphere should not be too heated. Glanders may be produced by anything that injures, or for a length of time acts upon and weakens the vital energy of the nasal membrane. They have been known to follow a fracture of the bones of the nose. They have been the consequence of violent catarrh, and particularly when the discharge from the nostrils is long continued. They have been produced by the injection of stimulating and acrid substances up the nostril; and everything that weakens the constitution generally will lead to glanders. To protect other horses from contagion, the mangers, racks, and partitions of the stable, should be first well scraped, next scoured with soap and water, and thoroughly washed with a solution of chloride of lime (a pint of the chloride to a pailful of water). The walls should then be lime-washed, the head-gear burned, the clothing baked and washed, the pails newly painted, and the iron-work exposed to a red heat. These precautions taken, all danger will cease. *Farcy* is intimately connected with glanders: they will run into each other, or their symptoms will mingle together, and before either arrives at its fatal termination, its associate will almost invariably appear. The symptoms usually show themselves in what is termed a button or bud, which is, in fact, a species of indolent boil. In some cases, however, the horse will droop for many days before the appearance of the buttons or farcy buds; his appetite will be impaired; his coat will get out of order; he will lose flesh. The poison is evidently at work, but has not gained sufficient power to cause the absorbents to swell. The progress of the disease is then suspended, and possibly for many months the horse will appear to be restored to health; but suddenly the farcy assumes a virulent appearance, and hurries him off. The increase of the buds marks the progress of the disease. The ulcers spread around, and are cured with considerable difficulty. Larger tumours appear in the groin, and between the fore-leg, and ulcerate and spread: the hollows and burrowings run deep in every direction; glanders speedily appear, and death ensues. Few things are more dissimilar, or more perplexing, than the different forms which farcy assumes. One of the legs, and particularly one of the hind legs, will suddenly swell to an enormous size. At other times, the head will be subject to this enlargement; the muzzle will particularly swell, and a fetid discharge will issue from the nose. Sometimes the horse will gradually lose flesh and strength; he will be hide-bound; mangy eruptions will appear in different parts; the legs will swell; cracks will appear at the heels, and the inexperienced person may conceive it to be a mere want of condition, combined with grease. Farcy, like glanders, springs from infection, or from bad stable management. It is produced by all the causes which give rise to glanders, but with this difference, that it is more frequently generated, and sometimes strangely prevalent in particular districts. The treatment of farcy varies with the form it assumes. In the button, or bad farcy, a mild dose of physic should be first administered. The buds should then be carefully examined, and if any of them have broken, the budding iron, of a dull red heat, should be applied to them; or if matter should be felt in them, showing that they

are disposed to break, they should be penetrated with the iron. These wounds should be daily inspected; and if, when the slough of the cautery comes off, they look pale, foul, and spongy, and discharge a thin matter, they should be frequently washed with a lotion composed of a drachm of corrosive sublimate, dissolved in an ounce of rectified spirit. When the wounds begin to look red, and the bottom of them are even and firm, and they discharge a thick white or yellow matter, the friars' balsam will speedily heal them. As, however, the constitution is now tainted, local applications will not be sufficient, and the disease must be attacked by internal medicines. So soon as the physic has ceased to operate, the corrosive sublimate will be the best alterative, and may be given in doses of ten grains, gradually increased to a scruple, with two drachms of gentian and one of ginger, and repeated morning and night until the ulcers disappear; unless the horse is violently purged, or the mouth becomes sore, in which case a drachm of blue vitriol may be substituted for the corrosive sublimate. During this treatment the horse should be placed in a large box, with a free circulation of air, and greenmeat or carrots, the latter more particularly, should be given him, with a fair allowance of corn. If he could be turned out during the day, it would be advantageous; but at all events, he must be daily exercised. *Broken-windedness* is a distressing complaint, to which many horses are subject. When the breathing of a horse is rapid and laborious, it is said to be *thick-winded*; and when it breathes irregularly, the inspiration taking one effort, and the expiration two, it is called *broken-winded*. Inflammation of the lungs from cold, is the cause of thick-windedness, the condition of these organs preventing the full action of the air-tubes. This complaint, if not removed, will most likely terminate in the broken-winded condition. But broken-windedness will take place without the premonitory symptoms. The main cause of broken-windedness is sharp work after over-feeding—causing the animal to run while the stomach is full. It is a disease almost invariably the result of sheer carelessness on the part of the persons whose duty it is to superintend the feeding of the horse. Broken-windedness depends as much upon the cramped state of the lungs, from the pressure of an over gorged stomach, in the ordinary state of the animal, as from the effects of over-exertion. A horse, for instance, frequently becomes broken-winded in a straw-yard, for there is but little nutriment in the provender found there; so that the animal, to obtain enough for the support of life, is compelled to keep the stomach constantly full, and pressing on the lungs. The perfect cure of broken-windedness is held to be an impossibility; yet much may be done to relieve it. The food of the animal should consist of a great deal of nourishment compressed into a small compass; the quantity of oats should be increased, and of hay proportionately diminished; the bowels should be gently relaxed by the frequent use of mashes; the water should be given sparingly through the day, although at night the thirst of the animal should be fully satisfied; and, above all, exercise should never be taken when the stomach is full. *Inflammation of the brain*, produced by over-exertion, or by any of the causes of general fever, and characterized by the wildest delirium, must be submitted to the most profuse blood-letting, active purgation, and blistering of the head, *Tetanus, or locked-jaw*, is a constant spasm of all the voluntary muscles, and particularly those of the neck, the spine, and the head. Bleeding, physicking, blistering the course of the spine, and the administration of opium in very large doses, will alone give any chance of cure. *Palsy* is the suspension of nervous power. It is usually confined to the hinder limbs, and sometimes to one limb only. Here bleeding and physicking, and antimonial medicines, and blistering of the spine, are the most rational applications. *Rabies*, or madness, is evidently a disease of the nervous system, and, once being developed, is altogether without cure. The utter destruction of the bitten part with lunar caustic, soon after the infliction of the wound, will, however, in the great majority of cases, prevent the development of the disease. *Pleurisy*, or inflammation of the serous coverings of the lungs, and the lining of the cavity of the chest, is generally connected with inflammation of the substance of the lungs; but it sometimes exists independently of any state of the lungs. Active purgatives may be pursued, and copious bleedings and sedatives had recourse to. *The Curb* is a derangement of the hock-joint, which arises from over-exertion of the ligaments, and takes the form of an enlargement a few inches below the joint of the hock. *Bog-spavin* is a defect of a somewhat similar character, but of a more serious nature. This also takes place from over-exertion, and is an inflammation of the vesicles which contain the lubricating material for the nourishment of the joint. This disease is almost incurable, and the afflicted animal is in general only fit for ordinary and moderate work for the remaining term of his life. *Bone-spavin* is a still more formidable disease. It is an affection of the bone of the hock-joint, caused by violent action, or by any kind of shoeing which throws an undue strain on certain ligaments, and deranges the action of the bones. A bony deposit takes place, the joint is stiffened, and the consequence is a lameness or stiff motion of the hind legs. Blistering, as a counter-irritant, and rest, are the principal remedies prescribed for this complaint; but the best remedy of all is never to overload the horse, or to put him to any violent exertion. *Warts* may be cut off with the scissors, and the roots touched with lunar caustic. *Inflammation of the haw* may be abated by the employment of cooling lotions, but that useful defence of the eye should never, if possible, be removed. Common *Ophthalmia* will yield as readily to cooling applications as inflammation of the same organ in any other animal. *Canker in the mouth*, generally resulting from the pressure and bad usage of

a sharp bit, and small ulcers produced by rusty bits, should be treated with a little cooling medicine, and to the ulcers themselves, tincture of myrrh, diluted with an equal quantity of water, or an ounce of alum dissolved in twenty times the weight of water, may be applied with advantage.

The horse is frequently subject to that morbid state which is characterized by no specific disease, but which is generally known as being "out of condition;" the animal assumes the jaded and drooping appearance seen in the accompanying engraving. The symptoms which accompany



this derangement are as follows: — The spirits of the horse are below par; a little exercise tires him, and the flesh becomes loose and flabby. The eyes are mostly dull, and, when not moist, they present a little inspissated crust at the anterior angle. The insides of the eyelids, and of the nostrils also, are often tinged with a yellow hue. The heat of the body is irregular; at one time the legs, ears, and muzzle will be cold, and at another a feverish heat and dryness may pervade the whole frame. The appetite for water is often increased, while that for food is frequently irregular and fickle, and what the horse does take appears to afford him but little nutriment. The hair ceases to shine, and becomes more or less ruffled; sometimes it falls off in patches; or lumps break out in different parts of the body. The legs of a horse in this state are very apt to swell, and not unfrequently cracks either accompany or follow the tumefaction. Sometimes, also, there will be a short dry cough. The accidental causes of morbid condition are various, and the remedial treatment must be so likewise. Injudicious feeding, as to quantity or quality, is very likely to produce it. A sudden remove from a generous to a poor diet is calculated to cause the derangement; for in such case the chyle, or nutritious pabulum, whence all the vital organs are recruited, and all the vital energies derive their vigour, cannot be separated in sufficient quantities. The blood itself thereby becomes deteriorated; universal absorption takes place of the softer parts, which produces a decrease of bulk; while a laxity of fibre in the remaining portions is productive of languor and debility. The liquid aliments should likewise be attended to in a consideration of the bad condition of horses. Too much and too little water are both injurious: hard waters seldom agree well; mineral waters are unfavourable in most cases; and a continued use of brackish water, found near sea-bathing places, is always hurtful to such horses as have not been accustomed to it. Badly ventilated stables are often the cause of ill-condition, and cold ones equally so. An inordinate amount of work, particularly if continued unremittingly for several days, and without previous preparation, will often produce a very obstinate morbid condition. In these cases the digestive organs themselves, having suffered equal injury with the rest of the frame, become unable to reinstate themselves; much less, therefore, can they be expected to be equal to the task of remedying the injuries of the whole mass quickly. Hence, therefore, these particular instances of morbid condition prove obstinate, and require much time and attention to remove. Such cases are very likely to occur in young unseasoned horses. In all cases, however, a good restorative plan consists in placing the horse in a loose box, with a malt mash at night, with carrots and speared corn in winter, with tares in summer, judiciously administering a mineral tonic at the same time.

The physicking of horses, in accordance with the various changes in their modes of feeding and living, or the ever-changing condition of their bodies, is a matter of great importance. When a horse comes from grass to hard meat, or from the cool open air to a heated stable, a dose of physic, or even two doses, may be useful to counteract the tendency to inflammation, which must be the necessary consequence of so sudden and great a change. To a horse that is becoming too fat, or that is out of condition from inactivity of the digestive organs, a dose of physic is often most serviceable. The practice of physicking all horses, as a matter of course, at spring and autumn is objectionable, and should certainly be guided by the condition of the animal. A horse should be carefully prepared for the action of physic. Two or three bran-mashes given on the same, or preceding day, are far from sufficient, when a horse is about to be physicked, whether to promote his condition or in obedience to custom. On the day upon which the physic is given, the horse should have walking exercise, or may be gently trotted for a quarter of an hour, twice during the day; but after the physic commences operating, he should not be removed from his stall. A little hay may be put into the rack; as much mash may be given as the horse will eat, and as much water, with the coldness of it taken off, as he will drink. If, however, he obstinately refuses to drink warm water, it is better that he should have it cold, than to continue without taking any fluid; but he should not be suffered to take more than a quart at a time, with an interval of least an hour between each portion. When the purging has ceased, a mash should be given once or twice every day, until the next dose is taken, between which and the setting of the first there should be an inter-

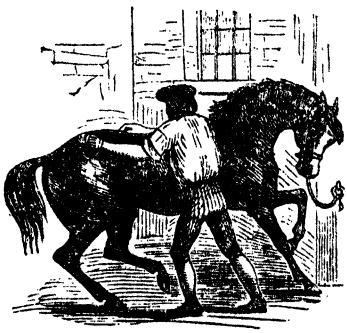
val of a week. The horse should be allowed to recover from the languor and debility occasioned by the first dose, before he is harassed by a second. Aloes form the surest and safest purgative for a horse. The dose for a horse, properly prepared, should be from five to seven drachms. The only other purgative upon which dependence can be placed is the croton. The farina or meal of the nut is used; but from its acrimony it should be given in the form of a ball, with linseed meal. The dose varies from a scruple to half a drachm. Linseed oil is an uncertain but safe purgative, in doses from a pound to a pound and a half. Olive oil is more uncertain, but safe; and castor oil is both uncertain and unsafe. Epsom salts are inefficacious, except in immense doses of a pound and a half, and then not always safe. Some little art and address are required in *administering physic* to horses: when a ball is to be given, back the horse in his stall; then, if necessary, the operator should raise himself on a stool or bucket, the tongue

of the horse should then be drawn a little way gently out of the mouth, so as to prevent its rising to resist the passage of the hand; but the tongue should not be laid hold of alone, or the struggles of the horse may injure it; on the contrary, it should only be held firmly by the fingers of the left hand against the jaw. The ball being previously oiled, must now be taken between the tips of the fingers of the right hand, lengthwise, when the hand, being squeezed into as small a space as possible, should be passed up the mouth close to the roof, by which injury to the teeth will be avoided; having placed the ball on the root of the tongue, the hand may be withdrawn, and the tongue may be liberated as soon as the ball is seen to pass down the throat. The head, during the whole process, should be but moderately elevated, when held too high it is apt to cause choking. An easy method of administering liquid medicine is as follows: Sling a loop of rope across the prongs of a stable fork, introduce this loop into the mouth, and by the aid of the fork handle separate the upper from the lower jaw. While the mouth is thus open, another

person, properly elevated, should place the horn or bottle, containing the fluid, into the horse's mouth, and, carrying it over to the root of the tongue, pour out the contents, when, still keeping the head well up, but letting the tongue loose, the drink will be swallowed.

HORSE, MANAGEMENT OF.—The health, vigour, and lasting powers of a horse, necessarily depend upon the amount of care and attention that is bestowed upon him. In treating of this important subject, therefore, it will be as well to take each of the leading features of management into consideration, and to give definite and precise rules respecting them. *Bedding* is an important duty, and cannot be too scrupulously attended to. The best bed is made of wheat-straw, but when that is dear or cannot be obtained, the straw of oats may be substituted. The more even and the less rumpled the litter, the better. The bed should be made level, or sloping slightly from the sides and head towards the centre, and be completely free from hard lumps. All ought to be smooth, clean, and soft, and the depth of the litter about seven or eight inches. Every morning the soiled litter should be taken away to the dung-yard, and the clean portion separated and placed at the head of the stall, ready to be employed again at night. *Cleaning the stable* should be performed every morning. The floor should be thoroughly brushed and swept, and all refuse and litter removed. *Grooming and dressing* are important considerations, inasmuch as the skin of the horse is liable to become clogged with a scurf of dried perspiration, along with particles of dust and mud, which, collect and lodge among the hairs, and which, as a matter of course, if suffered to remain, materially interfere with the animal's health and vigour. As a general rule, a horse should be groomed every morning, before he leaves the stable to accomplish his daily labour. The grooming is commenced

while the animal is in his stall; the restraining rein is lengthened, to allow of his standing a little back into the gangway. If restive, his head must be tied up. All refuse having been previously removed, a little of

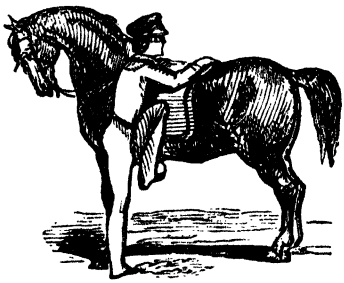


his bedding may be drawn out, for his hind feet to stand upon. The curry-comb must then be used vigorously, the coat finished off by brushing, and the mane, tail, and forelock combed, so as to make all the hairs lie straight. The legs, especially if they be white, will require an occasional washing with warm soap and water, and then to be dried with a wisp of hay. The dressing of a horse after work is as necessary as the morning grooming. When a horse is brought into the stable in a state of perspiration, it should not be allowed to settle into a state of rest all at once, but be walked gently about till it becomes moderately cool. This allows the excitement of the blood-vessels and muscles to be allayed gradually, and prevents any sudden stoppage of the pores of the skin. Wisping may be resorted to, in order to assist the drying and cooling. The horse's legs and feet should then be washed with water and a brush or sponge, any spots of mud on his body removed, and the whole thoroughly dried with a fresh clean wisp. When the horse has been cleaned and dried, the cloth may be thrown over him, and he may be led to his stall. The cloth used in summer should be lighter than that employed in winter. The loins especially should be protected from cold, for in this part, horses are peculiarly sensitive. Trimming should be performed with discretion and moderation; it should be borne in mind that every hair upon the horse's body is designed to fulfil *some* use, and their removal to any considerable extent is calculated to prove detrimental to the health of the animal. *The care of the legs and feet* forms a most important branch in the management of a horse. The legs must be kept perfectly dry and clean. Dirt suffered to form a lodgment, or wet allowed to remain upon the legs in cold weather, will fret the skin, and cause cracked heels, and many other ailments. If any disposition to swellings, cracks, &c., make their appearance on the legs, particularly in winter, moderate bandaging will, in general, contribute to remove the evil. It forms a part of the constant attention to the horse to see that the feet be well cleansed beneath the shoe from all stones and gravel, at every return from abroad. This must be invariably done when the horse has been stabled for the night. Take care to observe at the same time the general condition of the feet. The shoes must be examined, that their ends do not press into the crust, that the nails be fast, and that the clinches do not rise to cut the foot. In these cases, instant application must be made to the farrier. Horses ought by no means to remain in old shoes until the foot runs a risk of being worn. In the case of brittle hoofs, however, when it is obviously advantageous to shoe as seldom as possible, the shoes may be worn for a longer interval. Where there is a tendency to over-dryness of the hoof, as well as the undue action of moisture, it is advisable to anoint the horny part of the feet with an ointment made of tar, fish-oil, and beeswax, melted together in equal proportions; but this should not be done unless it is absolutely required. If well washed and kept clean, the feet will seldom require any such application. It is also prudent, when the hoofs are liable to harden and contract, to water the front part of the stall a little, and also occasionally or constantly, to hang around the hoofs an apparatus, made by doubling a circle of woollen cloth over a tape, which should be tied around the fetlocks loosely; the two segments of the cloth will then fold round the hoof, and correspond to it in shape. This may be dipped in water, and will be found admirably adapted to keep the feet cool and moist. It is considered beneficial, in general, to take off the shoes of a horse when necessitated to stand long in the stable, and doing no work, and to substitute tips: the growth of the crust, and the enlargement of the heel, being thereby promoted. The shoe of the horse must be of weight conformable to the powers and uses of the animal, also exactly suited to the curve of the hoof, flat, and of equal thickness. The operation of shoeing is most properly left to the farrier. As a general principle, care must be taken not to drive nails into any tender part, and the hoof should be as little broken as possible. *The exercise of horses* is essentially necessary to their health, as it counteracts the effects of the artificial life they are compelled to lead. The exercise should be daily, in the open air, and in the early part of the day: and when not exercised by work, the horse should be walked or trotted out on purpose. The horse that, with the usual stable-feeding, stands idle for three or four days, as is the case in many establishments, must suffer. He is disposed to fever, or to grease, or, most of all, to diseases of the foot; and if, after these three or four days of inactivity, he is ridden fast or far, inflammation of the lungs or of the feet is almost sure to follow. A gentleman's or tradesman's horse suffers a great deal more from idleness than he does from work. A stable-fed horse should have two

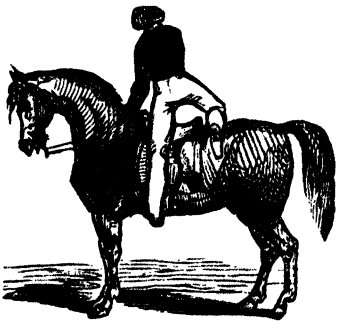
hours' exercise every day, if he is to be kept free from disease. Nothing of extraordinary, or even of ordinary labour, can be effected on the road or in the field without sufficient and regular exercise. The exercised horse will discharge his task, and sometimes a severe one, with ease and pleasure, while the idle and neglected animal will be fatigued ere half his task is accomplished; and if he be pushed a little too far, dangerous inflammation will ensue. Exercise should be somewhat proportioned to the age of the horse. A young horse requires more exercise than an old one; but it must not be violent, and the benefit derivable from it, greatly depends upon the way in which it is given. To preserve the temper, and to promote health, it should be moderate, at least at the beginning and the termination. The rapid trot, or even the gallop, may be resorted to in the middle of the exercise, but, finally, the horse must be brought to cool. Much mischief is frequently done to horses, by the exercising of them being intrusted to boys; and, to avoid this, the owner of a horse should insist upon the performance taking place within sight, or in the neighbourhood of his residence. *The watering of a horse* is a very important, but frequently disregarded portion of his general management. The kind of water has not been sufficiently considered. Soft water is preferable to hard; the latter freshly drawn from a well, will frequently roughen the coat of the horse unaccustomed to it, or cause griping pains, or materially lessen the animal's power of exertion. The temperature of the water is also a matter of the greatest consequence. It will rarely harm if taken from the pond or the running stream; but its coldness, when recently drawn from the well, often proves injurious. Water, therefore, before it is given to the horse to drink, should be exposed for some hours previously, either in the stable or in a tank. There is often considerable prejudice against the horse being fairly supplied with water. It is supposed to chill him, to injure his wind, or to incapacitate him for hard work. It certainly would do so, if, immediately after drinking his fill, he were galloped hard, but not if he were suffered to quench his thirst more frequently when at rest in the stable. The horse that has free access to water will not drink so much in the course of the day as another who, to cool his parched mouth, swallows as fast as he can, and knows not where to stop. When on a journey, a horse may, with perfect safety, be more liberally supplied with water than he generally is. An hour before his work commences, he should be permitted to drink a couple of quarts. He will perform his task much more effectually and pleasantly than with a parched mouth, and tormented by thirst. The task or the journey being accomplished, and the horse having breathed for a few minutes, another quart of water, or even two, will be gratefully refreshing to him, and will do him no harm. His corn may then be offered to him, which he will readily take; and before he has eaten the whole of it, two or three quarts more of water may be given. Horses that are "touched in the wind" are invariably thirsty, and it is extreme cruelty to withhold water in such cases, on the plea that by exhalation they lose flesh. Such should, therefore, have a few gulps offered to them from time to time; but they should never be allowed to drink their fill on any one occasion, as the distension which would be occasioned would materially impede their respiration. *The feeding of the horse* is another important consideration. In England the chief articles of food are oats and hay, with inferior proportions of beans, pease, cut straw, and bran. The quantity, and also the nature of the food, will depend upon the habits of the animal, and the work to which he is put. If the work be hard, he must be fed to a considerable extent on oats, which are more nutritious than most other articles in use; but if the work be light, a lighter diet of hay, with perhaps only a small quantity of oats, will suffice. The stomach of the horse being small, he cannot eat much at a time; and it is always preferable to feed him often and at regular intervals, than to offer him large meals at irregular periods. There is another reason for offering small feeds: the horse loathes food which has been blown upon or previously touched, and will accordingly reject it, if offered a second time or allowed to stand beside him. For various reasons, therefore, it is better to give him a little only at a time, so as to leave none behind. If the animal be a poor feeder, or apt to waste his food, greater care still must be exercised in this respect. Oats ought to be sound, old, and dry; if otherwise, they must be rejected. In almost all cases it is preferable to have them bruised, for by this means they are more easily digested and nourishing than if left whole. A very general method of preparing horses' food is to mix oats with chaff composed of the cuttings of clover and meadow hay, and the straw of wheat, oats, or barley. This admixture tends to neutralize the scouring properties which characterize bruised oats alone. A machine is usually kept for cutting this food; but, at all events, the cuttings should be about half an inch in length. Hay, clover, and meadow hay should be sound and sweet flavoured, without any mustiness. The hay should, if possible, be a year old, and well preserved for use in an adjacent stack. Some horses are fond of pease; but they require to be given with caution, as they are apt to swell in the stomach. Almost all horses are remarkably fond of carrots, which, when administered in small quantities, do not purge the animal, and will improve the appearance of his coat. The proportionate daily quantities of food which various horses require are estimated as follows:—For agricultural and cart horses, eight pounds of oats and two of beans should be added to every twenty pounds of chaff, and thirty-four or thirty-six pounds of the mixture will be sufficient for horses of a moderate size, with fair or even hard work. In this estimate no hay is supposed to be given. When the horse is fed on the

two last articles, hay and oats, four feeds, or nine or ten pounds of oats per day, will be a fair allowance during winter, and in the case of moderate work; but in summer half the quantity, along with a proportion of green herbage, will suffice. The general allowance for a riding horse is twelve pounds of oats per day, given in three or four meals. A pony, having but moderate work, will be fed on six pounds of oats per day, with a fair proportion of hay. As an article of food for horses, recently introduced, sago may be referred to, which has the reputation of being highly nutritive, and may be employed, to a certain extent, to supersede oats, or to be mixed with them. It should be partially softened with water. Books: *Youatt on the Horse*, 10*s.*; *Mills's Horsekeeping*, 1*s.*; *Stewart's Advice to Purchasers*, 2*s.* 6*d.*; *How to Buy a Horse*, 6*s.*; *Roper's Nature and Management*, 3*s.*; *Hieover's Treatise*, 5*s.*; *Cecil's Treatise*, 3*s.*; *Stewart's Stabling*, 6*s.* 6*d.*; *Doyle's Information*, 1*s.*; *Miles on the Horse's Foot*, 12*s.* 6*d.*

HORSEMANSHIP.—The art of riding with grace, safety, and fearlessness, on horseback; to attain which, it is necessary to observe certain rules, in order that the rider's manner of sitting and general management of the horse, may accord with his movements and disposition. *In mounting*, the rider



should approach the horse opposite the left shoulder, with his left breast near that shoulder, his whip being in his left hand. He then draws up the snaffle reins gently with his right hand, so as to equalize them, and get their centre; he then passes them between the second and third fingers of his left hand. He next places his left hand, and with the right, throws the reins to the off-side of the horse. He then takes the bridle with a tuft of the mane firmly in his left hand; with the right hand he holds the stirrup for the reception of his left foot; when that is safely introduced, his right hand is removed from the stirrup to the hinder part of the saddle, and grasping it firmly, he springs leisurely from the right foot, rises erect in the stirrup, brings his heels together for an instant, and then passes the right leg, well extended, over the rear of the horse; at the same time he shifts his hand to the pommel, and thus seats himself quickly. When first the reins are taken in hand, they should not be grasped so tightly as to make the horse rear, run, or fall back; nor so loosely as to afford him an opportunity to set off before his rider is firmly seated. *The seat.* When mounted, the body should be kept easy but erect, inclining rather backwards than forwards; the weight chiefly resting upon the horse's haunches, with a moderate pressure of both legs to the sides. To preserve this position free from restraint, it is essential to regulate the length of the stirrups according to the stature of the rider. They should be exactly of that length in which, the rider sitting upon his horse, either still or in action, may be able to disengage his foot from them by a single motion, or to recover them with equal facility. Both stirrups should be of an equal length. The rider should not bear upon the stirrups, but only let the natural weight of his legs rest upon them. The position of the stirrup-iron should be just under the ball of the foot. *Position when in motion.* The body must be kept easy and firm when in motion; the left elbow should lean gently against the body a little forward, and the hand in general should be about the same height as the elbow; the right arm must be placed in symmetry with the left, only let the right hand be a little more forward or backward, as occasion may require. The left hand, which holds the reins, must be kept clear of the body, about two inches and a half forward, and immediately above the pommel of the saddle; the nails should be turned towards the buttons of the waistcoat, and the wrist a little rounded with ease, the joint being kept perfectly pliable. *In dismounting*, the whip is to be returned into the left hand, the right hand taking hold of the rein above the left; the right foot quits the stirrup; the left hand slides forward on the rein; the right hand dropping the reins to the off side, takes a lock of the mane, brings it through the left hand, and twists it round the thumb; the fingers of the left hand close on it; the right hand is placed upon



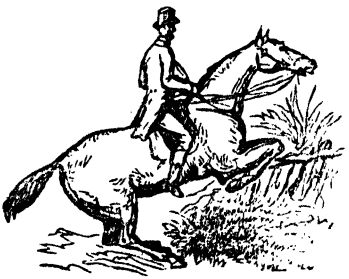
the pommel, the body being kept erect. The body is supported with the right hand and the left foot; the right leg is, without touching the horse's hind quarters, or the

saddle, brought gently to the near side, with the heels close, care being taken not to bend the right knee, lest the spur should touch the horse; the right hand passes at the same time to the cantle, to preserve the balance; the body is gently lowered until the right toe touches the ground; resting on the right foot, the left stirrup is quitted, and the reins placed over the pommel of the saddle.

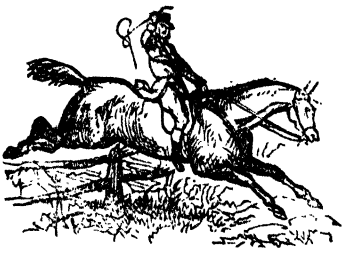
PACES AND MOTIONS OF THE HORSE.—*Walking.* The rider should not suffer his horse to move until his seat is properly adjusted, and whip shifted; when, collecting his reins, and taking one in his right hand, he must close his legs, to induce the horse to move slowly forward. If he wish to accelerate the pace, the pressure of the knees must be increased. When the horse moves, the legs must resume their former position, the hands remain perfectly steady, and the body yields to the movement. In performing the walk, if the rider do not support the horse sufficiently, his head will be low, and his walk slovenly; if he support him too much, he will shorten the animal's step so that he cannot walk freely. If the rider do not animate him, he will not exert himself; if he animates him too much, he will trot. In turning, the horse should be moved gently round, and plenty of room should be given him. The bridle hand should be slightly raised, and then drawn to the side, the legs corresponding with the motion. Some caution is necessary in regard to the pressure of the legs, for if one be closer than the other, the horse will throw his haunches out or in, which will cause a shortening of the step in one of the hind legs, and consequently the stride will be diminished. When the turn is finished, the rider returns to his former position. *Trotting.* To effect the trot, the rider must apply, for an instant, both legs to the horse's sides; and at the same time raise the fore hand, by drawing the lower finger on each side rather upwards and towards the body, avoiding all jerks or sudden motions. During the trot, he must sit close to the saddle, preserving his seat by the balance of his body, and not by the pressure of his knees; he must neither rise nor stand in the stirrups; his body must incline slightly backwards; the whole figure must partake of, and accompany the movements of the horse; and the rider must keep the hands up in their proper position, steady and pliant, and preserving a just correspondence. If the action be too rapid, it must be checked by strengthening the hand. If the action be too slow, it may be quickened by easing the fingers, and giving more animation. To give more animation, and to encourage the horse to put his foot out freely, the rider must support his fore hand up, and his haunches under, by a touch of the fingers, the excitement of the tongue, the switch of the whip, or the application of the leg, varied so as not to lose their effect. If the action be not sufficiently united, that must also be corrected. To unite the horse, the reins must be collected, and the head raised. By bringing the haunches under him, he may be pressed up to the bridle by the aid of the legs; care being taken that this is not done hastily or violently. The most certain sign that a horse trots well is, that when, in his trot, the rider presses him a little he offers to gallop. If the horse gallop when he ought not, the waist should be pushed forwards toward the pommel of the saddle, and a bend or hollow at the same time be made in the loins. *Galloping.* When a rider wishes to gallop from a walk or trot, he should first raise the bridle hand firmly, then slacken rein, and close the legs or give spur until the horse obeys; confining the horse to the speed desired, by drawing a firm rein and relaxing the pressure of the legs. The position of the horse in galloping always calls for a corresponding one from the rider; for instance, if the horse lead with the right leg, the rider's leg on that side will be more advanced than the left, and the inside of the thigh will be closer to the saddle; consequently the other thigh will be turned slightly outward, and the leg farther to the rear. The hips and the upper part of the body, are affected in the like manner. The rider while galloping, should, from time to time, glance his eye over the ground his horse is to pass over. It is immaterial which foot leads when galloping in a straight line, but it would be injurious to the horse were he always to lead with the same leg. To change the step (the horse galloping with the off fore foot in advance), the rider should draw the right rein, and close the left leg; and he should change from the near to the off fore foot on the same principle, but by inverse means. *In stopping a horse*, the rider should brace his arms to his body, holding both reins equally and firmly, drawing the fingers towards the body, closing for an instant both legs, to press the horse up to the bridle, and throwing the body back, with precisely such strength of all the muscles as is proportioned to the effect; all this being done at the same instant, and making but one motion. If

the rider do not close his legs, the horse may not bring his haunches under, the stop will lie on the shoulders, and its effect will be

destroyed. *Backing.* For a horse to back properly, he should be upon his haunches, have one of his hind legs always behind him, on which to rest and balance, and to impel or push him backwards; his head steady, and his legs well gathered. To aid the horse in this movement, the rider should incline the body slightly forward, hold the hand a little lower than usual, the reins equally and steadily, and yield and check instead of making a dead pull. To prevent the horse from swerving, the rider should press the legs gently to the rear of the girth. *Leaping.* Leaps are taken standing or flying; the first being most difficult to sit. The rider must, by a ready and fearless yielding of the bridle, leave the horse at liberty to extend himself, preserving his own equilibrium by leaning forward as the horse rises, and backwards as he alights. When the horse is brought to the fence, the body of the rider should be upright. The legs are to be applied to the sides of the horse with such firmness as to keep the rider down to the saddle, and in such a manner, namely, perpendicularly from the knee, that the action of the body shall not loosen or disturb them. The toes must be pulled up, to render the muscles firm, and to prevent the spur from approaching too near the horse; and, if necessary, they may be turned out a little, to strengthen the hold. The hand must be kept in the centre, and quite low; and the reins not too short, but just by the pressure of the fingers to feel the horse's mouth. The pressure of the legs and fingers will invite the horse to rise; and as he rises, the body comes forward and preserves its



perpendicular. The back must then be kept in and the head firm. The flying leap is distinguished from the standing leap by its being made from any pace without a previous halt; and although the action is quicker, it is much easier. The pace, however, at which the rider goes at a flying leap should always be moderate, in order that the horse may not rise too soon or too late. The seat in the flying leap is exactly the same as that in the standing leap; but, as the horse keeps a more horizontal position, it is easier. The rider, however, must not bring his body forward at the rising of the fore legs, because the spring from the hind legs immediately follows, and the body might not only not get back in time, but, if the horse did not come fair, or refused to make his leap, and checked himself, the body, if forward, might cause the rider to be thrown. He should, therefore, keep his body upright;



take hold with his legs; keep his hand down; and, as the horse springs forward, his body is sure to take the corresponding action of leaning back, particularly if he, at the instant, slip his breech under him, and bring his waist forward with an exertion proportioned to the spring which the horse makes. He must also take care not to bring his body upright, nor slacken the hold with his legs till after the hind feet have come to the ground.

Vices of the Horse.—*Stumbling.* By the rider pressing his legs to the horse's flanks, and keeping up his head, he may be made to go lightly on his fore legs; and the same should be done if he actually stumble, so as to afford him assistance. Hence it is evident that the bridle should be of such length in the hand that, in case of stumbling, the rider may be able to raise the horse's head by the strength of his arms and the weight of his body thrown backward. *Rearing.* The principal danger in rearing is the hazard of the horse falling backward. When, therefore, he rises straight up, the rider must throw his body forward, giving him all the bridle. The weight of the body will oblige him to come down: and the moment that his fore feet are near the ground, and before they touch it, both the spurs must be struck in as firmly and as quickly as possible. *Kicking.* Horses apt to kick, either when they go forward or stand still, must be kept much together, or held closely. When kicking is attempted, the hands, though fixed, must not pull at the horse, if he does not attempt to force the hand, and get his head; leave him at liberty to go forward. If, however, he attempt to get his head down, which would enable him to kick with such violence as to throw himself, he may have the head confined up; this will disarm him. When a horse kicks, the rider must incline the body backward. It is an effective punishment to twist him round a few times for this fault. If this be done in the direction of his weak or unprepared side, astonishment and confusion will deter him from further contention. In *plunging*, a horse gets his head down, cringes his tail between his quarters, sets his back up,

puffs out his body, and plunges till he can hold his breath no longer. To cure this, the rider must hold on firmly by his legs, and take care that the horse, in getting his head down, does not pull him forward; at the same time he should incline his body backward, and hold firmly with his hands. *Shying* often proceeds from timidity—often from a want of confidence in the rider. When the horse does this, his head should be kept well up, and the leg should be pressed against the side towards which he turns. He should be caressed rather than chastised, and urged gently forwards. Sometimes it is advisable to slacken the rein, stop, and let him walk towards the object at which he shied. *Restiveness* may arise from many causes, and the first thing the rider should do is to ascertain, if possible, what the cause is. In many cases of sudden restiveness, a sharp application of the whip, a pressure of the legs, and a determination, as it were, of the body of the rider to go forward, produces the desired effect. But, if the horse refuse to move on, this must not be repeated, and the rider should cease to contend with him by these means; but, on the contrary, try to conquer, by assisting in all movements, until opposition ceases. If he backs, or turns round, the rider should encourage him by all the aids necessary to continue the movement. If he stands stock still, the rein should be slackened, and an air of indifference assumed, so that in a short time the horse's temper will be probably conquered, and he will move on quietly. In all cases, the seat must be kept firmly, and the rider must not suffer himself to get out of temper. Horses will occasionally attempt to *lie down* while the rider is on their back. This fault should be foreseen; and if a horse exhibit the least propensity to do so, he should be urged onward by one or two smart applications of the whip. If he attempt to *bolt or run away*, the hands must be depressed and slacker pulls given; but the rider must keep his seat firmly, and still try to guide the horse; for, sooner or later, the animal must of necessity come to a standstill for want of wind.

HORSERADISH, CULTURE OF. — This plant grows naturally in marshy places, and by the sides of ditches, in some parts of England; when cultivated it yields a profitable return. The horseradish affects a deep, loamy, rich soil, kept as much as possible in a moderate but regular degree of moisture. If the soil is poor, the roots never attain any considerable size; and the same effect is produced if grown in a shady place, or beneath the drip of trees. Should the ground require to be artificially enriched, leaf-mould, or other thoroughly decayed vegetable substance, should be dug in to the depth at which the sets are intended to be planted. Horseradish seldom perfects its seed, consequently it is propagated by sets, which are provided by cutting the main root and offsets into lengths of two inches. The tops or crowns of the roots form the best; those taken from the centre never becoming so soon fit for use, or of so fine a growth. Each set should have at least two eyes; without one they refuse to vegetate at all. To obtain the necessary supply of crowns, any inferior piece of ground may be planted with sets, six inches apart and six deep; these will furnish from one to five tops each, and they may be collected for several successive years, with little more trouble than keeping them clear of weeds. Horseradish may be planted from the close of January until the same period in March; but the best times are October and February; the first season for dry soils, the latter for moist ones. The sets must be inserted in rows eighteen inches apart each way. The ground should be trenched between two and three feet deep, the cuttings being placed along the bottom of the trench, and the mould turned from the next one over them, or inserted to a similar depth by a long blunt-pointed dibble. When the planting is completed, the surface should be raked and levelled, and kept clear of weeds, until the plants are of such size as to render it unnecessary. The plants will be greatly benefited if the mould lies as lightly as possible over the sets, therefore treading on the beds should be carefully avoided. They speedily take root, and send up long straight shoots, which make their appearance in May or June. The only cultivation required is to keep them free from weeds, and, as the leaves decay in autumn, to have them carefully removed; the ground being also hoed and raked over at the same season, which may be repeated in the following spring, before they begin to vegetate. In the succeeding autumn they merely require to be hoed as before, and may be taken up as wanted. By having three beds set apart for this root, one will always be lying fallow and improving, of which period advantage should be taken to apply any requisite manure. If the plants, when of advanced growth, throw out suckers, these should be carefully removed during the summer as they appear. In September or October of the second year the roots may be taken up, and in November a sufficient quantity should be raised, to preserve in sand for winter supply. To take them up, a trench is dug along the outside row, down to the bottom of the upright roots, which, by some persons, when the bed is continued in one place, are cut off level to the original stool, and the earth from the next row is then turned over them to the requisite depth, and so in rotation to the end of the plantation. By this mode a bed will continue in perfection for five or six years, after which a fresh plantation is usually necessary.

HORSERADISH SAUCE.—In a little fish-stock stew an onion until it will pulp, add a teaspoonful of grated horseradish, and a teaspoonful of essence of anchovies. Beat all together over a fire, thicken it with a little butter, and finish with a spoonful of lemon-juice.

HORSERADISH VINEGAR. — Pour a quart of vinegar on three ounces of scraped horseradish, an ounce of minced shalot, and a drachm of cayenne; let it stand for a week, and it will then be fit for use.

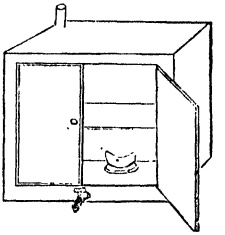
HORSE TAMING.—The subjugation of the horse to the will of man has been recently made a subject of universal interest; and several professors of the art have appeared before the public, who undertake to render the most stubborn and vicious horse perfectly obedient and docile. The most successful operator in horse taming is, without doubt, Mr. Rarey, an American, who has unequivocally brought several notoriously vicious animals, which no one dared mount or approach, to a state of perfect obedience. The system adopted by Mr. Rarey, has been the subject of much debate; but we have no doubt that his treatment is substantially as follows:—"The horse-castor is a wart, or excrescence, which grows on every horse's fore legs, and generally on the hind legs. It has a peculiar rank musty smell, and is easily pulled off. The ammoniacal effluvia of the horse seems peculiarly to concentrate in this part, and its very strong odour has a great attraction for all animals, especially canine, and the horse itself. The oil of rhodium possesses peculiar properties. All animals seem to cherish a fondness for it, and it exercises a kind of subduing influence over them. For the oil of cumin the horse has an instinctive passion—both are original natives of Arabia, and, when the horse scents the odour, he is instinctively drawn towards it. The directions given for taming horses are as follows:—Procure some horse-castor, and grate it fine. Also get some oil of rhodium, and oil of cumin, and keep the three separate in air-tight bottles. Rub a little oil of cumin upon your hand, and approach the horse in the field, on the windward side, so that he can smell the cumin. The horse will let you come up to him then without any trouble. Immediately rub your hand gently on the horse's nose, getting a little of the oil on it. You can lead him anywhere. Give him a little of the castor on a piece of loaf sugar or potato. Put eight drops of oil of rhodium into a lady's silver thimble. Take the thimble between the thumb and middle finger, stopping the mouth of the thimble, to prevent the oil from running out whilst you open the mouth of the horse. As soon as you have opened the horse's mouth, tip the thimble over upon his tongue, and he is your servant. He will follow you like a pet dog. He is now your pupil and your friend. You can teach him anything, only be kind to him, be gentle. Love him, and he will love you. Feed him before you do yourself. Shelter him well; groom him yourself, keep him clean, and at night always give him a good bed at least a foot deep. In the winter season, don't let your horse stand out a long time in the cold without shelter or covering: for the horse is a native of a warm climate, and in many respects his constitution is as tender as a man's. If you want to teach him to lie down, stand on his left side; have a couple of leather straps about six feet long; string up his left leg with one of them round his neck; strap the other end of it over his shoulders; hold it in your hand, and when you are ready, tell him to lie down, at the same time gently, firmly, and steadily pulling on the strap, touching him lightly on the knee with a switch. The horse will immediately lie down. Do this a few times, and you can make him lie down without the strap."

HOSPITAL.—A public institution for the relief of sickness and disease. These admirable institutions afford relief both in-door and out-door gratuitously. The patients are attended by the most eminent members of the medical profession, and nurses are provided to administer to every want. One of the most important functions of the hospital is, that it receives cases of accident or emergency instantly and freely, and in order to ensure this the more certainly, the doors are open day and night, and surgeons are in constant readiness to give immediate attention to the cases that need their assistance. Hospitals are established in almost every town of importance in England; and their rules and regulations are substantially as follows: In-door patients are admitted by a recommendation of one of the governors on certain days in the week; every necessary is provided gratuitously; but articles coming under the head of comforts or luxuries may be brought in by the patients' friends under certain restrictions. Relatives and friends are admitted to see the patients on certain days, and at stated intervals, generally once or twice a week; but exceptions are made in cases of impending death or under peculiar circumstances. It is customary to keep the patient in the hospital until every means of cure have been tried; but when the disease obstinately resists every method of treatment, the authorities are compelled to discharge the patient as incurable, so as to make room for other patients. When a patient is placed in a hospital it is required of the relatives or friends to give a written undertaking that in case of death the body shall be removed and buried by them. Out-door patients are usually attended to without any recommendation; all that has to be done is for the patient to present himself at the door of the hospital within certain hours, when he will be attended to by a properly qualified person, and have given to him medicine and any other materials which the complaint render necessary. The list of the Metropolitan Hospitals is to be found in the *Post Office London Directory*; and the purposes of each hospital, together with the regulations by which it is governed, will be supplied by the porter at the gate or door of each establishment.

HOTBED.—A name given by gardeners to a heap of fresh stable litter in a state of fermentation, upon which a glazed box is placed for the cultivation of certain plants requiring heat and moisture in greater quantity than those agents exist in the external air. Formerly hotbeds were more exclusively used for various purposes in horticulture than they now are. This is owing to the perfection to which other means of producing and applying artificial heat have now attained; but still, for the growth of cucumbers and melons, for raising seeds of tender annuals, and other plants, either culinary or

ornamental, hotbeds continue to be advantageously employed, as they likewise are for the striking of cuttings. Hotbeds may be formed of various substances, such as fresh litter, tan, leaves, or a mixture of these with moist litter; in short, any substance capable of producing and retaining fermentation, and which will admit of being built up so as to support a frame with sashes. The substance, however, that is most generally used is fresh stable litter; the preparation which it requires, consists in its being thrown in a heap, and also watered, if it contain much dry litter; and as fermentation proceeds, it should be turned two or three times, and mixed thoroughly in the process. The situation in which hotbeds ought to be formed, should be dry, open to the south, and well sheltered in every other direction, either by walls backed by high and close growing trees, or by very close and lofty hedges. Such extensive shelter, though desirable, cannot always be obtained, but some mode should be employed to break the force of sweeping winds. The basis on which the bed is to be formed should be marked out from four to six inches each way beyond the dimensions of the frame intended to be placed upon it; and if faggots or layers of brushwood be laid as a foundation, it will admit heat completely under, when the bed requires the application of a *lining*, which is a quantity of fresh materials added to the outside, should a diminution of heat require a new supply. The bed is then built of successive layers of the prepared materials, each layer being beaten tolerably compact with the fork as it is laid on, to the height of four feet in front and four feet nine inches in the back; the sides and ends should be quite perpendicular. The top layer should be as free from litter as possible. When thus finished, the frame and lights are placed upon it, and so soon as the violence of the fermentation has diminished, mould is put in; and when the latter has acquired a proper temperature, the plants are introduced. Instead of mould, rotten tan or leaf-mould, or sand is spread over the surface of the bed, when pots containing seeds or cuttings are to be plunged. As soon as the heat of the bed begins to decline, a lining of fresh materials must be applied. This, however, must be composed of substances that have not undergone any previous fermentation, and may consist of fresh stable litter, merely shaken up as it is placed against the sides of the bed, or of grass mowings, or of leaves, or of a mixture of such substances. A bed formed of well-pared materials, and raised to the height above mentioned, will be sufficient for any purpose for which a strong bottom heat is required; but a very mild bottom heat is frequently all that is wanted. In this case the bed is made lower and more compactly beaten or trodden. Substances that ferment violently are likewise excluded from its composition. It sometimes happens that, notwithstanding every precaution with regard to its formation, a hotbed will become too hot for plants or seeds that may have been placed close to it. In this case the only remedy is to remove the plants until the hotbed has been re-made, with the addition of some materials, the fermentation of which is slower and less violent.

HOT CLOSET.—A receptacle in which the various dishes prepared for the table are kept hot until they are wanted. The ordinary closet consists merely of shelves of a size proportioned to the number of dishes, kept very warm in the inside by flues or steam. They are sometimes made of cast-iron, and placed in a recess over the kitchen oven or roaster, and heated by the smoke and heat as it comes from the oven. They may also be heated by steam, after it has served to heat boilers. The annexed engraving illustrates a portable hot closet, heated



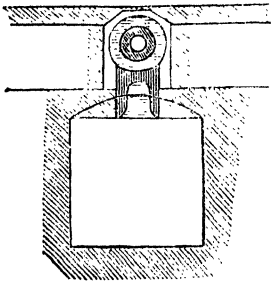
by steam, made entirely of tin plate. The outer case consists of two thicknesses of tin plate, having the steam between: a pipe from the boiler conveys the steam to the apparatus, and the condensed water runs off by a pipe with a stop-cock at the bottom. A hot closet may also be made on the screen that stands before the kitchen range, by various modes. A screen with a closet within, being constructed on the principle illustrated, steam is conveyed by a pipe on the floor and introduced into the space between the closet and the outside casing, the condensed water passing off by another pipe. Sometimes, when more heat is required, steam is not only carried all round the hot closet, but even in the shelves, as shown in the accompanying figure; the shelves being of tin and double, with the space between about an inch and a half. An economical and excellent hot closet may be constructed from a common screen used when meat is roasting, and closing up the front or side next the fire, with sheet-iron blacked, placing a door at the back, through which the various articles may be placed in and taken out. As black iron absorbs the heat powerfully, the air inside not being able to escape when the doors are shut, becomes very hot. In some cases it may not be necessary to convert the whole of the screen into a closet, the upper half alone being found sufficient, and the lower part may be used as a plate warmer; two sets of doors will, however, be necessary.

HOTEL.—All persons who have to travel are frequently compelled to make an hotel their temporary home; and under such circumstances it is important to ascertain which are the most economical and comfortable establishments. Supposing a person to be

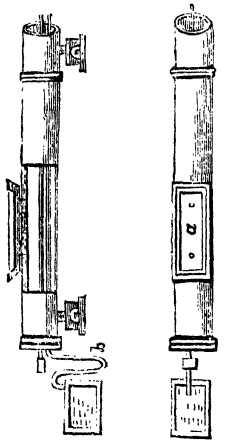
ignorant of this essential knowledge, it would be as well before he set out upon his tourney, to glean from some friend or acquaintance the name of the best hotels in each town, with their charges, &c.; and of these items he should make a memorandum in his pocket-book. Hotels present this anomalous feature, that whereas some of them charge very high, the viands are indifferent and the comfort small; while other houses, charging more moderately, give their customers excellent fare, and lodge them comfortably. When the intending traveller has obtained these particulars, he should write to the landlord of the hotel a day or two previously, so that arrangements may be made and he may take possession of his apartments, with the fire lighted, dinner prepared, and all conveniences at hand, instead of taking up his quarters without previous intimation, and at the very moment when he most needs rest and quiet, being irritated and annoyed by the hurry, and bustle, and confusion which his unexpected arrival has occasioned. As a matter of course, the cost of living at an hotel is very high; but by judicious management this may be considerably moderated. At many hotels a system has been introduced of charging so much per day or week, according to the style of living and the accommodation required; the obvious advantage of which arrangement is, that a person knows precisely how much he has to pay. Again, it must be borne in mind that occupying a private room, and having a dinner expressly served up daily, is charged for at a much dearer rate than if a person contents himself with sitting in the coffee-room, and dining at the *table d'hôte*, both of which he may do with an equal or perhaps greater degree of comfort, provided he is alone, and has no particular or private business to transact. The commercial room of an hotel is generally considered the pleasantest, because there is always sure to be company in it, and there exists a species of freemasonry and good-fellowship amongst the frequenters, which helps to pass away the evening pleasantly. It should be known, however, that if a person is not travelling on business, he cannot enter this room without being considered an intruder. The matter of fees to servants is one of those unpleasant concomitants of hotels which every traveller finds distasteful, for not only is the tax an imposition in itself, but the uncertainty as to how much ought to be given, or in other words what the servants will be satisfied with, renders the exaction still more repugnant. At some establishments a certain charge is added to the bill for these fees, which at once settles the difficulty. When a person makes a protracted stay at an hotel he should not allow the bill to run on for too long an interval, but desire it to be furnished, say once a week, and he will then be able to correct any inaccuracies which it may contain. When staying at an hotel a person should take the precaution to lock up all articles of value in his trunk or portmanteau; and in order to render the security greater, the lock should be a patent one of the best description. When leaving an hotel, if any instructions have to be given, such as the forwarding of letters, &c., the proprietor of the establishment himself should be spoken to upon the subject.

HOTHOUSE.—In gardening, a building formed upon a similar plan, and for the same purpose, as a green-house; but with a hot-bed of tan in its centre, and warmed to a considerably greater extent of heat, being seldom less than 70° of Fahrenheit, and equally maintained. Many changes have of late years taken place in these important adjuncts to scientific gardening. Their form and general structure have been much varied, and the spherical shape largely introduced. A considerable improvement in the mode of glazing also consists in making the upper and lower edges of the panes, segments of a circle, instead of being rectilinear or horizontal; the upper edge being made concave, the lower, convex. The advantages of this circular form must be evident. The rain which falls or the moisture which collects on the exterior of the glass, gravitates to the centre of the pane, and runs down in a continued line, instead of passing along to the side of the bars, and being partly detained by the capillary attraction of the two surfaces, at the overlapping of the panes. This narrowness of the top, again, prevents breakage from the lodging of moisture, and the sudden expansion produced by freezing during the variable weather of winter. When these circular panes are cut from whole sheets of glass, the expense is scarcely greater than for oblong squares. It is proper that the glass should be flat or equal; and the kind known by the name of 'patent crown glass' is to be preferred. The tops of the panes must be puttied; and on doing this, a small central opening should be left in the putty by inserting a slip of wood at first, and withdrawing it when the pane is pressed down to its bearing; by this little aperture the condensed vapour generated within, escapes without dropping on the plants beneath. The most important improvement in the heating of hot-houses, is the introduction of steam, by which medium a uniformly high temperature can be maintained for a length of time with great ease and certainty. A steam apparatus may be appended to an ordinary hot-house, without incurring any material expense, or any considerable alteration in structure; thus, a boiler may be erected over the ordinary furnace, the smoke of which passes through the flue as formerly. Heating by steam may also be carried out, by heating cisterns of water and also beds of stones. Steam may be applied to heat the atmosphere of a hot-house, making it the agent for conveying the heat to pipes of water, and carrying the small steam-pipes through the larger, containing the water. This method is excellently adapted to large places, more especially when the hot-houses are detached from each other. The following illustrations and description will serve to explain this operation. The water-pipes are eight inches in diameter, and about twenty-eight

feet long, presuming such to be the length of the house to be heated. The steam-pipe of one inch in diameter entering at the centre of one end, and proceeding in rather an inclined direction to the other, is then returned, still inclining, and passed out at the bottom of the bore, immediately under the place where it entered; it is then formed into a siphon, *b*, about three feet deep,

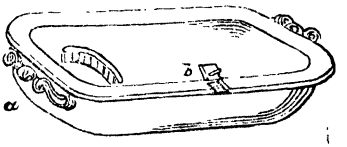


whence the condensed water is carried away. A smaller pipe is also connected with the top of the large one, to receive the increase of water by expansion when heated, which, as the large pipe cools, returns into it again. The annexed figure shows the



arrangement of the front pipe under the floor. The air being admitted from the air-chamber underneath, through an opening extending the whole length of the pipes, and passing through the upper chamber on each side of the pipes, is discharged through the grating into the house. The arrangement of the back pipes is similar. Shallow cisterns are connected with the upper part of the pipes, about eighteen feet from each other, by means of hollow screws, shown at *a*, which admit the water to pass to and fro reciprocally. The capacity of the cistern is more than sufficient to receive the increased bulk of the water, which expands when heated, and returns again to the pipes as the water cools. Another advantage of applying this mode of heating is, that as no returning pipes are necessary, as in the common hot-water apparatus, the bulk of water is doubled, with the same extent of heating surface, and the retaining power of the apparatus is doubled accordingly. The cisterns are further serviceable for regulating the humidity of the house, which can be done with the greatest accuracy by attending to the covers.

HOT-WATER DISH.—In cold weather, joints of meat are apt soon to become cold when placed on an ordinary dish: and when there is much fat upon the joint, the gravy will present a clotted and unseemly appearance. The hot-water dish remedies these defects, being provided with a reservoir, *a*,



for hot water beneath the dish itself, the water being poured in at *b*. When the joint is large, and the number of persons to be helped many, this contrivance will be found of especial service.

HOUND.—See BEAGLE; BLOODHOUND; GREYHOUND; HARRIER, &c.

HOUSE AGENT.—A person employed in the letting and buying of houses, and in other negotiations relating to houses generally. Before entering into business with a person of this class, particular inquiries should be made as to his respectability, since there are numbers of disreputable persons who trade under this denomination simply with a view of entrapping the unwary. The terms upon which agents usually do business take the form of a percentage or commission on the amount involved. But previously to a transaction being entered into, the charges should be definitely understood, and embodied in a written memorandum. House agents will be found useful to a person who wishes to rent or buy a house, as any one of them in a good way of business, always has upon his books a large number of houses, from which, in all probability, one may be selected to suit the applicant. It is not customary for the person taking or buying a house through the medium of an agent to pay any charges. An exception to this rule may be made in extraordinary cases; and at all events, it is always better to understand whether any fee is expected or not.

HOUSE, CHOICE OF. — In making choice of a house there are several points upon which it is desirable to obtain information. First, take care that it is not damp. Dampness may arise from a variety of causes, but imperfect drainage, and a too close contact of the floors with the ground are the principal. When a house is damp in any part, no matter from what cause, it is advisable by all means to avoid it, for it may produce the most pernicious effects upon the health of your family. Second, see that the house has a free open exposure for fresh air, and is situated so as to catch the sun's rays. Third, ascertain if there be a plentiful supply of pure water. Fourth, learn whether the chimneys are in good order and do not smoke. There are other inquiries to be made, which, though not applying to the structure and convenience of the house, intimately concern the dwellers within it. Thus, convenience to the place of business of the master of the house, and the nearness of shops where articles necessary for the household may be purchased, are essential considerations; many persons have been tempted to take a house, in an evil hour, merely because it struck the eye as being pretty and pleasant, and it has afterwards been discovered that these charms have gradually worn off, as the inconveniences connected with it increased. The respectability of the neighbourhood is another important point, and this is especially so, when the house you propose taking is attached or semi-detached; in the latter case, nothing can well be more vexatious and annoying, than being linked to a neighbour in whose house there is considerable quarrelling, noise, and other disturbances. Be careful to calculate that the rent is not too high in proportion to your means; for, remember that the rent is a claim which must be paid with but little delay, and that the landlord has greater power over your property than any other creditor. Carefully note the state of repair in which the house is, and if anything strikes you as requiring to be done, insist upon its being done before you enter the house. Never content yourself with the promises of a landlord on this score, for when once he has secured you as a tenant, the chances are that the promised repairs will be attended to at his convenience, not yours. Hesitate to sign an agreement for a lengthened term, until you have well considered whether such a contract is in accordance with your pursuits, and agreeable to your family. And be particularly cautious never to sign an agreement without perfectly understanding what you are signing. In important cases it is better to leave this matter in the hands of a respectable solicitor; it being much wiser economy to incur a trifling outlay at the outset, than to incur expense and litigation hereafter. When buying a house, the foregoing hints apply with all the greater force; and in addition, it is necessary that a surveyor should be employed, in order that he may examine into, and report upon the condition of the structure. When once fairly in possession, the master of a house should exercise his ingenuity in rendering it snug and comfortable; the task cannot be other than a pleasant one, and the result will amply repay the labour expended upon it. Endeavour to keep the house in repair by every reasonable means, but when once a defect is discovered, have it remedied as speedily as possible, promptitude in these matters sparing a great deal of discomfort and expense. — See ASPECT; BEDROOM; DRAWING-ROOM; PARLOUR, &c.

HOUSEHOLD MANAGEMENT. — See CLEANLINESS; DOMESTIC ECONOMY; ECONOMY; HOME; HOUSEKEEPING, &c.

HOUSEKEEPER. — The housekeeper of a first-rate establishment has the entire direction of the female servants. Her value and importance to her principals depends mainly upon her vigilant superintendence of each branch of female service, and on her constant investigation into the efficiency, steadiness, and general good conduct of each individual under her charge. It is her duty to see that the business of the house is regularly and properly performed; that everything is done in its right season, everything applied to its right use, and kept in its right place. The care of the furniture, of the household linen, and of all culinary and domestic utensils, devolves upon the housekeeper. The charge of the store-room belongs to her, also whatever stores are purchased, it is her duty to receive, examine, and weigh them; noting down, either in the store-book or on tickets, the weights and number of the articles, and handing the account so taken, to the steward, to serve both as a check upon the tradespeople, and the consumption. With cooking, generally the housekeeper has little concern. Her care of the table is confined chiefly to pickling and preserving; and in preparing confectionery, making ice-creams, arranging the dessert, &c. These preparations are all performed in the still-room, and with the assistance of the still-room maid. The early duties of the day must be devoted, first, to seeing that her subordinates are properly at work; and then to following her own still-room employments, &c. When all household business is ended, she has to set the maids to their sewing, placing in their hands the household linen which requires to be made or to be repaired. Her evenings should be occupied in preparation for the ensuing day. Lump sugar has to be broken, raisins stoned, currants washed, spices pounded, oranges and lemons peeled, and the juice strained and bottled for use. She has also to keep books in which the expenditure of the day is noted down, and to make memoranda of such articles as are required in her store-room. Half-yearly, or at convenient periods, she should compare the inventories given to her on entering the family, with the articles enumerated; and in making out new lists, she should carefully record the deficiencies which time or other causes have produced, and also enter a list of the articles which have been added to replenish such deficiencies. The housekeeper at the head of a smaller establishment, in which there is neither house-

steward nor man-cook, has many other duties to perform besides those enumerated above; marketing, in such a case, falls on her, and the higher branches of cooking, together with the arrangement of the table.

HOUSEKEEPING. — It is incumbent upon every prudent housewife to keep a regular and continuous account of her income and expenditure, this being generally the most essential in the routine of domestic duties. When properly set about, and methodically managed, there is little or no trouble in keeping the household accounts. There are a variety of methods, but the following simple plan will be found the readiest. Procure a small slate-book, constitute it your journal, and keep it ready at hand, so that you may enter with the pencil every item of expenditure as it is disbursed; at the end of so many days or a week, these entries should be transferred to a ruled paper book, which is your ledger; one page of this is devoted to money received, and the opposite side to money laid out. By making the entries regularly, and comparing the totals of each side from time to time, you will be able to ascertain at any moment how money matters are progressing.

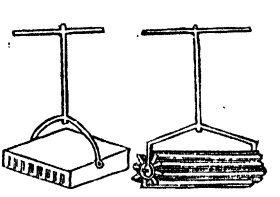
HOUSEMAID.—The duties appertaining to this service are divided between upper and under housemaids. The daily occupations of the upper housemaid commence, together with those of her assistant, in the rooms of which the use will be first required. The windows of these are to be opened in the first instance, weather permitting it; the curtains are then to be shaken, and hung up high enough above the carpet to remove them from the dust, which, in sweeping, will rise from it. The sofas, couches, and choice furniture must be covered with loose sheets of coarse calico or brown holland, and the rest of the room is to be prepared for the sweeping of the carpet by the removal of chairs, tables, &c., away from the sides and towards the centre of the room. The sweeping then should be begun from the upper end of the room, and proceeded with towards the fire-place, or lower end of the room, according as the pile of the carpet appears to be; for the sweeping must not go against, but with the pile. When the sweeping is done, the upper housemaid proceeds to remove the chimney ornaments, as well as others from cheffoniers, tables, &c., in order to dust the places in which they stand. Every part of the room is then carefully dusted, the curtains laid in folds, and the whole room placed in proper order This done, it is her duty to take warm water, and anything else that may be necessary for toilette, into the dressing-room of her mistress. When these matters are settled she may sit down to her breakfast. *The under housemaid*, after removing the hearth-rugs, should proceed to clean the grates; for this purpose, she should put on a pair of leather gloves, so as to preserve her hands, and to prevent other things from being discoloured. The fires should then be lighted, if in winter; and the same duty should be performed in the dressing-room. After breakfast the housemaids repair to such bed-rooms as are vacated, removing the bed-clothes, shaking up the beds, and then leaving them so, while the other duties of the bed-room are attended to. When these are performed, the bed should be made, and the bed-room swept, previously covering up the bed, dressing-table, wash-stand, &c., to preserve them from the dust. The under housemaids are usually required to assist the cook in preparing the dinner each day. The repairing of the household linen is an ordinary portion of the housemaids' duties, which usually fills up any leisure time they may have, until the period at which they must return to the bed-rooms and dressing-rooms, in order to replace everything that has been used during the dressing-time of the members of the family. Any leisure time between the last branch of their employment and the hour of going to bed, is usually allowed them for attending to the repairs of their own clothing. In some families the housemaids are allowed two or more evenings in the week for their own work. The daily duties of the housemaid usually end with the doing up of bed-rooms, and with the other preparations for the night. In establishments in which one housemaid only is kept, the whole business must be methodized according to the amount of work, and the movements of the family. In an establishment where regular habits prevail, she may probably have the privilege of going early to bed, so as to allow of her rising at six o'clock in the summer, and seven in the winter; and by economizing her time and methodizing her work, she will find no difficulty in accomplishing the duties which usually fall to servants in these cases.

HOUSE-STEWARD. — The house-steward is the representative of his employer in all matters of business connected with the house: he hires, manages, and directs every subordinate member of the establishment of men-servants, with the exception of the valet. He purchases every article consumed in the house, and it is necessary for him to know the articles and quantities that are wanted, and the best seasons for buying them. He must be ready in accounts, and keep a strict record of monies received and disbursed; and for his own satisfaction and his master's security, he should never pay any money away without having a receipt. The house-steward has a room appropriated to his use, in which he should make a point of remaining for certain periods during each day, so that all other members of the household may find him ready to answer their questions, or listen to their complaints. This done, he then proceeds to the various offices, to see that in each, the duties of the day are being properly performed. In some instances the house-steward has the general superintendence of the stables, and seeing into the fair and honest use of hay and corn; but this duty is usually performed by the coachman.

HOUSE-TAX.—This tax is imposed upon householders in lieu of the window-tax, and is as follows: for every inhabited house which, with the offices, yard, and garden

therewith occupied, is rented at £20 a year, and upwards; if used for the purposes of trade, and goods or wares are exposed in the shop or warehouse for sale, for every 20s. of such annual value, 6d.; if occupied by a person licensed to retail beer, spirits, wine, and other liquors, 6d.; if occupied as a farm-house, 6d.; if occupied in any other manner, for every 20s. such annual value, 9d. *Exception*—Market gardens and nursery-grounds are not to be included in valuation of inhabited houses.

HUMMELLER.—An instrument for separating the awns of barley from the seed. A cheap method of hummelling barley, where a threshing-machine is in use, consists in having a second cover for the drum lined with tin, having small holes perforated in it in the manner of a grater, the rough side appearing externally. The grain being separated from the straw in the ordinary way, the grated cover is to be substituted for the common one, and the grain passed through a second time. Hand hummellers are of two kinds, one somewhat similar to a garden roller, the cylinder being formed of thin flat wrought iron bars, placed about two inches apart, and the edges to the surface; this rolled over the barley, takes off the awns. An instrument is also used



for this purpose, resembling a grated presser or chopper, about a foot square, barred across with tin plates; this is lifted up and down by the workman, and the awns are thus chopped off. The best machine, however, is one placed upon a wooden stand, with a hopper, into which the barley is thrown, whence it falls into a box in which a spindle is placed on an inclined position, having, when at a few inches apart, short knives, placed spirally, so as to form a sort of screw, which, when put in motion, has a tendency to draw the barley from the upper end of the box to the lower; during the operation the awns of the barley are effectually removed.

HUNGARY WATER.—To a pint of proof spirit of wine put an ounce of oil of rosemary, and two drachms of essence of ambergris; shake the bottle well several times, then let the cork remain out for twenty-four hours. After it has stood a month, during which time shake it daily, pour it into small bottles, and set by for use, securely corked.

☞ Spirit of wine (proof), 1 pint; oil of rosemary, 1 oz.; essence of ambergris, 2 drachms.

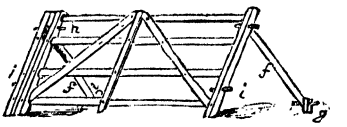
HUNTER'S BEEF.—Take three ounces of coarse sugar, three ounces of saltpetre, one ounce of nutmeg, half an ounce of allspice, and three handfuls of salt; mix them to a fine powder. Then procure a round of beef weighing twenty-four pounds, and after letting it hang for two or three days, rub the spices well into it, and continue to do so for a fortnight or three weeks. When to be dressed, dip it in cold water, to take off the loose spice. Bind it up tightly with tape, and put it into a pan with a teacupful of water at the bottom; sprinkle the top of the meat with shred suet; cover the pan with a coarse crust, and put brown paper over it. Let it bake for five hours, and when cold, take off the paste and remove the tape.

HUNTER'S PUDDING.—Mix one pound each of suet, flour, currants, and raisins, the latter stoned and slightly cut; the peel of half a lemon shred very fine, six Jamaica peppercorns, in fine powder, four eggs, a wineglassful of brandy, a teaspoonful of salt, and as little milk as will make it of a proper consistence; boil the mixture in a floured cloth for eight or nine hours; serve with sweet sauce.

☞ Suet, 1lb.; flour, 1lb.; currants, 1lb.; raisins, 1lb.; lemon-peel, ½ of 1; Jamaica peppercorns, 6; eggs, 4; brandy, 1 wineglassful; salt, 1 teaspoonful; milk, sufficient.

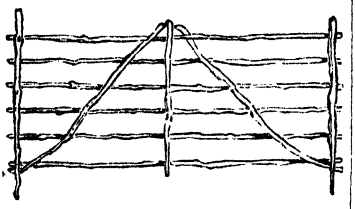
HUNTING.—See FOX, HARE, STAG, &c.

HURDLE.—In husbandry, a light frame of wood or iron, somewhat in the form of the common gate, constructed for the purpose of forming a moveable fence for the confining of sheep and other animals. The accompanying figure represents a hurdle set as it should be, and the mode of setting them is this: two persons set down the hurdles in the line of the intended fence. The first hurdle is raised by its upper rail, and the end of its stakes are sunk a little into the ground, with a spade, to give them a firm hold. The second hurdle is let into



the ground in the same manner, both being held in that position by the assistant. One end of a stay, *f*, is then placed between the hurdles near the tops of their stakes, and the stay and hurdles are fastened together by the peg, *h*, passing through holes in both. Another peg, *i*, is passed through a lower part of the stakes. The hurdles are then inclined away from the fenced ground, until their upper rail stands three feet nine inches from the ground. A short stake, *e*, is driven into the ground, at a point where the stay, *f*, gives the hurdles the above inclination, and a peg fastens the stake and stay together, as seen at *g*. After the first two hurdles are thus set, the operation is easier for the next, as one hurdle is raised after

another, and fastened to the last, until the entire line is completed. A very common form of hurdle is shown in the annexed engraving. It is made of any sort of willow



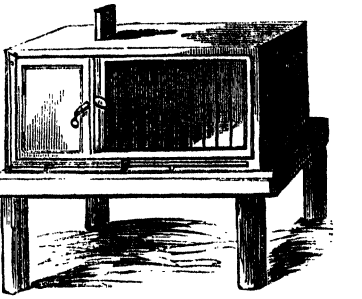
or hard wood, such as oak-copse, ash-saplings, or underwood, such as hazel. It consists of two heads, six slots, two stay-slots, and an upright slot. The slots are mortised into the heads and nailed with flattened fine-drawn nails, which admit of being very firmly riveted, upon which the strength of the hurdle mainly depends. For setting up three hurdles, an implement known as a fold-pitcher is used. The person who sets the hurdle, having made a hole in the hedge, or close to the dyke, for the foot of the first hurdle, he marks on the ground the place where the other foot is to be inserted, and then makes a second hole, which, like all others, should be nine inches deep. With the left hand the hurdle is put into its place, and held upright, while lightly pressed down by the left foot on the lowest slot. This being done, the third hole is made opposite to, and about six inches from the last. The fold-pitcher is then stuck in the ground near where the next hole is to be made; the second hurdle is next placed in position, one foot on the open hole, and the other foot marking the place for the next hole, and so on throughout the whole row. When the place of a second foot of a hurdle is marked on the ground, the hurdle itself is moved out of the way by the left hand, while the whole is made by both hands. When the whole row is set, it is usual to go back over it, giving each head a slight tap, so as to regulate their height, and make them retain their hold more firmly in the ground. To secure the hurdles steady against the rubbing of the sheep, couplings, or copses, are put over the heads of each pair where they meet, which is a sufficient security. These couplings are made of the twigs of willow, holly, beech, or any other tough shoots of trees, wound in a wreath of about five inches in diameter.

HUSBAND AND WIFE, Legal Relationship of.—On the marriage being constituted, the parties are bound to adhere with fidelity to each other; and the husband must support his wife according to his circumstances, unless she have property of her own sufficient for her support, with which the husband cannot interiere. The moveable property of both, including the property of the wife's heritable subjects, stock standing in her name, ready money plate, furniture, jewels, even the profits of her personal labour and skill, become the property of the husband. The marriage operates like a deed of assignment, so that the husband can sue for the recovery of these rights of his wife, in his own name, and without her concurrence; and any attempt on her part to defeat him, is held to be fraudulent. The common moveable property of the parties is sometimes called the goods in communion; and yet the wife, during the marriage, has only a hope of getting a share of it—her right in it not being indefeasible till the death of her husband. The husband's right is called his *jus mariti*. In virtue of this right he may sell, gift, or waste the common property at his pleasure, and his creditors may attach it for his debts. The wife's paraphernalia, comprehending her personal attire and ornaments, and such articles of a kind used by either party as the husband may have gifted to her before the marriage, are excepted. Besides having this right to her moveables, the husband, on the marriage, becomes her legal guardian. He may, however, renounce both his *jus mariti* and his right of administration, and where he does so, the wife can act in reference to her own estate independently of her husband, and altogether as fully and freely as if she were unmarried. But the husband may renounce his *jus mariti* and yet retain his powers of administration, in which case the wife can only act with his concurrence. Third parties may convey property to a wife conditionally, and so as to exclude all the rights both of the husband and his creditors, as by declaring the conveyance to be purely alimentary and exclusive of these rights; or by conveying to trustees for her behalf, with a similar exclusion of the husband and his creditors. A wife, by her own ante-nuptial contract, may reserve all the rights which she possessed as a single woman. After, however, a marriage is entered into, a husband cannot renounce his *jus mariti* to the prejudice of his creditors; and even when the renunciation is not to their prejudice, it seems to be in the nature of donations between husband and wife, which are revocable at pleasure during the existence of marriage. In law, the husband is liable, so long as she remains alive, for all the personal debts contracted by his wife previous to the marriage, but this liability terminates on her death, unless his estate were attached by "complete legal diligence" during the marriage, or unless he was a gainer by the marriage to a considerable extent. Even when made liable on the ground of having received some excessive advantage, it is only in the event of the wife's separate estate being found insufficient that he becomes personally liable. During the marriage the husband, and not the wife, is liable for all domestic furnishings which she may order, and such furnishings may be proved against him by her attestation or evidence. In other respects she is not received in evidence against her husband, except in the case of assault committed by him against herself. For furnishing unsuitable to his condition,

in life, made on the order of a wife, the husband is not liable, neither is he liable for any fine in which she may be subjected by a court of law as the punishment of her crimes. In this last case, however, so entirely is a wife's person exempted from imprisonment during marriage (except in a few instances), that when a fine is awarded against her on account of her crimes, it cannot be enforced by her imprisonment until the death of her husband. Indeed, even for her apparent crimes she may be relieved of all consequences, if it clearly appear that she acted under the compulsion of her husband. When, however, she voluntarily acts on her own account, or in concert with him, in the commission of crime, she is liable in criminal punishment. Where a husband is abroad, a wife's obligations for necessaries are effectual; and if, in order to procure a livelihood while her husband is abroad, she engage in trade, she then becomes, even during his life, liable to imprisonment for her debts. A partial measure has recently been passed, providing that married women may, by deed acknowledged in manner required by the Act, with their husband's concurrence, dispose of every future and reversionary interest to which the woman, or her husband in her right, shall be entitled in any personal estate *under any instrument made after the 31st December*, 1857, and relinquish or release any power she has on her right or equity to a settlement out of any personal estate, but the power does not extend to any reversionary interest which she is restricted from alienating, nor does it enable her to dispose of any interest on personal estate settled upon her by any settlement, or agreement for a settlement, made on the occasion of her marriage.

HUSBANDRY, Books: *Tusser's*, 2*s.* 6*d.*; *British*, 8*s.*; *Doyle's Cyclopædia*, 12*s.*; *Rham's Flemish*, 1*s.* 6*d.*; *Andrew's Modern*, 6*s.*; *Rawsterne's New*, 9*s.*; *Daubeny's Roman*, 12*s.*; *Ridgway's*, 3*s.* 6*d.*; *Lillett's Fork and Spade*, 8*s.*

HUTCH.—A species of hovel in which rabbits, guinea-pigs, &c., are kept. The hutch should stand upon a dry foundation, and be well ventilated. Each hutch intended for breeding should have two compartments, one to feed, and the other to sleep in. The floor of the hutches should be planed smooth, to allow the wet to run off, and a common hoe, with a short handle and a small broom, are convenient for cleaning the hutches. The breeding hutches should be about five feet high, two feet six inches deep, and four feet long; about one-third of this length should be separated from the other by a panel and arched doorway, separating the sleeping from the feeding compartment. Above this, there should be a sliding door, which can at any time be put down, so as to shut the doe into either compartment, as occasion may require. The edges of the doorway should be cased with tin, as should also the edges of the feeding trough, and, in short, any other part that the animal can get at with the teeth. The front of the hutch has two doors, one of which belonging to the inner apartment, is made of boards, and the other belonging to the feeding-room, is open, having wire-work let in; both these doors are fastened by buttons in front, but open in a contrary direction. The bottom of the hutch should have a long narrow piece of wood in front below the bars, which should



be moveable, so as to allow cleaning to be more readily performed. In placing the hutch upon the stand, it should be set a little aslant backward, and a small hole should be drilled at its back partition, for the purpose of letting all liquid pass off.

HYACINTH.—In the culture of this flower, much depends, in the first place, upon the quality of the bulbs, which should be perfectly ripe, and the sooner obtained after their arrival the better, for it is highly objectionable to expose them much to the air, except just to throw off any moisture they may have attained during their transmission. Always select the largest and best shaped bulbs, rejecting as a rule those that are loose in texture and small. If the base of the bulb is sound and ripe the other portion can be depended upon, and, in fact, this is the only guide to follow in regard to such kinds as Porcelain Sceptre, Prince Albert, and many others of the best sorts which have wretched-looking bulbs; it is, therefore, best for the amateur to leave the selection to those who are well acquainted with their properties until by experience he can trust his own judgment. The compost is another important point; this should consist of an equal portion of turfy loam and well decayed cow-dung previously prepared by exposure to air, by frequent turnings, so as to thoroughly incorporate them; and to this add about one-third silver sand, for they delight in a gritty open soil; 6-inch or 32-sized pots give plenty of room for their strong roots. Fill the pots about one-third with draining materials—broken oyster-shells or potsherds—and the remaining two-thirds with the compost; clear the root of all offsets and loose parts, and press tightly into the soil, leaving one-third above the surface; then water them sufficiently to settle the soil, and plunge them a foot at least under coal-ashes or old tan out of doors, or in a cold pit or frame. This is done to cause them to make roots before the crown is excited

into growth: this is the most essential point' for unless the pot is well filled with roots good flowers cannot be obtained. In a month or six weeks, the latter being the better time, take as many as may be required for the earliest blooming, and gradually inure them to light previously to placing them in the forcing pit, and as soon as these show their colour proceed with others in the same manner. The end of September is soon enough to pot the earliest sorts, repeating the operation until the end of November, by which means a succession of flowers can be had from Christmas till April. The finest flowers will be obtained from those not too strongly forced. Hyacinths should be well

attended to, after they have bloomed, great care being taken that the foliage does not get injured, as on this depends in a great measure their successful flowering afterwards, though they seldom bloom so finely as the first season from a good maiden bulb. When the leaves have perfected their growth, and have begun to assume a yellow tint, water must be withheld, and when withered the bulbs may be dried off. The second season they may be planted out of doors in turfy loam, very rotten cow manure and leaf soil in equal parts, with say one-sixth silver sand.

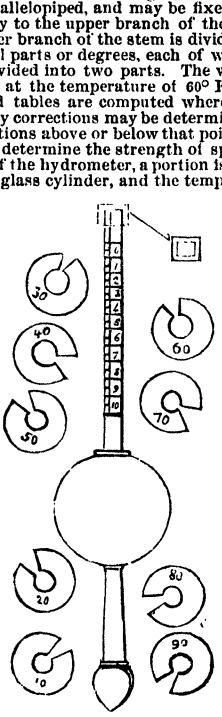
HYDROCEPHALUS.—See WATER ON THE HEAD.

HYDROCYANIC ACID.—Cyanide of hydrogen, or prussic acid, was first discovered by Scheele in 1782, from Prussian blue, of which it may be regarded as the basis. This acid, which in its pure state is one of the most potent poisons known, has in a mitigated form been extensively employed in medicine from the commencement of the present century, and has been employed with the utmost advantage in spasmodic coughs, asthma, hiccough, and sea-sickness, and as an external remedy in some obstinate eruptions of the skin, and in many forms of opacity of the cornea, and general dimness of sight. The want of a uniform British College is particularly evidenced in the preparation of this drug, each of the Colleges of London, Edinburgh, and Dublin having a different formula and strength for this acid. All of them, however, being prepared by decomposing some of the compounds of cyanogen, which, being a bi-carburet of nitrogen, consisting of two equivalents of carbon and one of nitrogen, unites with two equivalents of hydrogen, to constitute hydrocyanic acid. For the sake of uniformity of strength, it has long been the custom of all medical men, having any extent of practice, to prepare the diluted, or medicinal preparation of this acid themselves; and to effect this object, seventy-five grains of tartaric acid and thirty-three grains of the cyanuret of potassium were dissolved in ten drachms of distilled water and spirits of wine, in the proportion of two parts to one; by which means a double decomposition is effected: the tartaric acid is converted into the nearly insoluble supertartrate of potass—cream of tartar—and the liberated cyanogen unites with the water to make a safe, manageable, and uniform medicinal hydrocyanic acid; the dose of which, to have *any* effect in the cases for which it has been prescribed in this work, must not be less than five drops, which by repetition may be increased with perfect safety to fifteen drops. As, however, it appears that all chemists do not keep the same formulary, and many procure the acid from their druggists, and are ignorant from which preparation it has been procured, it will be advisable for all who feel inclined to try the efficacy of hydrocyanic acid, as occasionally prescribed, to ascertain from the chemist the nature of the preparation kept, bearing in mind that of the proper medicinal strength, the dose to be beneficial should begin with five drops, and may be increased to fifteen.

HYDROGEN.—This important element is only known to us in the gaseous or permanently elastic form. It is usually procured by the action of sulphuric acid and zinc or iron upon water, or by passing the vapour of water over red-hot iron.—See *Dictionary of Useful Knowledge*, article HYDROGEN.

HYDROMETER.—An instrument for determining the relative densities or specific gravities of fluids. The instrument known as "Sykes's Hydrometer," is the one almost universally used. It consists of a thin brass stem about six inches long, passing to and soldered on a hollow ball of the same material, and about an inch and a half in diameter. To the inferior extremity of the stem, from

which the hollow ball is about an inch distant, a permanent pear-shaped weight is attached; so that when the instrument is placed in a fluid, the other extremity may float perpendicularly to the surface. There are also ten weights of different magnitudes, nine of which are circular and applicable by means of a slit to the lower part of the stem. These are marked 10, 20, 30, 40, 50, 60, 70, 80, and 90 respectively, and by their successive application the instrument may be sunk so as to obtain the complete range of specific gravity, from that of pure alcohol to that of distilled water. The other weight is of the form of a parallelopiped, and may be fixed when necessary to the upper branch of the stem. The upper branch of the stem is divided into ten equal parts or degrees, each of which is again divided into two parts. The whole is adjusted at the temperature of 60° Fahrenheit, and tables are computed whereby the necessary corrections may be determined for all variations above or below that point. In order to determine the strength of spirit by means of the hydrometer, a portion is placed in a tall glass cylinder, and the temperature



observed. One or more of the circular weights is then attached to the lower stem of the instrument, so that the lower extremity of the scale may sink beneath the surface of the fluid, and when the whole has become stationary the number on the scale in contact with the surface of the fluid is observed. This number, added to the number marked upon the circular weight employed, will give a third number, adjacent to which, in the tables above mentioned, and under the head of the proper temperature will be found the percentage of strength required.

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HYDROPATHY.—A mode of curing diseases by the copious use of pure cold water, both internally and externally, together with dry sweating and the due regulation of diet, exercise, and clothing. The adoption of this treatment under ordinary circumstances is very inconvenient, and in some cases impracticable; and in order to render its practice more available, hydropathic establishments are located in various parts of the country, where patients place themselves under a course of treatment for a specific term.—Books: *Bushman's Treatise*, 4*s.*; *Claridge's*, 5*s.*; *Gubb's*, 4*s.* 6*d.*; *Horsell*, 2*s.* 6*d.*; *Shew*, 5*s.*; *Wilmot*, 1*s.*; *Armitage's, Applied to Acute Diseases*, 3*s.*; *Johnson's Domestic*, 6*s.*; *Claridge's Facts and Evidences*, 1*s.* 6*d.*; *Weiss's Handbook*, 7*s.* 6*d.*; *Johnson's Letters*, 1*s.* 6*d.*; *Johnson's Results*, 1*s.* 6*d.*; *Franklin's Theory*, 5*s.*; *Johnson's Theory & Practice*, 1*s.* 6*d.*; *Balbirnie's Aphorisms*, 1*s.* 6*d.*; *Lane's Treatise*, 13*s.* 6*d.*

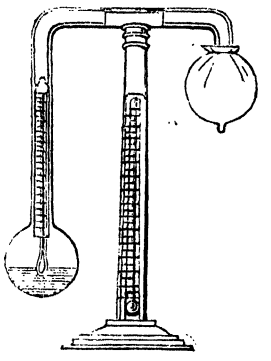
HYDROPHOBIA, or dread of water, as the name signifies, is a disease peculiarly affecting the nervous system, caused by the bite and absorption into the blood of the saliva, or *virus*, as it is called, of some rabid or strongly irritated animal, but most frequently of the two domestic species, the dog and cat, though, from the almost analogous symptoms excited in the system by certain accidents, eventuating in what has been called *tetanus*, the two diseases by many medical men have been considered as synonymous. The influence exerted by the mind on the body, both for good and evil, is a fact well known to the most casual observer, but in no instance is that effect exercised with more dangerous consequences than in the disease under notice; for it is unquestioned that many persons have been forced into a state of hydrophobia, simply through the terror inspired by the scratch or abrasion of an animal perfectly in health, though perhaps under a temporary fit of displeasure or pain. The peculiarity of this disease, is the great length of time that usually takes place between the receipt of the accident, or bite, and the disease itself, or the manifestation of the constitutional symptoms; sometimes weeks elapse, at others months, and not unfrequently years have supervened between the cause and the effect.

Symptoms.—At whatever time these may show themselves, they commence with wandering pains over the body, anxiety, restlessness, disturbed sleep, and frightful dreams, the patient starting up in horror and bedewed with cold perspiration; by degrees muscular contractions occur at intervals, weight and oppression of the stomach, a tightness in the throat, and difficulty of swallowing, till suddenly the crowning symptom takes place, and the patient, in attempting to drink, is seized with a sudden horror, and recoils in terror from the wished-for potation; the very sight or sound of water, or the motion of fluid, throwing the body into violent convulsions. From this stage the symptoms rush on to their climax: the countenance is contracted, the eyes wild and staring, the

teeth set firmly, and with the tightened lips covered with a ropy foam, or a thin watery saliva pours from them; this state is alternated with shrieks, animal noises, bilious vomitings, convulsive jerks and plunges, till one fearful spasm that draws the body like a bent bow, resting on head and heel, releases the patient from his sufferings.

Treatment.—The hot bath, electricity, blisters, bleeding and opium in immense doses, are the only agents that art can employ in this formidable disease; the most violent measures and the most opposite have been resorted to; but, unfortunately for science, hitherto with but little effect or benefit. In no disease is the old adage of "prevention better than cure" so applicable as in this. For the tranquillity of mind, for the satisfaction of the patient, and for motives of safety, in all cases of bite or abrasion from the tooth of an animal, the part should be cauterised. A tape or bandage being first tied tightly above the part to prevent absorption, the part is then to be washed with warm water, and lunar caustic then applied. If these steps are adopted quickly and effectually, and, if possible, the part sucked or dry-cupped before applying the caustic, and the ligature or pressure continued for some time, there will seldom be any necessity for the painful and questionable practice of excision. The patient's mind must be soothed; an aperient and a sedative given, and a warm poultice applied over the eschar. A mode of treating hydrophobia by means of ice, internally, down the spine, over the throat and chest, has been adopted with success, but the cases are too few to warrant pronouncing it as either safe or certain.

HYGROMETER.—A vast number of substances, such as sugar, flour, bread, &c., possess the property of absorbing moisture, the amount of which varies according to the circumstances in which they are placed. Atmospheric air also, and most gases, absorb and retain watery vapour, so that in all experiments regarding the composition of bodies, it is necessary to ascertain their state as to dampness. The values of many commodities are greatly influenced by the quantity of moisture which they hold, and hence the utility of having some means of ascertaining this quantity. This instrument is represented in the accompanying figure. It consists of two hollow glass balls, containing ether, and communicating by the glass tube which rests on the support. The ball which forms the termination of the longer branch is of black glass, in order that the formation of moisture on its surface may be the more perceptible. It includes the bulb of a delicate thermometer dipping in the ether, its scale being enclosed in the tube above the ball; and whatever change takes place in the temperature of the ether is indicated by this thermometer. The other ball is covered with muslin. In making an observation, it is first necessary to note down the temperature of the air; next turn the instrument, so that when the covered ball is held in the hand, the ether may escape into the blackened ball; and it should also be held till the included thermometer rises a few degrees above the temperature of the air, when it should be replaced on the support. Then drop, or gently pour, a little ether on the muslin. The evaporation which takes place, produces cold; and attention must be instantly directed to the black glass ball and included thermometer. The latter will be seen falling rapidly, and at length a ring of moisture will be seen at the line which runs across the black ball, quickly, if



the surrounding atmosphere is very moist; slowly, if it is dry. The degree at which this takes place, must be carefully noted. In very damp or windy weather the ether should be very slowly dropped upon the ball, otherwise the descent of the thermometer will be so rapid, as to render it extremely difficult to be certain of the degree. In dry weather, on the contrary, the ball requires to be well wetted more than once to produce the requisite degree of cold.

HYPOCHONDRIASIS. This functional disturbance of the digestive organs, is generally found in melancholic temperaments, and presenting features of a purely nervous character, derives its origin from some preternatural condition of the function of digestion; though the often grave symptoms that supervene, might, to the uninitiated, appear to depend upon some organic disease, either of the heart or brain, so remarkable and various are the characters evoked by this disease; the hallucinations of the mind amounting, in many instances, to positive monomania. So far, indeed, does the imagination become erratic, that the patient sometimes believes in his own death; will lay himself out like a corpse, refuse all food, obstinately remain silent, and would die from inanition, but for the friendly violence of his physician; others believe themselves made of glass, and are almost killed in reality by the terror excited by the approach of a friend, who, in his cordial offer of shaking hands, excites the

wildest terror, lest, ignorant of the fact of his altered state, he should, in his rude friendship, shiver him to pieces. The delusions and imaginings of the hypochondriac are illimitable, and there is no disease in the nomenclature of science that demands such skill, so much tact, or so shrewd a knowledge of human nature in the physician as is called for in this. The treatment demanded, is often more moral than physical, and, in either case, calls for great judgment and determination. The first object to be effected is, restore the stomach and assistant organs to a healthy action; the next, to restore energy to the brain and nervous system, and to correct the morbid association of ideas that pervert the whole tenor of the patient's life; sometimes the last becomes the first and most important step; indeed, each object must be, in a measure, concurrent with the other. In such a disease, it is only possible to point out the means; their mode of employment must depend upon the speciality of the case to be treated. These are, change of scene, habits, and purposes, exercise, bathing, society, cheerful amusements, harmless sports, with new and interesting or exciting pursuits; next to these moral remedies, the medicinal agents are chalybeate and mineral waters, stomachics, tonics, antispasmodics, wine, external stimulants, electricity, and all the mineral acids and tonics.

HYSTERIA.—This disorder is more common in females than men, and is characterised by low spirits, a feeling of depression and anxiety, sudden and involuntary grief and tears, palpitation, sickness, a sense of suffocation, and the apparent presence of a ball in the throat; these symptoms are or are not attended with sobs, and sudden fits of laughter, convulsive twitches, and contractions of the hands and arms, finally terminating, after more or less muscular contortions, in insensibility and coma. *Treatment.*—In robust young patients, when the fit is strong it is necessary to bleed, but in general the sudden application of cold water dashed in the face, and pungent stimulants applied to the nostrils, will be found sufficient to restore the patient to consciousness. If not, a draught of sal volatile, water, and spirits of lavender, is to be given; and should much stupor or drowsiness continue after recovery, a blister must be applied to the nape of the neck. As hysteria generally depends upon some natural cause, the source of excitement is to be found out and removed; and as a preventative a course of aperient medicine, varied with an occasional assafœtida pill, is to be taken for a series of days, till the cause for which it was taken is removed. One of the best medicines that can be taken as a corrective to the system, and a stimulant of impaired natural action, is an infusion of equal parts of wormwood and pennyroyal, made with boiling water, and taken in cupfuls twice a day for three or four days in succession every fortnight, followed on each occasion by one or two compound assafœtida pills. — See FAINTING.

I.

ICE.—In medicines, ice is frequently employed, externally in inflammation of the brain, to resolve inflammation, to stop hæmorrhage, to astringe relapsed parts, and to deaden pain. For these purposes it is pounded small in a cloth, and placed in a bladder, or a bag of gauze, before applying it. Internally, ice, or ice-cold water, has been given with advantage in heart burn, typhus, inflammation, and spasms of the stomach, to check the vomiting in cholera, and to arrest internal hæmorrhage. Small lumps of ice, or a small glassful of pounded ice and water, will often temporally restore the tone of the stomach and nervous system during hot weather, when all other means fail. Ice creams, taken in moderation, act in the same way.

ICE-CREAMS. — These are commonly composed of cream or sweetened water, variously flavoured, and congealed by ice or a freezing mixture. Sometimes, instead of cream the materials of a custard are used. The mixed ingredients are placed in a tin, furnished with a handle at top, called a freezer or freezing-pot, which is then plunged into a bucket containing salt and ice (ice broken small and mixed with half its weight of common salt), and is kept in rapid motion backwards and forwards until its contents are frozen. As the cream congeals and adheres to the sides, it is broken down with the ice-spoon, so that the whole may be equally exposed to the cold. As the salt and ice in the tub melt, more is added until the process is finished. The ice-pot with the cream in it, is next placed in a leaden ice-stand, is at once surrounded with a mixture of ice and salt, and closely covered over. The glasses are filled from this as required for immediate use, and should have been previously made as cold as possible. Plain ice-cream is commonly made by one or other of the following formulæ: 1. New milk, 2 pints; eggs, 6 yolks; white sugar, 4oz.; mix, strain, heat gently, and cool gradually. 2. Cream, 1 pint; sugar, 4oz.; mix as before. 3. Cream, 1 pint; milk, 1 pint; white sugar, ½lb.

Flavoured ice-creams are made by mixing cream for icing with half its weight of mashed or preserved fruit, previously rubbed through a clean hair sieve; or, when the flavour depends on the juice of fruit or an essential oil, by adding a sufficient quantity of such substances. — See CURRANT; LEMON; RASPBERRY; STRAWBERRY, &c.

ICE-COOLER.—See COOLER.

ICE-HOUSE.—A receptacle in which ice is kept so as to furnish supplies from time to time as they are wanted. Wooden structures will be found the best for this purpose. The sides may be built on the principle of hollow walls, the uprights being of nine-inch battens edgewise, and boarded up on both sides, leaving a vacuum of nine inches between; or this space may be filled up with

dry straw or sawdust, finely sifted coal-ashes, or any other non-conducting material. The roof should be thatched with straw, reeds, or heather, at least two feet in thickness, and the sides covered with the rugged bark of trees, or with moss, or panelled off in ornamental patterns, with straight rods of hazel, larch, or otherwise in imitation of rustic work. Ice-houses should be in all their parts as dry as possible; and they should be so constructed as to ensure the running away of the meltings as quickly as possible. The ice-house should stand on a place exposed to the sun and air. The next thing is to protect the ice against damp from beneath. It should therefore stand on some spot from which water would run in every direction, and if the natural ground present no such spot, it would be no difficult matter to construct one. The best form for an ice-house is the circular, as seen in *fig.* 1. In

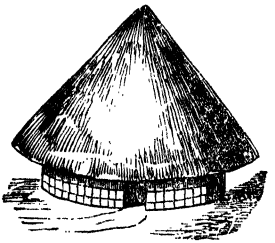


Fig. 1.

fig. 2, *a* is the centre of a circle, the diameter of which is ten feet, and at this centre a post should be set up, to stand fifteen feet above the level of the ground, which post ought to be about nine inches through at the bottom, and not a great deal smaller at the top. Great care must be taken that this post is

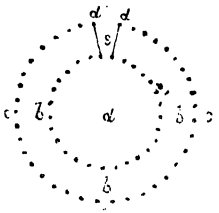
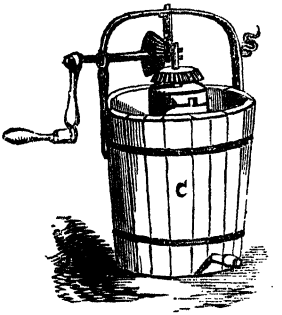


Fig. 2.

perfectly perpendicular, for if it be not, the whole building will be awry. *b b b*, represent twenty-eight posts, nine feet high, and six inches through at the bottom, without much tapering towards the top. These posts stand about two feet apart from centre to centre, which leaves between each two a space of eighteen inches. *c c c c*, are thirty-eight posts, five feet high, and five inches through at the bottom, without much tapering towards the top. These posts stand about two feet apart, reckoning from centre to centre, which leaves, between each two, a space of nineteen inches. The space between these two rows of posts, is four feet in width, and, as will be presently seen, is to contain a wall of straw; *e*, is a passage through the wall; *d*, is the outside door of the passage; *s*, is the inside door; and the inner circle, of which *a* is the centre, is the place in which the ice is to be deposited. The walls should be formed between the posts of clean wheat or rye straw, laid closely and smoothly. Plates of wood are to be laid on the top of the two rows of posts for receiving the rafters of the roof. The roof should not be at a lower angle than forty-five degrees, and should be covered with strong laths, to which the roof thatch is to be secured. The thatch should be of wheat or rye straw, and four feet thick. The bed upon which the ice is to be laid, should be formed by laying round logs, about eight inches in diameter, across the area, leaving spaces between them of about a foot. Over these, poles, about half the size of the last, are to be laid across in an opposite direction; and six inches apart over these, a third course, two inches in diameter, and three inches apart; upon these again, a course of still smaller rods, one inch apart; and, finally, upon these, two inches of dry twigs and branches, or strong heath, free from moss or grass; upon this bed the ice is put, broken and pummelled, and beaten down together in the usual manner; when the house is filled it should be shut closely up.

ICE MOCK.—Take of preserved strawberries, raspberries, and red currant jelly, a tablespoonful each; put it through a sieve with as much cream as will fill a shape; dissolve three-quarters of an ounce of isinglass in half a pint of water; when almost cold, mix it with cream, put it into a shape, set it in a cool place, and turn it out the following day.

ICE PAIL.—An implement, by means of which ice-creams may be readily made. The



following are the directions for use:—Having prepared the water or cream mixture, put it into the freezing pot and adjust the appara-

tus; then fill the pail, c, with ice broken up sufficiently small to be admitted into the pail round the freezing pot; but to every three-inch layer of ice, add a layer of salt, using about a fourth as much salt as ice. Press them down with a stick with one hand, at the same time turning the machine with the other, without stopping, for about eight or ten minutes, or until the contents are sufficiently frozen, which will be known by a difficulty in turning the handle, then let the frozen cream remain a few minutes without stirring, and it will be fit for table; but if required to be kept long before use, the wooden peg should be taken out of the pail, and the water let off; then put the plug in again, and refill the pail with ice and salt as before, but use only half the quantity of salt. The object of stirring or rotary motion, communicated to the mixture, is to prevent the outside from being frozen more than the inside; and to induce all to keep a consistence half-way between snow and ice.

ICE WELL.—A receptacle for ice, on a similar principle as an ice-house, the difference in construction being, that one is built above the surface and the other below. An ice well made as follows will be found best adapted to the purpose. Dig a circular well, twelve feet deep by twelve feet wide, and brick it round in nine-inch work; place a roof over it, thatched two feet deep, have on one side a door with a latticed opening in the upper part, and immediately opposite, a latticed window; keep these constantly open, so that there may be always a draught circulating winter and summer. The structure should be moderately shaded with trees, and there must be a drain from the bottom, should the ground require drainage with a trap to prevent the air from entering below by the drain, and the ice should be covered with a foot or two of straw. At the bottom of the well, should be placed a layer of faggots, resting on sleepers, pointing to the drain, so that any water may be carried off. The construction allows of the ice being abstracted every day, with very little if any waste; and the ice will last through the whole year without being exhausted.

ICED CAKE.—Take two pounds of flour well dried, a pound and a half of fresh butter, two pounds of lump sugar pounded, ten eggs well beaten, half a pint of milk, half a pound of candied citron and lemon-peel mixed, cut into strips, a nutmeg grated, a wineglassfull of ratafia, and the same quantity of orange-flower water; beat the butter to a cream with a wooden spoon, and add the other ingredients, and when well mixed, two tablespoonfuls of yeast. Let it rise before the fire for half an hour. Bake it in a buttered tin for three-quarters of an hour. Immediately on taking it out of the oven, crust over the top with white of egg, cover over thickly with powdered sugar, and glaze with a salamander.

☞ Flour, 2lb.; butter fresh, 1½lb.; sugar, 2lb.; eggs, 10; milk, half a pint; citron and lemon-peel, ¼lb. (mixed); nutmeg, 1; ratafia, 1 wineglassful; orange-flower water, 1 wineglassful; yeast, 2 tablespoonfuls.

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ICING.—A process applied to cakes, and performed as follows:—Whip the white of five eggs to a froth; add a pound of double-refined sugar sifted, and three spoonfuls of orange-flower water; beat it up thoroughly, and when the cake is taken out, ice it with a wooden spatula. Leave it in the mouth of the oven to harden, and do not allow it to contract the least colour. Lemon-juice, instead of the orange-flower water, renders it very white and particularly pleasant to the taste. These cakes may be decorated with gum paste ornaments, either white or in colours.

IDIOT.—An asylum for idiots has been established at Highgate and another at Colney Hatch. Each of these have offices in London, where all particulars respecting admission may be obtained.

IMPERIAL.—A summer beverage made as follows:—Two ounces of cream of tartar; two pounds of loaf sugar; three lemons cut in slices; pour upon these two gallons of boiling water. Let it stand until cold. Strain and bottle it, and in ten days it will be fit for use.

IMPORTS.—Commodities bought in other countries. In transacting his business, an importer has to abide by certain laws of the Customs, and to pay such duties as are levied upon the goods which he imports. —Book: *McCulloch's Directory of Commerce.*

IMPRISONMENT, FALSE.—Every species of confinement constitutes imprisonment, whether it be in a common prison or a private house, in the stocks, or even by forcibly detaining one in the public streets. False imprisonment may also arise for executing a legal process at an improper time; as by arresting in a civil suit on Sunday. In whatever way the illegal act may have been committed, the aggrieved party has his remedy by action at law, and may press for damages, according to the amount of injury sustained.

IMPRISONMENT FOR DEBT.—No person can be imprisoned for making default in payment of a sum of money excepting for default in payment of a penalty other than a penalty in respect of a contract; or of any sum recoverable before a justice of the peace; or default by a trustee of any sum under his control which he has been ordered to pay by a court of equity; or default by an attorney to pay costs for misconduct, or any sum ordered to be paid by a court of which he is an officer; or default in payment of any portion of income which a court having jurisdiction in bankruptcy has ordered to be paid for the benefit of creditors. In all these cases no person shall be imprisoned for more than one year.

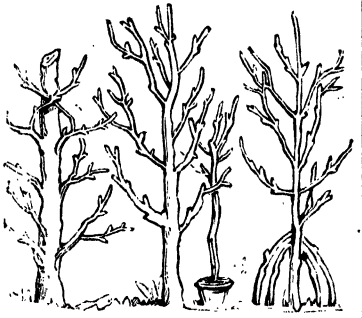
Any court may commit to prison, for a period not exceeding six weeks, any person who has made default in payment of any debt or instalment of a debt due from him in pursuance of an order or judgment of any competent tribunal, but only when it is proved to the satisfaction of the court that the debtor has since the order had the means to pay the sum ordered, and upon payment of the sum within the period of six weeks, and of the prescribed costs, the

debtor shall be discharged from custody. Such imprisonment shall not operate as an extinguishment of the debt.

Where an action is brought in a superior court to the amount of £50 and upwards, the defendant can be arrested if the plaintiff can prove that there is probable cause for the belief that he is about to quit England; and, if the action be not for a penalty, that the absence of the defendant will prejudice the plaintiff in the prosecution of his action.

Any person being bankrupt who shall fraudulently conceal any property or papers, or who shall have contracted any debt by fraud, or committed any fraudulent act in relation to his bankruptcy, is liable to imprisonment for a term not exceeding two years.

IN-ARCHING.—An ingenious mode of grafting, by which one young plant, without removal, is made to strike upon another plant, and thus form a union. It may be performed in various ways, as represented in the engraving; for example, two branches



of a tree may be bent so as to meet and strike upon a wound in the main stem, by which a gap will be filled up; one growing tree, either from the ground or a pot, may be led to unite with another; or several suckers may be led from the ground arch-wise to strike upon a point in the stem, thus bringing fresh aid to the productive part of the tree. The spring is the season for performing this operation generally, but any season when the sap is in proper condition is equally proper. In order to carry out in-arching successfully, it is necessary that the plants to form both the stock and scion should be either growing near to each other, or, if in a portable state, placed so that their branches may meet. A portion of bark is then removed from each at the intended point of the union, say from an inch to three inches in length, according to the size and strength of the subjects; these parts are fitted together so that the inner barks of both coincide, and the process of tying, and claying or waxing follows, as in common grafting. Some, however, tongue the scion and stock in the same manner as is done in whip-grafting. In either way the cambium shortly becomes developed, the alburnum of the scion and the stock becomes united, and when this is accomplished, the scion may be cut off a little below where it is united to the stock, either at one operation, or only partially cut through first, and in a few days completely severed. A week or two after the union has taken place, the remaining portion of the scion, if any was left in, when separated from the parent plant, should be cut off close to the stock, that the wound may heal over, and leave the stem as perfect as possible. Side in-arching, without tonguing, is well adapted for young shoots of camellias, oranges, &c.; and when the wood of both scion and stock is soft, and full of sap, a union speedily takes place.

INCOME.—The laying out of an income so as to secure the largest amount of benefit, and to purchase the greatest number of the necessaries and comforts of life, may be truly termed an art in social economy. Some persons have the faculty, to use a common phrase, "of making a pound go as far as another person's thirty shillings"—a contrast in expenditure which results rather from the laxity of the spendthrift, than from any extraordinary judgment on the part of the thrifty. It is obvious that if two persons have the same amount to spend, and similar advantages are open to both, they ought to be able to secure an equal value for their outlay; and to do this it is only required for a person to *think* and *make a proper use of his eyes*. In the disposition of an income, another important consideration is, not to spend all, but to lay by something every week, or month, or year, in order to meet emergencies—such as illness, accidents, &c. Where the income is limited, it is of course, difficult to do this; but in stations however humble, there are mostly certain luxuries indulged in, which might easily be dispensed with, and the cost of which would furnish the provident fund in question. Some persons find a pleasure in thus economizing their incomes, whilst to others it is an irksome process, and one which they have the greatest reluctance to practise; but these latter should bear in mind, that by their energy and perseverance, a larger income may be secured, so as to render these sacrifices comparatively unfelt, so that to a certain extent their own prosperity and happiness remains in their own hands. Again, when a person has a fixed income he usually has to work only during fixed hours, and it is possible for him to turn his leisure time to account, so as to make a sensible addition to his stipend. Before doing anything in which a larger amount than ordinary is involved, the step should be well considered, so as to avoid after embarrassment by an act of thoughtlessness and indiscretion. Thus, previously to taking a house, it should be ascertained whether the income can bear the demand which the rent will make upon it; the same rule applies to the ordering of furniture, clothes, or any other extraordinary disbursement. Having thus used all diligence and judgment in the laying out of the income, the next important step is, to keep accounts of all receipts and

expenditure, on such a clear and straightforward plan, that a cursory glance will at any moment furnish an index of the true state of affairs. In the disbursements of an income, one of the most besetting sins, is a love of finery and display, for the sake of eclipsing one's neighbours and astonishing the world. This is often done not only at a great sacrifice to personal and domestic comfort, but frequently at the expense of honour and happiness, a darkened hearth and a ruined home. No policy can be more short-sighted than this, and no conduct more indefensible; for the person that makes these efforts to win admiration and excite astonishment, can never be certain that the object is gained; whilst he who devotes his income to gathering substantial benefits for his own little world within, neither thinking about, nor caring for the world without, does certainly secure to himself the materials for comfort and happiness, both tangible and unalienable.—See BENEFIT SOCIETIES, BUILDING SOCIETIES, CASH AND CREDIT, ECONOMY, HOUSE KEEPING, MARKETING, &c.

INDIAN CAKE.—Take half a pound of butter, with three-quarters of a pound of sugar, and three-quarters of a pound of Indian corn meal, sifted; add eight eggs, a nutmeg grated, or a teaspoonful of cinnamon; rub the butter and sugar to cream, stir in the other ingredients, and when properly set, bake in a moderate oven.

☞ Butter ½lb.; sugar, ¾lb.; Indian corn flour, ¾lb.; eggs, 8; nutmeg, 1; or cinnamon, 1 teaspoonful.

INDIAN CORN.—A particular kind of grain which grows abundantly in the south of Europe, and in tropical climates. Bread made from this corn is proved to be highly nutritive, and may be made as follows: take seven pounds of Indian corn flour, pour upon it four quarts of boiling water, stirring it all the time; let it stand till milk warm, then mix it with seven pounds of fine wheaten flour, to which a quarter of a pound of salt has been previously added. Make a depression on the surface of this mixture, and pour into it two quarts of yeast, which should be thickened, to the consistence of cream, with some of the flour; let it stand all night; on the following morning the whole should be well kneaded and allowed to stand for three hours, then divide it into loaves, and bake them in tins for half an hour. It is of importance that the flour of Indian corn should be procured, as Indian corn meal is that which is commonly met with at the shops, and the coarseness of husk in the meal might, to some persons, prove prejudicial.

☞ Indian corn flour, 7lbs.; water, 2 quarts; wheaten flour, 7lbs.; salt, ½lb.; yeast, 2 quarts.

INDIAN INK.—This article is used in China for writing with a brush, and for painting on the soft flexible paper of Chinese manufacture. An ink of equal efficacy may be made as follows: put six lighted wicks into a dish of oil; hang an iron or tin concave cover over it, so as to receive all the smoke; when there is a sufficient quantity of soot settled on the cover, remove it gently with a feather on to a sheet of paper, and mix it up with gum tragacanth to a proper consistence.

INDIAN PICKLE.—The vegetables to be employed for this pickle are small hard knots of white cabbage sliced, cauliflowers or broccoli in flakes, long carrots, not thicker round than the finger, gherkins, French beans, small onions, white turnip radishes, half grown shalots, young hard apples, green peaches, vegetable marrow not larger than a hen's egg, small green melons, horse-radish, nasturtiums, capsicum, and garlic. As all these do not come in season together, the best method is to prepare a large jar of pickle at such a time of the year as most of the things may be obtained, and add the others as they come in season. Thus, the pickle will be nearly a year in accumulating, and ought to stand another year before using, when, if properly managed, it will be excellent, but will keep and continue to improve for years. For preparing the several vegetables, avoid boiling as much as possible, and soaking in brine to be preferred; be particular that every article is dried before it is put into the jar, and that the jar is very closely tied down every time that it is opened for the addition of fresh vegetables. For the pickle, to a gallon of the best white wine vinegar, add three ounces of salt, half a pound of mustard, two ounces of turmeric, three ounces of sliced ginger, one ounce of cloves, half an ounce each of mace, black pepper, long pepper, and white pepper, and two drachms of cayenne; steep the spice in vinegar, and let it remain on the hob for two or three days. The mustard and turmeric must be rubbed smooth with a little cold vinegar, and stirred into the rest when as near boiling as possible.

INDIGESTION.—See DYSPEPSIA.

INDORSER.—One who signs his name on the back of a bill of exchange or other document, to enhance its validity. A bill payable to *order*, or to *bearer*, or containing any words to make it assignable, may be indorsed over, so as to give the indorsee a claim on all the antecedent parties whose names appear upon the bill. But unless the operative words "to order," or "to bearer," or some equivalent term, be inserted, it cannot be transferred so as to give the indorsee a claim on any of the antecedent parties, except the last indorser. An indorsement by pencil marks has been held sufficient, but is very objectionable. A bill may be indorsed before it is complete, or after the time appointed for payment. In the first case, if a man indorse a blank stamped piece of paper, it will bind him to the amount of any sum which may be inserted, consistent with the stamp, and made payable at any date. If the indorsement be after the bill is due, it is incumbent on the indorser, to satisfy himself that the note is a good one; for if he omit to do so, he takes it on the credit of the indorser, and must stand in place of the person who was holder at the time it became due. No particular words are essential to the indorsement of a bill,

the mere signature on the back of a bill is in general sufficient; such indorsement is called a blank indorsement. A full or special indorsement mentions the name of the indorsee in whose presence it is made; as thus, "pay the contents to A. P., or order," and is subscribed with the name of the indorser. Such special indorsement precludes the person in whose favour it is made from making a transfer, so as to give a right of action against the special indorser, or any of the precedent parties to the bill, and from retaining a payment to their prejudice. After a payment for part, a bill may be indorsed over for the residue.

INFANT.—Infants are subject to so many ailments, and prone to such sudden attacks, betraying symptoms, probably in themselves of little consequence, though assuming such formidable characters, as to terrify the inexperienced mother; under this head it is proposed to include the following: the management of still-born children, infants in fits, and the general uses of the hot bath, duration of suckling, and infantine foods.

1. Infants still-born, and in fits, with the use and advantages of the hot bath. All children come into the world in the same imploring helplessness, with the same general organization and wants, and demanding, either from the newly awakened mother's love, or from the memory of motherly feeling in the nurse, or the common appeals of humanity in those who undertake the earliest duties of an infant, the same assistance and protection, and the same fostering care. It sometimes happens that the infant does not cry, or give utterance to any audible sound, or if it does, it is so faint as scarcely to be distinguishable as human accents, plainly indicating that life, as yet, to the new visitor, is neither a boon nor a blessing. As soon as this state of things is discovered, the child should be turned on its right side, and the whole length of the spine, from the head downwards, rubbed with all the fingers of the right hand, sharply and quickly, without intermission, till the quick action has not only evoked heat, but electricity in the part, and till the loud cries of the child have thoroughly expanded the lungs, and satisfactorily established its life. The operation will seldom require above a minute to effect, and less frequently demands a repetition. If there is brandy at hand, the fingers, before rubbing, may be dipped into that, or any other spirit. If the friction along the spine has failed, a warm bath is to be used, at a temperature of about eighty degrees, in which the child is to be plunged up to the neck, first cleansing the mouth and nostrils of the mucus that might interfere with the free passage of air. While in the bath, the friction along the spine is to be continued, and if the lungs still remain unexpanded, while one person retains the child in an inclined position in the water, another should insert the pipe of a small pair of bellows into one nostril, and while the mouth is closed, and the other nostril compressed on the pipe with the hand of the assistant, the lungs are to be slowly inflated by steady puffs of air from the bellows, the hand being removed from the mouth and nose after each inflation, and placed on the pit of the stomach, and by a steady pressure expelling it out again by the mouth. This process is to be continued, steadily inflating and expelling the air from the lungs, till, with a sort of tremulous leap, nature takes up the process, and the infant begins to gasp, and finally to cry, at first low and faint, but with every respiration of air, increasing in length and strength of volume, when it is to be removed from the water, and instantly wrapped all but the face and mouth in a flannel. Sometimes, however, all these means will fail in effecting an utterance from the child, which will lie with livid lips and a flaccid body, every few minutes opening its mouth with a short gasping pant, and then subsiding into a state of pulseless inaction, lingering probably some hours, till the spasmodic pants growing farther apart, it ceases to exist. Should the hot bath, friction, and artificial inflation fail of the desired effect, and the infant still remain passive, with the pulsation of the heart feeling under the hand like a faint irregular flutter, remove it from the bath, and having put a few red cinders into a warming pan, lay the child folded in a flannel, but its face and mouth uncovered, on its back along the lid of the pan, the heat ascending through the spine and so reaching the brain, often effecting in a few moments the result that all other means failed to effect, namely, the cry, that in expanding the lungs, propels the blood through the heart, and establishes the child's life. Infants of certain constitutions, and a low condition of vital energy, are not unfrequently attacked during the period of teething with fits, or as they are often improperly called, *convulsions*, and this without the slightest warning; the child that one moment lies crowing in the mother's lap, giving back smile for smile, and the picture of security and health, suddenly becomes rigid, its eyes open, dull, and fixed, the lips become pale, the orbits swarthy, the tiny fingers clinched, and the body often drawn arching backwards. In these cases the treatment is simple and easy; let the mother instantly strip the child, and laying it across her lap, the head to her left side, and the face looking towards her body, rub the spine from the base of the head to the hips, in sharp and rapid sweeps, with the four fingers of her right hand, till the fingers and the child's skin glow with the friction. Should this not cause the child *to cry* within two or three minutes, she must lay down the infant, and prepare as quickly as possible the warming pan, as in the previous case, and with the intervention of a flannel, lay the little patient across the lid; though if boiling water is at the fire, a hot bath is to be immediately extemporised by mixing *two parts of cold* with *one of boiling water*, and plunging the child up to the neck in the hot water and allowing it to cry as much as it pleases, as the more air it receives by the lungs, the more rapid and permanent will be the benefit realized.

2. Period of suckling, food, &c.—Of equal importance with food, in the management of infants, is pure air, and for this desirable object the infant should never, under any condition, be allowed to sleep with the nurse, if old, or even with the parents, but placed in a side bed, in easy and level access to the mother; that when required for the purposes of nursing, it can be easily moved to its mother's arms, and when suckled or fed returned to its crib. The amount of oxygen required by an infant is so large, and the quantity consumed by mid-life and age, and the proportion of carbonic acid thrown off from both so considerable, that an infant breathing the same air cannot possibly carry on its healthy existence while deriving its vitality from so corrupted a medium. This objection, always in force, is still more objectionable at night time, when doors and windows are closed, and amounts to a condition of poison, when placed between two adults in sleep, and shut in by bed-curtains; and when, in addition to the impurities respired from the lungs, we remember in quiescence and sleep how large a portion is given off from the skin.

The greatest mistake a mother can commit is that of over-feeding her child, and believing that every time it cries, it wants nourishment. A young mother should make it her business to study early the voice of her infant and the language conveyed in its cry. The study is neither hard nor difficult; a close attention to its tone, and the expression of the baby's features, are the two most important points demanding attention. The key to both she will find in her own heart, and the knowledge of her success in the comfort and smile of her infant. Mothers should early make themselves acquainted with the nature and wants of their offspring, that when left to the entire responsibility of the baby, after the departure of the nurse, she may be able to understand her new duties with more confidence than if left unaided to her mother's instinct. To ensure a pure and invigorating supply of nourishment to the child the mother should live well in every respect, but, at the same time, if she would avoid the cries and inconvenience that arises from an acid dietary, affecting her infant with griping and flatulent pains, she will eschew all acid or indigestible foods, and live as much as possible on plain and unvarying aliments, avoid over-feeding, late hours, or any sudden exertion that may heat or disorganise the milk.

The time a mother suckles her infant should never be less than *nine* or exceed *twelve* months, unless some special reason is adduced for either; for it may be taken as an invariable rule, that when nature puts teeth in a child's mouth, they are meant for *use*. The articles generally employed as food for infants consist of arrowroot, bread, flour, baked flour, prepared groats, farinaceous food, biscuit powder, biscuits, tops and bottoms, and semolina or manna croup, as it is otherwise called, which like tapioca, is the prepared pith of certain vegetable substances.

INFECTION.—See CONTAGION; DISINFECTION.

INFLAMMATION.—By this term is generally understood that condition of a part, in which it becomes painful, hotter, redder, and more turgid than in a state of health. The more considerable these symptoms become, or when they take place in very sensitive parts, they induce that condition of the system known as fever, and which, when the primary symptoms occur in certain tissues, becomes inflammatory fever. The seat of inflammation lies in the capillaries, those minute vessels or tubes that in health perform the office of secretion and nutrition, but diseased, become distended with red blood, consequently swell and cause the enlargement, the first symptom of inflammation; at the same time the increasing quantity of blood accumulating in the part, causes the redness and accession of heat; while the rigidity, tightness, and weight induced by the collected blood pressing on the sentient nervous filaments below, produces the dull, the sharp, or hot throbbing pain experienced, according to the situation of the swelling, and constitutes the last and most distressing symptom of local inflammation.

All inflammations are either local or general; when local, and attacking an organ, the disease is named after the part affected, as hepatitis—inflammation of the liver, phrenitis of the brain, gastritis of the stomach, and so with repect to other organs; but when it is general, as already said, it is called inflammatory fever. As there are degrees in the rapidity or slowness with which inflammation takes place, and also in the time the disease continues, inflammation has been divided into the *acute*, the sub-acute, and the chronic, each form demanding a separate and peculiar practice. Nature, that in all forms of disease attempts to effect a cure, has in the case of local inflammation provided several means, the chief of which are—1st. Resolution, which is a gradual absorption of the accumulated blood. 2d. By hæmorrhage, or the bursting of the distended part, and the escape of the blood. 3d. By suppuration, or the conversion of the effused blood into pus, or matter, which, gradually pressing on the skin, causes absorption of its texture till an aperture is formed and the contents of the abscess escape; and 4th. By gangrene, or mortification, which, when a part has been killed by excessive inflammation, forms a line of demarcation, and separates the dead from the living part. The symptoms, general and local, of inflammation, are materially altered by the structure of the part in which the disease takes place; thus, the heat is much less, the pain infinitely more acute, and the pulse hard and sharp, when the inflammation attacks the *serous* membrane, or that tissue which lines the chest; while in the *mucous* membrane, or that which lines the mouth and stomach, there is less pain, more heat, and a full, round pulse. The treatment of inflammation is both general and local. By the first is understood, bleeding from the arm, tartar emetic, opium, and saline purgatives; the latter, leeches, cupping, blisters, baths, and fomentations. For the

treatment of special cases, see BRAIN; LIVER; LUNGS, &c. And for external inflammations, see ABSCESS; BOILS; CARBUNCLE; WHITLOW, &c.

INFLUENZA.—A disease which, though unquestionably common to this country from remote time, has only within the last thirty years obtained a distinctive name and character. What the peculiar state of the atmosphere is, that induces or predisposes to this disease, science has not yet discovered, though the external causes, as far as appreciation enables us to form an opinion, appear to be, a long-continued state of humidity, succeeded by sudden heats, or seasons of alternate hot and wet weather, or a long humid autumn followed by a cold and boisterous winter. In these conditions of the climate the disease often becomes epidemic, and puts on a protean shape, and, though twenty persons in the same tenement are attacked with it, not two perhaps present the same chain of symptoms, or have been seized in the same way. The first sign of illness in one is a sudden coma, that deprives the patient for some minutes of all consciousness; another falls in a fit, a third is seized with an intense pain on the top of the head, others by fits of sudden heat or cold, by coughing, or pains in the back, chest, or throat; but however varied the commencement may be, or different the general run of symptoms, there are three signs that, taken together, always characterize influenza, and by which it may in every case be at once identified; these are—severe and splitting pain on the top of the head, great and sudden loss of strength, and a rough excoriated sensation in the chest behind the breast bone, as if the lining membrane in that part was raw. When influenza comes on gradually, the disease generally puts on the following succession of SYMPTOMS: a sense of cold, lassitude, weariness, cold chills, pains in the back, head, and loins; these symptoms are followed by flushings, weight on the head and great oppression on the chest, sneezing, the eyes become bloodshot, a thin acrid discharge from the nostrils occurs, with inflamed fauces and throat, followed by a short cough with a thick viscid expectoration, which soon becomes thin, discoloured mucus, mixed with purulent discharge. With these symptoms there is extreme prostration of strength, loss of energy, and great depression of spirits, the pain on the head continuing with unabated violence. The pulse, which at the beginning was quick and small, becomes, as the disease progresses, sharp, weak, and irregular. From the first the appetite has failed, the tongue furred, and the stomach in a state of nausea and often irritated to vomiting. The discrepancy in the state of the pulse in influenza generally renders it an insecure guide to a knowledge of the heart's action by the number or the frequency of the beats; the only true test of the vital strength of the patient is by the amount of pressure it will bear by the finger. Influenza, if not speedily cured, is very prone to degenerate into bronchitis, pneumonia, pleurisy, or some chronic thickening of the mucous membrane, of the throat, or enlarged tonsils. *Treatment*—the foremost point to be remembered in the treatment of this disease is, that the great debility is *real*, not a prostration dependent on nervous pressure, but a *bonâ fide* loss of vital power; consequently, bleeding, strong relaxing medicines, or blisters, are, except in very rare cases, highly injurious, and more likely to kill than cure the patient; the treatment therefore required is more a course of judicious dietary than one of physic. The medicinal means must consist of the following mixture and pills, the keeping the feet hot by hot bricks, or bottles of water, and a hot bran poultice applied frequently to the neck and chest. Take of the—

Powder of compound tragacanth, 2 drachms.
Hot water, ½ pint.
Lump sugar, 2 drachms.

Mix in a mortar, adding the water slowly till a smooth thin mucilage is made of the whole; then add—

Tincture of tolu, 1 drachm.
Ipecacuanha wine, ½ oz.
Spirit of nitre, 6 drachms.

Shake well together, and, lastly, add solution of acetate of ammonia, 1½ ounce. Mix, and make a 12 ounce mixture; of which let the patient take two large tablespoonfuls every four hours.

Take of—

Compound rhubarb pill, ½ drachm.
Extract of henbane, ½ drachm.

Mix, and divide into 12 pills, two to be taken at bed time every other day.

To support the strength, the food must be of the lightest and most nutritious kind, such as boiled mutton, custards, and sago puddings; and, as frequent stimulants are indispensable, claret glasses of warm egg-flip, either made in the usual way with the addition of a little rum or brandy, or egg-sherry must be given, with toast, every two hours. By these means, and the addition of 20 drops of laudanum, at bed time, to a dose of the mixture, all ordinary cases of influenza may be safely and expeditiously treated to recovery.

INFUSION.—This is one of the most frequent operations required in making up medicines, its object being to extract the aromatic and volatile principles of substances that would be lost by decoction of digestion; and to extract the soluble from the insoluble parts of bodies. Infusions may be made with cold water, in which case they are weaker, but more pleasant. The general method employed, consists in sherry, brandy, or powdering the ingredients first, then placing them in a common jug (which should be as globular as possible), and pouring boiling water over them; cover the jug with a cloth, folded six or eight times, but if there is a lid to the jug, so much the better; when the infusion has stood the time directed, hold a piece of very coarse linen over the spout, and pour the liquid through it into another jug.

INJUNCTION, IN CHANCERY.—Upon the principle of preventing a civil injury, which a court of equity can only redress, the Court of Chancery interferes, by issuing an injunction to restrain the sale of printed articles, and an order to produce an account of such articles produced and sold. Thus, an author or publisher possessing the copyright of a book, or a patentee having the exclusive privilege to produce a certain article, may take these proceedings to establish his right.

INK-MARKING.—Dissolve, separately, one ounce of nitrate of silver, and an ounce and a half of sub-carbonate of soda, in distilled rain water. Mix the solutions, and collect and wash the precipitate in a filter; while still moist, rub it upon a marble or Wedgwood mortar, with three drachms of carbonic acid; add two ounces of distilled water, mix six ounces of white sugar, ten drachms of powdered gum arabic, and half an ounce of archil and water; put into bottles and cork securely.

INK-STAINS, TO REMOVE.—When the stains are recent, let one person hold the stained part of the article between his two hands over a basin and rub it, while another pours water gradually from a decanter upon it, and let the whole jugful be used if necessary; if the collar, sleeve, &c., be detached, let it be dipped into a basin filled with water, and then squeezed and dipped in again, changing the water after every two or three squeezes. To remove ink stains of an old date from linen, &c.: put a pint of boiling water into a narrow-necked jug, place the stained part on the top of the jug, and, while wet and hot, with the finger rub in a little salt of sorrel. The acid should remain on the linen for half an hour before it is washed.—*Caution:* Salt of sorrel being a powerful poison, it should be cautiously used, and the paper in which it is placed marked "poison." *To remove ink stains from mahogany.*—Put a few drops of spirits of nitre into a teaspoonful of water, touch the stain with a feather dipped in the mixture, and on the ink disappearing, rub it over immediately with a rag wetted in cold water, or a white mark will be left, which will be difficult to efface. *To take ink stains from paper.*—Make a solution of muriate of tin, two drachms; water, four drachms; and apply it with a camel's hair brush. After the stain has disappeared, the paper should be passed through water, and dried. *To remove ink stains from silver.*—Make a paste with chloride of lime and water, apply a little of it to the stains, and then rub it with a leather or rag. *To take ink stains out of coloured table covers.*—Dissolve a teaspoonful of oxalic acid in a teacupful of hot water; rub the stained part well with the solution. *To remove ink stains from the hands.*—Wet the stained part with water, and rub a little oxalic acid over it.

INK, SYMPATHETIC.—With a clean pen, write on paper with a solution of muriate of cobalt, so diluted with water, that the writing, when dry, will be invisible. On gently warming the paper, the writing will appear of a blue or greenish colour, which will disappear again when cool. A solution of muriate of copper forms a yellow and sympathetic ink, and acetate of cobalt a rose or purple. If a landscape be drawn representing a winter scene, the paper being overlaid in the place where the foliage should be, with the green sympathetic ink, then on gently warming the drawing, it will represent summer. Sky and water may be drawn with the blue, and standing corn with the yellow ink.

INK, WRITING.—Boil eight ounces of galls in coarse powder and four ounces of logwood, in thin chips, in twelve pints of rain water, for one hour; strain the liquor, and add four ounces of green copperas, three ounces of powdered gum arabic, one ounce of blue vitriol, and one ounce of coarse sugar; stir the mixture until the whole be dissolved, then let it subside for twenty-four hours; strain it off speedily, and put it by in stone bottles for use. An excellent ink, suitable for writing with steel pens, which it does not corrode, may be made as follows: sixty grains of caustic soda, a pint of water, and as much Indian ink as is required for producing a proper blackness.

INOCULATION is the insertion of the matter taken from the pustule of small pox, and inserted under the skin of a healthy person, to produce, by that means, a milder form of the disease, than is contracted in the natural way. This dangerous practice has long been superseded by vaccination, and the employment of inoculation now very properly made punishable as a misdemeanour.

INSANITY.—This alarming and dangerous state of the mental faculties, is, fortunately, more frequently the consequence of diseased action elsewhere, or in other words, a symptomatic affection, than the result of an organic or morbid condition of the brain itself. Insanity may arise from any severe constitutional disturbance, or local disease, so long continued as to affect reciprocally the system, hence it is a frequent symptom of all fevers, whether of the nervous or inflammatory type; often supervening upon severe accidents, and very frequently following the shock sustained by the system on the performance of important surgical operations. Insanity may also be idiopathic, or arise without any previous disease, as when the mind has been long kept preternaturally bent on one engrossing subject; or it may proceed from some sudden emotion of the mind, acting on a weakened frame, or from any cause that excites and keeps up a long tension of the reflective powers. It may also arise from organic disease of some part of the brain, or follow from an hereditary taint. Insanity is distinguished from madness, only by the milder character of all the symptoms, and by the subsidence of the incoherency on the suppression of the immediate cause that produced it; whereas, madness is excited by the same causes, and continues for a longer or a shorter time after the subsidence of all the excitement that gave rise to it. The insanity that constitutes what is denominated madness, as a

special disease, we shall not refer to in this work, confining ourselves merely to that state which attends or follows ordinary disease.

Symptoms.—Insanity appears in many forms, seldom showing twice alike; but, as a general rule, its characteristics are in the following order: severe pains in the head; noise in the ears; redness of the face; peculiar wildness of the countenance; rolling and glistening of the eyes; grinding of the teeth; loud roarings; violent exertions of strength; incoherent discourse; unaccountable antipathy to certain persons, particularly to their nearest relatives and friends; a dislike to such places and scenes as formerly afforded particular pleasure; a diminution of the irritability of the body with respect to the morbid effects of cold, hunger, and watching: together with a full strong pulse.

Causes.—Hereditary predisposition; sanguineous temperament; violent emotions of the mind; immoderate indulgence in any passion; violent exercise; frequent intoxication; sedentary life; abstruse study; parturition or lactation; tumours compressing the brain; preceding attacks of epilepsy, fever, &c. *Treatment.*—Before proceeding to the mode of treatment, the following objects are to be strictly borne in mind:—1. To gain a perfect command over the maniac. 2. To divert the patient's mind from the existing train of thought. 3. To diminish the preternatural action of the brain. To effect these results, the following remedies must be had recourse to: 1. By bleeding, if of a plethoric habit, and the attack recent. 2. Purgatives; both the drastic and cooling aperiatives have been recommended—perhaps the former are preferable; hellebore, senna, and jalap. 3. A spare low diet. 4. Emetics of sulphate of zinc, or of tartar emetic. 5. Nauseating remedies. 6. Cold bath during the paroxysms. 7. Sedatives; hemlock, camphor and henbane; opium is generally prejudicial. 8. Counter-irritants; blisters, setons or issues. 9. Where great debility is present from the first, or supervenes after the employment of active remedies, tonics and stimulants, as in debility from other causes.

Insanity, to a greater or less extent, may be regarded as an effect of many fevers, especially those of nervous order and typhoid type, and though in general the hallucinations of this mental disturbance subside on the decadence of the symptons, cases arise where the balance of mental power is not restored for some considerable time after the bodily recovery, and others in which a predisposition is left behind, upon which, at the slightest excitement, the insanity returns with perhaps increased severity; in such cases the disease assumes a new phase, and more properly comes under the denomination of lunacy.

INSECTS, TO DESTROY.—Insects commit great havoc among every kind of vegetation, but in fruit trees their depredations are, perhaps, most severely felt. To destroy them, take an old tin watering pan, or any similar vessel, and make a charcoal fire in it; add a tube or pipe, made of either tin, leather, or stiff paper, to the spout, which may be of any sufficient length; then strew some brimstone, tobacco dust, fine shreds of leather, &c., upon the fire in the pan, and cover the top; having a pair of bellows ready, hold the wind-flap over the tube or pipe, to receive the smoke, which it will do very effectually when you use the bellows. By this means the suffocating vapour may be directed through the bellows to any part of the tree with the greatest ease and facility, and the tree will be soon cleared of all vermin.

INSOLVENT.—The old distinction between bankrupt and insolvent being now done away with, any person who is unable to pay his debts and who owes £50 is liable to be made bankrupt, unless he makes a composition with his creditors, or his affairs are liquidated by arrangement.

Any creditor whose debt amounts to £50, or several creditors whose aggregate debts amount to a like sum, may petition for an adjudication in bankruptcy, against any person who within the previous six months has committed an act of bankruptcy, viz., has assigned his property for benefit of creditors; or made a fraudulent transfer of his property; or, with intent to defraud his creditors, has left England; or, being a trader, has left his house, or begun to keep house, or been outlawed; or has filed a declaration of insolvency; or, if a trader, has had an execution levied against him or on his goods; or has been served with a debtor's summons for not less than £50, and has neglected to pay the same for seven days, or, if a non-trader, for three weeks.

The petition must be verified by affidavit, and if the Court, at the hearing, is satisfied that the statements contained therein are true, it will adjudicate the debtor bankrupt, after which the bankruptcy is advertised in the "London Gazette" and in one local paper.

When a person is adjudicated bankrupt, the Court may appoint a receiver or manager to take possession of the bankrupt's property or business; and as soon as possible after the adjudication a general meeting of the creditors is appointed, at which debts may be proved and at which the majority in value of the creditors present appoint a trustee, who may be a creditor or not, and whose duty it is to realise all the property of the bankrupt, and to distribute it among the creditors at such remuneration as the creditors may appoint. At this meeting the creditors also appoint a committee of inspection, consisting of not more than five of the creditors, to superintend the management of the estate by the trustee. A secured creditor can only prove for the balance of his debt after deducting the value of the security, unless he gives up the security; and his vote on the appointment of trustee and committee of inspection is valued only at the amount of the balance. A corporation may prove a debt by its authorised agent, and any person who is authorised by a creditor and who has personal knowledge of the existence of the debt, can prove as the agent of such creditor. A vote by any person appointed proxy by a creditor, is equivalent to the vote of the creditor himself.

Until the appointment of a trustee, the registrar of the Court is the trustee, and if no trustee be appointed at the first meeting, the court may either annul the adjudication or appoint the registrar to act as trustee. Where there is no committee of inspection, its functions are undertaken by the Court.

The bankrupt is to assist the creditors in realising his property, and at the first meeting he must produce a statement of his affairs, on which he is publicly examined on a day appointed by the Court. He must furnish lists of his debtors and creditors, and do all such things as he may be required to do by the trustee of the Court. If he neglect any of these requirements, or fail to deliver up all his property, he is guilty of contempt of Court, and may be punished accordingly. The trustee may appoint the bankrupt to manage his estate, or to carry on his business, and may, with the sanction of the creditors, accept any composition offered by the bankrupt.

The trustee is to call a meeting of the committee of inspection, at least once in every three months, when they are to audit his accounts, and declare what dividend, if any, is to be paid. The trustee is then to forward his audited account, together with a statement of the outstanding assets, to the comptroller in bankruptcy, who will examine the same, and call upon the trustee to make good any loss he may find the estate to have sustained from the trustee's neglect. He must also at least once in each year forward to the same officer a statement showing the state of the proceedings. The trustee cannot appoint a solicitor or other agent, without the consent of the committee of inspection, and if a solicitor be appointed trustee, the remuneration allowed him by the creditors must include all professional charges.

All proofs of debt are to be sent to the trustee, who will accept or reject them, subject to an appeal to the Court; and when the committee of inspection have determined that a dividend shall be made, the trustee is to divide the money among the creditors who have proved or claimed, having previously paid all costs and preferential claims, such as wages, rates, income and assessed taxes, &c. In cases in which a firm is adjudicated bankrupt the assets of the separate estates of the partners of the firm are in the first instance applied to the satisfaction of the debts of the separate creditors. If there is any overplus of the separate estates it is carried to the account of the joint estate. And if there is any overplus of the joint estate after paying all the creditors such overplus is carried to the account of the separate estates. When the whole of the estate is realised, the trustee is to declare a final dividend, and may then apply for his release at a meeting of creditors to be summoned for that purpose, when he is to produce the comptroller's report on his accounts, and a statement of all outstanding property, unclaimed dividends, &c. On the release of the trustee, the registrar becomes the trustee of the estate. The bankruptcy is then considered closed.

When the bankruptcy is closed, or at any time during its continuance, with the consent of the creditors, the bankrupt may apply for an order of discharge, which, however, will be granted to him only if his estate has paid 10s. in the pound, or might have paid such a dividend, but for some fault of the trustee; unless the creditors have by special resolution declared that the failure of the bankrupt arose from circumstances for which he could not justly be held responsible, and they desire that an order of discharge should be granted him. Such order of discharge will release the bankrupt from all debts provable under the bankruptcy. If the bankrupt has not obtained an order of discharge, no debt provable under his bankruptcy can be enforced against him until the expiration of three years from the close of the bankruptcy, and if during that time he pays sufficient to make up 10s. in the pound, he is entitled to his discharge. At the termination of this period, the balance of the debt of any creditor may be enforced against any property the bankrupt may be proved to possess. If the estate of a bankrupt has paid 20s. in the pound and interest, he is entitled to receive the surplus, if any.

If the bankrupt be a beneficed clergyman, the Court may sequestrate the profits of the benefice, allowing the bankrupt such stipend as a curate would have received in case the bankrupt had been non-resident. If he be an officer, civil servant, or pensioner, the court may, with the sanction of the chief of the department, direct a portion of his pay or pension to be set aside for the benefit of his creditors; or, if he be in receipt of any other salary or income, the Court may direct any portion thereof to be paid to the trustee. The trustee may, with the consent of the creditors, grant the bankrupt such allowance for his maintenance or for his services in winding up the estate as the creditors may approve.

If the bankrupt resides in the district of any of the Metropolitan County Courts, the proceedings must be taken in the London Bankruptcy Court before the Chief Judge; if he resides in any other district, they must be taken in the County Court of that district.

The creditors of an insolvent debtor may, at a meeting summoned by him, declare by a resolution, voted by the majority in number and value, that his affairs are to be wound up by arrangement and not in bankruptcy, and at an interval of not more than a week a trustee is to be appointed, with or without a committee of inspection. The subsequent proceedings are the same as they would be in bankruptcy, except that the provisions as to discharge of the bankrupt, close of the bankruptcy, and audit of the trustee's account, do not apply to liquidation by arrangement, the debtor's discharge being granted by a special resolution of the creditors and reported by the trustee to the registrar, whose certificate of such discharge has the same effect as an order of discharge to a bankrupt. The resolution for liquidation by arrangement is to be presented to the registrar, who, if it has been passed according to the Act, and the trustee has been appointed, will register it, together with the debtor's statement of affairs.

The only other mode of winding up the affairs of an insolvent debtor is by composition.

The creditors may resolve by a resolution made by a majority in number, and three-fourths in value of the creditors present at a meeting summoned by the debtor, that a composition be accepted, and if such resolution be confirmed by a majority in number and value of the creditors present at a second general meeting held at an interval of not less than seven, or more than fourteen days from the date of the first meeting, it must be presented, with the debtor's statement of affairs, to the registrar, who will register the same, if he is satisfied that they are in order. A resolution so admitted is binding on all creditors whose names appear in the debtor's statement, but does not prejudice the rights of any creditors whose names are omitted therefrom. The creditors may alter the provisions of the resolution after it has been passed, but without prejudice to the rights of any creditors not assenting to the alteration. The amended resolution is to be passed by the registrar in the same way as the original one. The Court has power to enforce the provisions of any composition on the motion of a person interested, and disobedience to any order so made by the Court is considered as contempt of Court. (For the old law of bankruptcy, see BANKRUPT.)

INSURANCE, FIRE.—The advantages of fire insurance are well known. By it a tradesman or private individual can, by the payment of an annual sum proportioned to the risk, secure himself against loss in the event of his place of business or dwelling-house, or their contents being destroyed by fire. It is almost impossible to form a correct classification of the various risks undertaken. They are, however, generally divide into *common*, *hazardous*, *doubly hazardous*, and *special*—the rates varying from 1*s.* 6*d.* for £100 per annum for a private first class dwelling-house, to 4*s.* for £100, for a sugar refining or drying stove. The more fragile and costly contents of a house, such as china, glass, mirrors, and pictures, are charged at a higher rate of premium than the ordinary articles of household furniture; as being more susceptible of damage in the event of fire; whilst books of accounts, written securities, bills, bonds, ready money, and gunpowder, are deemed uninsurable. The government duty of 3*s.* per cent per annum (often double the amount of the premium) has been recently abolished. The conditions on which an insurance is granted are in all cases printed upon the policy, and form a part of the contract, being in general so well defined as seldom to require submission for judicial interpretation. Candour is imperative on the part of all persons proposing for insurance. Any misrepresentation in describing the building, or goods, or the process of manufacture carried on, whereby the same may be charged at a lower rate of premium than they otherwise would be, invalidates the policy; and if any alteration be made in the state of the building or process of manufacture after the insurance is effected, the insured is required to give due notice thereof to the insurers, otherwise he forfeits all right of recovery under his policy. The party effecting an insurance, must have an interest in the property insured, to enable him to establish a claim against the insurance company; and a trustee, mortgagee, reversioner, factor, or agent is held to have sufficient interest to effect a policy of insurance, provided the nature of such interest be distinctly specified at the time of effecting the insurance. An insurance on the same property in any other office must be named in, or endorsed on, the policy, and in the event of loss, each office pays a rateable portion thereof. It frequently occurs, however, that various parties have separate interests in the same property, in which case each may insure his own interest without communication with the others. A separate sum must be insured on each building, and on the contents of each. But goods in the upper part of the house, will be included with goods in the lower part of the same building, unless the policy is expressly limited to the whole of the goods on the upper part. The offices generally hold themselves liable for loss occasioned by lightning and gas explosions; also for losses occasioned by incendiarisms, the offices having a right of recovery from the county, in the event of a conviction of the incendiary. There is a general exemption from liability in the case of fire occasioned by invasion, foreign enemy, civil commotion, riot, and any military or usurped power. Policies of insurance may be effected for any period. If for a year or a term of years, fifteen days' grace are usually allowed for the payment of the premium. A policy of insurance is not in its nature assignable, nor can it be transferred without the express consent of the office. When, however, any person dies, his interest remains in his executors or administrators respectively, who succeed or become entitled to the property, provided such representatives respectively procure their right to be endorsed on the policy. The method of effecting an insurance is extremely simple, and need only occupy a few minutes; a person desiring to insure gives the particulars to any one of the clerks in the office, the amount payable for the first year's premium is at once calculated, a receipt is given for the same, and although the policy is not then handed over, still the insurance may be considered to be virtually effected from that moment. When a fire occurs, and the property is only partially destroyed, a claim has to be sent in by the insured, in which the articles burnt or otherwise injured have to be enumerated, and their separate value estimated as nearly as possible. In making out the claim, particular regard should be made to truth and honesty, and all mis-statements should be carefully guarded against. Many offices make it one of their conditions that the statement of loss should be supported by the oath or affirmation of the claimant; declaring at the same time that if any false swearing, fraud, collusion, or wilful misstatement shall take place, either by the assured, or on his behalf, the whole right of recovery shall be forfeited. In the majority of cases, a fire does not involve a total loss, and the insurance company is liable for the actual amount of loss or damage sustained—

not exceeding the sum insured by the policy, which is the maximum, beyond which no claim can extend. The offices generally reserve to themselves the power of reinstatement, instead of the payment of the amount claimed. There are instances where persons are their own insurers, thus, where the rate of insurance is very heavy, the sum paid in premiums and the interest thereon, would in a very few years amount to as much as the value of the property insured. A calculation is made to this effect, and if no fire occurs between the date of the supposed insurance, and the time that the premiums due and the interest thereon amounts to the value of the property, it is clear that that amount of profit has been made, inasmuch as had the premiums been paid to the office, the amount would have been expended although the property had suffered no loss.

INSURANCE, LIFE.—The principle of life assurance is to secure to the insurer or his representatives, the payment of a certain sum in the event of death or some other contingency stipulated for. There are various methods of effecting insurances, dependent on the object in view, or some personal circumstance in connection with the insurer. *Ordinary life assurance* is the stipulation for a certain sum to be paid on the death of the insurer, whenever that event may occur; the assurance, therefore, extends over the whole term of life. The amounts of premium or annual payments for the sum of £100, will depend entirely upon the age of the person at the time the insurance is effected, and whether he wishes to participate in the bonus, or the profits of the company; or assures on the withdrawal or non-withdrawal principle. For definite information and instruction on these points, persons desirous of effecting an insurance should consult the prospectus and tables of the particular office with which he resolves to do business. The insurable principle, however, with all offices is, to increase the amount of the premium as age advances. Thus, for example, a person at the age of twenty would have to pay a premium of £1 17s. 9d.; at thirty, £2 8s. 2d.; at forty, £3 5s. 10d.; at fifty, £4 12s 9d.; at sixty, £7 5s. 6d. It is, therefore, important for a person to effect an insurance on his life as early as possible; because, although he himself grows older, the premium always remains the same. *Deposit Assurance* is the method whereby a given amount is secured, should death occur within a specified number of years; a plan of great service, whereby a guarantee is required for payment of temporary loans in case of premature death. This method is peculiarly adapted to members of building societies, small tradesmen in pecuniary difficulties, and others where temporary loans are required for special purposes. Example:—If a person twenty years of age should deposit the sum of £10 yearly for ten years, the insurance will amount to £147 8s. The amount insured becomes payable at the death of the insurer, together with the amount of the deposit in the hands of the company at death. Persons may thus create a considerable insurance on their own lives, and have at their command the capital deposited for such purpose, when they require it; thus enjoying the advantage of a savings bank and life insurance. *Endowment Insurance* provides for two important contingencies; the securing of a positive provision for the insurer's family while in life, and guaranteeing the same in the event of death. By this system, parents of limited means are enabled to provide a sum sufficient for the superior education of their children, or at a particular period in life to assist them to start in business. Example:—A parent, by the annual payment of £3 9s. 6d. for his child two years of age, may secure for him or her the sum of £100 on attaining the age of twenty-one. *Reversionary Insurance* is where the payment of a stipulated sum is guaranteed to a given person on the death of another. It is an insurance effected by A. on the life of B., payable to A. on the death of B. This mode of insurance is subject to a variety of conditions, and is capable of application to innumerable cases. *Joint Lives Insurance* is that which is effected on two or more lives for the benefit of the last survivor. The following are some of the illustrations of this particular method: 1st. On payment of £3 2s. 11d. annually, during the joint continuation of two lives, aged thirty and twenty, the sum of £100 will be received upon the death of either of these lives. 2d. Suppose a husband to be thirty-five and his wife thirty, an annual payment of £3 15s. 7d. will secure to the survivor the sum of £100. 3d. In the case of three brothers, aged respectively twenty, thirty, and forty, £100 will be secured to the last survivor by an annual payment of 19s. 8d. *Accidental Death Insurance* is designed to insure a fixed sum against every description of death by accident or violence; and combined with this, at the option of the insured, a proportionate amount of compensation in certain cases of personal injury. This description of insurance is applicable to all classes of society, but more especially to such persons as are engaged in pursuits and occupations of a more than ordinary hazardous nature. These risks are classified into three descriptions—1st. Ordinary risks, comprising the gentry, professional men, farmers, clerks, commercial travellers, shopkeepers, and other tradesmen under sixty years of age. 2d. Builders, sawyers, masons, house-painters, printers, labourers, porters, carters, coopers, millers, policemen, ostlers, coachmen, individuals engaged in engineering works, docks, tunnels, &c. 3d. All whose occupations are particularly hazardous to life, as boatmen, sailors, miners, railway engine-drivers, stokers, and guards. First example: A single payment of £10 10s. will purchase for any person comprised in 1st class £1000 in the event of death by accident; or an annual payment will have the same effect so long as payments are continued. Second example: An annual payment of £1 5s. will ensure the sum of £500 to all comprised in 2d class. Third example: By the payment of 8s. a year the working man may insure himself, in the event of an accident, 10s. a week as long as he is disabled, and £1 for medical attend-

ance, and £50 payable to his representatives should the accident terminate fatally. *Maritime Passengers' Insurance* applies to all classes of persons travelling by water, whether journeying by steam or sailing vessel, against death or personal injury arising from accident. Compensation will be made in all cases of personal injury, and payment of the amount insured, should death occur through accident. Insurance can be effected for the journey or voyage, by the year, or one payment made for the insurance for the whole life. This method is principally applicable to seamen, fishermen, boatmen, and all others liable to marine casualties, and can be effected in sums varying from £5 to £100. It is also extended to officers in her Majesty's and the East India Company's service, masters and mates in the mercantile marine, and to pilots. Example:—A passenger proceeding to Calcutta, Australia, Port Natal, New York, or California, may insure his life and personal safety against sea accident, for £200, on paying a premium of 5s. Example 2:—To provide against all risk by ocean or river, permitting the insured to proceed to any part of the world during a period of twelve months, for £100, 3s. 6d.; £500, 17s. 6d.; £1000, £1 15s. premium. *Railway Passengers' Insurance* is a mode of life insurance which secures the payment of a sum of money, in the event of loss of life or personal injury happening to them while travelling by railway. To facilitate such insurances, the clerks at all railway stations are authorized to issue insurance tickets at the time that the insurer pays his railway fare. The terms on which these insurances are effected are as follows:—To insure £1000, if a first class passenger, 3d.; £500, if a second, 2d.; £200, if a third, 1d. To insure £1000, with the option of travelling in any class carriage, a premium of 10s. is paid for three months; 16s. for six months; 20s. for twelve months.

Having thus given an account of the various kinds of life insurance, the next important matter is to point out how ordinary life insurance may be effected. Before entering into a transaction of this kind, the intending insurer should consider well the nature of the contract to which he is to become a party, and to understand fully the principles upon which it is to be conducted. It should be remembered that this is a contract for life; and when the insurer enters into it he binds himself to adhere to the rules and regulations laid down, and any deviation on his part will, ultimately, render the agreement null and void. By this means he forfeits all the benefits guaranteed and stipulated by the contract itself. The first thing which should be attended to in the selection of an office is its well known respectability and standing. Among so many offices with which business may be safely transacted, it would be invidious to specify any in particular; as a rule, however, the insurer should select an old and long-established company in preference to a new one, for although the latter may surmount those obstacles which young insurance offices have to contend with, and punctually meet their engagements, the first named offices, having passed through the stage of probation, are obviously in a better position to satisfy the demands made upon them. As there is great competition among insurance offices, new concerns, in order to secure business, are in the habit of tempting insurers, first, with a comparatively low scale of premiums; and, secondly with the prospect of extraordinary advantages; but these present benefits should be regarded as of minor importance, as compared with the consideration of the security for the future. Care should also be taken to insure with a company whose policies are indisputable; for where this is not the case some unforeseen or unavoidable accident, or some technical objection may be seized hold of by the company as a pretext for repudiating their liability to payment. The amount to be insured can only be regulated according to the pecuniary resources of the insurer himself; and on no account should he be induced to enter into an obligation to pay a larger amount of premium than there is a reasonable prospect of his being able to continue. The most prudent course is, when any doubt on this head exists, to insure in the first instance for a less sum, and increase the amount in proportion to the augmentation of income. An important consideration in the negotiation of a life insurance, and one which cannot be too deeply impressed upon the mind is, that the basis of the contract or agreement is founded upon the insurer's own personal statement, as made in the proposals furnished by himself. It is to be feared that in many instances answers are given to the questions put by the office, which are at variance with the fact, and this is done not so much with a desire of wilfully suppressing the truth, as from not having duly considered the importance of the question, and the consequences which may result from the answer. It should be borne in mind, therefore, that any false statement respecting the health, habits, age, or other personal matters, are sufficient to invalidate the policy. Thus there are instances upon record where persons have died of a certain disease, which attacked the person so afflicted on several occasions during his life, in a milder form. When the question has been put, whether the intending insurer has ever been attacked with the specific malady, the answer has been, "Never." But the circumstances of death having awakened the suspicions of the insurance office, inquiries have been set on foot, and the fact has come to light that the deceased was attacked by, and treated for, this complaint on several occasions during his lifetime. The policy has been accordingly vitiated. It is possible that an error may be committed by a non-compliance with the rules laid down, as by an actual and fraudulent intention by misrepresentation. But to guard against such liabilities, the state of the law upon this point is defined as follows: "Insurance is a contract upon speculation, and therefore the special facts upon which the risk is to be completed lie chiefly in the knowledge of the insurer only. The office insuring, trusts in his statement, and proceeds upon the confidence that he does not keep back any

circumstances within his knowledge, to mislead the office into a belief that they do not exist. By the suppression of such facts, although happening through a mistake, without any fraudulent intention, still the office is deceived; and being compelled to run a risk really different from the risk understood and intended to be run at the time of the agreement, the policy is thereby rendered invalid." The contract is equally void whether the misrepresentation is made on the part of the insurer, or of his agents, or of any other party concerned on his behalf, about the insurance. The foregoing considerations resolve themselves into this common sense mode of action. Instead of making one error, in keeping back what ought to be stated, rather pay the additional charge of premium, if it be required, by telling the truth. In so doing, all danger is avoided of rendering the policy of none effect. It should be remarked, that in order to avoid error or misrepresentation, the whole of the insurance offices are remarkably plain and explicit in their directions and instructions in their printed forms of proposals. These printed forms may be obtained by application at the insurance office; but, as many persons may be so situated as not to be able to apply for them, a copy of the questions usually put is given herewith:—1. Name, residence, and occupation or profession, of the person whose life is to be insured. 2. Place and date of birth. 3. Age next birthday. 4 Whether he is now in good health. 5. Whether his habits are sober and temperate. 6. Whether he has ever been afflicted with apoplexy, palsy, fits, convulsions, spitting of blood, habitual cough, asthma, palpitation of the heart, or consumption. 7. Whether he has ever been subject to rheumatism, gout, insanity, rupture, or any other disease tending to shorten life; if so, its nature and extent to be stated. 8. Whether any member of his family has died of either of the diseases named in the foregoing queries—that is, his father, mother, brother or sister. 9. Whether he has had the small-pox or cow-pox from vaccination. 10. Whether he has ever resided abroad, where, for what period, and how long since. 11. Is he insured in any other office? if so, in what office, and the date when the insurance was effected. 12. Has his life been declined by any other office? if so, state the name of the office and the date when it was declined. 13. Whether he is, or has ever been, employed in the military, naval, or merchant seaman's service. 14. Reference to two respectable parties who are competent to afford information as to his state of health, or mode of life, or his medical adviser, if he have one. 15. Sum proposed to be insured. 16. Whether for the whole life, or a term of years. 17. Whether with participation of profits. The following declaration usually accompanies the proposal paper, and also requires to be subscribed: "Having an interest in the life of the above named , to the full amount of the said sum of , I hereby propose to effect an insurance on my own life, with society; and I do hereby declare that I have not withheld any information which is calculated to influence the decision of the directors, as to the illegibility of the life proposed for insurance. And I do further agree, that the insurance hereby proposed, shall not be binding on the society until the amount of premium demanded shall have been paid." The proposal paper being thus filled up, is forwarded to the office and an intimation is shortly afterwards received by the intending insurer that his proposal has either been declined or accepted. In the latter case, a day is named for the insurer to wait upon the medical officer of the company, in order to be examined. This done, a report is made to the directors, and a second intimation is received by the proposed insurer, stating that his life is accepted, and requesting of him to attend at the office, for the purpose of completing the transaction, and paying the amount of premium, fees, &c., usual in such cases. The intervals at which the premiums are made payable, are generally regulated at the option of the insurer quarterly, half-yearly, and yearly. The punctual payment of the premiums as they fall due is a matter of the greatest importance; because when this is omitted to be done, the contract is at once violated; the office is no longer liable; and the policy becomes so much waste paper. To allow for contingencies, a certain interval beyond the precise day on which the premium falls due is usually granted, these are termed "days of grace," extending to fourteen, twenty-one, or thirty; during which time, if the premium be paid, the policy still holds good. And here a word of warning is necessary against procrastination; for the records of life insurance show, that innumerable instances have occurred, when policies have been forfeited by the lapse of a day or even a few hours. Therefore, although these days of grace are allowed, it is unwise to take habitual advantage of them, because it is impossible to say what accident may arise to prevent the policy holder carrying into effect that which he proposes to himself to do within the given time. The policy now being delivered into the hands of the insured person, represents a certain value, and the value is all the more enhanced by the convertible nature of the policy. Thus a policy may be assigned during the lifetime of the insurer to any person whom he deems fit; the amount which it represents may be willed to any person just as any other tangible property may be. It should also be known that loans may be raised on policies; and most offices will lend the value of a policy at a moderate rate of interest. Finally, a policy may be surrendered, that is to say, that if at any time the policy holder find himself in a position which debars him from keeping up the payment of the premium, or from any other cause, the office in which the insurance was effected, will take back the policy, and return a certain portion of the premiums paid. This is a material point, and one well worth knowing, for there are doubtless cases where the policy

holder finding himself unable to pay the premium, has abandoned the policy in despair, without even once inquiring whether some sort of compensation did not exist, such as is here indicated. The next point is to ascertain the line of conduct which is to be pursued, to obtain payment of the policy, when the person whose life was insured dies. When that event occurs a notification is required to be sent to the office. The cause of death must also be certified and other surrounding circumstances, which should be stated as accurately as possible. The primary object, however, in requiring the cause of death to be stated is, in order to ascertain that the particular disease of which the person died did not exist when the insurance was effected—that is, within the knowledge of the party; and that the party did not die by his own hand or the hand of justice. When the explanations given, prove satisfactory, the amount of the policy is paid within a stated time after the death of the insurer. Books: *Currie's Popular Essay*, 2s. 6d.; *Gray's Tables*, 10s. 6d.; *Burt's Essay*, 7s. 6d.; *Grith's Treatise*, 1s.; *Pocock on Life Insurance*, 7s.; *Hutchinson's Popular View*, 2s. 6d.; *Bunyon's Treatise*, 21s.; *Dowdeswell's Law*, 6s.; *James's Treatise*, 15s.; *Young's Guide*, 1s.; *Eagle's Manual*, 5s. 6d.; *Todd's Tables*, 21s.; *Laurence's Treatise*, 1s.

INSURANCE, VARIOUS.—On the same principle as life and fire insurance, there are also various kinds of guarantee against peculiar risks and contingencies, among which are the following: *Marine insurance* for ships, and for merchandise transported by sea. *Insurance on emigrants*, covering the risk of voyages, localities, gold diggings, &c. *Insurance against specific diseases*, such as blindness, insanity, paralysis. *Insurance of plate glass windows. Insurance against losses by hail-storms. Insurance against defective titles*, where the title, though good for holding, is unmarketable, by reason only of such defects. *Insurance of the value of mortgaged property. Insurance of debts. Insurance of rents*, securing punctual payment whether the property be or be not occupied. *Insurance against loss by theft*, for the efficient prosecution of the offenders; and for the detection and prevention of crime. *Insurance of live stock*, for the purpose of securing the farmer against the diseases and casualties to which live stock is exposed.

INTEREST.—The annual sum or rate per cent. which the borrower of a capital agrees, or is bound, to pay to the lender for its use. When a loan is made, it is usual to stipulate that the interest upon it should be regularly paid at the end of every year, half-year, &c. A loan of this sort is said to be at simple interest. It is of the essence of such loan, that no part of the interest accruing upon it should be added to the principal to form a new principal, this is called *simple interest*. Sometimes, however, money or capital is invested so that the interest is not paid at the periods when it becomes due, but is progressively added to the principal; so that at every term a new principal is formed, consisting of the original principal, and the successive accumulations of interest upon interest. Money invested in this way is said to be placed at *compound interest*. Interest is estimated at so much per cent. per annum, or by dividing the principal into 100 equal parts, and specifying how many of these parts are paid yearly for its use. Thus 5 per cent., or 5 parts out of 100, means that £5 are paid for the use of £100 for a year, £10 for the use of £200, £2 10*s.* for the use of £50 for the same period, and so on. Suppose it is required to find the interest of £210 13*s.* for 3¼ years at 4 per cent. simple interest. In this case we must first divide the principal £210 13*s.*, into 100 parts, 4 of which will be the interest for one year, and this being multiplied by 3¼ will give the interest for 3¼ years. But instead of first dividing by 100, and then multiplying it by 4, the result will be the same, and the process more expeditious, if we first multiply by 4 and then divide by 100. Thus—

	£	s.			
Principal	210	13			
Rate per cent.		4			
			£	s.	d.
100)	8,42	12 (	8	8	6½ = 1 yrs. inter.
	20			3½	
	8,52		25	5	6¾ = 3 yrs. inter.
	12		4	4	3 = ¼ yrs. inter.
	6,24		£29	9	9¾ = 3¼ yrs. inter.
	4				
	96				

It is almost superfluous to observe that the same result would have been obtained by multiplying the product of the principal by the number of years, and then dividing by 100. Hence, to find the interest: By this table may be readily ascertained the number of days from any given day in the year to another. For instance, from the 1st of January to the 14th of August (first and last days included), there are 226 days. To find the number, look down the column headed January, to No. 14, and then look along in a parallel line to the column headed August, you find 226, the number required. To find the number of days between any other two given days, when they are both after the first of January, the number opposite the first day must, of course, be deducted from that opposite to the second. Thus, to find the number of days between the 13th of March and the 19th of August, deduct from 231—the number in the table opposite to 19 and under August—72, the number opposite to 13 and under March, and the remainder, 159, is the number required, last day included. In leap year, one must be added to the number after the 28th of February. When interest instead of being simple, is compound, the first year's or term's interest must be found, and being added to the original principal upon which interest is to be calculated for the second year or term; and the second year's or term's interest being added to this last principal, makes that upon which interest is to be calculated for the third year or term; and so on for any number of years. To find the interest of

£100 for any other term, as 1 year and 278 days, at 4½ per cent. Take the sum for the several days as in the following example:

	£	s.	d.
Interest for 1 year	4	10	0
,, 290 days	2	9	3¾
,, 70 ,,		17	3¾
,, 8 ,,		1	11
Interest required	7	18	6

For any other sum than £100. First find for £100 as above, and take it so many times or parts as the sum is of £100. Thus, to find for £355 at 4½ per cent., for 1 year and 278 days.

First, 3 times the above sum:—

	£	s.	d.
(for £300) =	24	15	8½
¼ (for £50) =	3	19	3¾
1/10 (for £5) =		7	11
Interest on £355 =	£28	2	10¼

In calculating interest on accounts current, it is necessary to state the number of days between each receipt or payment, and the date (commencing the 31st of December) to which the amount current is made up. Thus £172 paid on the 15th of September, being interest to the 31st of December, 107 days. The amount of such interest may then be calculated by the aid of the following table.

Table for ascertaining the Number of days from any one day in the year to any other.

Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.
1	32	60	91	121	152	182	213	244	274	305	335
2	33	61	92	122	153	183	214	245	275	306	336
3	34	62	93	123	154	184	215	246	276	307	337
4	35	63	94	124	155	185	216	247	277	308	338
5	36	64	95	125	156	186	217	248	278	309	339
6	37	65	96	126	157	187	218	249	279	310	340
7	38	66	97	127	158	188	219	250	280	311	341
8	39	67	98	128	159	189	220	251	281	312	342
9	40	68	99	129	160	190	221	252	282	313	343
10	41	69	100	130	161	191	222	253	283	314	344
11	42	70	101	131	162	192	223	254	284	315	345
12	43	71	102	132	163	193	224	255	285	316	346
13	44	72	103	133	164	194	225	256	286	317	347
14	45	73	104	134	165	195	226	257	287	318	348
15	46	74	105	135	166	196	227	258	288	319	349
16	47	75	106	136	167	197	228	259	289	320	350
17	48	76	107	137	168	198	229	260	290	321	351
18	49	77	108	138	169	199	230	261	291	322	352
19	50	78	109	139	170	200	231	262	292	323	353
20	51	79	110	140	171	201	232	263	293	324	354
21	52	80	111	141	172	202	233	264	294	325	355
22	53	81	112	142	173	203	234	265	295	326	356
23	54	82	113	143	174	204	235	266	296	327	357
24	55	83	114	144	175	205	236	267	297	328	358
25	56	84	115	145	176	206	237	268	298	329	359
26	57	85	116	146	177	207	238	269	299	330	360
27	58	86	117	147	178	208	239	270	300	331	361
28	59	87	118	148	179	209	240	271	301	332	362
29		88	119	149	180	210	241	272	302	333	363
30		89	120	150	181	211	242	273	303	334	364
31		90		151		212	243		304		365

To find the interest of any sum at any rate per cent. for a year, multiply the sum by the rate per cent. and divide the product by 100. To find the interest of any sum for a number of years, multiply its interest for one year by the number of years; or, without calculating its interest for one year, multiply the principal by the rate per cent. and that product by the number of years, and double the last product by 100. When the interest of any sum is required for a number of days, multiply the interest of a year by them, and divide by 365. Thus, to find the interest of £210 for four years and seven months and twenty-five days, at 4½ per cent.

Principal..... £210
Rate per cent..... 4½

840
105

Interest for 1 year £9 } 45 X 4 = £37·80, do. for four years.
Interest for 4 years = £37·8000
6 mths. = ½ of 1 yr. = 4·7250
1 mth. = ⅛ of 6 mths. = ·7875
25 days ..... = ·6472

£43·9597 = £43 19s. 2d.

The interest for 25 days is $\frac{9{\cdot}45 \times 25}{365}$ = 6472, that is, it is equal to the interest for a year, multiplied by the fraction $\frac{25}{365}$. Division by 100 is performed by cutting off two figures to the right.

A very easy and general method of computing simple interest, is by means of the following concise but comprehensive table.

Days.	3 per cent.			3½ per cent.			4 per cent.			4½ per cent.			5 per cent.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
1	0	0	1¼	0	0	2¼	0	0	2½	0	0	3	0	0	3½
2	0	0	3	0	0	4½	0	0	5	0	0	6	0	0	6¾
3	0	0	4¼	0	0	6¾	0	0	7½	0	0	8¾	0	0	9¾
4	0	0	5¾	0	0	9	0	0	10	0	0	11¼	0	1	1
5	0	0	7	0	0	11¼	0	1	1¼	0	1	2½	0	1	4½
6	0	0	8¼	0	1	1½	0	1	3	0	1	5¼	0	1	7½
7	0	1	1½	0	1	4	0	1	6½	0	1	8¾	0	1	11
8	0	1	3	0	1	6½	0	1	9	0	1	11½	0	2	2½
9	0	1	5¼	0	1	8¾	0	1	11½	0	2	2¾	0	2	5¾
10	0	1	7½	0	1	11	0	2	2½	0	2	5¼	0	2	8¾
20	0	3	3¼	0	3	10	0	4	4½	0	4	11½	0	5	5¾
30	0	4	11	0	5	9	0	6	6¾	0	7	4½	0	8	2½
40	0	6	6¾	0	7	8	0	8	9	0	9	10¼	0	10	11½
50	0	8	2½	0	9	7	0	10	11½	0	12	3¾	0	13	8½
60	0	9	10¼	0	11	6	0	13	1¾	0	14	9½	0	16	5½
70	0	11	6	0	13	5	0	15	4	0	17	3½	0	19	2
80	0	13	1¾	0	15	4	0	17	6½	0	19	8¾	1	1	11
90	0	14	9½	0	17	3	0	19	8¾	1	2	2½	1	4	7¾
100	0	16	5½	0	19	2	1	1	11	1	4	8	1	7	4¾
200	1	12	10¾	1	18	4½	2	3	10	2	9	3½	2	14	9½
300	2	9	3½	2	17	6½	3	5	9	3	13	11¼	4	2	2½

N.B.—This table contains the interest of £100 for all the several days in the first

column, on the several rates of 3, 3½, 4, 4½, and 5 per cent. in the other five columns.

The following table will repay the trouble of committing it to memory, as showing the amount per pound, stating what each rate of interest bear.

	s.	d.	
2½ per cent. is	0	6	in the pound.
3 ,,	0	7½	,,
4 ,,	0	9¾	,,
5 ,,	1	0	,,
6 ,,	1	2½	,,
7½ ,,	1	6	,,
10 ,,	2	0	,,
12½ ,,	2	6	,,
15 ,,	3	0	,,
17½ ,,	3	6	,,
20 ,,	4	0	,,
22½ ,,	4	6	,,
25 ,,	5	0	,,

INTEREST, LEGAL OPERATION OF.—There is now no law debarring a person from taking all the interest he can on money lent. Where, however, the security consists of land or freehold estates, there is little difficulty in obtaining money at five per cent., whilst the interest charged in other cases, is regulated according to the value and tangibility of the security. But to entitle the lender to more than five per cent., it is necessary that the extra and agreed amount should be stated on the face of the document securing the debt and interest. The payment of interest on a debt, will take the same out of the Statute of Limitations. Interest is, in general, recoverable, in addition to the principal sum upon an express promise, or where a contract may be implied from circumstances, as the particular mode of dealing by the parties, or the usage of trade. Interest is recoverable where a bond, bill of exchange, or promissory note has been given. But interest is not generally recoverable upon a sale of goods, or upon money lent, or money paid, or money had and received, or upon the balance of an account stated. But it is enacted: That upon all sums certain, payable at a certain time or otherwise, the jury, in the trial of any issue, or on any inquisition of damages, may allow interest not exceeding the current rate, from the time when such debts and sums certain were payable, if such debts or sums be payable by virtue of some written instrument at a certain time; or, if payable otherwise, then from time to time when demand of payment shall have been made in writing, so as such demand shall give notice to the debtor, that interest will be claimed from the date of such demand until the time of payment; provided that interest shall be payable in all cases in which it is now payable by law. The jury may give damages in the nature of interest over and above the value of the goods at the time of conversion or seizure, in actions of trover or trespass, and over and above the money recoverable in actions on policies of insurance. In a long unsettled partnership account, rendered intricate by the neglect of a party, he shall have no interest on the balance when settled. Executors and trustees are frequently charged with interest in equity, where they have withheld money from parties to whom it is due, or unnecessarily called in sums out on good security. In such cases they are generally made to pay five per cent.; and an executor has been charged with compound interest at that rate. In case of a vested legacy, due immediately, and charged on land, or money in the funds, which yields an immediate profit, interest shall be payable thereon from the testator's death; but if charged only on the personal estate, which cannot be immediately got in, it shall carry interest only from the end of the year after the death of the testator.

INTERMITTENT FEVER, when occurring as a spontaneous disease, is a fever consisting of paroxysms of fever, between each of which there is a perfect period of intermission without fever—each paroxysm of fever being divided into three distinct and well-marked stages, called the cold, hot, and sweating; an intermittent fever, consisting of alternate paroxysms of the three stages and intervals of repose, or except for the debility left by the attack, of health. These morbid periods of three stages sometimes occur only once in twenty-four hours, occasionally twice, every other day, or every forty-eight hours, according to the length of the remission of the ague, being called quotidian, twenty-four hours; tertian, forty-eight; and quartan, seventy-two hours: besides these there are further complications as to the recurrence of the fits; for which, see article, "Fever," under which head will be found the descriptive chain of symptoms. The *treatment* of intermittent fever differs with each stage or fit; in the cold stage, or congestion, or collapse, the blood, having been driven from the surface, and collecting in a state of plethora in all the vital organs, produces a pale, shrunken appearance of the body and countenance, great cold, shivering, pain and difficulty of breathing, demanding a mode of treatment that shall unload the gorged organs, restore the blood to the surface, and by equalising the circulation, cut short the duration of the fit. To effect this object, stimulants and the hot bath are the chief agents to rely upon. In the hot stage into which the disease, after a longer or shorter time, naturally glides, and which is the state of re-action, the cold pallor of the body and its shrunken appearance is changed for a dry burning heat that renders turgid, flushed and swollen, every part of the body, causing severe pains in the head, ringing in the ears, and other acute symptoms from the distended state of the vessels, and their pressure on the brain. As in the cold stage, nature, if unassisted, would, after a certain interval of time, relieve the intolerable heat, thirst, and pain of this condition, by sweating: the medicinal means employed to cut short the hot stage and induce the third, are cooling drinks, cold aspersions of the body, diaphoretics, and other antiphlogistic remedies. In the third or sweating stage, when a dense perspiration, like a summer shower on the parched earth, breaks out, all the scorching symptoms of a raging fever give way before the relaxing

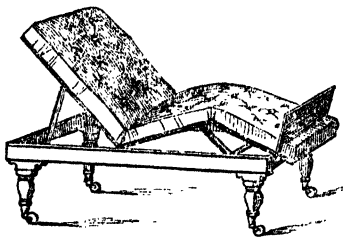
burst of moisture, which is so copious, as seemingly to expel, by this rain of perspiration, every germ of the disease, leaving the patient free from all fever, but so exhausted as to be, on some occasions, scarcely able to speak, so excessive has been the discharge. In this stage, all that can be done is to keep the room cool, and the body frequently wiped, and when the stage is over, a stimulant, and perfect repose, so that the patient may sleep. It is, however, during the hours of remission, or within an hour of the time of the expected return of the paroxysms, that the remedial agents are to be employed, the object being to break the diseased punctuality of the fits, and having once broken their order, the cure is more easy and certain. To effect this, the system is to be first cleared by one or two full doses of some aperient medicine, and quinine, which is the chief dependence of the physician, administered in a dose sufficiently large to arrest, by anticipation, the morbid condition of the first stage, by postponing or mitigating the cold fit; if the hot bath is then used, the second stage may be avoided, by exciting the last or sweating, after which, tonics and stimulants are to be employed to restore the strength, and an hour before the recurrence of the cold fit, again exhibit the large dose of quinine, and so in rotation till the fever is conquered; the interval between the end and beginning of each paroxysm being employed in building up the patient's strength by wine, diet, and tonics. The intermittent fever that arises during many protracted cases of illness, must be treated according to the nature of the primary disease, with a combination of the above treatment. — See AGUE.

INTRODUCTION, ETIQUETTE OF. — In strict etiquette, persons are supposed to be strangers to each other until they have gone through the ceremony of introduction. This being one of the rules of society, it is incumbent on those having any authority, to introduce persons who are strangers to each other, so as to put them at their ease, and advance the harmony of the company generally. Thus, a host when a person enters the room, who is not generally known by the assembled guests, conducts that person to the various individuals, and makes mention of their names to each other, together with any circumstance calculated to strengthen the acquaintance. The persons introduced bow to each other, sometimes in silence, and sometimes expressing some appropriate compliment, likely to be acceptable. Generally speaking, it is better not to overlay the congratulatory recognition with such phrases as, "I am proud to make your acquaintance;" "I am delighted at having the honour of an introduction to you," &c.; such sentences, in the majority of cases, are unmeaning and insincere, and embarrass rather than gratify the person to whom they are addressed. On the other hand, the ceremony of introduction should not be conducted with too great an amount of formality and reserve; as though it were an act of condescension on your part to notice the person introduced to you. The truth is, that in this, as in many other points of etiquette, the charm does not reside in the words uttered, or the mechanical carriage of the body, but in the manner and expression, which, with well-bred persons, seldom fails to make itself understood. Inferiors should be introduced to superiors, and gentlemen to ladies. Thus, if a gentleman were walking with his wife, and meet a friend, he should first say with a suitable action, "Mr. So-and-so;" and follow it by, "Mrs. Such-a-one." It is not usual for persons to shake hands when they are introduced to each other, except on extraordinary occasions. Thus, for instance, if the persons introduced have been occasionally talked about to each other in connection with circumstances common to both, the indirect knowledge of each other will permit of a warmer recognition than is ordinarily countenanced. If in the general introduction you are brought face to face with a person whose features and name are familiar to you, you say, "I believe I have had the pleasure of meeting you before," and offer him your hand. Immediately after introduction do not be too loud or loquacious, but lead off with one or two remarks on subjects which you suppose will be interesting, thus giving the person you address an opportunity of talking, without oppressing him with the weight of your own conversation.

INVALID BEVERAGES. — See APPLE WATER, LEMON WATER, RASPBERRY VINEGAR, TAMARIND WATER, WHITE WINE WHEY, &c.

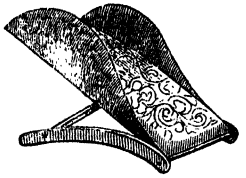
INVALID COOKING. — See ARROW-ROOT, BEEF TEA, CARAGEEN MOSS, CAUDLE, GRUEL, MUTTON BROTH, &c.

INVALID FURNITURE. — When the human body is racked with pain, protracted by long-continued sickness, its sufferings may be considerably alleviated and its movements materially assisted through the intervention of mechanical aid. The accompanying engraving illustrates a Double Rising Invalid's Bed, which is so constructed

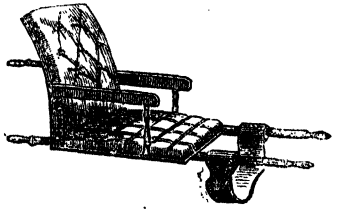


as to adapt itself to the various positions which the invalid may desire to assume. The application is extremely simple, as will be seen in the figure, and may be attended to by one person only. The wearisome effects induced by invalids lying for a long interval on an ordinary bed without being able to change their posture, is well known, so that

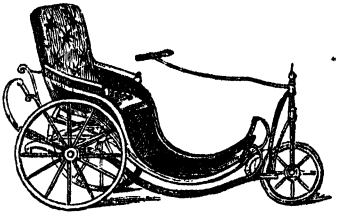
a contrivance of this nature is not only productive of immediate ease, but is calculated to accelerate ultimate recovery. When a patient is sufficiently recovered from illness to be able to sit up in his bed, or when it is found necessary to place him in that position, the Invalid Bed Chair, as seen in the annexed engraving, will be found very useful.



This may be introduced into an ordinary bed, and placed so as to receive the back of the invalid comfortably within it when he reclines backwards. Upon his becoming tired of that position, the chair may either be removed from the bed, or it may be let down on a level with it, by lowering the supports which give it its elevated direction. The desire which invalids frequently express for sitting up for a few minutes, may be gratified by this simple construction without subjecting them to the irritation and annoyance necessarily occasioned by the shifting of the pillows and the continuing of the body in an unnatural position, which the ordinary method entails. It is frequently considered beneficial to order an invalid to leave his bed-room even before he has quite recovered his strength; the depressing influence of the chamber of sickness, and the relief afforded by a removal into another and more cheerful apartment, being one of the most certain means, not only of regaining bodily strength, but of re-establishing mental vigour. Where, however, the distance between the sick-chamber is great, and difficult to arrive at, the transporting of the invalid is frequently attended with so much inconvenience and so many rude shocks, that the contemplated benefit of the



change of room is defeated by the difficulties experienced in getting there, and the patient is frequently disturbed and shaken for the rest of the day. To obviate these ill effects a chair has been constructed for carrying invalids up and down stairs, as here shown, and by the aid of which the invalid may be removed from one apartment to another with the least possible inconvenience and disturbance. This chair may be brought to the bedside and held on a level with the bed, so that the patient may be gently lifted into it without any perceptible change of position. The seat and back are made sufficiently capacious to receive the body, and the legs may hang down on the receptacle constructed for them. One person proceeding in front and another following behind, and both timing their steps and motions together, the invalid may thus be carried any distance without tiring or disturbing him. When he has reached the room he may be lifted out of the chair gently on to the couch; and when it is considered advisable to remove him back to his bed-chamber, the process may be conducted noiselessly and gently, as before. That stage of convalescence having arrived when the invalid is enabled to sit up, and when the mind, forestalling the body, is continually restless of being fixed in one spot, and desires locomotion, any construction by which this may be achieved is well worthy of attention. It must be borne in mind that the patient is not yet sufficiently recovered to venture out of doors, but is permitted to have the range



of the rooms or the hall of the house to perambulate. When he is enabled to move himself from the table to the window, and from that to the book shelves or the piano, without undergoing any fatigue, a great object is accomplished. The Merlin chair is admirably adapted for the purpose. It is furnished with handles fitted to that portion of the chair where the hands naturally rest, and by turning which the chair is moved by means of pinions on axles. The proper management of this chair requires some little practice; but when that is accomplished, the ease and readiness with which the invalid may transport himself from one portion of the room to the other, is both soothing and exhilarating. The invalid being now enabled to leave the house, and ordered gentle out-of-door exercise, no contrivance can be better than the Bath Chair, which moves on three wheels, and is hung on springs. Its form is that best adapted for an invalid, giving both rest and support to the body, without taxing its energies. It is propelled by a person who pushes it from behind. The fore part of the vehicle is furnished with a handle by which the invalid may guide the wheels in any

direction, and there being no obstruction in front, he is enabled to take an uninterrupted view of surrounding objects, and to have all the benefit of the fresh air coming full upon him.

INVENTION.—See PATENT.

INVENTORY.—A detailed and systematized list of contents of any place, room, or receptacle. In domestic economy, inventories are of the greatest service, and especially where the articles are placed in the care of other persons, or are of that nature as not to be mixed, owing to their being but seldom put into requisition. An inventory has not only immediate practical utility to recommend it, but it is also calculated to act as a moral restraint upon the peculations and paltry abstractions of dishonest servants. For a servant being aware of the existence of an inventory, and knowing that his employer was in the habit of regularly comparing the articles themselves by the written list, would not have the hardihood to commit a depredation, where detection would follow so surely and so soon. By this, it will be understood that the mere making out of an inventory is of no use to preserve the articles intact, unless a systematic investigation is gone through at frequent intervals. When many changes take place from known causes, the inventory should be altered agreeably to the existing contents, and these checked and regulated from time to time. In extensive establishments where a large stock of various kinds of articles are continually in use, an inventory will be found almost indispensable, not only as a check upon the nefarious practices of subordinates, but to acquaint the owner with the renewals which are required, to make up for unavoidable wear and tear, and losses of various causes.

INVITATION, ETIQUETTE OF. — Invitations are usually expressed in writing, and where practicable are sent by hand, not by post. They should be written on superfine paper, enclosed in a neat envelope, and sealed with wax. These little niceties may appear frivolous to some persons, but it should be remembered that almost every act of etiquette is generally an amalgamation of small observances. In writing the invitation, the day and hour alluded to should be distinctly stated, to prevent misapprehension. Thus, instead of merely saying "Thursday," it should be "Thursday next," or "Thursday the 20th instant." The nature of the intended entertainment should also be specified, whether dinner, evening party, dance, &c. When an invitation is received, it should be answered as promptly as possible, whether it be accepted or declined; this is not only an appropriate acknowledgment of the kindness extended, but also has its practical use, in permitting those by whom the invitation is issued to regulate their arrangements according to the number of guests expected. The wording either of an acceptance or a refusal of an invitation, should neither be verbose nor high-flown, a few simple words answer all the purpose; for if you acted differently, it would appear in the one case that you were seldom invited out, and in the other that you deemed your presence of so much consequence as to overload your refusal with a superabundance of apologies, so that those who invited you might not take your absence too greatly to heart. Special invitations are necessary to invite persons to your house who are not related, or on terms of the closest intimacy. It is said that "a general invitation is no invitation at all;" and it would be rather awkward if "come whenever you please," and "consider this house as your home," were accepted in a literal sense. Even where the nearest degree of friendship exists, it is better not to dine with any one unless you have been invited; but rather choose some hour in the after or former part of the day to pay your visit, if it be a casual one. It is always understood that one invitation should be responded to by another as soon after the celebration of the occasion as possible; and where there are no pretensions to ceremony, it is customary, upon taking leave of those who have invited you, to invite them to your house in return, leaving it to the persons asked, to name the day most convenient to them. Never invite persons to "tea," with a view of sparing the expense of a dinner; but if your engagements compel you to specify this meal, take care that the subsequent repast is on a liberal scale, so as to do away with any impression of meanness. Take care that the friends whom you invite are all of them on a friendly footing, unless, indeed, it be your intention to bring the contending parties together, and heal their differences; but this office must be executed with great circumspection and extreme delicacy. Do not allow your invitations to be based upon ulterior motives, such as preferring a favour of one of the invited guests immediately afterwards, or of palpably bringing two young persons together with whom you conceive it desirable to make up a match; such manœuvres usually defeat their own end. When a person neither answers an invitation by attendance or by letter, it is under ordinary circumstances considered that the acquaintanceship is no further desired, and is acted upon accordingly. If, therefore, through any error or accident, an invitation should miscarry and not reach the hands of the person for whom it was intended until after the event of which it speaks has transpired, it is a duty which he owes both to himself and his friends, to hasten immediately and afford an explanation of the apparent act of rudeness. Repeated refusals to invitations from the same quarter are also regarded as tantamount to a desire for discontinuing the acquaintance, unless by some extraordinary coincidence, it is known that the pleas which have been set up were valid and insuperable. When an invitation is given verbally, the person invited should return an absolute affirmative or negative; and not by an ambiguous answer leave it uncertain as to whether he intends to accept or decline.

IODINE.—An elementary substance that is found to reside in minute quantities in all spring water, fresh water, land plants, and

every variety of food; and an essential constituent in the organism of all animals. The iodine of chemistry, when combined with iron, is found to be an excellent tonic in cases of scrofulous debility, and in scrofulous subjects generally. It cannot be prescribed in the solid form; and, from its proneness to undergo decomposition, it is better kept in a state of solution, in the proportion of three grains to a drachm of water, and a coil of iron wire, as a bell spring, should be kept in the bottle with it. The dose of the iodide of iron is from two to five grains.

IPECACUANHA.—A root which in medicine acts as an emetic, diaphoretic, and expectorant. It is used internally to excite vomiting, in doses of from twenty to thirty grains of the powder; or an ounce to an ounce and a half of the infusion, administered every half-hour until vomiting takes place. To cause it to act well and easy, the patient should drink half-pint draughts of warm water. As a *diaphoretic* it should be given in doses of three grains, mixed with some soft substance, such as crumbs of bread, and repeated every four hours. Dose of the wine: from twenty minims to one drachm (as a diaphoretic), and from one drachm to an ounce and a half (as an emetic). *Caution.* Do not give more than the doses named above, for although it is a safe emetic, it is also an acrid narcotic poison.

IRISH CAKE.—Take a pound of butter, three-quarters of a pound of sugar sifted and dried, nine eggs, a quarter of a pound of almonds, and a quarter of a pound of flour dried. Beat the butter to a cream, stir in the sugar, which should be quite hot; then beat the yolks and whites of the eggs separately, pour on the yolks first, and add the whites; work the mixture for half an hour, then add the flour by degrees; when thoroughly mixed, add a gill of brandy. Add the almonds with a quarter of a pound of currants, and a quarter of a pound of lemon-peel, just before the cake is placed in the oven. Previous to placing in the oven, the cake should be beaten for one hour; the hand kept moving the same way, and not taken out.

☞ Butter, 1lb.; sugar, ¾lb.; eggs, 9; almonds, ¼lb.; flour, ¼lb.; brandy, 1 gill; currants, ¼lb.; lemon-peel, ¼lb.

IRISH STEW.—Cut rather thick chops from a loin of mutton, say half a dozen; put them into a saucepan, and add a dozen good sized potatoes sliced and placed in layers with the chops, half a dozen small onions, and about a quart of water; season with pepper and salt; cover the saucepan closely, and let the contents stew over a moderate fire for two hours, or until the potatoes have become nearly a mash, and have absorbed all the gravy from the meat, and the water. The stew should then be dished and eaten hot.

☞ Loin chops of mutton, 6; potatoes, 12; onions, 6; water, 1 quart; salt and pepper, to season.

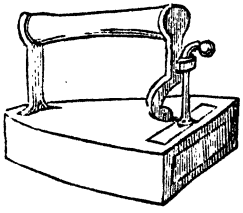
IRON.—The properties and uses of iron are well known. It is remarkably ductile, and possessed of great tenacity, but it is less malleable than any of the other metals. It is the hardest of all the ductile and malleable metals, and when combined with carbon or silica, admits of being tempered to almost any degree of hardness or elasticity. The common crude iron of commerce is known as pig iron or cast iron, which is the melted metal discharged from time to time from the furnaces and allowed to run into moulds of sand, so as to form lumps called pigs. Of cast iron there are several varieties, varying in colour, hardness, and composition. They are known as grey, black, and white iron, of which the first is commonly the best. These variations in quality and character of the product depend chiefly on the method followed, and the fuel used in their production.—See *Dictionary of Useful Knowledge*, article *Iron*.

IRON, MEDICINAL USES OF.—The preparations of iron used in medicine are very numerous. In the crude form, the effect of iron is generally to increase the appetite, and to stimulate the digestive powers. It imparts tone and vigour to the whole system, and gives a florid colour to all who take it for any length of time. When iron in any of its preparations has been given in too large doses, or persisted in for too great a length of time, it is apt to cause a state of general excitement, marked by a sensation of fulness in the head, and a degree of giddiness. The administration of iron in any of its forms is not advisable in full and inflammatory habits, in those disposed to a determination of blood to the head, or who have a tendency to active hæmorrhages. Those diseases to which it is applicable are all such as show a deficiency of red blood, or in which there are evidences of direct debility, or in nervous or hysterical affections, or feebleness of the digestive organs, scrofula, &c. The most simple, manageable, and perhaps the most useful of all the preparations of iron, is the *iron wine;* this is particularly appropriate for children. *Dose.* One drachm to half an ounce. *Carbonate of iron* is an excellent form of tonic, and has much repute for the cure of neuralgic affections, tic-doloreux particularly, and is useful in giving tone to the bowels, and eventually obviating their costive state. The principal objection to it, is its bulk and insolubility. *Dose.* Half a drachm to half an ounce, three or four times a day, in combination with honey, treacle, or confection of orange peel. *Muriated tincture of iron* is also much esteemed as a tonic, or is a good astringent in both spitting and vomiting of blood. It is also an excellent local styptic applied to bleeding vessels in loose fungous sores.

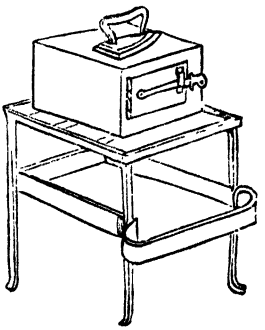
IRON, TO PRESERVE.—The preservation of iron from rust may be accomplished as follows:—Add to a quart of water half a pound of quicklime; let this stand until the surface is perfectly clear; pour off the clear liquid, and stir up with it a quantity of olive oil, until the mixture becomes a thick cream. Rub any articles which are to be put by, with this mixture, and then wrap them up in paper. If the nature of the articles will not admit of their being wrapped up in

paper, they will remain free from rust by covering them more thickly with the mixture.

IRONING.—A process in connection with the laundry. Previous to ironing, all linen and other articles, after being washed and well dried, must be properly folded and slightly damped by sprinkling water upon them just before the application of the hot iron. The proper degree of dampness is a nicety learned only by practice, but it is essential to the success of a good ironing. Ironing is a very important part of what is termed the getting up of linen; bad ironing is known by the creases left, and inaccurate folding, and sometimes the marks left by ill-cleaned irons, or even iron-moulds. To iron well it is necessary not only to be dexterous in the use of the iron implement, but also it is essential that the mode of heating the irons should be effectual. Smoothing irons are employed to give smoothness to such articles of wearing apparel as do not admit of being wound round a cylinder to be mangled. These implements are of three kinds; the common flat iron, the box iron, and the Italian iron. The common flat iron, which is most frequently employed, is well known. The larger the irons, the longer they retain the heat, and the greater the pressure they are capable of giving. Small irons are employed for more delicate articles. The box iron, as seen in the

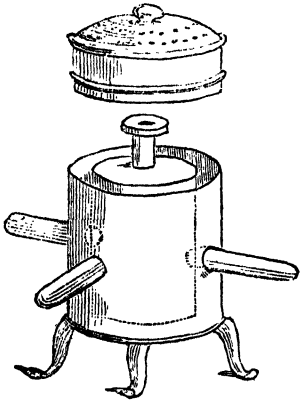


engraving, is an old-fashioned implement, less used than formerly, but ingeniously constructed. As considerable pressure is frequently useful, this iron is made large and heavy; and to retain its heat longer, it is made hollow, the cavity containing an iron heater, which is made nearly red hot, occasionally as the iron cools. To keep this heater in its place, an iron slider is made to shut down in front; and by this mode, the frequent setting down and taking up of irons is avoided. The proper degree of heat in the smoothing iron is very necessary to attend to, and can only be learned by practice. Before using it, it is proper to try its effect upon a piece of blanket kept on the table for that purpose; if the iron be too hot, it will scorch the linen, and if not hot enough, it will not properly perform its office. In the first case, in order not to lose time, some coarse article may be ironed, which a very hot iron will not injure. The use of the iron in the various articles of wearing apparel can be learned only by practice under a skilful operator; no verbal directions can be sufficient. A few hints, however, can be given. Things that require to be very flat, as shirt collars, require to be covered by a towel in the first ironing, and then gone over on both sides with the box iron. Laces and worked muslins require a soft and very good ironing blanket, and they are to be dried by rolling them up, and to be unrolled as they are ironed. When silks are ironed, they should be covered over with paper, to prevent the iron from touching the silk itself, which produces an unsightly glossiness. Great care must be taken not to scorch anything, for this not only discolours the article, but injures the fabric. The Italian iron affords a very neat and expeditious way of ironing certain articles, as frills, which require to be puffed. It is a hollow tube, and is heated by a cylindrical piece of iron made red hot and inserted in it. The articles to be ironed are drawn over the iron, instead of passing the iron over them. A clean and expeditious way of heating smoothing irons is very essential in a good laundry. In a very small way, these irons are heated by placing them on a moveable iron shelf hung on the bars of a grate; but in this manner they are apt to be soiled by the ashes and coals, and require careful wiping to prevent staining the linen. To obviate this inconvenience, ironing stoves are constructed, by which the irons are heated without any possibility of their contracting any dirt. Sometimes the ironing stove forms a recess in the wall like a small chimney, with a hot plate and furnace below it. Upon this hot plate the irons are set to be heated; and there should be an air-flue above the plate to carry out the hot air, and prevent its incommoding the laundry. Generally, however, the ironing stoves are detached, and stand in the laundry, and then answer the double purpose of warming the room, and heating the irons. The annexed figure represents one of



the smallest kind; it is made wholly of iron; the fire is contained in the box on which the smoothing iron is placed, and a pipe is inserted in the back, to carry off the smoke into the chimney flue. An

apparatus has also been constructed for heating Italian irons. It is a short iron cylinder placed within another about four inches wider, the inner one being filled with lighted charcoal, and the space between left empty; four cylindrical pieces of brass pass through this space, and enter into the fire chamber, by which means they are heated sufficiently. The fumes or deleterious gas formed by the combustion of the charcoal, pass out through the tube seen in



the apparatus, and when the cover is put on, they issue through the holes in it. The ironing-board or table should be very strong and steady; and for this purpose one end or side of it is generally placed against a wall. It should likewise be placed on the window side, to have the benefit of a perfectly good light. The ironing cloth, which is a kind of blanket made on purpose, of a proper width and thickness, should be double, and should be firmly and securely pinned down round the table, to prevent its moving.

IRONMOULD.—A stain produced in linen by ink and deleterious compounds. To remove an ironmould it should be wetted, then laid on a hot-water plate, and a little essential oil of lemons put on the part. If the linen becomes dry, wet it, and renew the process, observing that the plate is kept boiling hot. Much of the powder sold under the name of salt of lemon is a spurious preparation; and, therefore, it is necessary to dip the linen in a good deal of water, and wash it as soon as the stain is removed, to prevent the part from being worn into holes by the acid.

IRRIGATION.—The act of watering the soil. This operation acts in two ways, mechanically and chemically. The mechanical act of irrigation is, that it softens the soil, and preserves the roots of plants in a healthy state. It also serves to dissolve the various earthy matters contained in the soil, and acts as a medium by which they are taken up into the plants. The chemical action of irrigation is produced by the water which irrigates the land becoming decomposed, and furnishes fresh combinations with various elements which it attracts, partly from the air, and partly from the soil. The act of irrigation applies more to meadow land and fields of crops, than to the ordinary garden. In *surface irrigation*, the water is conveyed in a system of open channels, which require to be most numerous in such grounds as are under drilled annual crops, and least so in such as are sown in breadths, beds, or ridges, under perennial crops. *Subterraneous irrigation* may be effected by a system of drains, or covered gutters in the subsoil, which, proceeding from a main conduit or other supply, can be charged with water as required. For grounds under the culture of annual plants, this mode is more convenient, and for all others more economical, as to the use of water, than surface irrigation. When the under stratum is gravelly, and rests on a retentive stratum, this mode of watering may take place without drains, as it may also on perfectly flat lands, by filling to the brim, and keeping full for several days, surrounding trenches; but the beds or fields between the trenches must not be of great extent. Flooding and warping are modes of irrigation, the former for manuring grass lands, and the latter for enriching the surface of arable lands; while both at the same time gradually raise up the surface of the soil. Irrigation with a view of conveying additions to the soil, has long been practised, and is an evident imitation of the overflowing of alluvial lands, whether in meadow or aration. In the former case, it is called irrigation or flooding, and in the latter, warping. Warping is practised chiefly as a mode of enriching the soil by an increase of alluvial depositions, as warp of rivers during winter, where the surface is not under crop.

ISINGLASS.—A substance consisting entirely of gelatine, and the purest variety of this principle. It is prepared from the sounds or swimming bladders of various fish, chiefly the sturgeon, which affords the finest kind. The quality of good isinglass is determined by its whiteness, absence of the least fishy odour, and ready, and almost entire solubility in boiling water; the solution forming a nearly white, scentless, semi-transparent, solid jelly when cold. Isinglass is extensively adulterated, principally with gelatine, and may be tested as follows: Take a few threads of the substance, drop some into boiling water, some into cold water, and some into vinegar. In the boiling water, the isinglass will dissolve; in cold water, it will become white and cloudy; and in vinegar, it will swell and become jelly-like. In boiling water, gelatine will not so completely dissolve as isinglass; in cold water, it becomes clear and jelly-like; and in vinegar, it will harden.

ISINGLASS FLUMMERY.—Dissolve, without boiling, two ounces of isinglass in a pint of water; add a gill of white wine,

with the juice of two lemons; sweeten; beat the yolks of six eggs, add them to the other ingredients, and thicken the whole by stirring it over the fire; pour it into a basin, and agitate till cold; put by in moulds or glasses. This mixture is considered to be very nourishing for invalids.

☞ Isinglass, 2ozs.; water, 1 pint; white wine, 1 gill; lemons, juice of 2; sugar, to sweeten; eggs, 6 yolks.

ISINGLASS JELLY.—Boil in a quart of water an ounce of isinglass and a quarter of an ounce of cloves, till reduced to a pint; then strain it over sugar, and serve, when cold, in glasses.

ISINGLASS, TO CLARIFY.—Take about two ounces of the best and clearest sort of isinglass for a quart mould of jelly, put it into a stewpan, with just sufficient cold water to cover it completely; set it by the fire, stir it occasionally, and clear the scum as it rises; let it boil very gently, and until the whole is reduced to three-quarters; then strain it through a sieve or cloth into a basin for use.

ITALIAN BREAD.—Make a stiff dough with twelve tablespoonfuls of fine flour, six of white powdered sugar, three eggs, a lemon-peel grated, and two ounces of fresh butter; mix them in a pan with a wooden spoon; and if the dough is not sufficiently firm, add more flour and sugar. Then turn it out, and work it well with the hand, cut it into the shape of round long biscuits, and glaze them with white of egg.

☞ Flour, 12 tablespoonfuls; sugar, 6 tablespoonfuls; eggs, 3; lemon-peel, 1; butter, 2 ozs.

ITALIAN CHEESE.—Chop very fine two pounds of pork liver, with a pound and a half of the fat of pork; add a shalot, an onion, a clove of garlic, a bay-leaf, a sprig of thyme, half a dozen mushrooms, all chopped fine; season with salt and spices. When well mixed, butter a mould, press the ingredients closely in, moistened a little with butter, and put it into an oven for two hours; when cold, turn it out.

☞ Pork liver, 2lbs.; pork fat, 1½lb.; shalot, 1; onion, 1; garlic, 1 clove; bay-leaf, 1; thyme, 1 sprig; mushrooms, 6; salt and spices, to season.

ITALIAN CREAM.—Whip together for nearly an hour, a quart of very thick scalded cream, a quart of raw cream, the grated rind of four lemons, and the juice strained, with ten ounces of white powdered sugar; add half a pint of white wine, and continue to whisk the whole until it assumes a solid. Lay a piece of muslin in a sieve, and lade the cream upon it with a spoon. In twenty-four hours turn it carefully out, and be careful that it does not break.

☞ Cream, 1 quart scalded, 1 quart raw; lemon, peel of 4, juice of 4; sugar, 10ozs.; white wine, ½ pint.

ITALIAN FRITTERS.—Make a batter with three tablespoonfuls of fine flour, a gill of cream, a glass of white wine, two ounces of sugar, and four eggs; beat the whole thoroughly; mix in currants minced, raisins, or other fruits, almonds, and a little veal kidney fat, or marrow; fry them high over the fire, that they may be well done.

☞ Flour, 3 tablespoonfuls; cream, 1 gill; white wine, 1 wineglassful; sugar, 2ozs.; eggs, 4; currants, raisins, almonds and veal kidney fat, sufficient.

ITALIAN PIE. — Mix together some chopped thyme, parsley, and one or two sage leaves, salt, white pepper, and cayenne; lay into the bottom of a dish some thin slices of lean veal, sprinkle them with the seasoning, and add slices of ham, and a few forcemeat balls; put in a layer of seasoned veal, of ham, and forcemeat balls, alternately, till the dish is filled; then add the yolks of five eggs hard boiled, and some good white stock; cover the dish with a puff paste, and bake it for an hour. Before serving, pour in through a funnel, fixed in the centre of the crust, a teacupful of rich cream.

ITALIAN SAUCE.—Put into a saucepan two slices of ham, a handful of minced mushrooms, a lemon minced without the pips, a spoonful of minced shalot, blanched, and wrung in a cloth, half a clove of garlic, and a gill of olive oil; when nearly ready, take out the lemon, add a spoonful of minced parsley, a glass of white wine, and a little pepper; let the whole simmer till reduced one-fourth; take out the ham, and serve.

ITALIAN SOUP.—Make three quarts of stock, which strain through a fine sieve into a stewpan; add to it three ounces of sago, and let it boil gently for twenty minutes, then skim it. The stock being previously seasoned, will only require half a teaspoonful of sugar, a little salt, pepper, and nutmeg; a limited addition of thyme and parsley, with a bay-leaf, will vary the flavour. Just before serving, put into a basin the well-beaten yolks of four eggs, and add to them half a pint of cream; then take the stewpan off the fire, pour the cream and eggs in, stir quickly for one minute, and serve immediately.

ITCH. — This cutaneous and offensive disease, the result of bad living and dirt, is propagated by the merest contact; and as this is a misfortune that any person may be exposed to, by touching in a cursory manner the person of an affected individual, it is necessary to show the means by which, with a day or two's seclusion, it may be effectually eradicated. The intolerable itching that so remarkably distinguishes this disease, is the consequence of a very minute microscopic insect which burrows under the scarf skin of the hands and body, and all that is necessary to destroy the life of this insect, and of course cure the disease, is, to block up the pores of the skin, by rubbing in some stiff simple ointment upon going to bed; use a hot bath in the morning to cleanse the body of the grease, and repeat the ointment again; and so continue the one at night, and the other in the morning till the cure is effected. For long standing cases sulphur or creosote is necessary, but for trifling cases, spermaceti ointment is quite sufficient, the hands being kept greased and gloved both day and night.

IVORY.—A substance which is properly obtained from the tusks of the elephant, the teeth of the hippopotamus, wild boar, &c. It is largely used for the handles of knives, and for other purposes requiring a smooth and clean white surface. Carvings in ivory when not kept under glass, sometimes become covered in time with a multitude of minute cracks, which get filled with dirt, and deface them. Glass not only protects them from this injury, but affords the means of bleaching or whitening ivory which has been discoloured. This effect is produced by exposing the articles to the sun's rays under glass, turning each side in succession to the direction of the rays. To remove the cracks before mentioned, the ivory should be washed in soap and warm water with a brush till the cracks disappear, after which the article should be placed under glass.

IVORY JELLY.—Put half a pound of ivory powder into three pints of cold water, let it simmer until reduced to a pint and a half; when cold, take the jelly carefully from the sediment; add to it the juice of a lemon, half the peel, two or three cloves, and sugar to taste; warm it till quite dissolved, then strain it.

IVORY, TO SILVER.—Immerse the ivory in a weak solution of nitrate of silver, and suffer it to remain until it has acquired a deep yellow colour; then take it out, wash it with water, and expose it to the sun's rays, which will turn it black in about three hours; the ivory will upon being rubbed, assume a silvery appearance.

IVORY, TO STAIN.—Ivory may be stained of any colour, after being freed from dirt and grease, as follows:—*Black.* Wash the ivory well in an alkaline lye, steep it in a weak solution of nitrate of silver, then expose it to the light. *Blue.* Steep it in a weak solution of sulphate of indigo which has been nearly neutralized with salt of tartar. *Brown.* As for black, but using a weaker solution of silver. *Green.* Dissolve verdigris in vinegar, and steep the pieces therein for a short time, observing to use a glass or stoneware vessel. *Purple.* Steep it in a weak neutral solution of terchloride of gold, and then expose it to the light. *Red.* Make an infusion of cochineal in water of ammonia, then immerse the pieces therein, having previously soaked them for a few minutes in water very slightly acidulated with aquafortis. *Yellow.* Steep the pieces for some hours in a solution of sugar of lead, then take them out, and when dry, immerse them in a solution of chromate of potassa.

IVY.—A hardy evergreen climbing plant, common everywhere in Europe, and forming an excellent screen when planted against trellis-work. The common ivy is very often employed for covering exposed buildings or trees; which latter, however, it invariably kills. It may be propagated by seeds, but in all its varieties is quickest propagated by slips inserted in a north border in sandy soil, kept moist in the autumn. This is far better than inserting it at once where it is intended to remain. Deep, rich soil suits the common ivy; the tender kinds should have lighter soil. For clothing dead trees, covering open fences, giving an air of antiquity, affording security, supplying warmth and dryness to buildings, and even producing architectural effects, and covering the ground in shady places with a green carpet, where scarcely anything else would grow, the ivy is invaluable.

J.

JACK.—A name given to the pike before it attains the weight of four or five pounds.—See PIKE.

JACK, BAKED.—Cut the fish open, remove the entrails, and thoroughly cleanse the inside; then make a stuffing as follows: half a dozen oysters chopped, the crumb of a penny loaf, a little lemon-peel shred fine, a quarter of a pound of butter, the yolks of two eggs, a few sweet herbs, and a savouring of pepper, salt, and nutmeg. When these ingredients are thoroughly mixed, put them into the belly of the fish, which must then be skewered and sewn round. Then rub the fish over with yolk of egg, and strew over it crumbs of bread and grated nutmeg; place a piece of butter on it here and there, then put it into a dish with half a pint of good broth or gravy, and bake it in a moderately heated oven; the time required being proportioned to the size of the fish. Make a sauce with the gravy in which the fish has been baked, adding a spoonful of anchovy essence, a little ketchup, the juice of a lemon, and some butter rolled in flour; let them be boiled together for a few minutes; pour it over the fish, garnish with fried parsley, and serve.

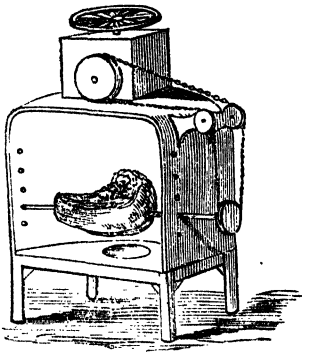
JACK, BOILED.—Scale the fish, open the throat near the gills, and after cleansing the fish thoroughly, stuff it with the following: grated bread, herbs, anchovies, oysters, suet, salt, pepper, mace, half a pint of cream, and the yolks of four eggs; mix all over the fire till it thickens, then put it into the fish, and sew the fish up. Boil it, and when nearly done, mix a large cupful of rich broth, with a dessertspoonful of the essence of anchovy, the same of soy, a little lemon-juice, and some butter rolled in flour; boil these up, pour it over the fish, and serve.

JACK, POTTED.—Scale the fish, and cut off the head; split it, and remove the backbone; strew it over with salt and pepper; cover it, and bake it; then take it out, and lay it on a coarse cloth to drain. When it is cold, place it in a pot large enough to hold it, and cover it with clarified butter.

JACK, ROASTED.—Let the fish lie for some days then scale and cleanse it; stuff it with bacon rolled in salt, spices, shred parsley, and shalots; wrap the fish in a buttered paper, on which spread sweet herbs, spices, and salt; place it on the spit, and baste it with white wine and melted butter. When done, remove the paper, and serve the fish with a piquant sauce.

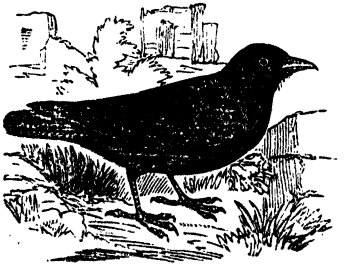
JACK SALAD.—Cut the remains of a cold jack into pieces, and mix with it gherkins, capers, and anchovies, and some herbs shred; serve the jack, garnishing the dish with lettuces and hard-boiled eggs. Mix oil and vinegar at table.

JACK, FOR ROASTING.—This culinary implement has been introduced in a variety of forms. The best kind is an improved spring jack as shown in the engraving, and in which the article to be roasted is fixed on a spit lying horizontally in the usual manner. A box on the top contains the spring, which causes a wheel to revolve in front; round



this, an endless chain passes over two pulleys to the spit, which goes through on the side of the tin screen. By means of a series of holes, and shortening or lengthening the chain, the height of the spit can be adjusted; and there is a fly-wheel to regulate the motion.—See BOTTLE JACK.

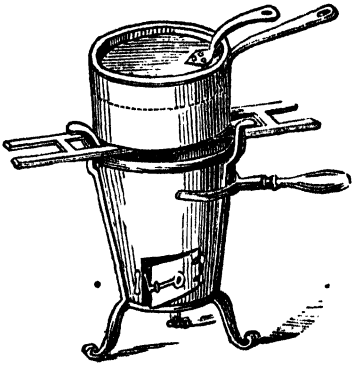
JACKDAW.—A well-known bird of the rook genus. The bill and legs are black; the claws strong and hooked; eyes white; and the hinder part of the head and neck silvery gray; the rest of the plumage is of a



fine, glossy blue-black above, and dusky beneath. The jackdaw may be easily tamed; it is an amusing bird, and may be taught to imitate the human voice in speaking, singing, &c.

JALAP.—A medicinal agent derived from a root indigenous to South America. It is a stimulant cathartic, performing its office briskly, and safe and efficacious, although occasionally griping severely. It is a good medicine in the torpid state of the intestines; and for children who are troubled with worms. A drop or two of some essential oil, as the oil of carraway or aniseed, should be added to each dose of jalap, to prevent griping. The dose is from ten grains to half a drachm, given in the form of pill or powder.

JAM.—Fruit boiled down with sugar to the consistence of a paste. Jams form valuable domestic stores, supplying us the flavour and essences of fruits at such times as they are no longer in season. In the preparation of this confection, some little care and nicety are demanded; ordinarily



they are prepared in stewpans lined with enamel, and placed over the fire of the kitchen. An improved method of preparing jams, however, is through the medium of the small portable French stove or furnace in the accompanying illustration; this is furnished with a trivet and stewpan, and is exceedingly convenient for the purpose intended. By this furnace all smoke is kept away, and the heat can be regulated at pleasure. There should always be a free current of air in the room in which it stands when lighted, as it is lighted with charcoal, that being the only fuel suitable to it. To kindle it, two or three pieces must be lighted in a common fire, and laid on the top of that in the furnace, which should be evenly placed between the grating and the brim, and then blown gently with the bellows until the whole is lighted; the door of the furnace must in the meanwhile remain open, unless the heat should at any time prove too fierce, when the door must be closed for a few minutes to regulate the heat. To extinguish the fire entirely, the cover must be pressed closely on, and the door be quite shut; the embers which remain will serve to re-kindle it easily, but before it is again lighted, the grating must be lifted out and all the ashes cleared away. It should

be set by in a place which is not damp. In making jams it is desirable to have three or four wooden spoons or spatulas, one fine hair-sieve at the least, one or two large squares of common muslin, and one strainer or more of closer texture, kept exclusively for this purpose; for, if these things are used for other purposes, there is the hazard of their retaining some coarse or strong flavour, which they would impart to the jam. Damp is a great enemy to jams, and it is therefore essential to place them in a dry cool place. To obviate any danger of their becoming mouldy, there is nothing more required than to moisten thin brown paper, or silver paper, with the white of an egg; as by this means the covering will adhere closely, and effectually exclude the air.—See PRESERVING; likewise APRICOT, BARBERRY, BLACKBERRY, CHERRY, CURRANT, GOOSEBERRY, GREENGAGE, RASPBERRY, STRAWBERRY &c.

JAMES'S POWDER.—This celebrated medicine is a specific originally introduced by Dr. James, a London physician. It operates as a diaphoretic and alterative, and *is often of excellent use in colds, coughs, the* commencement of fevers and all inflammatory actions, as it changes in a very gentle, and frequently insensible manner, the diseased condition of action in the minute vessels of the circulating system, and thus conducts the existing malady to a favourable termination. If it be administered early, after the operation of purgatives or an emetic, fevers of the most threatening aspect are frequently arrested by it. Its good effects are almost always increased by the addition of a small quantity of calomel, such as half a grain or a grain to each dose. Thus combined, and also united with guaiacum, it is administered with much effect in obstinate eruptions of the skin. In fever, inflammation, and other acute complaints, it must be given in doses, frequently repeated, of three, four, and five grains, with half a grain of calomel every four or five hours; and its operation is assisted by the patient drinking freely of some warm diluting fluid during the day.

JANUARY, GARDENING FOR.—*Kitchen Garden: Artichokes*, attend to, shelter, &c. *Asparagus*, plant in a hotbed, attend to forcing. *Beans*, plant, earth up early ones, plant in hotbed. *Beet* (red), plant for seed. *Cabbages*, plant, sow, plant for seed. *Cardoons*, attend to, shelter, &c. *Carrots*, sow small crop, plant for seed. *Cauliflowers*, attend to those under frames, as also those picked, sow. *Celery*, earth up, shelter, &c. *Composts*, prepare and turn over. *Cucumbers*, sow, prick out. *Dung*, prepare for hotbeds, wheel on vacant ground. *Earth up* plants disturbed by frost. *Endive*, blanch. *Frost*, protect plants from, which require it. *Ground* (vacant), dig trenches, &c. *Hotbeds*, make and attend to. *Horseradish*, plant. *Jerusalem artichokes*, plant. *Kidney beans*, sow in hotbeds. *Liquorice*, plant, dig up three year old plants. *Lettuces* in frames, attend to, transplant to force, sow. *Melons*, sow. *Mint*, force in hotbed. *Mushroom* bed, make, attend to those in production. *Mustard and Cress*, sow in hotbed. *Onions* (winter standing), clean from weeds, examine those in store, sow small crop, plant for seed. *Peas*, sow, earth up advancing, plant in hotbed, prepare stocks for. *Potatoes*, plant. *Radishes*, sow in hotbeds and in borders. *Rape* (for salading), sow in hotbed, (edible root) sow. *Savoys*, plant for seed. *Salading (small)*, sow. *Spinach*, clean from weeds. *Tansy*, plant in hotbeds. *Tarragon*, plant in hotbed. *Turnips*, plant for seed. *Weeds*, persistently destroy.

General Remarks.—During this month do everything that can tend to lessen the labour of the succeeding month, which is generally a busy one. Pick up all dead leaves, and remove plants destroyed by the frost. Destroy slugs, set traps for mice, and remove all larvæ, webs, eggs, &c.

Flower Garden.—Plant dried roots of border flowers, if not done before, but defer planting bulbs of the finer florist's flowers till February, unless the weather is very mild. Transplant daisies and other edgings, if the weather hold fine. Protect choice plants by matting, litter, cases of wickerwork, old bark, and all other proper means, observing *to do it with due attention to neatness in* this department of gardening. Attend to the finer sorts of tulips, which will emerge from the ground by the end of the month; hoop them over, and apply mats. Attend to *flowers under glass cases*; let them have air every dry day, and protect them in severe weather with mats, &c. Mignonette and other prolonged annuals, as stocks, sweet peas, &c., will require similar attention. Look to choice auriculas and polyanthuses; keep them plunged in frames in old tan, or, what is better, sawdust or ashes. In general, never attempt to keep a potted plant through the winter in a cold frame, unless it be plunged, or the pots are standing close together. *In hotbeds and pits*, begin to force roses and other shrubs and hardy flowers, as well as bulbs. *In the greenhouse*, see that the most delicate plants be placed on the warmest part of the house, in so far as is consistent with other arrangements; give air freely when the weather is mild, and water at all times sparingly. Keep the lawn and grass walks neat and smooth by rolling; if any part require fresh turf, this is the season for cutting and laying it down: that from a common is best, as the herbage is short, and free from nettles, docks, &c.; lay it down firmly and evenly, allowing for the sinking of the newly laid earth an inch or two; roll it well after it is down. Weed and roll gravel walks when the weather is dry. Dig clumps where evergreens are intended to be planted in February and March—the frost will render newly dug earth more friable. If the weather is very settled and mild, plant out hardy deciduous shrubs, as sweetbriars, double bramble, double-blossomed cherry dwarf almond, jessamine, honeysuckle, roses, lilacs, laburnums, guelder rose, mezereons, &c.; transplant each shrub with a good ball of earth round its root. Prune flowering shrubs now where they require it, with a sharp knife, not with shears. Transplant suckers from hardy flowering shrubs; take care not to injure their roots, support them

neatly with stakes. Cuttings of shoots of hardy deciduous shrubs may be planted in mild weather to root, and form good plants by autumn. Layers may also be formed.

JANUARY—THINGS IN SEASON.—*Fish:* Cod, eels, flounders, haddock, mullet, perch, plaice, skate, soles, whitings, turbot.

Meat: Beef, ham, mutton, pork, veal.

Poultry and Game: Capons, fowls, hares, partridges, pheasants, pigeons (tame), rabbits, snipes, turkeys, woodcocks.

Vegetables: Brocoli, cabbages, carrots, celery, endive, leeks, onions, potatoes, savoys, spinach, sprouts, turnips.

JAPANNED ARTICLES, TO CLEAN.—In cleaning tea trays, bread pans, candlesticks, and other articles made of japan ware, hot water should not be used, as it will produce fractures and cracks; lukewarm water is the best to use. To remove grease, let the water be just warm enough to melt it; then wipe the articles with a cloth, and if they appear smeared, sprinkle a little flour over them, and wipe it clean off.

JARS.—These domestic utensils are well known as the depositories of preserves, pickles, fruits, &c. When they are used they should be perfectly clean and dry; and if there is any reason to doubt their sweetness, they should be thoroughly scalded with boiling water previously to being used. The best kind of jars for general use are those of brown ware, glazed on the inside.

JAUNDICE is the name given to the effect produced on certain parts and secretions of the system by a diseased state of the liver, or whatever cause prevents the bile from finding its natural outlet; and by confining it to the gall-bladder, or the secreting vessels of the liver, causes it to be absorbed into the blood, and, passing into the circulation, gives rise to those symptoms which constitute what is called jaundice. The word "jaundice" signifies *yellow*, and is used to designate that impaired state of the liver known by the external signs of a yellow skin, a yellow tinge of the white coat of the eye, and a deep saffron colour imparted to the secretion from the kidneys, while the other alimentary discharges are almost white; these characteristics of jaundice are attended with languor, loss of appetite, sometimes amounting to a loathing of food, disturbed sleep, great avidity both of stomach and bowels, nausea and often sickness; a heavy bitter taste, that no cleanliness can eradicate, pervades the mouth and fauces, while a dull heavy pain takes possession of the right side, just over the liver, greatly increased by pressure, but which no change of position abates. Attending these symptoms there is always more or less of what is understood as fever: when the disease is protracted, and the bile remains long unremoved from the blood, the skin and eyes darken in their colour, and assume a *green* aspect, and when still more obstinate of cure, that green becomes of a deep purple or blackish hue, when the disease is called black jaundice.

Jaundice is a very common disease in hot climates, especially to Europeans newly arrived, and, indeed, is by no means rare in this country and the sister island, and though, as we have already said, it may proceed from any diseased condition of the liver, there are many other causes that may induce it, such as pressure on the liver by the formation of tumours, pregnancy, and the presence of gall-stones, though in this latter case the cause is generally easily discovered by the severity, sharpness, and continuance of the pain. Though the remedies employed for jaundice are under all circumstances nearly alike, it is both satisfactory and useful to discover as early as possible what is the immediate cause that, obstructing the bile, has led to its absorption by the blood; as on this knowledge much time may be saved in the treatment, which is remarkably simple, and may be undertaken with the greatest confidence without consulting any medical opinion. In all cases of jaundice, especially when attended with pain, the warm bath is of the utmost importance, as it will afford instant relief; and if the pain and disease proceeds from a gall-stone, the heat of the bath, by expanding the duct in which it is impacted, will almost immediately facilitate its passage, and thus by removing the obstruction, at once remove the cause of the disease.

As remedial means, the adult patient should take one of the following pills three times a day, or one every eight hours, and every second morning two teaspoonfuls of Epsom salts dissolved in a tumblerful of cold water, with a wineglassful of dandelion tea every four or five hours, and continued as long as it is necessary to take the pills.

Pills. Take of

Camphor	2 grains.
Powdered opium . . .	2 grains.
Blue pill	20 grains.

Mix and divide into six pills. Take of

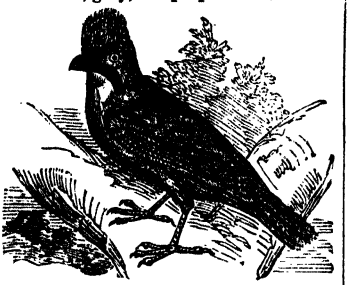
Dandelion roots, washed and cut small . . .	2 oz.
Liquorice root and sassafras, of each . . .	2 drachms.
Boiling water	1½ pint.

Simmer slowly for twenty minutes; strain, and, when cold, give a wineglassful every four or five hours.

When the obstruction has been removed, and the cure has been effected—as the restoration of the skin and eyes to their natural colour will indicate—it is sometimes necessary to take a tonic for a few days, to restore the tone of the stomach; this will be best effected by taking a tablespoonful of the following mixture an hour before each meal for four or five days:—Infuse 2 drachms of gentian, 2 drachms of carbonate of soda, and 1 drachm of ginger for six hours in a pint of boiling water; and, when cold, giving it in the above doses. To those subject to jaundice, exercise and sea-bathing should be vigorously adopted after each recovery, so as to work the system into an energetic and self-supporting condition; for if not excited out of its torpidity, the body is very prone to relapse into its previous torpidity.

JAY.—A beautiful bird, about the size of a pigeon; its beak is black, and resembles that of a crow; the feet are brown and some-

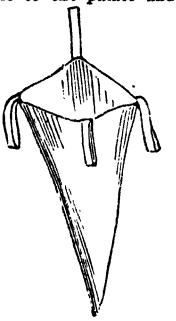
what inclined to flesh colour; almost the whole of the body is tinged with purple ashen grey; the throat is whitish, the parts near the tail perfectly white; the large loose feathers on the top of the head can be raised into a black, gray, and purple crest; on each



side of the head a black stripe runs from the lower mandible almost half way down the neck; the pen feathers are blackish, the centre ones having a white border, which produces a spot of the same colour on the wings. The larger coverts are crossed on the outer side by bright, narrow stripes of whitish blue, light blue, and bluish black. The female is only distinguishable from the male by having on the back of the neck a grayish, in place of a reddish tinge. *In order to take this bird*, in autumn, choose, in a spot frequented by them, a fir or pine which stands five or six paces from any other tree; cut from this all the superfluous branches, leaving only sufficient to form a sort of ladder, and dock these to the length of about two feet; let these branches, which should extend from about ten feet from the ground to six feet from the summit of the tree, be covered with lime twigs; under the tree a small hut lightly roofed with brushwood is to be built capable of holding as many persons as wish to share in the sport. On this is placed a living or dead owl, or an owl fabricated of clay, or even a hareskin will do, so that it is attached to a string by which it can be moved. To attract the jays, the cry of the owl should be imitated; the jays, its enemies, flock together and utter their cries. The alternate cry of owl and jay brings more; they fly on to the lime twigs, fall down, and are carried by the weight through the roof of the hut. This mode of catching jays may be practised either at daybreak or twilight.

JELLY.—Fruit jellies are compounds of the juices of fruits combined with sugar, concentrated by boiling to such a consistence that the liquid, upon cooling, assumes the form of a tremulous jelly. Vegetable jelly is a distinct vegetable existing in fruits, which possesses the property of gelatinizing when boiled and cooled; but it is a principle entirely different from the gelatine of animal bodies, although the name of jelly is common to both. Animal jelly is glue, and vegetable jelly is rather analogous to gum. In preparing vegetable jellies, it is necessary to guard against boiling them too long, since this destroys their property of gelatinizing, and they then assume the appearance of mucilage or gum; and this accident is most likely to occur when the quantity of sugar is too small to absorb the water of the juice. Jellies are most perfect as to beauty and transparency when clarified sugar is used; but for ordinary purposes, refined sugar answers very well. Jellies were formerly supposed to be particularly nutritive; but the prevailing opinion at present is that they are less so, and even less digestible than the flesh of muscular parts of animals: still, when acidulated with lemon-juice and flavoured with wine, they may be very properly given to convalescents, as they present a form of nourishment agreeable to the palate and readily taken. — See APPLE, APRICOT, BARBERRY, CALF'S FOOT, CURRANT, GOOSEBERRY, &c.

JELLY-BAG.—A jelly-bag may be made of felt or flannel, and is used for straining jellies through after they are made. The process is to suspend the bag immediately above the receptacle into which the jelly is to run; and then pour the jelly in from time to time until all is strained through.

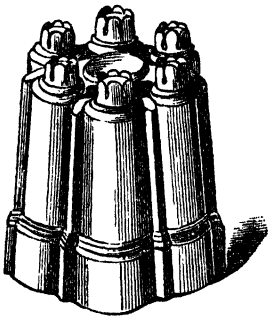


JELLY, COLOURING FOR.—To produce red, boil very slowly in a gill of water, till reduced to one-half, twenty grains of cochineal, the same quantity of alum and of cream of tartar, finely pounded; strain the mixture, and keep it in a phial to be used as required. For yellow, use an infusion of saffron. For green, wash well, and pull into small bits, a handful of spinach leaves; put them into a closely covered saucepan, boil them for a few minutes, and then express the juice.

JELLY MOULDS.—The shape of the moulds used for jellies is a matter of importance in the appearance of the entremets of a handsome dinner. They should be high and nearly of the same size. If the jelly sinks flat in the dish it presents an insignificant and unsightly appearance. The cylindrical mould shows the transparency of jelly excellently, the centre being filled in with a light whipped cream after the jelly is dished, which not only enhances its appearance, but improves its flavour. One of the most recent improvements is that known as the Belgrave mould, which is of superior construction for the purpose, as it contains a large central cylinder, and six smaller ones, which, when withdrawn after the jelly is set, leave vacancies which can be filled either with jelly of another colour or with fruit of different kinds, or with blancmange, or any other isinglass cream. The space left by the larger cylinder may be left empty, or filled, before the jelly is served, with white, or with pale-tinted whipped cream.

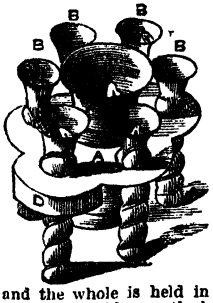
Water, only sufficiently warm to detach the jelly from them without heating or melting it, must be poured into the cylinder to unfix them; and to loosen the whole so as to

Fig. 1.



unmould it easily, a cloth wrung out of very hot water must be wound round it, or the mould must be dipped quickly into some which is nearly or quite boiling. A dish should then be laid on it, it should be carefully reversed, and the mould lifted from it gently. *Fig.* 1 represents this mould in its entirety; *fig.* 2 shows the interior of the same mould inverted. A is the thin metal plate, which, when turned downwards, forms the bottom of the mould, and which is perforated in six places to permit the fluted columns B to pass through it. There is also a larger aperture in the middle, to admit the centre cylinder. The plate is fixed, and the whole is held in its place by the part which folds over the larger scallop D at either end. There is also a cover which fits the mould, and which is pressed on it before it is dipped into water, to prevent its getting into the cylinder.

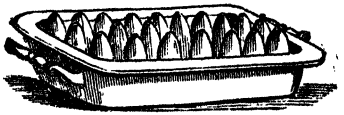
Fig. 2.



JERSEY CAKE.—Take two pounds of flour, six ounces of butter, six ounces of white sugar, a little nutmeg, ground ginger, and lemon-peel; beat eight eggs, and mix them thoroughly with the before-named ingredients. Roll the mass about the thickness of your crust, cut off a small slice, and form it into an oval, about four inches long and three inches wide, not too thin; cut two slits in it, but not through either end, there will then be three bands. Pass the left one through the aperture to the right, and throw it into a brass or bell-metal skillet of boiling lard, or beef or mutton dripping. Three or four of these cakes may be cooked at a time. In about two minutes, turn them with a fork, and they will be browned and swollen, or raised in two or three minutes more. Remove them from the pan to a dish, and leave them to dry and cool.

JERUSALEM ARTICHOKE, CULTURE OF.—A hardy perennial, a native of Brazil. The season of its flowering is September and October; but though its roots endure our hardest winters, the plant seldom flowers with us, and it never ripens its seeds. It is raised by planting, either some small offset tubers of the main roots, or middling sized roots, cut into pieces for sets, which is more eligible. Preserve one or two full eyes to each cutting. It will grow in any spare ordinary part of the garden; and to obtain fine large roots, sow in an open compartment of pretty good mellow ground. The season for planting is February, March, or the beginning of April. Having dug the compartment, plant them either by dibble in rows, two and a half feet asunder, about eighteen inches in the lines, and three or four inches deep; or in drills by a hoe the same depth and distances. The plants will come up in April and May. In their advancing growth, hoe and cut down all weeds, drawing a little earth to the bottom of the stems. The root will multiply into a progeny of tubers, in a cluster, in each plant, increasing in size till September and October; the stems may then be cut away, and the produce dug up as required. Or, in November, when they have wholly done growing, it will be proper to take up a quantity, and lay in dry sand under cover to be ready as wanting, in frosty weather, when the others are frozen up in the ground, or affected by the frost. As the roots of this plant are very prolific, the smallest piece of a tuber will grow. In taking up the produce, therefore, all should be cleared out as thoroughly as possible; as any remaining part will come up the following year irregularly, and pester the ground; and would thus continue rising for many years, but not eligible to cultivate for a good crop. To satisfy a demand, therefore, a fresh plantation must be made every year.—See ARTICHOKE.

JERUSALEM ARTICHOKE, TO DRESS.—Wash and wipe the artichokes, cut off one end of each quite flat, and turn the other into a point; boil them in milk and water, lift them out the instant they are done, place them upright in the dish in which they are to be served, and pour some



bechamel sauce over them, or with nearly half a pint of cream, thickened with a dessertspoonful of flour mixed with an ounce and a half of butter, and seasoned with a

little mace and some salt. When cream cannot be procured, use new milk, and increase the proportion of flour and butter. Another mode of dressing artichokes is to boil them till tender, press the water well from them, and then mash them with butter, milk, or cream, adding pepper and salt.

JESSAMINE.—The species of this elegant genus are familiar to every one. The stove and greenhouse kinds thrive well in a mixture of sand, loam, and peat; and cuttings of the ripened wood, root freely in the soil or sand under a glass in heat. The hardy kinds thrive well in any common soil, and are easily increased by cuttings under a glass. They are remarkably well adapted for training over an arbour, or against a wall or trellis-work. The white

jessamine thrives best in a light warm soil, but it will grow in any ground in a sheltered situation. The yellow jessamine, a shrub growing four or five feet high, blows a yellow flower from July to September. It is not sweet like the white, but very elegant in appearance. Both these sorts may be propagated by suckers.

JESSAMINE PERFUME. — Since the flowers of the jessamine do not yield in distillation either sufficient essential oil, or the flavour is destroyed by heat, the perfume is obtained by steeping the flowers in a very fine oil; a layer of the flowers is laid over the bottom of a hair sieve, and upon the flowers is placed a layer of small and detached pieces of cotton wool, which have been dipped in oil of behn; over the cotton are laid other flowers, and so on alternately, flowers and cotton, until the sieve is full. When these have lain twenty-four hours, the flowers are taken away and the cotton is laid in the same way between layers of fresh flowers, and this operation is repeated, until the cotton is thoroughly impregnated with the perfume of the jessamine; the cotton is then collected, put into a press, and the oil squeezed out of it. If kept as oil, it must be in well stopped bottles, but the usual plan is to add to it at once some very finely rectified spirit of wine, which is as odourless as possible.

JESSAMINE POMADE. — Melt hog's lard, and wash it in clear water, lay it an inch thick in a dish, and strew it over with jessamine flowers; by this means, the scent will be imbibed, and a very fragrant pomade produced.

JEWELLERY, TO BUY.—In purchasing jewellery, always deal with first-rate establishments, and do not be led away by inferior articles which are advertised or marked at unusually low prices. There is scarcely anything more vexatious than to buy what is believed at the time to be genuine jewellery, and to discover afterwards that it is only a spurious imitation; whereas jewellery of real value always gives satisfaction as long as it is worn, and may be converted into cash at any moment, should the possessor be necessitated to part with it. When such articles are bought, the purchaser should by way of security, have a bill made out with each article duly specified, and a warranty attached by the person who sells them; so that if any subsequent question arise as to the genuineness of the articles, the purchaser may be enabled to call upon the vendor to make good the depreciation, if any such be proved. Be cautious in buying jewellery at auctions, from private dealers, or through any other irregular channel; as a number of schemes are often set a foot, encouraged by the irresponsibility of the vendors in such cases, by which the purchaser very frequently is made to suffer severely. Thus, cases have recently occurred where so-called private dealers have palmed articles of mock jewellery, plated with gold to a sufficient depth to bear the usual tests, and presenting outwardly all the appearance of genuine articles; such a circumstance could hardly occur with a respectable dealer, because he is in the habit of purchasing his goods from persons to whom an honest reputation is everything, and who dare not attempt to sacrifice their own and their employer's interests by such a nefarious venture.

JEWELLERY, TO CLEAN.—From constant wear, jewellery is apt to become dirty and tarnished, and the process of restoring it to its pristine brightness is very simple. Make a lather of common yellow soap and warm water, wash the articles in this and brush them well, then wipe them dry, and polish them either with a plain leather, or with one upon which a little rouge has been put; after this application, the brilliancy of the jewellery will be restored.

JEWELLERY, TO WEAR.—The wearing of jewellery requires to be guided by taste and regulated by the station which a person occupies in life. Amongst the nobility, and the upper classes generally, whose incomes warrant any amount of outlay, the wearing of jewellery is allowed to any extent; but with persons moving in an humbler sphere, as a tradesman or a shopkeeper, an inordinate display of jewellery is in bad taste, and indeed is apt to excite suspicions as to its genuineness. With all persons of the middle classes and of limited means, a limited display of jewellery is more becoming and graceful. The effectiveness of jewellery greatly depends on the style and chasteness of the design, as in many cases articles of enormous cost will not appear so well to the eye as others of a tenth part of their intrinsic value; simply because there is a heaviness of style and poverty of design which tends, as it were, to dim its lustre and depreciate its value. Consequently, by exercising a due

amount of taste, money can be laid out far more advantageously than when it is only sought to obtain massive and expensive articles.

JONQUIL.—See NARCISSUS.

JUJUBES.—A composition for coughs and colds, made with gum arabic and a decoction of the fruit of the jujube-tree. The jujubes of commerce, however, seldom contain any of this decoction, and are made as follows:—Take half a pound of the whitest gum arabic, and having broken it into extremely small pieces, dissolve it with an ounce of fine isinglass, in just sufficient water for the process. In the meantime, make a syrup with half a pound of fine loaf sugar, and half a pint of water; skim this frequently, and when it has become thick, pour it into the dissolved gum, previously strained through a flannel bag, and continue the simmering from time to time, until it is very thick; then set it by to cool, and when the greatest part of the heat has gone off, pour in three or four drops of neroli. Before the syrup has begun to set thoroughly, pour it out upon a marble slab, and roll it to the thickness of about the eighth of an inch. Before it is quite cold, pass a large flat knife underneath the paste, to prevent its sticking; and when cold, either cut the paste into small squares, or into diamonds, and keep them in a tin case.

JULIENNE SOUP.—Slice very fine, in any quantity, according to the number of persons who are to dine, equal parts of leeks, carrots, parsnips, onions, turnips, celery, and potatoes: add an equal proportion of finely chopped lettuce, and a little sorrel and parsley; let these be about half cooked in a saucepan with fresh butter, and then add sufficient beef stock to make the quantity of soup required; boil gently for an hour, then season with pepper and salt as may be necessary, and serve up without straining. If there be no beef stock on hand, make some for the purpose in a separate saucepan.

JULY, GARDENING FOR.—*Kitchen garden: Alexanders*, earth up. *Artichokes*, attend to. *Asparagus* beds, clean, leave off cutting from. *Beans*, plant, leave some in production for seed. *Beet*, red, thin. Green, white, sow. *Borage*, sow. *Borecole*, plant, prick out. *Brocoli*, prick out, plant. *Cabbages*, plant, prick out seedlings, sow. *Carrots*, thin, sow. *Cauliflowers*, plant. *Celery*, prick out, plant, earth up. *Celeriac*, plant. *Chamomile* flowers, gather, *Chervil*, sow. *Coleworts*, plant. *Coriander*, sow. *Cress, American*, sow, earth up where necessary. *Cucumbers*, attend to. *Endive*, plant, sow. *Garlic*, take up as wanted. *Horseradish*, attend to hoeing. *Kidney-beans*, attend to, sow. *Lavender*, gather. *Leeks*, weed, &c., and plant. *Lettuces*, plant, sow, leave for seed. *Marigolds*, flowers, gather. *Marjoram*, gather for drying. *Melons*, attend to. *Mint*, plant. *Mushroom* bed, attend to, make spawn, collect. *Onions*, weed, &c., press down leaves, sow. *Parsley*, sow. *Parsnips*, weed. *Peas*, sow, hoe advancing, leave for seed. *Peppermint*, gather. *Pompions*, attend to. *Potherbs*, gather for drying and distilling. *Radishes*, sow. *Rape*, edible rooted, sow. *Salsify*, thin. *Savoys*, plant. *Salading (small)*, sow. *Spinach*, sow, hoe, and thin ground between plants. *Succory*, sow. *Turnips*, sow. *Wormwood*, plant.

General remarks.—During this month take advantage of the showery weather to propagate by bulbs, shoots, slips, and offsets. Thin and hoe the ground, and pay particular attention to the extermination of weeds. Support advancing plants, where necessary, with stakes. Take advantage of the fine weather to water, as far as practicable.

Flower garden.—Sow a few hardy and half-hardy annuals for succession. Propagate by cuttings, such plants as are proper for the purpose, as they go out of flower. Pipe and lay pinks and carnations towards the end of the month. Transplant the seedling auriculas which were sown last year, and also the seedling polyanthuses. Transplant the perennial and biennial seedlings which were not done last month to remain till October. Take up all bulbs and other tuberous roots, dry them in the shade, and remove them to boxes or drawers in the store-room; wrap the finer sorts in paper. *Hotbeds and pits.*—Put pots of carnations and pink pipings in gentle heat, it will prevent their sticking. Do not forget to give head-room to your balsams and other tender annuals. Attend to pots of cuttings and seedlings; also to young stove plants put into this department for more rapid advancement. *Greenhouse.*—As soon as the mulberry comes into leaf, remove the plants to a fit situation in the open air. *Dry stove.*—Give abundance of air, night and day, and be moderate as to water. Cease to water bulbs soon after they have done flowering; let them go slowly into a state of hybernation, and then take them out of the pots and dry them.

General remarks.—Mow, weed, hoe, rake, thin, stir, and dress and maintain as complete an appearance of polish and high keeping as possible. Walk round the garden frequently, and examine everything minutely, and reflect on what can be done to promote its growth and beauty. Water and roll any new-laid gravel, to combine it properly with the rest. Dress, roll, and mow lawns and turf in every form. Search out insects and destroy them. Shade, shelter, and afford every kind of protection to plants coming into flower.

JULY, THINGS IN SEASON.—*Fish:* barbel, brill, carp, cod, conger eels, crabs, cray-fish, dabbs, dace, dory, eels, flounders, gurnards, haddocks, herrings, ling, lobsters, mackerel, mullet, perch, pike, plaice, prawns, salmon, skate, soles, tench, thornback, trout.

Fruit.—Apples: codlin, jennetting, Margaret, summer pear-main, summer pippin. Apricots, cherries, currants, damsons, gooseberries, melons, nectarines, peaches. Pears: catharine, green-chisel, jargonelle, musk. Oranges, pine-apples, plums, raspberries, strawberries.

Meat.—Beef, grass-lamb, mutton, veal, buck-venison.

Poultry and Game.—Chickens, ducks, fowls, green-geese, leverets, pigeons, plovers, rabbits, turkey-poults, wheat-ears, wild pigeons, wild rabbits.

Vegetables.—Artichokes, asparagus, balm,

beans, carrots, cauliflowers, celery, chervil, cucumbers, endive, finochio, herbs of all sorts, lettuces, mint, mushroom, peas, potatoes, purslane, radishes, rocambole, salads of all sorts, salsify, sorrel, spinach, turnips.

JUMBLES. — Cakes, made as follows: half a pound of flour, half a pound of sugar, six ounces of butter to be rubbed into the flour; one ounce each of sweet and bitter almonds pounded. This quantity, wetted with one egg well beaten, dropped in small lumps on a tin, will bake in a few minutes in a hot oven. A little powdered white sugar may be strewn over the surface, before they are put into the oven.

☞ Flour, ½lb.; sugar, ½lb.; butter, 6ozs.; sweet almonds, 1oz.; bitter almonds, 1oz.; egg, 1.

JUNE, GARDENING FOR.—*Kitchen garden: Alexanders*, earth up, *Artichokes*, weed, &c. *Asparagus* beds, clean, &c. *Beans*, plant, hoe, &c., advancing crops. *Beets*, thin. *Borecole*, plant, sow, prick out. *Brocoli*, sow, prick out, plant. *Basil*, plant. *Cabbages*, sow, prick out, plant, earth up. *Capsicum*, plant. *Carrots*, thin, &c. *Cauliflowers*, prick out; seedlings, earth up, &c.; leave for seed. *Celery*, sow, plant, earth up advancing. *Celeriac*, plant. *Coleworts*, sow for, plant. *Cucumbers*, sow, plant, in forcing attend to. *Cardoons*, thin, plant out. *Coriander*, sow. *Cress, American*, sow, water, plant, earthing up, attend to. *Endive*, sow, plant. *Fennel*, plant. *Finochio*, sow, earth up advancing crops. *Garlic*, gather for use. *Herbs*, gather for drying and distilling. *Jerusalem artichokes*, hoe, &c. *Kidney beans*, dwarfs, sow, runners, attend to. *Leeks*, thin, &c., transplant. *Lettuce*, sow; plant, leave for seed. *Melons*, plant out. *Mint*, plant. *Onions*, thin, &c., transplant into deficiencies. *Parsley*, sow. *Hamburg* ditto, thin. *Parsnips*, thin. *Peas*, sow, attend to advancing crops. *Potatoes*, hoe. *Pompions*, plant. *Radishes*, sow. *Rampion*, thin. *Sage*, plant. *Salsify*, thin. *Savoys*, plant, prick out. *Scurvy-grass*, sow seeds, attend to, gather. *Salading (small)*, sow. *Spinach*, sow, thin advancing; stir ground between crop in rows. *Succory*, sow. *Tarragon*, plant. *Thinning*, attend to. *Tomatoes*, plant out. *Turnips*, sow, thin advancing. *Turnip cabbage*, sow, plant, attend to their watering and weeding. *Wormwood*, plant.

General remarks.—Give shelter, shade, and protection to every kind of advancing crop. Water where necessary, and stick and top beans, peas, &c.; hoe, thin, and stir the surface among every description of crop wherever necessary. Check the ravages of birds, vermin, and insects, by searching well for them, and destroying them without delay. *Flower garden:* propagate carnations by layers, and pipings; double sweet williams and pinks by layers and cuttings, or slips; perennial fibrous-rooted plants, by cuttings of the stalks. Transplant the large annuals from the seedling bed to the places where they are to remain; let this be done in showery weather if possible. Take up all bulbs, ranunculus and anemone roots, &c., as the flowers and roots decay. Water the delicate plants, if the weather prove dry; give a moderate watering in the evening, but never in the middle of the day. Sow some hardy annuals, such as ten-week stocks, Virginia-stocks, &c. Plant out China asters, Chinese hollyhocks, ten-week convolvulus, &c.; but let each root have a ball of earth around it. Turn the African and French marigolds from their lower straggling shoots, that they may present a neat and upright appearance. Turn the chrysanthemums, which are apt to branch too near the root, and stake them neatly. Plant out carnations and pink seedlings into their appointed places. *Hotbeds and pits.*—Attend to cuttings, from whatever department. If you are endeavouring to flower the more delicate aquatics, see to the keeping up of a regular heat. *Greenhouse.*—This will now be filled with pots of tender annuals, which only require shifting now and then till of a certain growth.

General remarks. — Eradicate all weeds the moment they appear; keep the surface of the ground always fresh, and rather rough, never smooth and battered; it is better to have little clods and knots of earth, as they make a variety of light and shade; and are, besides, more favourable for the admission of air, heat, and moisture to the roots. Destroy insects; cut out broken stalks and diseased parts of plants. Gather flowers neatly with a knife, and so as not to disfigure the plants. Gather in general from the reserve-garden, so as not to disturb the borders. Attend to the mowing and dressing of the lawn, according as the weather may be fine or showery. Weed and roll gravel walks in moist weather. When dry, and the gravel becomes loose, water and roll.

JUNE.—THINGS IN SEASON. *Fish.*—Carp, cod, conger eels, crabs, cray-fish, dabbs, dace, dory, eels, flounders, gurnards, haddocks, herrings, ling, lobsters, mackerel, mullet, perch, pike, plaice, prawns, salmon, salmon trout, skate, smelt, soles, sturgeon, tench, trout, turbot, white bait, whitings.

Fruit.—Apples: John apple, stone pippin, golden russet. Apricots. Cherries: duke bigaroon, blackheart. Currants, gooseberries, melons. Pears: winter green. Strawberries. *Forced fruit.*—Grapes, nectarines, peaches, pines.

Meat.—Beef, grass-lamb, house-lamb, mutton, pork, veal, buck-venison.

Poultry and Game.—Chickens, ducklings, fowls, green-geese, leverets, pigeons, plovers, pullets, rabbits, turkey-poults, wheatears, wood-pigeons.

Vegetables.—Angelica, artichokes, asparagus, beans, beet (white), cabbage, carrots, cauliflowers, chervil, cucumbers, endive, herbs of all sorts, leeks, lettuce, onions, parsley, peas, potatoes, purslane, radishes, salad of all sorts, spinach, turnips, vegetable marrow.

JUNIPER BERRY.—A strong diuretic, combined with a tonic principle. The oil of juniper, in doses of from two to six drops, is a more powerful diuretic than any other known. The diuretic property of gin is wholly owing to the presence of the essential oil given out by this berry in distillation.

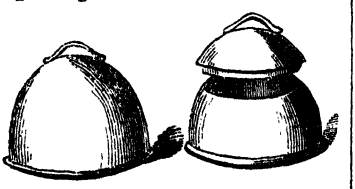
JUNKET.—A preparation common in Devonshire, made as follows:—Put warm milk into a bowl; turn it with rennet; then put some scalded cream, sugar, and cinnamon on the top, without breaking the curd; which put into a close net, and hang it up, for the purpose of allowing the milk to drain from it, and to bring it into shape. Or, put some new milk into a basin, add to it a little rennet, and, if approved, a little brandy or rum may also be added; stir the whole well till perfectly mixed. Place it near the fire, or on a warm stove or hearth, until turned, but avoid keeping it too hot, or it will not turn properly. When turned, put sugar and grated nutmeg or cinnamon on the top, and clotted cream, without breaking the curd; then serve.

JURY.—With the exceptions hereafter specified, the following persons are qualified to serve on juries, in the county, riding, or division, where they respectively reside. 1. Every man between the age of twenty-one and sixty years, residing in England, having, in his own name, or in trust, £10 per annum of clear yearly income, arising from lands and tenements; or rents amounting to the clear yearly value of £10. 2. Every man having £20 a year clear, from lands or tenements held by lease for twenty-one years or upwards, or for any term determinable on any life or lives. 3. Householders assessed to the poor rate, or to the inhabited house duty, in the county of Middlesex on the value of £30; in any other county, £20. Lastly, persons occupying any house containing not less than fifteen windows. The following are exempt from serving on all juries and inquests whatever. Peers, judges, counsellors, attorneys, proctors, coroners, gaolers, and keepers of houses of correction; clergymen in holy orders; Roman Catholic priests, having taken the oath required by law; dissenting ministers, whose places of worship are registered, and who follow no secular occupation except that of schoolmaster; police magistrates and commissioners of the metropolis; officers of the army and navy on full pay; physicians, surgeons, and apothecaries, duly licensed, and actually practising; servants of the royal household, pilots licensed, and masters in the buoy or light service; officers in the customs, post-office, and excise; officers of courts of justice actually exercising the duties of their offices; sheriffs' officers, high constables, and parish clerks. After serving and obtaining the sheriff's certificate, persons are free from again serving on juries, for certain periods; in the counties palatine, or the principality of Wales, or in Hereford, Cambridge, Huntingdon, or Rutland, for one year; in the county of York, for four years; in any other county except Middlesex, two years. The names of the jurors summoned, being written on tickets, are put into a box, and, when each cause is called, twelve of the persons whose names are first drawn are sworn on the jury, unless absent, challenged, or excused, or unless a previous view of the subject in issue shall have been thought necessary by the court; and then the jurors, who have had the view, shall be sworn prior to any other jurors. On the jurors' names being called, they may be challenged or objected to by the parties, as improper persons to form the jury. Challenges are of two kinds; challenge to the array, and challenge to the pole. Challenge to the array is an exception at once to the whole panel, which may be on the ground of partiality, or default in sheriff, or his deputy who arrayed the panel. Or the array may be challenged because one of the parties is an alien, so entitled to a jury of one-half foreigners. Challenges to the pole are exceptions to particular individuals, and may be made on several accounts. 1. That the juror is an alien. 2. That he is not duly qualified according to the statute. 3. That he has been an arbitrator in the cause, has received money for his verdict, or is related to, or employed by one of the parties. 4. That he is infamous or degraded in law. 5. Challenges may be made to the favour, as where the party has no direct cause of challenge, but objects only to some suspicious circumstance, as acquaintance or the like, the validity of which must be determined by two indifferent persons, chosen by the court. And lastly, a juror may challenge himself, on the ground of his title, office, profession, or some other cause of exemption, before enumerated. Persons summoned to serve on juries in any of the inferior courts of record in London, or in any other liberty, city, borough, or town, not attending, shall forfeit not more than forty shillings, and not less than twenty shillings, unless the Court be satisfied with the cause of absence. In the superior courts the lowest fine is £10 for non-attendance without sufficient reason, and the highest fine £50.

K.

KALE, CULTURE OF.—Kale, or colewort, is a species of sea-cabbage; it is propagated both from seed and slips of the root; the first is by far the best mode, for although it may be obtained from slips with greater certainty, yet the plants arising from seed are the strongest and longest lived. The seed may be inserted in drills from October to the commencement of April, but the best time for inserting it is during January, February, or March. It is by much the best mode to leave the plants where raised, and with that intent to guard against failure, inserting the seed in patches of six or twelve seeds, each six inches apart, and the patches two feet asunder. If, however, they are intended for transplanting, the seed may be sown in drills twelve inches asunder; in either case it must not be buried more than two inches below the surface; and it is a good plan, previously to inserting the seed, to bruise the outer coat without injuring its vegetating power, as by this treatment the germination is accelerated. The plants will, in general, make their appear

ance in four or five months, never sooner than six weeks; but, on the other hand, the seed will sometimes remain twelve months before it vegetates. The best time for increasing it by slips is in March. Rooted offsets may be detached from established plants; or their roots, which have attained the thickness of the third finger, may be cut into lengths, each having at least two eyes. The cuttings must be inserted in an upright position, two or three inches beneath the surface. It is best to plant two together, to obviate the danger of failure, at two feet apart, to remain. The bed should be laid out three feet wide, and a two-feet alley between every two. If the months of June and July prove dry, the beds should be plentifully watered. The seedlings require no other attention during the first summer than to be kept free from weeds, and if the plants come up too numerously, to be thinned to five or six in each patch. When their leaves have decayed, and been cleared away about November, they must be earthed over an inch or two with dry mould from the alleys, and over this about six inches depth of long litter be spread, and thus left during the winter. In the following spring, the litter is to be raked off, and a small portion of the most rotten dug into the alleys. When the plants have perfectly made their appearance, they must be thinned, leaving the three strongest in each patch; those removed being planted at similar distances if required. In the second winter, the earthing-up must be increased to five or six inches over the crowns, and the covering of litter performed as before. In the third spring, the litter being removed, and some dug into the alleys, as before, about an inch depth of drift sand or cool ashes must be spread regularly over the surface. The sprouts may now be bleached and cut for use. In November, as soon as the leaves are decayed, the beds being cleared of them, the coating of sand and ashes removed, and gently stirred with the asparagus fork, they must be covered with a mixture of three parts earth from the alleys, and one part of thoroughly decayed leaves, to the depth of three or four inches. The major part of this is to be removed in the following spring, the beds forked, and the covering of sand removed, the routine of the cultivation existing during the continuance of the beds.



In blanching, pots are much to be preferred to any other covering. Common flower-pots of large dimensions may be employed, the hole at the bottom being stopped with a piece of tile and clay, so as to exclude every ray of light. A kind of pot for blanching as represented in the engraving, is very commonly used. They are of earthenware, twelve or eighteen inches in diameter, and twelve high. Previous to covering the stools with the pots, the manure laid on in the winter must be removed; and the operation should commence at the close of February or at least a month before the shoots usually appear, as the shelter of the pots assists materially in bringing them forward. In four or six weeks after the plants are covered, they should be examined, and as soon as they appear three or four inches high, they may be cut. In order to prolong the season of production, the plants should be raised annually, so that every year a cutting may be had from a yearling crop, which comes in much later, and consequently succeeds, in production, the old established roots. The shoots should be cut while young and crisp, not exceeding five or six inches in height; the section to be made just within the ground, but not so as to injure the crown of the root. When the cutting ceases, all covering must be removed, and the plants allowed to grow at liberty. *For producing seed*, a stool, which has not been cut from, or even covered at all for blanching, must be allowed to run in spring. Unlike the generality of vegetables, the shoots of forced sea kale are always more crisp and delicate than those produced naturally. Those plants will not do for forcing a second time, which have been forced in frames; consequently, a small bed should be sown every year for this purpose, so that a succession of plants may be annually secured.

KALE BOILED.—Wash, trim, and tie the kale in bunches, and throw it into plenty of boiling water with some salt in it. When it is perfectly tender, lift it out, drain it well from the water, and send it to table with melted butter. It is improved by being served up on toast, as asparagus. About twenty minutes will boil it; a minute or two less for persons who like it crisp.

KALE STEWED.—Boil the kale for ten minutes in salt and water; drain it well, and put it into a saucepan with as much good brown gravy as will nearly cover it, stew it gently for ten minutes, or until it is very tender, and send it to table in the gravy very hot. Another excellent mode of serving this vegetable is, to boil it in salt and water, and to pour over it plenty of rich white sauce after it is dished.

KALEIDOSCOPE.—A pleasing philosophical toy, which may be formed as follows;—Two slips of silvered glass from six to ten inches in length, and from an inch to an inch and a half wide, and rather narrower at one end than the other, are joined together lengthwise, by one of their edges, by means of a piece of silk or cloth glued on their backs; they are then placed in a tube of tin or pasteboard, blackened inside, and a little longer than is necessary to contain them, and are fixed by means of small pieces of cork, with their faces at any angle to each other that is an even aliquot part of four right angles (as the $\frac{1}{8}$, $\frac{1}{5}$, $\frac{1}{10}$, &c.) The one end of the tube is then closed with an

opaque screen, or cover, through which a small eyehole is made in the centre; and the other end is fitted, first with a plate of common glass, and at the distance of about an eighth of an inch, with a plain piece of slightly ground glass parallel to the former; in the intermediate space or cell are placed the objects to form the images. These consist of coloured pieces of glass, glass beads, or any other coloured diaphanous bodies, sufficiently small to move freely in the cell, and to assume new positions when the tube is shaken or turned round. A tube so prepared presents an infinite number of changing and symmetrical figures, no one of which can be exactly reproduced. This toy is so easily constructed, is so very inexpensive, and at the same time so capable of affording an almost inexhaustible fund of amusement to the young, that the construction of it is well worth the trial, as affording a double gratification. Any common tube of tin or pasteboard may be used, and strips of glass smoked on one side will answer for mirrors.

KENNEL.—The feeding and lodging of dogs, and the consequent management of the kennel, is a matter of the greatest importance. It is essential that the kennel should be in a healthy situation; and that it should be dry, warm, and airy. Cleanliness is also worthy of the strictest attention, and should never be wanting; neglect in this particular frequently inducing many cutaneous and other diseases, from the noxious exhalations which are suffered to arise. In the feeding of dogs, a mixture of both animal and vegetable substances may be considered as its most proper food; the proportions of each are best determined by the exertions of the body, for animal food affords most nutriment; so when the bodily exertions are great, as those of hounds, greyhounds, pointers, &c., in their working season, then a large proportion of animal matter forms the best food. On the contrary, when the season of rest arrives, milder and less nutritious food (but such as is equally bulky) is required; consequently, at this period, a larger proportion of vegetable matter is equal to their wants. An entire vegetable diet, however, does not always agree with dogs which have been long fed with flesh; neither is a long continuation of any one kind of food so wholesome as an occasional change. The quantity, as well as the quality of food is also to be considered, as well as constitutional peculiarities, for some require more than others. When dogs feed together, some will eat slowly, and some will devour three times the quantity in the same time which sufficed for the meal of the former; consequently, unless the feed regulates the operation, one-half of the dogs will be gorged and the other half underfed. Of the animal substances used as food for dogs, the entrails of the larger kinds, as those of sheep and cows, are common. Where a limited number only of dogs are kept, bullocks' and sheep's paunches boiled down, and the liquor poured over bread-raspings or ground meal of any kind, form excellent food. Greaves, also, first soaked in cold water, and then mixed with a thick mess of meal of any kind, form a convenient food for pointers. Of the vegetable substances from which dogs can receive nourishment, the list extends to almost every edible plant; and though dogs will not voluntarily eat all vegetables, yet the number they will take is very considerable, and may be increased by custom.—See DOGS, MANAGEMENT OF.

KENTISH CAKE.—Mix a tablespoonful of salt with half a peck of sifted dry flour, half an ounce of cinnamon, a quarter of an ounce of nutmeg, a drachm of cloves, and one of mace, all finely beaten and sifted with the salt. Add three-quarters of a pound of sugar; and well work, by a little at a time, a pound and a half of fresh butter into the flour; it will take three hours in working up. Then put in a quart of cream, a pint of ale yeast, a gill of white wine, the yolks of eight eggs, the whites of four, and a gill of rose water. Mix the whole with the flour, and knead them well together. Lay the paste for some time near the fire; then put in a pound of raisins stoned and minced, and three pounds of currants; bake the cake for three hours, in a gentle oven. When done, frost it on the top with rose-water and the white of an egg beaten together; sift over it plenty of powdered loaf sugar, and set it in the oven to dry.

☞ Salt, 1 tablespoonful; flour, ¼ peck; cinnamon, ½oz.; nutmeg, ½oz.; cloves, 1 drachm; mace, 1 drachm; sugar, ¾lb.; butter, 1¼lbs.; cream, 1 quart; ale yeast, 1 pint, white wine, 1 gill; eggs, 8 yolks, 4 whites; rose-water, 1 gill; raisins, 1lb.; currants, 3lbs.

KETCHUP, MUSHROOM.—Gather the broad flapped and red gilded mushrooms before the sun has discoloured them; wipe, and break them into an earthen pan. To every three handfuls, throw in one handful of salt; stir them two or three times a day till the salt is dissolved, and the mushrooms are liquid. Bruise the remnants, set the whole over a gentle fire till the essential properties are extracted; strain the hot liquor through a fine hair sieve, boil it gently with allspice, whole black pepper, ginger, horseradish, and a few shalots, with two or three laurel leaves. After simmering for some time, and well skimming, strain the liquor into bottles; when cold, close the bottles with cork and bladder. If again boiled at the end of three months with fresh spice, and a stick of sliced horseradish, it will keep very well for at least a year; but unless this be done, it will seldom keep so long.

KETCHUP, OYSTER.—Take a number of oysters, according to the quantity of ketchup which is to be made. Beard them, and boil them in their liquor, strain, and pound them in a mortar; boil up with some spring water the beards of the oysters; and straining it to the first oyster liquor, boil the pounded oysters in the mixed liquors, with bruised mace and pepper. When thoroughly boiled, set it to cool, then pour it off into bottles, and cork securely. This ketchup will keep good for a long time.

KETCHUP, WALNUT.—Put any number of walnuts you please into a jar, cover them with cold strong alagar, and tie them closely

down for twelve months. Then take out the walnuts, and to every gallon of liquor put two heads of garlic, half a pound of anchovies, a quart of red wine, and an ounce each of mace and cloves, long, black, and Jamaica pepper, and ginger. Boil altogether till the liquor be reduced to half the quantity, and the next day bottle it for use.

KETTLE.—A well-known culinary implement for boiling water. They are constructed of various materials, according to the uses to which they are to be put. For kitchen purposes strong iron kettles are the most suitable, as better able to resist the extraordinary amount of heat to which they are submitted, and the rough usage to which they are subjected. When water is required to boil quickly, a kettle made of tin will be found the best. For parlour use, bright copper kettles are generally used; and in order to keep these in a state of brightness, they should not be put over the fire for the purpose of boiling the water, but the water which has been boiled in another kettle should be transferred into them. When kettles have been long submitted to the action of heat, the handles are frequently too hot to touch; to obviate this disadvantage handles are made of non-conducting materials, such as bone or glass, so that they may be handled without any inconvenience. *To clean the inside of a kettle*, fill it with water, and add to it a drachm of sal-ammoniac; let it boil for an hour, when the fur, or petrified substance formed on the metal, will be dissolved, and can be easily removed. In boiling a kettle, care must be taken to put on the lid closely, so as not to leave the smallest crevice. If the lid is in the least broken or bent, it is best to obtain a new one; otherwise the water is liable to be smoked and rendered unfit for use, communicating a most unpleasant flavour to the tea, coffee, &c. The furring to which kettles are subject is caused by the deposits of water repeatedly boiled; the simplest precaution will prevent this unpleasant accumulation. Place in the kettle a clean oyster-shell, which, by attacking the particles of stone or lime deposited by the water, will have the effect of keeping both the kettle clean and the water pure.

KEYS.—The care of keys is no unimportant consideration, when it is reflected how much inconvenience and trouble are frequently caused when one of these is missing or broken. In order that keys may be kept together, they should all be fastened on to one ring, and so that the hand may be placed upon them at any moment they should be invariably deposited in a certain spot, known only to yourself; the best way, perhaps, is to look them up and keep the key under which they are locked up, in your purse or pocket-book. When a key is lost beyond all hope of return, and if it belongs to any receptacle in which articles of value and importance are kept, it is best to have a new lock, so that in the event of the key having been abstracted for dishonest purposes, this design may be effectually frustrated. When there is something amiss with a key so that it will not turn with ease, do not be impatient and endeavour to force it to turn, as this will in all probability break the key and injure the lock; but withdraw the key and examine both it and the lock, and then, after removing any obstruction, make several gentle attempts, and success will most likely be the result. Do not give children keys to play with which are in ordinary use, as they are almost sure to lose them, and a search of some hours will thus be entailed. When there are a great number of keys, and many of them are similar in appearance, they should be distinguished by small labels with their designations marked on them.

KID BOOTS, TO CLEAN.—Rub the boots over with a moistened sponge, and then apply to them a blacking made as follows: Four ounces of glue, one ounce of soft soap, half a pound of logwood shavings, a quarter of an ounce of isinglass, and one drachm of indigo. Simmer them over the fire till reduced to one-half, then apply.

KID CUTLETS.—Prepare the cutlets; lard them; put them in a marinade made of vinegar and water in equal quantities, slices of onions, cloves of garlic cut in two, juniper-berries, salt, pepper, cloves, nutmeg, and ginger. Stew the cutlets gently in this with two tablespoonfuls of stock, onions, bunch of herbs, and carrots sliced. When done enough, glaze them, and serve with a piquant sauce.

KID GLOVES, TO CLEAN.—Wash the hands thoroughly clean, then put on the gloves and wash them, as though you were washing your hands, in a basin containing spirits of turpentine, until quite clean; then hang the gloves up in a warm place, or where there is a free current of air, which will carry off all the smell of the turpentine. Or, make a strong lather with curd soap and warm water, in which steep a small piece of new flannel. Place the glove on a flat, clean, and unyielding surface, such as the bottom of a dish, and having thoroughly soaped the flannel (when squeezed from the lather), rub the kid till all dirt be removed, cleaning and re-soaping the flannel from time to time. Care must be taken to clean every part of the glove, by turning it in every direction. The gloves must be dried in the sun or before a moderate fire, and when quite dry they must be gradually pulled out; they will then look as well as new. *To clean coloured kid gloves*, have ready on a table a clean towel folded three or four times, a saucer of new milk, and another saucer containing a piece of brown soap. Take one glove at a time, and spread it smoothly on the folded towel. Then dip in the milk a piece of flannel, rub it on the soap till it receives a tolerable quantity, and then with the soaped flannel commence rubbing the glove. Begin at the wrist and rub lengthwise towards the ends of the fingers, holding the glove firmly in your right hand. Continue this process until the glove is cleaned all over with the soap and milk. When done, spread them out, and pin them on a line to dry gradually. When nearly dry, pull them out evenly, the cross way of the leather. When quite dry, stretch them on your hands.

KID, ROASTED.—Raise the skin of kid, lard it, and put it in a marinade, as in the

preceding. Let it remain for eight days; then drain it; wrap it up in oiled paper; roast it; and serve with piquant sauce.

KIDNEY BEEF, FRIED.—Slice the kidney rather thin, after having stripped off the skin and removed the fat; season it with pepper, salt, and grated nutmeg, and sprinkle over it plenty of minced parsley, or equal parts of parsley and shalots chopped small. Fry the slices over a brisk fire, and when nicely browned on both sides, stir among them a teaspoonful of flour, and pour in by degrees a cupful of gravy, and a wineglassful of white wine; bring the sauce to the point of boiling; add a small piece of fresh butter, and a tablespoonful of lemon-juice, and pour the whole into a hot dish, garnished with fried bread.

KIDNEY BEEF, MINCED. — Chop up the kidney with some parsley and shalot, mix all well together, season with pepper and salt, dredge a little flour over it, and put it into a stewpan with some butter; let it stew until tender, and then add a teacupful of rich gravy, and a glassful of white wine.

KIDNEY, BROILED.—Split sheep's kidneys, open lengthwise without dividing them, strip off the skin and fat, run a fine skewer through the points and across the back of the kidneys, to keep them flat while broiling, season them with pepper or cayenne, lay them over a clear brisk fire, with the cut sides towards it; turn them in from four to five minutes, and in as many more, dish and serve them quickly, with or without sauce.

KIDNEY DUMPLINGS. — Make the dumplings in the usual way, put into each a sheep's kidney well washed, and seasoned with pepper and salt; boil them tied in a cloth, and serve them very hot.

KIDNEY, FRIED.—Fry gently in a little good butter a dozen slices of bread, of uniform shape and size, trimmed free from crust, cut half an inch thick, about two inches and a half wide, and from three to four in length; lift them out, and keep them hot. Split quite asunder six fine fresh kidneys, after having freed them from the skin and fat; season them with salt and cayenne, arrange them evenly in a clean fryingpan, and pour some clarified butter over them. Fry them over a somewhat brisk fire, dish each half upon one of the slices of bread, make a sauce in the pan from gravy and a little ketchup; pour it around the slices, and serve the kidneys instantly.

KIDNEYS, DISEASE OF.—These, like the other organs of the body, are liable to many diseases, such as inflammation, enlargement, and softening; but as these are cases that do not frequently occur, we confine our observations to the affections of these organs, a class of ailments much more common than the diseases of them. Pain in the region of the kidneys is very common, so frequent, indeed, that there are few of either sex who are not more or less subject to such symptoms. Sometimes the pain proceeds from the imperfect manner in which the secretion is carried on, from the presence of sand or gravel, and occasionally from a fall and injury to the part, or from the application of cold. But however severe the pain may be, or from whatever cause it may arise, in no ailment of the body is *heat* more beneficial, or the hot bath of such immediate and permanent good.

In all affections of the kidneys, then, the patient should at once use the hot bath, and remain in it for not less than ten minutes, using gentle friction over the part both before and after the bath, and, if necessary, repeating the same practice every day. A draught, composed of thirty drops of spirits of nitre, and the same quantity of the tincture of henbane, hyoscyamus, in a little tea or gruel, may be taken at bed-time; and when the pain is severe, a mustard and flour poultice, applied for a quarter of an hour; or the loins may be rubbed with an embrocation made with equal parts of opodeldoc, oil of amber, and spirits of turpentine. At the some time, in all affections of the kidneys the patient should drink largely of linseed tea.

KING'S EVIL.—Scrofula; so called because this was the disease formerly supposed to be cured by the imposition of the royal hand.—See SCROFULA.

KINO.—In medicine, a powerful astringent. It is used externally to ulcers, to give tone to them when yielding and discharging foul and thin matter. It is used internally in the same cases as catechu. Dose of the powder, from ten to thirty grains; of the tincture, from one to two drachms; of the compound powder, from ten to twenty grains; of the infusion, from half an ounce to an ounce and a half.

KIPPER.—The name given to salmon, prepared as follows: Cut the fish up the back, and take out the bone; wipe it very clean with a cloth, score it, and put a handful of salt on each side, and let it lie for three days; then hang it up to dry, and it will be fit for use in two days; when required for eating, broil slices of it, and flavour with butter and pepper.

KIRCHWASSER. — A spirit distilled from cherries. It is a dangerous liquor, if taken to excess, as it contains much of the principle of prussic acid; but in small quantities, and mixed with water, it is a good stomachic. Infuse for four days in two quarts of spirit of wine, half a pound of kernels of cherries bruised; distil until rather less than the two quarts of spirits have come over; add twelve drops of neroli, two quarts more of spirit of wine, and two quarts of water. This will be improved, if about two ounces of the bruised kernels of cherries be infused in half a pint of spirit of wine for a fortnight, and the infusion added.

KISSES.—A confection made as follows: Beat the whites of four eggs till they stand alone, and then beat in, gradually, a pound of the best white sugar, sifted and powdered; add twelve drops of the essence of lemon, and beat the whole very hard. Having laid a sheet of white paper on the bottom of a square tin pan, drop on it, at equal distances, a small spoonful of stiff curran-

jelly, and then, with a large spoon, pile up some of the white of egg, and sugar on each lump of jelly, so as to cover it over; let this be done as evenly as possible, so that the kisses may be round and smooth; they must then be placed in a cool oven, and as soon as they are coloured, taken out, and have the underneath parts placed together. Lay them lightly on a sieve, and dry them in a cool oven, till they stick closely to each other, so as to form a ball.

KITCHEN, ARRANGEMENT OF. — The following requirements in connexion with the kitchen, are essential. It should be sufficiently large, and the parts conveniently distributed. It should be lofty and well ventilated. There should be good light, especially in those places where the cooking is immediately going on. It should be well supplied with water and fuel. There should be easy access to it, without passing through the house. It should be so placed that the odour of cooking cannot be perceived in the house; nor should the latter be incommoded and disturbed by the noise of the culinary operations and the servants. The appendages of the kitchen, as scullery, pantry, store-room, fuel closet, &c., should be arranged in convenient proximity. The orderly arrangement of the kitchen itself, is a matter of the greatest importance. Every utensil and article of use should be placed so that the hand may be put upon it immediately. Kitchen utensils ought to be provided in proper abundance, as well as of suitable kinds, rather numerous than otherwise, to save the distraction occasioned by scanty supplies. A digester, meat-screen, salting-trough, meat-safe, bain-marie, and a few other small articles, are indispensable in a family where both economy and comfort are studied; and speedily repay their cost by the saving of fuel, labour, and provisions. Such articles may be bought on the graduated scale, suited to the size and circumstances of the family. The price, to a young housekeeper, of a couch or a lookingglass, would obtain all these kitchen articles so subservient to good cookery and economy. The importance of cleanliness must be insisted on; and is indeed one of the first virtues of plain cooking. Cleanliness of the most scrupulous kind must be particularly observed with regard to all culinary utensils; all saucepans, kettles, gridirons, frying-pans, spits, skewers, &c. to be placed away clean, and kept well tinned and free from rust. Pickle-jars, preserve pots, casks, troughs, paste pans, &c. to be wiped, scraped, or washed before they are put away. Great attention to be given to keep pudding-moulds and cloths, tapes, jelly-bags, tammy-cloths, sieves, &c. clean, sweet, and dry. Kitchen cloths to be washed every day after dinner, wood-ashes are best for this purpose. Cleanliness is applicable with equal force to provisions about to be dressed. All should be thoroughly trimmed, wiped, and washed. Attention, also, to be given to careful skimming, straining, withholding the sediment, lees, &c. All refuse and noxious matters of every kind should be placed out of reach, and never suffered to accumulate; the injurious effects attending the neglect of this important particular are incalculable. — See COOK, DUTIES OF; COOKERY CLOCK; KITCHEN BOILER; KITCHEN RANGE, &c.

KITCHEN BOILERS.—These culinary implements are necessary when large joints are to be cooked, when soup or other liquids are to be made in large quantities, or when an unusual supply of hot water is required. They are constructed either without a lid and tap, as in *fig.* 1, or furnished with both these adjuncts, as shown in *fig.* 2. One of the chief recommendations of this culinary implement is, that it spares the expense and trouble of lighting the copper fire when a large supply of hot water only is required, and in the majority of cases answers the purpose equally well.

Fig. 1.

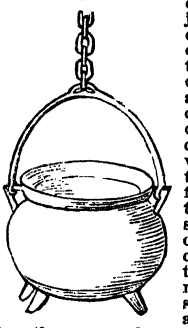
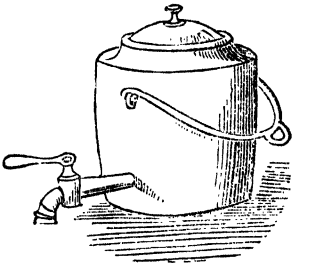
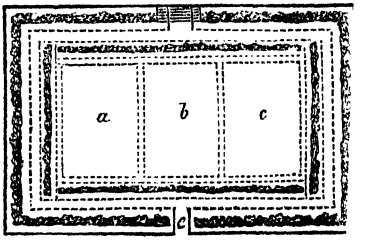


Fig. 2.



KITCHEN GARDEN.—The arrangement and laying out of a kitchen garden, embraces a variety of considerations, some relative to local circumstances, as situation, exposure, soil, &c., and others depending on the skill of the artist, as form, laying out the area, water, &c.; both of these require the utmost deliberation. *The situation* of the kitchen garden should be as near the house as is compatible with convenience and sightliness; in a word it should be near but concealed. The situation should not be so elevated as to be exposed to boisterous and cutting winds, nor should a very low situation be chosen if it can be avoided. *The exposure* should be towards the south, and *the aspect* at some point between south-east and south-west, the ground sloping to these points in an easy manner. An open aspect to the east, is a consideration of much importance in laying out a kitchen garden; for when the sun, at its rising, can reach the garden,

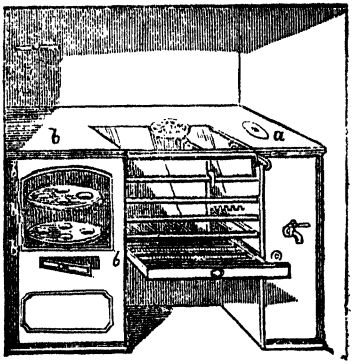
and continue a regular influence, increasing as the day advances, it has a gradual and most beneficial effect in dissolving the hoar frost, which the preceding night may have scattered over young buds, leaves, and blossoms. On the contrary, when the sun is excluded from the garden till about ten in the morning, and then suddenly bursts in upon it, with all the force derived from considerable elevation, the exposure is detrimental, particularly in the spring months, for the powerful rays of heat at once melt the icy particles, and, immediately acting on the moisture thus created, scald the tender blossoms, which are in consequence nipped and killed. *The extent* of the kitchen garden must be regulated by that of the place, of the family, and of their style of living. To assist in determining the extent, it may be observed, that an acre with wall trees, hotbeds, pots, &c., will furnish sufficient employment for one man. The extent also may be judged by the number in the family; thus a rood of ground will be plenty for a family of four persons (exclusive of servants), and so on in proportion. *Shelter and shade* are also necessary to be secured for the kitchen garden. It should be sheltered from the east, north, and west winds, by hills, rising grounds, high buildings, or plantations of trees at such a distance on the east and west sides, as not to prevent the sun penetrating; shady borders should be contrived to protect the small annual plants, and other tender members of vegetation. *The soil* of the kitchen garden is obviously a matter of the greatest consequence. The best soil is a sandy loam not less than two feet deep, and good earth, neither of a binding nature in summer, nor retentive of wet in winter; but of such a texture that it can be worked without difficulty, in any season of the year. If it can be accomplished, the garden should certainly be made on land, the bottom of which is not of a springy wet nature. If the land be of too strong a nature, it should be well mixed with sands, or scrapings of roads, where stones have been ground to pieces. Sea-coal ashes, and the refuse of ditches, will be found very proper to mix with a strong soil; and if the ground should be cold, a large quantity of coal ashes, sea sand, or decayed vegetables should be laid upon it, in order to meliorate and loosen the soil, and render it easy to work. Lime rubbish, or light sandy earth from fields or commons, will also be found of great service to stiff clayey ground. In order to improve a soil, the cultivator must be mainly guided by its nature, so as, if possible, to render it serviceable for general purposes. And, hence, the importance of hitting upon that just medium which suits the generality of esculents, in the formation or improvement of the soil of the kitchen garden. Such a soil should be sufficiently tenacious to adhere to the roots of plants, though not so much as to be binding, which would certainly retard the progress of the plants. Hence a loam of middle texture, rather inclining to sand, may be considered as the most suitable soil for the purpose here in view, and that on a double account, namely, the greater part of the valuable kinds of kitchen vegetables delight in such a soil, and it is worked at less expense than a stiff one; and in severe draughts it is neither apt to crack or be parched, nor in hard frosts to throw out. A copious supply of water is essential to a good kitchen garden, and from whatever source it is furnished, it should be distributed either in reservoirs or open cisterns, or in pipes properly protected over the garden. Many kinds of crops are lost, or produced of very inferior quality for want of watering. Lettuces and cabbages are often hard and stringy, turnips and carrots do not swell, onions decay, cauliflowers die off, and, in general, in dry seasons, vegetation becomes stunted, or covered with insects. Copious waterings in the evenings during the dry seasons, will, on the other hand, produce fulness and succulency. *The form* of the kitchen garden is of little consequence. It may be square, oblong, semicircular, or irregular, according to taste, or local circumstances. In the greater number of instances, an oblong, as represented in the



engraving, will be found most convenient. It is surrounded by a wall, in which is an entrance marked *c*. Within the wall is a border of several feet wide, and dotted round with flowers or flowering shrubs. Next is a gravel walk; and within is another border, containing fruit-bushes, or perhaps fruit-trees on espaliers; and in the centre is the body of the garden laid out in three plots marked *a*, *b*, and *c*. Between these plots and around them are paths (represented by dotted lines), of twelve or fourteen inches in width, not for ordinary walking, but for admission to the various plots or sections into which the ground may be divided. These paths are only flattened by the foot or by the spade, and are to be delved annually in the course of digging. At the opposite side of the garden from the door there may be supposed to be an arbour or summer house, overhung with climbing plants, and fitted up according to taste. The regular walks in all moderately sized gardens should not be wider than three feet; any greater width is a mere loss of ground. Much care is required to keep walks in order, and especially to restrain the growth of grass and weeds. The following tools and gardening implements are those which a

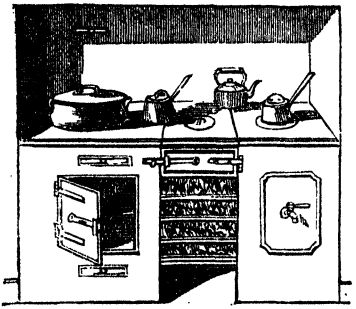
most likely to be required in moderately sized gardens of a mixed kind—Spades of three sizes, a trowel for lifting flowers, Dutch and common hoes, a broad iron rake, a rake with short teeth for the walks, a small rake for flower borders, a strong clasp knife for pruning, a pair of strong pruning shears, an axe, a handsaw, a hammer and nails, a wheelbarrow, a wooden scuttle for carrying a little earth or manure, a roller, a pair of large compasses, a dibble and line, a watering-pot, and a ladder. Other utensils employed, as circumstances demand, need not be particularized; for a person possessing only a small garden will shortly discover by experience what are the articles required in his operations. Although certain latitude is allowed in laying out a garden, there are nevertheless determinate rules which should be followed. Thus, the wall is reserved for fruit-trees. As fruit-trees require much air and sun, the borders must not be clogged up with bushes, peas, or other tall vegetables. The borders should contain only small plants, which are dug up yearly, because the soil at the roots of the trees requires occasional renewing and loosening, and this operation cannot be performed if the ground is encumbered with permanent plants. If a row of gooseberry or other small fruit-bushes be placed on the borders, they should be near the outside, and not less than ten feet apart. Flowering plants should occupy the border most exposed to the sun, whilst those naturally loving the shade, should be placed in the south and west borders. The body of the garden within the walks, is laid out in larger or smaller plots according to taste. These plots are generally oblong, and are subdivided into sections, rows, or beds for the different kinds of kitchen vegetables. In some gardens, much of the ground is overshadowed by fruit-trees. This is seriously detrimental to the growth of plants beneath, exhausts the soil, and prevents the proper flowering and fructification of every vegetable within reach. When a garden possesses the addition of an outside strip, enclosed by a hedge, the exterior sides of the walls may be lined with fruit-trees, and the ground laid out for potatoes and other common classes of vegetables.—See CABBAGE, CARROT, LETTUCE, POTATO, &c., also DIGGING, HOEING, WEEDING, &c.

KITCHEN RANGE.—That portion of the culinary department which includes the fireplace, oven, boiler, &c. In the most improved kind, the grate contains a partition of iron, which is moved by concealed rack-work and a key, for the purpose of enlarging the fire when cooking is done, or contracting it when the cooking is finished. On the top of this partition is a revolving trivet, to hold a teakettle or saucepan over the fire. The top bar of the grate folds down, to reduce the height of the fire when necessary, and to support saucepans or boilers. A shelf or drawer below the fire may be drawn out to sustain the dripping-pan, plates, dishes, or anything where heat is required. On one side of the fire-bars is a series of hooks, on which one end of the spit rests, the other end being carried by a chain coming up against an upright round, which is attached to a horizontal piece, that can be pulled out a little to bring the spits nearer, or remove them farther from the fire; and the hooks at the other end are also fixed to an upright bar that may be moved out in a similar manner. By this range, more than one spit may be in action one above another at the same time. Besides the range itself, there are frequently attached to it on one side, a boiler, fixed, and, forming part of the apparatus: this boiler extending along the back of the fire as well as at the sides, being heated by the fire in the grate, affords a constant supply of hot water, which is drawn off by a tap with a lever handle. On the other side of the range, there is an iron oven, heated by a small fire below it, and which, when well managed, serves to bake pastry, &c. It must be observed that to bake well in this oven, it must be so constructed that the heat from the fire may circulate over the top of the oven, and under the uppermost plate, as well as round the sides and back, in order that the heat may be thrown down upon the contents of the oven. When the oven is heated only on one or two sides, and not on the top, it does not perform nearly so well. Other range ovens are heated only by the fire in the range, without any below it, as shown in the engraving; there is a narrow aperture in the side of the grate, by



which the smoke and heat are allowed to pass beneath the bottom of the oven in the direction of *b b b*, thence round the side farthest from the fire, and over the top, and lastly, into the chimney flue, there being a damper *c*, to regulate the draught. Below the oven is an aperture by which to clean the flue occasionally. In other ranges, again, there is no circulation round the oven, which is heated only by the fire in the range on one side of the oven, assisted by a mass of iron that lies in the fire and communicates between it and the inside of the oven, thus affording a certain amount of

heat to the latter, by conducting it from the fire. Very small kitchen ranges sometimes have an oven and side boiler, both heated by the fire in the middle, without the boiler extending along the back of the fire; but such a range cannot have a partition to wind up so as to reduce the dimensions of the fire, as the latter must come up to both oven and boiler; these cannot be expected to act so well, but they are sufficiently useful, and much cheaper. In very large kitchens where a great deal of cooking is performed, the range is usually made of a much more ample size, and is constructed of wrought iron instead of cast iron, being of greater strength and durability. In the construction of some kitchen ranges, it is endeavoured to dispense with the ordinary open fire, and to depend upon hot plates, baking ovens, steam, &c. These arrangements are economical in point of fuel, and well adapted to particular cases, but the general use is questionable, as so much depends upon the intelligence of the servant under whose care the apparatus is placed. A kitchen fire-place constructed upon the principle of having a hot plate immediately over the fire, is illustrated in the annexed figure. Here

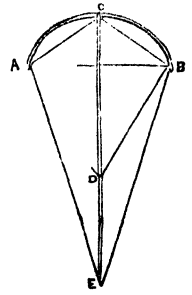


the fire in the range, instead of being open at the top in the usual way, is covered by a plate of cast iron, and the smoke is made to pass into a flue behind the back of the chimney. By this mode, the soot is prevented from falling upon the various vessels placed on the hot plate; and when the inside of the chimney is lined with white glazed tiles, it has a very neat and clean appearance. Immediately below the hot plate, and above the bars of the grate, there is a narrow door for throwing coals on the fire, and just over the fire there is a circular aperture, generally covered with an iron plate; but when the cover is left off, the aperture serves to cause anything to boil quickly when placed over it. On the right of the range is a boiler, and on the left an oven. Latterly several kitchen ranges have been introduced, so constructed that the whole is connected together, requiring merely to be set in the chimney with very little trouble by the bricklayer. On account of repairs, however, it is better to have the several parts of kitchen apparatus as independent of each other as possible. Many kitchen ranges are put out of order or neglected through the ignorance of the person in whose charge they are placed; when, therefore, a new servant arrives, it would be as well to explain to her the working of the kitchen apparatus if it possesses any peculiar features; a few words thus timely spoken will obviate much trouble and expense hereafter.—See BOILER, FIRE, OVEN, STOVE, &c.

KITCHENER'S ZEST.—A well known sauce used for fish, meat, &c., and made as follows:—A pint of claret, a pint of mushroom ketchup, and half a pint of walnut pickle; four ounces of pounded anchovy, an ounce of fresh lemon-peel thinly pared, and the same quantity of shalot and scraped horseradish, an ounce of black pepper and allspice, a drachm of cayenne, and a drachm of celery seed. Infuse these in a wide-mouthed bottle closely stopped, for a fortnight, and shake the mixture every day; then strain and bottle it for use. A large spoonful of this stirred into a quarter of a pint of thickened melted butter, makes an admirable fish sauce. Or the same quantity of the zest may be mixed with the gravy of cutlets, &c., and will prove extremely savoury.

KITE.—In order to make this implement of healthy sport, proceed as follows:—Procure a lath of deal of the length of your proposed kite, and a thin hoop or piece of hazel for the arched piece; a piece of whalebone or split cane will, perhaps, do better. Fasten the arched piece at its centre to the upright lath, and bend it to the form you wish, connecting the ends by means of a piece of string, which should twist round the lath. Connect all the points A, B, C, D, E, by passing the string through each, as in *fig.* 1. Make them fast, and the skeleton of the kite will be complete. You must next paste together as many sheets of thin paper as will cover the kite, leaving a margin to be pasted over the outer edges. Bore two holes in the upright, one about a fifth of the kite's length from the top, and the other about a fourth from the bottom; run through these and fasten by a knot at the ends your belly-band string, to which the ball of string by which you fly your kite is afterwards fixed. At the point in the belly-band where the kite exactly balances, fasten your string. The wings of the kite are made by cutting half through several sheets of white paper, which are afterwards rolled up and fastened at A and B (*fig.* 1). The tail, which should be from ten

Fig. 1.



to twelve times the length of the kite, is made by tying pieces of writing paper folded about an inch broad, and three inches long, at intervals of three inches and a quarter on a string, with a longer bob, similar to the wings, at the bottom of it. The kite may now be flown. *Cloth kites* made of linen or calico are greatly to be preferred to those made of paper, both for durability and portability. The paper kite is liable to get torn in being carried to or from the field, whereas, the cloth kite being folded up in carrying, is no more trouble than a walking-stick would be. The cloth kite is made in the following manner:—Two pieces of planed wood are placed across each other, as shown in *fig.* 2, and held together by means of a piece of wire bent into a loop at *a*. Within this loop a thin wooden collet or button is placed, in order that the two transverse pieces may work freely on their centres. Thus, when not in use, the two transverse pieces may be laid longitudinally, one upon the other. The form of the cloth kite differs from the paper kite in being of an oblong diamond, as seen in *fig.* 3. The calico being cut to the requisite shape and size, has to be hemmed round the edges, to prevent their fraying. Its two narrow ends are tied to the top and bottom ends of the longest stick; and the loop of the centre wire is to be passed through the calico. A piece of tape is then attached to those corners of the calico which are to be fastened to the extremities of the cross piece of wood, and another piece of tape is fixed to the wood itself. When these are tied, and the calico drawn tight, the kite is fit for use. Not more than two minutes are required to put the whole apparatus in working order, and less time than that, even, will suffice to undo it and make it portable again.

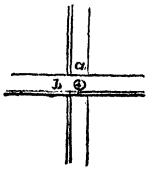


Fig. 2.

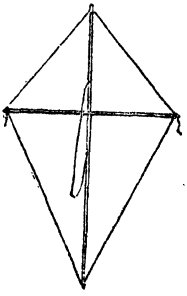


Fig. 3.

KNEE, AFFECTIONS OF.—This joint is, fortunately, so securely guarded and bound together by external and internal ligaments, as to be very rarely dislocated; and most fortunate for man it is so, as from those reasons, and other causes, its reduction is a matter of extreme difficulty. The knee-cap, however, is very liable to injury, and sometimes fracture; though in general this joint suffers most from blows and falls, in which case considerable inflammation takes place, attended with great heat, pain, and swelling. Such a state of the joint should be immediately treated by applying six or twelve leeches, encouraging the bleeding by hot fomentations of water, and after by hot sugar of lead lotions, and the limb kept as quiet as possible. After three or four days of such treatment, friction may be applied, by rubbing in some lard with the hand, so as gently to restore tone and strength to the part.

The knee-joint is particularly liable to a species of chronic enlargement, sometimes perfectly harmless, and which consists only of a thickening of the ligaments and capsule of the joint, and for which rest, and the following ointment, rubbed well in twice a day, will generally be found a perfect cure:—Take of

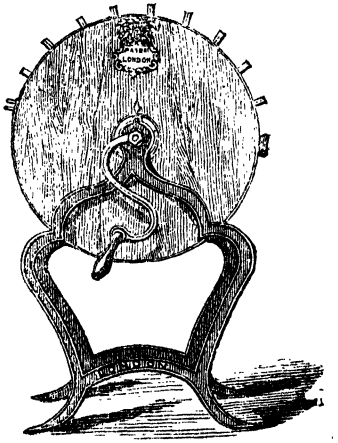
Camphor	1 drachm.
Iodine	1 scruple.
Spermaceti ointment .	1 oz.

Mix. Sometimes, however, when the constitution is diseased, these swellings become malignant, and yield to no remedy short of surgery; of this kind is the disease of the knee known as white swelling. But for all ordinary affections of this part, either hot fomentations, cold lotions, leeches, and the above ointment, will be found sufficient.

KNIFE-BOARD.—The construction of a board on which to clean knives is very simple. Cover a deal board about four feet long, one foot wide, and an inch in depth, with thick buff leather, on which put emery one part, crocus martis three parts, in very fine powder, mixed into a thick paste with a little lard or sweet oil, and spread on the leather to the thickness of a shilling; this kind of board gives a far superior edge and polish to knives, and will not wear the blades nearly so much as the common method of using brick-dust on a board. When, however, the ordinary brick-dust boards are used, they should be provided with a stiff brush for cleaning the forks, at one end; and at the other end should be a box with the open end towards the hand, and a sliding lid; this should contain a bath-brick, leathers for forks, &c. A hole should also be bored at one end, and a string inserted, by which the board may be hung up out of the way when not in use.

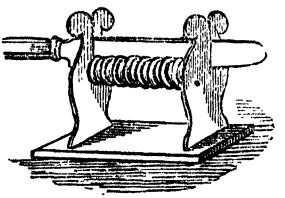
KNIFE CLEANING.—In cleaning knives by the aid of the ordinary board, the knives should be previously washed and wiped thoroughly dry, the bath-brick is then to be rubbed briskly over the board several times until a sufficient quantity of the dust is produced. The knife is then brought to bear upon the board with the edge of the blade towards the cleaner; it is then passed backwards and forwards with a quick motion, and when that side is done, the blade is reversed and the other side cleaned; as they are finished they should be placed in the box, and when the whole operation is completed, they should be wiped separately and carefully, so as to remove any dust adhering to them. During the last few years an implement known as a knife cleaner has been introduced, by which a great deal of

the labour and time employed by the old method is saved. This implement consists of a series of brushes arranged within a revolving case, and when the knives are to be cleaned they are inserted within this case at certain distances, the machine is then set



in motion, and in a few seconds the knives may be taken out perfectly cleaned. The only objection to this ingenious contrivance is, that it destroys the blade in a shorter time than in the ordinary method; the amount of friction brought to bear upon it to produce the polish, wearing down the metal. Where, however, this is not regarded as of importance, and the saving of time and labour is the first consideration, and a perfectly clean knife the second, nothing can be better than the knife cleaner as thus described; and, indeed, to large establishments, such as hotels, commercial houses, schools, &c., where the number of knives used is very considerable, this modern introduction must prove invaluable. A powder is sold with this implement, to be used according to the directions given. The prices of the knife cleaners vary with their size and capacity, for a small family one may be obtained for about four guineas, the prices gradually increasing to fifteen pounds.

KNIFE SHARPENER. — Few things prove a greater drawback to the enjoyment of a dinner than a blunt knife; whilst, to a carver who has to perform his operations under such circumstances, the result is embarrassing and vexatious in the extreme. Some carvers, very unreasonably, never trouble themselves about the state of the knife with which they are to operate, until the dinner is served; and then, when the guests are expecting to be helped, several precious moments are wasted in putting an edge on the knife, which ought clearly to have been done previously. The mode of sharpening the carving knife by a steel is at all times inelegant, and requires great dexterity to produce the desired effect. An excellent kind of knife sharpener is that shown in the engraving, which consists of two steel cylinders, placed parallel to each other, and revolving upon their axes. Each cylinder has protecting rings of hard steel,



the edges of which are grooved finely. The edges of the rings in the opposite cylinder overlap each other, as at *b*, by the rings of one cylinder falling between those of the other. If the edge of the knife be drawn from hilt to point between the cylinders, at their junction, a good edge will be given to it by the action of the sharp grooves on the rings, which act like a file.

KNIVES, CARE OF. — Knives may be preserved for a long time with a little care. When not in common use, the blades should either be rubbed over with mutton suet, or the knives kept in a wooden box containing sifted quicklime, care being taken that the blades only touch the lime. When knives are placed in hot water, the blades only should be immersed, and for this purpose, a jug or pot of the same depth as the blades of the knives should be employed. If the handles become loose, make a cement of brick-dust and melted rosin mixed together, and apply it to the defective handle. Handles of ebony should be cleaned with a soft cloth dipped in a little sweet oil; and after resting awhile with the oil on them, let them be well wiped with a clean towel. Ivory or bone handles ought to be washed with a soaped flannel and lukewarm water, and then wiped with a dry towel. To preserve or restore their whiteness, soak them occasionally in alum-water that has been boiled, and then suffered to grow cold. Let them lie for an hour in this mixture, then take them out, and brush them well with a small brush, and afterwards take a clean linen towel, dip it in cold water, squeeze it out; and while wet, wrap it round the handles, leaving them in it to dry gradually.

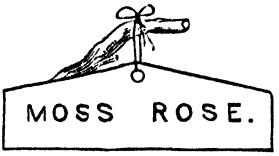
KNITTING.—Books: *Cooper's Knitting and Crochet*, 1s.; *De la Brachandiere*, 2s. 6d.; *Cassell's Ladies' Book*, 2s. 6d.; *Gaugain's Novelties*, 2s. 6d.; *Mee's Manual*, 5s. 6d.; *Flohr's German*, 7s. 6d.; *Savage's Knitting, Needlework, and Crochet*, 1s. 6d.; *Gaugain's Knitting, Netting, and Crochet*, 16s.; *Watt's Selections*, 1s.; *Ronaldson's Knitting Book*, 2s.; *Babies' Wardrobe*, 6d.; *Miland's Ladies' Book*, 4s. 6d.; *Clarke's Handbook*, 1s.; *Cassell's Work Book*, 2s. 6d.; *Lambert's Knitting Book*, 1s. 6d.; *Copley's Comprehensive*, 7s. 6d.; *Mee's Exercises*, 1s. 6d.; *Floral Book*, 1s.; *Owen's*

Handbook, 1s.; *Lambert's Ladies' Pocket Book*, 1s.; *De Berre's Knitting Made Easy*, 1s.; *Flohr's Treatise*, 7s. 6d.; *Sherwood's Designs*, 6d. *each*; *Brachandiere's Child's Knitting*, 6d.; *Hope's Knitter's Casket of Receipts*, 1s.; *Hope's Knitter's Friend*, 1s.; *Gaugain's Knitter's Friend*, 2s. 6d.; *Ladies' Cabinet Knitted Designs*, 6d. *each*.

L.

LABEL.—In the practice of horticulture, labels are necessary for indicating the names and positions of various plants. Many forms and substances are adopted for labels. For general use they should embrace among their good qualities cheapness, durability, facility of being written upon, and legibility. The most unpretentious kind of label, and one answering every necessary purpose, may be made of a small piece of deal, planed smooth, painted white, and written on with a blacklead pencil, as in *fig.* 1. If the label be fastened to the plant by a shred

Fig. 1.



of thin lead, it retains any desired position. When required for a seed-bed, a small stake is to be driven into the ground, and from it the label is to be suspended. The stamped numbering instrument is formed in various ways; the simplest and most economical are triangular slips of lead: for plants in pots they need not be longer than three inches, or broader at the head than half an inch. On these the number is stamped with a type, or the name at length may be stamped in the same manner. Such labels are durable, unobtrusive, and not so readily driven out of pots as those of wood. Leaden tallies are chiefly used for small plants in pots, and every gardener may cast them for himself. The advantage of leaden tallies over iron ones is, that they retain the names painted on them for a much longer time; and their superiority to wooden ones consists in their being much more durable. Named tallies consist of a cast-metal standard, with a long square head, in the front of which is a hollow box, into which a ticket, with the name written on it, is put; a piece of glass, cut to the proper size, is then fitted in over the name, and fastened with putty, like the pane of a window. The ticket on which the name is written may be of wood, tin, or earthenware; but wood is preferable, because it can be easily written upon by a carpenter's blacklead pencil, and also because it is not liable to rust. An imitation of this label, on a small scale, for pots (*fig.* 2), has been made of terro-metallic earth. *The mode of naming or registering by series*, is done by marking down the names in a book or on the plant, without the use of labels at all. Thus, suppose the east side of an east wall is to be planted with fruit trees begin at the south corner, and write down under that title the sort of trees in the order in which they are planted, placing in the list a number against each name, in regular series. Suppose that you afterwards want to find which tree is the golden pippin, then looking in the list, that name is found opposite No. 9; counting nine, therefore, from the south corner, will give the tree as indicated.

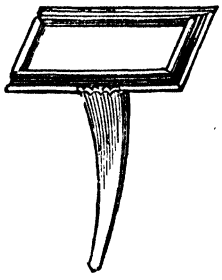


Fig. 2.

LABELS, FOR BOTTLES, &c. — Labels which are insoluble, and capable of resisting the action of oils, spirits, water syrups, and dilute acids, may be obtained as follows: Lay a coat of strained white of egg over the label (an ordinary paper one), and immediately put the vessel into the upper portion of a common steam-pan, or otherwise expose it to a gentle heat, till the albumen coagulates, and turns opaque; then take it out, and dry it before the fire or in an oven, at a heat of about 212 degrees; the opaque white film will then become hard and transparent. The labels or bottles containing strong acids or alkaline solutions, should be either etched upon the glass by means of hydrofluoric acid, or be written with incorrodible ink.

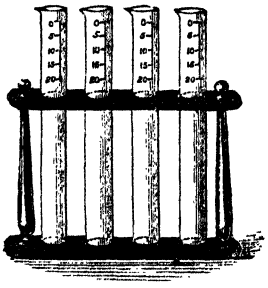
LABURNUM.—This family of ornamental shrubs belongs to the pea tribe, to which they are allied by the similarity of their organs of fructification. They may be considered rather as shrubs than as trees, and are very ornamental from the handsome form of their leaves, and the beauty of their dependent gay-coloured flowers. The tree laburnum produces a timber, much prized by cabinet makers and turners for its hard, compact, durable structure. Hares and rabbits are so fond of the bark of this species, that it is frequently planted on the outskirts of other plantations, in order to protect the more valuable trees. Though eaten to the ground in winter, it will spring again next season, and thus afford a constant supply for these animals, so as to save the other trees till of a size to resist their attacks. The seeds or peas of the laburnum possess narcotic properties, and have sometimes proved poisonous to chil-

dren when eating them. They excite nausea, vomiting, great heat of the stomach, fever, a dry mouth, and after a time a fatal collapse. Although they excite vomiting, yet the stomach should be cleared of the seeds by an emetic, and acidulated liquids afterwards administered.

LACE, TO CLEAN.—*For point lace.* Fix the lace in a prepared tent, draw it straight, make a warm lather of Castile soap, and, with a fine brush dipped in, rub over the point gently; and when it is clean on one side, do the same to the other; then throw some clean water on it, in which a little alum has been dissolved, to take off the suds; and having some thin starch, go over with the same on the wrong side, and iron it on the same side when dry; then open it with a bodkin, and set it in order. To clean point lace, if not very dirty, without washing: fix it in a tent as the former, and go over with fine bread, the crust being pared off; and when it is done, dust out the crumbs, &c. *For white silk lace or blonde.* Take a black bottle covered with clean linen or muslin, and wind the blonde round it, securing the ends with a needle and thread, not leaving the edge outward, but covering it as you proceed. Set the bottle upright in a strong cold lather of white soap and very clear soft water, and place it in the sun, having gently with your hand rubbed the suds up and down on the lace. Keep it in the sun every day for a week, changing the lather daily, and always rubbing it slightly when the suds are renewed. At the end of the week take the blonde off the bottle, and pin it backward and forward on a large pillow, covered with a clean tight case. Every scollop must have a separate pin; or more, if the scollops are not very small. The plain edge must be pinned down also, so as to make it straight and even. The pins should be of the smallest size. When quite dry, take it off, but do not starch, iron, or mess it. Lay it in long loose folds, and put it away in a pasteboard box. *To wash thread lace.* Rip off the lace, carefully pick out the loose bits of thread, and roll the lace very smoothly and securely round a clean black bottle, previously covered with old white linen, sewed tightly on. Tack each end of the lace with a needle and thread, to keep it smooth; and be careful in wrapping not to crumple or fold in any of the scollops or pearlings. After the lace is on the bottle, take some of the best sweet oil, and with a clean sponge wet the lace thoroughly to its inmost folds. Have ready in a wash-kettle a strong cold lather of clean water and white Castile soap. Fill the bottle with cold water, to prevent it bursting, cork it well, and stand it upright in the suds, with a string round the neck, secured to the ears or handle of the kettle, to prevent its rolling about or breaking while over the fire. Let it boil in the suds for an hour or more, till the lace is clean and white all through. Drain off the suds, and dry it on the bottle in the sun; when dry, remove the lace from the bottle, and roll it round a wide ribbon block; or lay it in long folds, place it within a sheet of smooth white paper, and press it in a large book for a few days.

LACQUERING.—The name given to a thin varnish applied to brass work, such as handles of locks, door plates, &c., to prevent their tarnishing. Brass work may be relacquered in the following manner. The metal should be just warmed, and a lacquer laid over it evenly with a soft brush, as follows:—Put an ounce of turmeric, two drachms of anatto, and two drachms of saffron into a pint of alcohol; agitate it occasionally during a week, and then filter it into a clear bottle. Add to this three ounces of clean seed-lac, and shake up the bottle now and then during a fortnight. For a lacquer to give tin, or articles covered with silver leaf, the appearance of brass. Melt, in several vessels, two ounces of gum-lac, and eight ounces of amber; mix them well together, and add half a pound of drying linseed oil. Digest in a pint phial a little saffron in half a pint of oil of turpentine; strain this liquor, and add to it some gum tragacanth, and anatto, finely powdered. Mix this last compound with the former, and shake them well. It is by this varnish that leather is made to appear as if gilded, after it has been covered with silver leaf. *To clean lacquered articles:* brush them with soap and warm water, wipe them, and set them before the fire to dry; finish with a soft cloth. By this simple means may be cleaned ormolu and French gilt candelabra, branches, and lamps; mosaic gold and gilt jewellery, toys, and ornaments. Care is requisite in brushing the dirt from fine work, and finishing it quite dry. Anything stronger than soap, as acids, pearlash, or soda, will be liable to remove the lacquer.

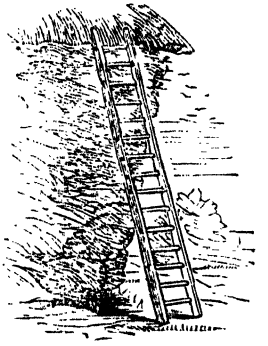
LACTOMETER.—An instrument used in dairies for measuring cream. Three or four glass tubes, about a foot high, divided into 100 parts, and graduated near the upper



ends, are loosely supported in a wooden stand, and filled with the milk warm from the cow, one being devoted to each sample to be examined. The scale is generally extended down one-fifth of the tube, and this will nearly always suffice; but in some cases,

the amount of cream is much greater than this. After standing twelve hours, the cream has all risen to the surface, and the figure opposite its lower edge marks the per centage of cream to milk. Thus, supposing it stands at the figure 10, then there is ten per cent. of cream; or if at 5, then only five per cent., and so on. The average of cream appears to be about eight or nine per cent., but in different breeds and pastures, it will vary greatly from that amount. Provided with the hydrometer to measure the amount of curd, and with the lactometer the proportion of cream, the dairyman will be able to ascertain whether the cows he has are worth keeping, or whether he ought to make an attempt at bettering himself by getting rid of them and purchasing others.

LADDER.—A well-known construction by which persons are enabled to ascend to certain heights from the ground. A ladder should always be kept upon the premises, as it will be found convenient in many emergencies, and frequently in cases of fire, will be the means of preserving life. In order that the ladder may be placed out of the way, and yet always ready at hand, it should be suspended upon two or more strong iron hooks driven into the garden wall, or the boarding of an outhouse. Ladders are most useful implements about a farm-steading. They are best formed of tapering Norway pine spars, sawn up the middle. A useful form of ladder for farm purposes is shown in the accompanying figure, where the rounded form of the Norway spar is placed outermost,



though it is as often placed innermost. These spars are connected together by steps of clean ash, pushed through auger-made holes in the spars, and rendered firm by means of wedges driven into the outside ends of the steps. The steps are nine inches apart, sixteen inches long at the bottom, and thirteen inches long at the top, in a ladder of fifteen feet in length, which is the most appropriate size for the use of a stack-yard. To prevent the ladder from falling to pieces, in consequence of the shrinking of the round steps, a small rod of iron is placed under the upper, middle, and lower steps, where one of its ends is passed through each spar, and held firmly there by means of a shoulder on the inside, and a nut and screw on the outside of each end of the rods. When properly finished and painted, such a ladder will last for many years. Some dexterity is required to set a long ladder on end, as also to carry it from one place to another. To place it in a perpendicular position, its lower or heavy end should be pushed against any object capable of resisting its slipping on the ground; and on its light end being elevated arm's length above the head, the position is kept good by another person taking a step between the prongs of a fork, by means of which, that end of the ladder is still more elevated, while it is still increased by the first person pushing arm's length, simultaneously, against one step after another, till the perpendicular position is gained. A long ladder is carried from one place to another in this way, provided the distance be short. Set the perpendicular edge of the ladder against the right shoulder, and then take hold of a step with the right hand, and raise the ladder steadily by it a little from the ground, while to retain the perpendicular position, grasp a step above the head firmly with the left hand, and then walk steadily forward. A ladder may be moved along the ground for a short distance while standing in a perpendicular position, by holding a spar in each hand at arms' length, and then moving first one foot of the ladder in advance and then the other, till the spot is gained. A long ladder is brought down from the perpendicular to the horizontal position, by placing it against a stack or any other object which will resist its foot slipping on the ground, and allowing it to come to the inclined position against the arms, with the hands stretched above the head; the ladder will then approach the horizontal position the farther the person recedes from its lower end, the upper end being supported by another person with a long fork.

LADY.—The title of lady, like that of gentleman, admits of wide application, and may be claimed by any female, whose manners and address distinguish her above the ordinary class. There is a great charm about a ladylike person, which materially adds to beauty, and goes far to compensate for this latter quality where it is wanting. To arrive at this position, a female must avoid everything in the shape of vulgarity and bad taste, whether in connection with her actions, her speech, or her attire, the latter especially must be regulated by good taste; eschewing all sorts of display, gaudiness, and inappropriateness. In a word, a female who wishes to be regarded as a lady must take good sense and propriety as her guide, and not suffer herself to be led away by any meretricious attractions, or determined by an unworthy standard.

LADY'S MAID.—The duties of the lady's maid, if not arduous, are unremitting, between the attendance on the toilet and the charge of the wardrobe of her lady. Her daily occupations commence with arranging the dressing-table, after the dressing-room has been dusted and swept by the house-

maid. After setting out and preparing everything which may be required, she awakens her lady at the proper hour, and then retires till summoned by the bell to attend her, to brush, comb, and dress her hair, and to assist in the completion of the morning toilet. After replacing or putting away everything which has been used, she next directs her attention to the state of the wardrobe; occupying herself in making new, or repairing any old articles of apparel, until her lady again requires her attendance, either in preparing for riding, walking, or dressing for dinner. At night, also, she arranges everything for the retiring of her lady, as she did in the morning for her rising. By this routine of duties it will be seen that a lady's maid should possess distinct qualifications from any other member of the establishment. Her taste in dress should be cultivated, or she will be unable to judge in the dressing-room of the effect which the *tout ensemble* of the lady's costume will have in the drawing-room. She should acquire a knowledge of the most agreeable combination of colours, and of the effects which these produce upon different complexions. If she have also a ready perception of the proper *set* of each part of a lady's attire, and have the art of giving this effect or air, to the dress of her employer, she may be regarded as a skilful tirewoman. It is this art which gives more style and elegance to dress than the costliness of the materials, and supplies the finishing stroke to that which would otherwise be unfinished. The art of applying cosmetics should also be understood by the lady's maid, and it should be especially ascertained how far these agents are innocent or injurious. The charge of the wardrobe requires that in dress-making and millinery she should be a proficient. As a sempstress, expertness in making and repairing linen and other articles will be expected from her; and she should consider that the contents of the wardrobe being under her care, she ought to be capable of using her needle in whatever way the different articles in it may require. Clear-starching, getting up laces and nets, washing gauzes, crape, and silk-stockings, removing fruit-stains or soils from silks, preserving furs, woollens and other worsted clothing from moths, are all included in the duties of a lady's maid. Nor must she neglect to note the quantity of linen sent to and returned from the laundry, nor to make occasional comparison of the contents of the wardrobe with the inventory given to her on entering the service of her employer. Should she be the attendant of an elderly or infirm lady, it may be requisite for her to read aloud agreeably, and to write neatly—acquirements which may be easily gained with diligence and attention.

LAMB.—As a food, lamb is milder, more delicate, and less exciting than mutton; the flesh is white, tender, and gelatinous. Lambs are sometimes fatted on grass for the butcher, and sometimes reared by suckling, or by hand, on milk. Those which are suckled by the mothers and fattened in houses, and hence called *house lambs*, are the earliest in the spring season, beginning to be ready in December and continuing till February. If lambs are allowed to suckle by their mothers for six months or a little more, the flesh becomes more nourishing and digestible than if they are weaned at two months, as they frequently are. The best lambs for the table are those which have been nourished from the milk of the mother alone; but the fattest are those which have sucked from several ewes at the same time. The grass-fed lamb comes next in season, in April and May, and continues till Christmas. Of all the kinds of lamb those known as the Southdown are the best, and they may be known by their black legs and faces, which are generally left on to mark their superiority. The freshness or staleness of lamb are the chief points to be attended to in purchasing it. In choosing the fore quarter, the vein in the neck should be ruddy, or of a bluish colour. In the hind quarter, the knuckle should feel stiff, the kidney should be small and perfectly fresh. Perhaps the best judgment of all may be formed from the eyes; as long as they are full and bright, the buyer may rest assured that the lamb has been recently killed. In order to keep lamb sweet, the joints should be carefully wiped every day, and, in warm weather, sprinkled with a little pepper.

LAMB BAKED.—Half roast either a neck or loin of lamb, then cut it into steaks; boil half a pound of rice in water, for ten minutes, and put to it a quart of good gravy, with some nutmeg and two or three blades of mace; stew it over a slow fire until the rice begins to thicken; then take it off, stir into it a pound of butter, and when quite melted, add the yolks of six eggs, well beaten; butter a dish all over, put a little pepper and salt to the steaks, dip them in the melted butter, and lay them in the buttered dish; pour upon them the gravy which comes from them, and then the rice; pour over the yolks of three eggs well beaten, bake it in an oven for rather more than half an hour.

LAMB BLANQUETTE.—Roast a leg of lamb, and when cold remove all the skin and nerves, and cut the flesh into pieces of about the same size and thickness, cut off the angles so as to make the pieces nearly round, beat them with the handle of a knife, and put them into a saucepan with some fried mushrooms, a quart of good stock, and a little pepper; set the saucepan over the fire for a few minutes, thicken the contents with the yolks of two eggs; make it quite hot, and serve with sippets.

LAMB, BREAST OF, STEWED.—Cut the flesh into pieces, season with pepper and salt, and stew it till tender, in sufficient gravy to cover the meat, then thicken the sauce and pour in a glass of sherry; serve on a dish of stewed mushrooms.

LAMB CHOPS.—Having cut a neck or a loin of lamb into chops, rub them over with the yolk of an egg, well beaten; then grate some bread, finely, and mixed with some chopped parsley; a little lemon-peel, pepper salt, and a very small quantity of nutmeg sprinkle this over the chops; after which

fry them of a good colour, and serve with a sauce made of the trimmings of the chops, a piece of butter floured, and a little mushroom ketchup. They may be served with gravy, if preferred. To dress lamb chops with potatoes, cut the back ribs of a large lamb into handsome chops, trimming off the bone with a chopping knife. Season and brush the chops with a well-beaten egg; dip them in crumbs and minced parsley, and fry them delicately. Place mashed potatoes high in the centre of a dish, score them neatly, and lay the hot chops around, leaning each chop towards the side of the adjoining one. A finely-minced onion may be added to the mashed potatoes, if its flavour be approved. The ordinary method of dressing lamb chops, is simply to cut chops from the loin of about half an inch in thickness, retaining the kidney in its place; dip them into egg and bread crumbs, fry and serve with fried parsley.

LAMB COLLOPS.—Cut the collops very thin; beat, marinade, and fry them; dredge them with flour and spice, and sprinkle them with sweet herbs; put them into a stewpan, with two or three spoonfuls of water or stock, boiled up in the frying-pan; pour it over the collops, add some thin quartered slices of lemon, or a handful of finely-minced parsley; simmer, dish, and garnish with lemon.

LAMB CUTLETS.—These may be prepared in a variety of ways, as follows: 1. Set the cutlets in butter, in a stewpan over the fire, taking care that they do not burn; take them out, let the butter cool; mix it with the yolks of two eggs beaten well; moisten the cutlets with a little gravy, strew bread crumbs over them, and stew them over a slow fire. Serve with gravy, and the juice of a lemon. 2. Take the cutlets from the best end of the neck, cut them thin with one bone to each; trim off the fat and all the skin, scrape the bones very clean that they may appear white, and season the cutlets with salt and pepper; brush them with egg, dip them into very fine bread crumbs, then into clarified butter, and again into the bread crumbs; broil them over a very clear and brisk fire, till they attain a delicate brown colour; press them between two sheets of white blotting-paper to extract the grease; dish them in a circle, and pour into the centre cucumber sauce. 3. Take thin cutlets from a leg of lamb, and put them into a stewpan; make a sufficient quantity of good stock with the bones, shank, &c., to cover the cutlets, put it into the stewpan and add a bunch of sweet herbs, an onion, and some clove and mace enclosed in a muslin bag, let them stew gently for ten minutes. Take out the cutlets, skim off the fat, and also take out the herbs and spice; thicken the stock with butter rolled in flour, season it with salt and a little cayenne pepper; add a few mushrooms and truffles; make some forcemeat balls and add them, also the yolks of three eggs beaten up in half a pint of cream, and some grated nutmeg; keep stirring the same way until it is thick and smooth, and then put in the cutlets; give them a toss up, take them out with a fork, and lay them on a dish; pour the sauce over them, and garnish with beet-root and lemon.

LAMB, FORE QUARTER OF, ROASTED.—This is considered the prime part of lamb. It should be roasted before a clear brisk fire, and basted with butter carefully and plentifully from the moment of its becoming warm, until it is thoroughly done; although, however, it requires quick roasting, it should never be placed sufficiently near the fire to endanger the fat, which is very liable to catch or burn.

LAMB HASHED.—Rub a piece of butter into some flour, with the point of a knife, until it is well mixed; then put it into a stewpan with some mushrooms cut in pieces, and a bunch of herbs; moisten with stock, and let it stew gently till the sauce is nearly consumed; cut up some cold roast lamb into slices, and put them into a stewpan with the yolks of four eggs beat up with some milk; let it thicken over the fire, but do not allow it to boil; dish and serve with the juice of a lemon over it.

LAMB, HIND QUARTER OF, ROASTED.—This may be roasted in the same manner as the fore quarter, or as follows: lard it, and cover it with oiled paper; when rather more than half-done, withdraw the paper, baste the joint with yolk of egg, and slightly strew it with bread crumbs; then put it nearer to the fire to give it a fine brown; when served, sprinkle it with lemon-juice.

LAMB, LEG OF, BOILED.—Put the joint into a saucepan containing sufficient clear soft water to cover it; let it remain for half an hour; then add a tablespoonful of vinegar, and half a handful of salt; put the leg of lamb into a thin white cloth which has been floured, and boil it; a bundle of sweet herbs may also be thrown into the saucepan; if served hot garnish with parsley, and thin slices of lemon laid around the dish; if not sent to table until it becomes cold, tastefully arrange sprigs of parsley around it.

LAMB, LEG OF, FORCED.—Carefully take out all the meat with a sharp knife, and leave the skin whole with the fat on it; convert the lean which has been cut into a forcemeat, thus: to two pounds of meat add two pounds of beef suet chopped small, and beat it in a marble mortar till it is very fine; take away all the skin off the meat and suet, and mix it with four spoonfuls of grated bread, eight or ten cloves, four or five blades of mace dried and beaten fine, half a nutmeg grated, a little pepper and salt, some lemon-peel cut fine, a small portion of thyme and parsley, and four eggs; mix all together and put it into the skin so that it may assume its original form; sew it up, roast it, and baste it with butter, and serve with stock cut from the loin and fried in gravy.

LAMB, LEG OF, ROASTED.—This joint should be roasted gradually, commencing at a distance from the fire, and gradually placing it nearer; it should be well basted, dished hot, and served with mint sauce.

LAMB, LEG OF, STEWED.—Choose a small plump leg of lamb not greatly exceeding five pounds in weight; put it into a

vessel nearly of its size, with a few trimmings or a bone or two of undressed veal; cover it with warm water, let it boil slowly, clear off the scum with great care, and when all is skimmed off, add a bunch of thyme and parsley, and two carrots of moderate size. Let the lamb simmer only, but without ceasing for an hour and a quarter; serve it covered with bechamel, or rich English white sauce, and send a boiled tongue to table with it, and a portion of the same in a tureen. The same joint is also a very nice dish when stewed with peas as follows:—Stew a leg of lamb in some stock or beef braise. When sufficiently done, take it out, put it into a slow oven and glaze it three or four times; then have some young green peas well stewed, with some bechamel sauce. Pour them on the dish, lay the leg on the top, cut the loin into cutlets and fry them in butter and rich gravy; when nearly done, shake them well in their glaze, dish round the lamb over the peas, and serve them hot.

LAMB, LOIN OF, STEWED.—Wash the joint, and wipe it very dry; skewer down the flap, and place it into a close-shutting and thick stewpan or saucepan, in which three ounces of butter have been just dissolved, but not allowed to boil; let it simmer slowly over a very gentle fire for two hours and a quarter, and turn it when it is rather more than half-done. Lift it out, skim and pour the gravy over it; send asparagus and brown gravy to table with it.

LAMB PIE.—This pie should be made of the loin, neck, or breast. It should be very lightly seasoned with pepper and salt, and the bones should be taken out, but not the gristle; a small quantity of jelly gravy may also be put in hot, but the pie should not be cut till cold; put in two spoonfuls of cold water, cover with a rich puff paste, and bake of a light brown.

LAMB RAGOUT.—Free the flesh of any part of lamb from the bones, and cut it into pieces; lard it with bacon fried of a light brown, stewed in mutton gravy sufficient to cover it, and seasoned with sweet herbs, pepper, salt, and spice; half an hour's stewing will be sufficient. Strain off the gravy (keeping the lamb hot), and add to it some oyster fried brown, half a glass of port wine, a few mushrooms, and a piece of butter rolled in flour; boil these together for a few minutes with the juice of half a lemon. Lay the lamb in a dish, and pour the sauce over it.

LAMB, SADDLE OF, ROASTED.—This is an exceedingly nice joint for a limited party. It should be roasted at a brisk fire, and kept constantly basted with its own dripping; serve it with mint sauce, cucumber sauce, and a salad.

LAMB, SHOULDER OF, BRAISED.—Bone a small fat shoulder of lamb, leaving only about an inch and a half of the knuckle. Mince a little of the meat from the inside with some bacon fat, pepper, and salt, and lay it on the inner side. With a large needle and coarse thread, gather together the circumference of the meat, press it flat, and fasten the little bone as a handle in its proper place. Then lay at the bottom of a stewpan a large sliced onion, half a lemon without any of the peel, three small carrots cut lengthwise, and one clove; on these lay the lamb, and around it put strips of bacon; throw in a little parsley, and cover the meat with veal broth. Set the pan on a very slow fire, and plain wood embers on the lid. Simmer for two hours. Keep the meat hot while the gravy is being strained, and add to it a little *velouté*; boil very quickly, and pour it over the lamb. It may be served with either cucumber or tomato sauce.

LAMB, SHOULDER OF, FORCED.—Take out the bone from the shoulder, and be careful in removing it, not to cut a hole through the skin; when this is done, fill up the vacancy with some good veal forcemeat, covering it with fat bacon or ham; then put it into a good braise and let it boil gently for about an hour, and when required glaze it well; after the forcemeat has been put in and the incision sewed up, it may either be made into the form of lamb, or made to resemble a swan by adding the shank bone for a neck, and forming the beak or bill of paste; if plain, put an ornamented paper ruffle round the shank bone. It may be served with peas, spinach, or asparagus, and with cucumber or sorrel sauce.

LAMB, SLICES OF, FRIED.—Cut some cold lamb into slices, season and fry them; when done, put them in a dish, and pour over them melted butter; then put a little flour into a saucepan, with some beef stock and a little walnut pickle; let this boil and keep continually stirring. Serve the slices in this sauce, and garnish with fried parsley.

LAMB STEAKS.—To dress the steaks *white*, stew them in milk and water till very tender, with a bit of lemon-peel, a little salt, and some pepper and mace. Have ready some veal gravy, and put the steaks in it; mix together some mushroom powder, a cupful of cream, and a little flour; shake the steaks in this liquor, stir it, and let it become quite hot, without suffering it to boil. Just before it is dished up put in a few white mushrooms. To dress the steaks *brown*, season them with pepper, salt, nutmeg, grated lemon-peel, and chopped parsley; but dip them first into egg; fry them quickly. Thicken some gravy with a little flour and butter, and add to it a tablespoonful of port wine.

LAMB, TO CARVE.—The principal joint of lamb is that known as the fore quarter, to carve which the shoulder must be divided

and raised entirely from the breast in the direction of the letters *a b c d*. A slice of

butter sprinkled with cayenne and salt is then usually laid between them, and a little lemon-juice is added. The shoulder may then be removed or not into another dish, as is most convenient. The brisket is next separated from the long bones in the line *e, f*, and carved in the direction *g h*; the rib-bones are divided from *i i* to *j j*. The choice of the different parts is offered in serving them. For the various other joints, as the leg, shoulder, &c., see MUTTON, TO CARVE.

LAMB'S BRAIN CAKES. — Take the brains, and remove any blood, &c., that may be among them, chop them small, and add salt, nutmeg, and pepper, a little raw egg, and flour enough to cause them to adhere together; mix thoroughly, form into cakes about the size of a crown piece, and fry them brown on both sides with lard.

LAMBS' EARS.—Take about a dozen lambs' ears and braise them till they are tender, chop a large handful of sorrel, and stew it in a little stock with a small piece of butter added; pour in a teacupful of callis, season with pepper, salt, and grated nutmeg; stew for a minute, then twist the ears up neatly and serve.

LAMBS' FEET. — After having well scalded and cleaned the feet, take the bones out and put the meat into a stewpan, with five or six tablespoonfuls of velouté and some chopped parsley, thicken the sauce with an egg, and put it over the feet, shaking the stewpan well; add a little lemon-juice and whole pepper; if the feet are bought in a parboiled state they will require but little stewing, and must not be allowed to boil.

LAMB'S HEAD.—Boil a lamb's head and a lamb's pluck till tender, taking care not to dress the liver too much; take out the head and score it in every direction with a knife. Then grate some nutmeg over it, and lay it on a dish before a brisk fire; strew over it bread crumbs, sweet herbs rubbed, a little lemon-peel finely chopped, and a slight seasoning of pepper and salt; add a little butter and flour, and just as it is done baste and dredge it; chop half the liver, the heart, the lights, and tongue, very small, and add to these about eight tablespoonfuls of gravy or water; then shake some flour over the meat and stir it together; put into the gravy or water a large piece of butter rolled in flour, a little pepper and salt, and the gravy that runs from the head, into the dish; simmer them all together for a few minutes, and add half a spoonful of vinegar; put it into the dish and place the head in the midst of the mince-meat; have ready the other half of the liver cut into thin slices, with some rashers of broiled bacon; lay these around the head, garnished with lemon, and serve.

LAMB'S HEAD STEWED. — Take out the brains and make a forcemeat of them; boil it, and when cold cut it into pieces; then mince some lamb and beef suet together with the brains; add some grated bread, season with salt, pepper, and sweet herbs minced small; add four or five raw eggs; fill the lamb's head with these, then put it into a stewpan, and let it stew with some good stock; make the remainder of the mincemeat into balls, and serve with the stewed head.

LAMB'S LIVER.—Cut a sound fat liver into long thin slices, soak them in water, dry them in a cloth, and flour them; fry of a rich brown in plenty of fresh butter or lard; minced shalots or young onions, with cayenne and pepper may be added to the fry; serve with hot gravy and stewed cucumbers, or with cucumber sauce; garnish with fried parsley.

LAMB'S SWEETBREAD CUTLETS —Blanch the sweetbreads for about ten minutes, and put them to cool in cold water: then take them out, and dry them in a cloth; cut lengthwise twelve or fourteen pieces for cutlets; lay the cutlets in the pan with some fresh butter or lard, add a little lemon-juice, and a slight seasoning of pepper and salt; when done take them up and lay them upon white paper, in order that the grease may be absorbed; dish them thin, with the sauce poured over them.

LAMB'S SWEETBREAD PIE.—Take eight lamb sweetbreads, soak out all the blood from them, and cut them into small thin pieces; trim them all to the same size and shape; take a quarter of a pound of butter, the same of grated bacon, a dessertspoonful of parsley, two of mushrooms, and one shalot, all minced small; add a slight seasoning of pepper, salt, and nutmeg; when the butter is melted put the sweetbreads into this, and simmer them for twenty minutes over a moderate fire, turning them frequently, in order that both sides may be equally done; make a good raised crust, at the bottom and around the sides of which lay in some forcemeat; put the sweetbreads cold on this, add to them the herbs in which they were cooked, together with two bay leaves, and some slices of bacon; cover with a crust, and place it in a brisk oven; as soon as the top is of a light brown colour, cut round the edge and cover it with a large piece of paper folded four times; an hour and a half will be sufficient to bake it; then take off the top, remove the bay leaves and the bacon, drain away the fat, pour in some rich gravy mixed with any sauce preferred, and serve.

LAMBS' SWEETBREADS, STEWED. —Make a forcemeat of the tenderest parts of boiled or roast fowl, some bacon, a little parsley chopped, thyme, lemon-peel, the yolks of two eggs, and a seasoning of cayenne pepper and nutmeg; put the sweetbreads into a pan upon a layer of slices of veal, cover them with slices of bacon, add a bunch of sweet herbs, an onion sliced, a little mace, and pepper and salt; pour in a quart of good broth, and stew for two hours; remove them, and reduce, by boiling the broth, to a fourth; heat the sweetbreads in it, and garnish with slices of lemon.

LAMBS' SWEETBREADS, FRICASSEED.—*To fricassee sweetbreads white*, blanch, and cut them in slices. To a pint of veal gravy put a thickening of flour and butter, a tablespoonful of cream, half a teaspoonful of mushroom powder, grated lemon-peel, a

nutmeg, and a little white pepper. Stew for ten minutes, add the sweetbreads and let them simmer for twenty minutes. Dish, add salt, thin pieces of lemon-peel; mix up, and serve. *To fricassee sweetbreads brown.* Cut them into small pieces, flour and fry them. When of a rich brown, pour over them a pint of beef gravy, highly seasoned; stew gently, until the sweetbreads are tender. Add a little flour and butter to thicken; flavour with mushroom ketchup, and serve.

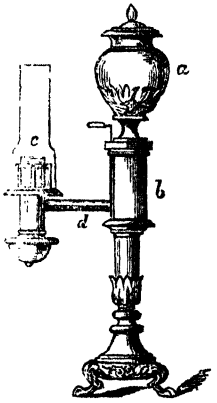
LAMBS' TAILS.—Braise or boil the tails, and make a light batter of flour, one egg, a little salt, white wine, and oil. Fry them of a delicate brown colour, and serve them garnished with fried parsley, and with any sauce preferred.

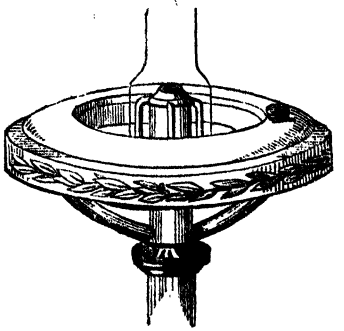
LAMBS, TO REAR.—It is the duty and would be to the interest of the farmer to attend to the comfort of ewes and lambs at the lambing season; therefore, the lambing field should always be a sheltered one, and there should be a retreat for the weakly and the cold. The first care of the shepherd is, to examine the newly dropped lambs. If they are chilled and scarcely able to stand, he should give them a little of the milk, which at this season he should carry with him, and then take them to some shelter, or place them in a basket well lined with straw. Nursing of this kind for an hour or two will usually give the animal sufficient strength to enable it to rejoin its mother. In every case of a ewe refusing to let her own lamb suck, the shepherd should particularly examine the state of the udder, and ascertain the cause of uneasiness; and if it be inflammation, remedial measures must be adopted as follows: Put the ewe into the shed and confine her to a certain spot by a short string tied above the fetlock joint of one of her fore-legs, and fastened to a stot driven into the ground, or to the hurdle. As she endeavours to leave her lamb, the string pulls her foot from off the ground, and while the struggling with the string absorbs her attention, the lamb seizes the teat and sucks in the meantime. This stratagem frequently repeated, induces her to take with the lamb. When a gimmer that has little milk has twins at a time, and another ewe that has plenty of milk produces a single lamb, it is for the benefit of one of the ewes and two lambs, that the ewe which has plenty of milk should bring up two lambs; and the transference is easily accomplished while all the lambs are still wet, and two of them are placed before the ewe at the same time; but when a ewe does not die until two or three days after she has lambed, it will be difficult to make another ewe that lambs a single lamb at the time the other ewe dies, take the older lamb along with her own. The usual plan is, to rub the body of the older lamb with the newly dropped one, before the ewe that has recently lambed has an opportunity of recognising her own lamb, and to place both before her at the same time. She should then be placed in a dark corner of the shed, and confined in it by a board placed across the corner, only giving her room to rise up and lie down, and to eat, but not to turn quickly round upon the stranger lamb to box it; while, rubbing itself against her wool, and sucking her against her inclination, it will acquire the odour of her own lamb, and ingratiate itself in her favour. Another troublesome case is, when the lamb dies at birth and the ewe has plenty of milk, while another ewe has twins which she is unable to support. The expedient is, to let the ewe smell her own new-born dead lamb, and then to strip the skin immediately off it, and sew it to the body of one of the lambs belonging to the other ewe, and present the foster-lamb to her. Should all these expedients fail, the lambs should be taken away and brought up as pets upon cow's milk. The milk should be given to them warm from the cow; the quantity, as much as they can drink. In the intervals of meals in bad weather they are kept under cover, but in favourable weather they are put into a grass paddock during the day, and under shelter at night until the nights become warm. They are fed by hand out of a small vessel, which contains as much milk as it is known each can drink. They are first taught to drink out of the vessel by the aid of the fingers, as explained when treating of the calf, and as soon as they can hold a finger steady in the mouth, a tin tube about three inches in length, and the thickness of a goose quill, should be neatly and securely covered with folds of linen and used as a substitute for a teat; by this means they will readily drink their allowance of milk. When the same person feeds the lambs, as the dairy-maid, for instance, the lambs soon become attached to her and will follow her everywhere; and to prevent them bleating in her absence, and annoying her during the day, an apron or piece of cloth hung upon a stake or a bush in the paddock, will content them and keep them together in quietness. The *cuckoo* lambs will require the particular attention of the shepherd. These are those that are dropped from the middle of April to the beginning of May, when the cuckoo is just making her appearance, and after which bird they are named. Care must be taken that they have sufficient but not too nutritive food; and that the diseases to which weakly lambs are subject, are promptly attended to. In two or three weeks, and often considerably sooner, the lambs will begin to nibble a little grass. In this, great caution is required; the sheepowner should determine whether or not the grass is too luxuriant, as much mischief frequently arises in the sudden change from bare to luxuriant pasture. It often sets up a degree of inflammatory fever which no depletion will extinguish, and no astringent can check. The technical term applied to lambs diseased from this cause, is *gall-lamb.* The liver seems to be the principal seat of inflammation, and a great quantity of bile or gall is found in the duodenum and small intestines. It is a disease which very speedily runs its course, occasionally carrying off its victims in little more than twelve hours, and seldom lasting more than three days. Immediate bleeding in the early stage, and afterwards Epsom

salts, with a small portion of ginger, will afford the only chance of cure. If, during the period of suckling, the udder of the ewe should become unnaturally enlarged, accompanied by redness, and the appearance of knots and kernels, the lamb must be taken away, and the udder well fomented with warm water; an ointment composed of a drachm of camphor, rubbed down with a few drops of spirits of wine, a drachm of mercurial ointment, and an ounce of elder ointment, well incorporated together, must be rubbed into the affected part, or the whole of the udder, two or three times a day; she must also be bled, and the physic repeated. If the udder should continue to enlarge, the heat and tenderness increase, the knots or kernels become more numerous and of greater size, and some of them should begin to soften and give signs of containing a fluid, no time must be lost in resorting to remedial measures. A deep incision must be made into that part of the udder where the swellings are ripest, the pus or other matter squeezed out, and the part well fomented again. To this should succeed the application of a weak solution of chloride of lime, with which the ulcer should be well bathed two or three times in the day. When all fetid odour ceases and the wound assumes a healthy appearance, the friars' balsam may be substituted for the chloride of lime. *The time of weaning* differs materially, according to the locality of the farm and the quality of the pasture. In a mountainous country and where the land is poor, the weaning often takes place when the lamb is not more than three months old, for it requires all the intermediate time to prepare the ewes for the market. In a milder climate, and on better pasture, they need not be weaned until four months old. On the other hand, if the pasture is good, and especially if it is the system, or to the interest of the farmer, to sell his lambs in store condition, they frequently are not weaned until they are six months old. In weaning, the first thing to be attended to, is to remove the ewes and lambs as far as possible from each other. Two or three days before the time arrives of their being parted, the ewes and the lambs should be removed to the pasture, which the latter are afterwards to occupy; and then in the evening of the appointed day, the ewes are to be driven away, probably to the pasture which they had occupied with their lambs, or if they are moved to another it should be a poorer and barer one. It will be advisable to milk them two or three times, in order to relieve their distended udders, and to prevent an attack of inflammation. In a day or two they will be tolerably quiet. The management of the lambs will depend on the manner in which the farmer means to dispose of them; but at all events they should be turned out to somewhat better pasture than that to which they had been accustomed, in order to compensate for the loss of the mother's milk. At the same time, care must be taken that the lamb is not overfed, lest some acute disease should speedily carry him off. One of the most fatal diseases to which lambs are subject is diarrhœa, arising from cold, or from some fault in the mother's milk, or from the new stimulus of the grass when the lamb first begins to crop it, or from its overpowering stimulus at the weaning time, when it constitutes the only food of the animal. While the animal feeds and plays, there is no danger; but when the eyes are heavy and the step is slow and sluggish, and the wool begins to look deranged, there is no time to be lost. A gentle aperient is first indicated to carry off any offensive matter that may have accumulated in, and disturbed, the bowels; half an ounce of Epsom salts, with half a drachm of ginger, will constitute the best aperient that can be administered; this must be accompanied by tender treatment and careful housing and nursing. The next disease to be mentioned is one of a mingled character. The milk of the mother is no sooner received into the true stomach of the lamb, than by the action of the gastric juice it undergoes a sudden change; a portion of it is converted into a firm curd, while the other, retains its liquid form, but is altered in character and becomes whey. When either the milk of the mother or the stomach of the lamb is not in a healthy state, this change takes place in a more decisive manner; the curd is hardened and retained, and sometimes accumulates to an incredible extent, and the whey pressed out in greater quantity, finds its exit through the bowels, and gives an appearance of purging of a light colour. In the natural and healthy state of the milk and the stomach, this curd afterwards gradually dissolves and is converted into chyme; but when the one takes on a morbid hardness, and the other may have lost a portion of its energy, the stomach is sometimes literally filled with curd, and all its functions are suspended. The animal labours under seeming purging from the quantity of whey discharged, but the actual disease is constipation. In such cases, magnesia should be administered, suspended in thin gruel, or ammonia, largely diluted with water; and with these, should be combined Epsom salts, to urge the dissolved mass along, and ginger to excite the stomach to a more powerful contraction. Read's stomach pump will be found a most valuable auxiliary. A perseverance in the use of these means will sometimes be attended with success, and the little patient, being partially relieved, the lamb and the mother should be removed to somewhat barer pasture. Lambs are very subject to fever, rapidly degenerating into inflammatory fever. It is sudden in its attack, and usually confined to the best conditioned and most thriving lambs of the flock. If taken in time, the loss of a little blood, or the administration of a tolerable dose of Epsom salts, will generally arrest the malady in its commencement. In some cases, and when the lamb has been hurried on too fast for the early market, the stage of simple fever will scarcely be recognised, but the animal will be suddenly taken with what is termed "staggers." Perhaps, an hour before the attack the animal will be in perfect health; then,

almost without warning, he becomes evidently ill; the head is protruded, and the walk is staggering, or the lamb stands still, unable to walk at all; then he falls, and after a short struggle, dies. The whole flock being exposed to the same exciting cause, the disease soon spreads, so that a dozen lambs have been lost in less than as many hours. The lancet, physic, and comparative starvation, will afford the only means of cure and prevention.

LAMP.—In many households the lamp is still preserved as a medium for giving light, in preference to candles or gas. Numerous improvements have been made upon the original form and kind. One of the best of these is that known as the argand lamp, represented in the engraving: *a* is the reservoir for oil; *b*, the cistern supplied from the reservoir, and from which the oil flows to the burner, *c*, through the branch, *d*. In the original construction of this lamp, there was an imperfection in the glass chimney which has been removed by a subsequent improvement. This is principally achieved by an alteration in the shape of the glass, which, instead of being of equal width throughout, is contracted at the level of the flame, as at *c*, by which the current of ascending air is made to turn out of its course when it arrives at this shoulder, and is propelled against the top of the flame just where the smoke is beginning to part, which, in consequence, is destroyed almost entirely. The lamp known as the annular, and represented in the annexed figure, is that which is generally used for the table. In the original construction of Argand's lamp, the reservoir for the oil was placed on one side of the flame; and consequently, the light being obstructed by it, there was a strong and inconvenient shadow on that side. To obviate this imperfection, the annular lamp was contrived. The ring of metal, contains the oil which descends below the burner, by tubes—a construction which is extremely simple, and consequently not liable to get out of order: there is a cap, by unscrewing which, the oil may be poured into the reservoir. The construction of the burner is on Argand's principle. Among the most recent introductions is that known as the paraffine lamp, which is admirably adapted for working or reading by, and which, in addition to simplicity of construction, has smallness of cost to recommend it. The lamps may be obtained from two shillings upwards,





and the oil costs three shillings and threepence a gallon, which quantity will last a month. In lighting this lamp, a little care and attention are required, so as to avoid an uncertain light and an unpleasant smell; and the proper manner of proceeding will be best illustrated by the aid of the accompanying engravings. The cotton, A, is first

Fig. 1.

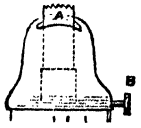
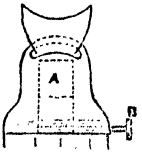


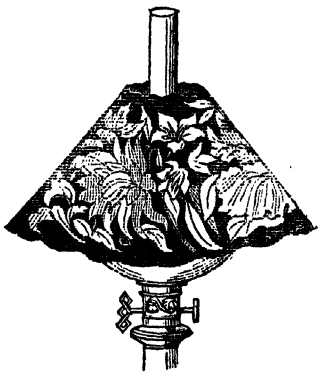
Fig. 2.



raised by the screw, B, to the height indicated in *fig.* 1. It is then lowered by the screw until it is a little below the opening of the tube, as shown by the dotted lines surrounding A in *fig.* 2. The light produced is then clear and brilliant, and will burn without smell, and without requiring any further attention. In order to ensure a more perfect working, it is better to fill the lamp with fresh oil each evening before using it. One of the objections against the use of lamps is, that the oil is liable to be spilt from them; but this can only result from carelessness, and with proper management can never occur. Another objection is, the trouble which they are supposed to entail, but this evil is exaggerated, for a few minutes daily is all the time that need be expended upon them. To ensure the proper use and management of lamps, it would, perhaps, be better to assign them to the care of some one person in the household, giving him instructions to remove them when no longer required, to a place of safety. A very curiously contrived nightlamp, is one constructed to burn without a flame on the following principle. If a cylindrical

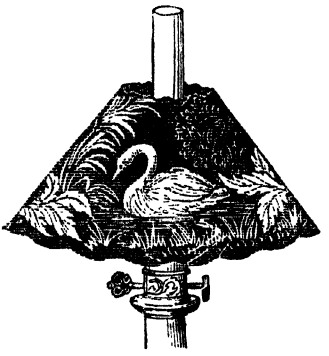
coil of very thin platina wire be placed partly round the wick of a lamp with spirits of wine, and partly above the wick, and the lamp be lighted so as to heat the wire to redness; on the flame being blown out, the mere heated vapour rising from the spirits of wine will be sufficient to keep the upper part of the wire red-hot for any length of time that the spirit remains. This beautiful and simple contrivance will give sufficient light to see the hour of the night by a watch, or to do anything which requires a limited light, and will not be so liable as a flame to disturb persons unaccustomed to burn a light. It has also the convenience of being always the same, requiring no trimming, and being peculiarly safe, as it can emit no sparks. The size of the platina should not exceed one hundredth part of an inch. A coil of twelve turns is sufficient. When the wire collects a crust round it, it may be brightened, and made to act as well as at first, by uncoiling and rubbing it with fine glass paper. The safety lamp, invented by Sir Humphry Davy, consists of a common oil lamp surmounted with a cylinder of wire gauze, the apertures of which are not greater than the $\frac{1}{20}$th of an inch square, and the wire of which it is made of the $\frac{1}{40}$th to the $\frac{1}{60}$th of an inch in diameter. The fire damp (carburetted hydrogen) of coal mines, in passing through the meshes of such gauze, gets cooled by the conducting power of the wire below the point necessary to kindle it. When this lamp is taken into an explosive atmosphere, although the fire damp may burn within the cage with such energy, as sometimes to heat the metallic tissue to dull redness, the flame is not communicated to the mixture on the outside. These appearances are so remarkable, that the lamp becomes an admirable indicator of the state of the air in different parts of the mine, and if its admonitions are attended to, gives the miner time to withdraw before an explosion takes place.—See CANDLE LAMP.

LAMP SHADES.—These useful appendages of the lamp may be fashioned of exquisite beauty, and in endless variety, by a process at once simple and inexpensive; and the two illustrations appended hereto will convey some idea of the rich effects which can be produced by the simplest materials. In addition to the designs here presented, snow scenes, waterfalls, moonlight scenes, ruins of castles, groups of animals and of fruit, &c., may be produced according to the skill and taste of the manipulator. The materials simply consist of glazed cardboard, of a medium thickness, a few sheets of tissue paper of various colours, a blacklead pencil and a little gum or paste; a few cake water-colours may be used or be dispensed with, at option. The tools consist of a cutting board of rather hard wood, a sharp penknife, a pair of scissors, a stout pin, and a large needle or two, such as those used for stockings or for knitting. The art of making the lamp shades simply consists in cutting the outlines, and the leading lines necessary to denote the form of any object which it is desired to represent. In order to obtain a good shape for the lamp shade, cut one out of a piece of old newspaper or a sheet of thick brown paper. Fit it on to the lamp, and when a well-fitting shape is obtained, proceed to cut out the shape in the glazed



cardboard. The flower pattern lamp shade, seen in the engraving, is made in precisely the same manner, with the exception that for this shade a white glazed cardboard is used, and coloured tissue papers, of the richest colours that can be obtained, are laid underneath to give the proper colours to the flowers, and green paper for the leaves. Roses, fuchsias, dahlias, chrysanthemums, tulips, lilies, &c., may all be represented with beautiful effect; and where peculiar tints upon coloured grounds are required, they may be obtained by colouring in water-colours the spots or shapes upon the tinted papers that are laid underneath. The shade should be lined in and finished with white tissue paper, which not only conceals the patchwork from the eye, but moderates the light, so as to produce a very soft and pleasing effect. The swan pattern lamp shade, of which an illustration is given, is made thus:—The cardboard is green glazed, and the green is kept on the outside. The white lines shown in the drawing indicate simply the cuts with the penknife, by which large, broad leaves, water, rushes, and a willow tree are formed. The leaves, &c., are cut through from the green side, but the dotted heads of flowers, rushes, &c., are punctured through with a pin or large needle from the inside, which gives them a more open and free appearance than could otherwise be obtained. The shape of the swan is cut out of the green cardboard, and a corresponding shape

in white cardboard is cut and let in, and is fixed in position simply by a piece of white tissue paper gummed on the back. The bill of the swan is rendered yellow by a piece of yellow tissue pasted at the back; and the upper part of the bill and the feet are rendered black, either by a piece of black paper



pasted over them at the back, or by a thick coating of Indian ink, or common ink. This is all that is required to produce a most beautiful effect. When the whole is completed, it is to be lined throughout with tissue paper merely gummed at the top and bottom edges. The ends of the shade are to be firmly gummed together and strengthened by a strip of paper on the inside. The feathers of the swan are indicated by cuttings with the penknife, just as the other effects are produced. The black lines in the engraving on the body of the swan, show the character of the cuttings. The cardboard should be sufficiently opaque to prevent the passage of light in any part where an effect is not sought to be obtained. And to this end it may be necessary, in some instances, to line the shade with a dark-coloured paper. A very beautiful shade of poppies and wheat ears may be made with great ease, and is probably one of the simplest patterns to begin with. Before lining the shade, hold it to the light, and show the effect. Open the leaves of the flower, &c., to let the light pass through with greater power in some parts than in others. This will give richness and freedom to the design. Also, before lining, deepen the shades in some parts by additional layers of dark coloured paper, and do away with any appearance of patchiness from the paper behind, either by laying on an additional layer of paper, or by removing edges of cuttings, where they have a tendency to show through.

LAMPS, TO CLEAN. — Bronzed lamps should be wiped carefully; if oil be frequently spilled over them, it will cause the bronzing to be rubbed off sooner than it would disappear by wear. Brass lamps are best cleaned with crocus, or rotten-stone and sweet oil. Lacquered lamps may be washed with soap and water, but should not be touched with acid or very strong lye, or the lacquer will soon come off. When lamps are foul inside, wash them with potash and water, rinse them well, set them before the fire, and be sure they are dry, before oil is again put in them.

LAMPS, TO PREVENT SMOKING. — To prevent or lessen the smoking of lamps, the wicks should be well soaked, either in dilute muriatic acid, well washed in water, and afterwards dried, or in strong vinegar, when they will merely require drying. Large lamps, that emit much smoke, should be burnt under a funnel, to carry the smoke off; or a large sponge dipped in water may be suspended over them. In all cases the wick should not be turned too high.

LAMP BLACK.—To make this pigment on a small scale, suspend over a lamp a funnel of tin plate, having above it a pipe, to convey from the apartment the smoke which escapes from the lamp. Large masses of a very black carbonaceous matter, and exceedingly light, will be formed on the summit of the cone. This carbonaceous part is carried to such a state of division as cannot be given to any other matter, by grinding it on a piece of porphyry. It may also be rendered drier by calcination in close vessels. The funnel ought to be united to the pipe, by means of wire, because solder would be melted by the flame of the lamp.

LAMPREY.—This fish is in general appearance very like the eel; but instead of the flat mouth which that fish exhibits, the lamprey has a sucking apparatus, by which it attaches itself to stones, roots of trees,

and piles. and then lies with its body quite at rest, except as moved by the current. The lamprey is an inhabitant of the ocean, ascending rivers chiefly during the latter part of winter and the early months of spring; and, after a residence of a few months in fresh water, it again returns to the sea. This fish is in season during March, April, and May, and they are observed to be much firmer when just arrived from sea than when they have been a considerable time in fresh water.

LAMPREYS POTTED. — Remove the cartilage of the fish and the string running down each side of the back, but allow the skin to remain. Wash and clean the fish thoroughly in several waters, and wipe them dry. To a dozen tolerably-sized fish, use two ounces of white pepper, salt in pro-

portion, six blades of mace, a dozen cloves, all in fine powder, and with this season the fish, after it has drained all night. Then lay them in a stone jar one by one, curled round, the spices and salt being sprinkled on and about them. Clarify two pounds of butter and half a pound of beef suet, pour it over the fish, and lay thick paper on the top to keep in the steam. Bake the fish for three hours in a moderate oven. Look at them frequently, and as the oil rises, clear it off. They will thus keep until the spring.

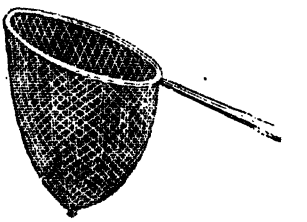
LAMPREYS STEWED.—After cleaning the fish carefully, remove the cartilage which is to be found in the back, and season the fish with a small quantity of cloves, mace, nutmeg, pepper, and allspice; put it into a small stewpan, with as much strong beef gravy and white wine in equal quantities as will cover it. Close the stewpan securely, stew the lampreys till tender, then take them out and keep them hot, while you boil up the liquor with two or three anchovies chopped, and a little flour and butter; strain the gravy through a sieve, and add lemon-juice and some made mustard. Serve with sippets of bread and horse-radish.

LANCASHIRE CAKE.—Beat up together eight eggs and a pound of powdered sugar, for three-quarters of an hour; then, by degrees, mix in twelve ounces of fine flour well dried; add two ounces of caraway seeds and bake in soup plates or in tins in a brisk oven.

☞ Eggs, 8; sugar 1lb.; flour 12ozs.; caraway seeds, 2ozs

LANCERS QUADRILLES.—The various figures of this popular dance are as follows:—*La Rose.* First gentleman and opposite lady advance and set, turn with both hands, retiring to places; return, leading outside, set and turn at corners. *La Ledoiska*—First couple advance twice, having the lady in the centre. Set in the centre; turn to places; all advance in two lines; all turn partners. *La Dorset*—First lady advance and stop, then the opposite gentleman; both retire, turning round; ladies' hands across half round, and turn the opposite gentleman with left hands; repeat back to places, and turn partners with left hands. *L'Etoile*—First couple set to couple at right; set to couple at left; change places with partners, and set pirouette to places, right and left with opposite couple. *Les Lancers*—The grand chain. First couple advance and turn, facing the top; then the couple at right advance behind the top couple; then the couple at left, and the opposite couple do the same, forming two lines. All change places with partners and back again. The ladies turn in a line on the right, the gentlemen in a line on the left. Each couple meet up the centre. Set in two lines, the ladies in one line, the gentlemen in the other. Turn partners to places; finish with the grand chain.

LANDING NET.—This is a very necessary article in the outfit of an angler It is made of silk or hemp, either dressed with a waterproof composition or not, according to the taste of the user; the net is stitched over a ring either of iron, brass, cane, or whalebone, jointed or unjointed, and attached to a landing stick of suitable length. The Irish whalebone net frame, with a telescope three-jointed handle, is the most convenient for use, being portable, and



easily packed up for carrying. Care, however, should be taken in using it, not to let the weight of the fish bear upon the framework; this can be accomplished by drawing instead of lifting the fish out of the water.

LANDLORD AND TENANT, LAWS RELATING TO.—The landlord is he of whom land or tenements are taken. Tenant signifies one that holds or possesses land or tenements by any kind of right, either in fee for life, for years, or at will. In taking a house, a person should carefully examine the covenants in the lease, and those in the underlease, if any, or he may possibly discover, when too late, that he is tied down by such restrictions as to render the house unfit for his purpose, or likely to involve him in unforeseen difficulties. He should take care that all arrears of rent, the ground-rent, and all taxes, are paid up to the time he takes possession; for if they are not, he must pay all arrears, and can only recover them by having recourse to the last tenant. Houses are considered as let for the year, and the tenants are subject to the laws affecting annual tenancies, unless there be an agreement in writing to the contrary. When taking a house for a year, it is advisable to have a written agreement drawn up somewhat as follows:—

Memorandum of an undertaking, entered into this day of 185 , between A. B., of and C. D., of , as follows:—

The said A. B. doth hereby let unto the said C. D. a dwelling-house, situate in in the parish of , for the term of one year certain, and so on from year to year until half a year's notice to quit be given by or to either party, at the yearly rent of pounds, payable quarterly; the tenancy to commence on day next.

And the said A. B. doth undertake to pay the land-tax, the property tax, and the sewer rate, and to keep the said house in all necessary repair, so long as the said C. D. shall continue therein; and the said C. D. doth undertake to take the said house of A. B. for the before-mentioned term and rent, and to pay all taxes, except those on

land, or property, and the sewer rate, and to observe the other conditions aforesaid.

Witness our hands this day of , 185 .

A. B.
Witness, E. F. C. D.

If the landlord agree to pay all the rates and taxes, then a different wording of the agreement should be adopted, as thus:—

And the said A. B. doth undertake to pay all rates and taxes, of whatever nature or kind, chargeable on the said house and premises, and to keep the said house in all necessary repair, so long as the said C. D. shall continue therein.

If the landlord agree to secure the incoming tenant from all arrears due on account of rent, rates, and taxes, the indemnification should be written on a separate paper, and in something like the following terms:—

I, A. B., landlord of a certain house and premises, now about to be taken and occupied by C. D., do hereby agree to indemnify the said C. D. from the payment of any rent, taxes, or rates in arrear, prior to the date of the day at which the said tenancy commences. As witness my hand, this day of 185 .

A. B.,
Landlord of the above premises.
Witness, E. F.

Sometimes a house is taken for a term of three years certain; under which circumstances an agreement may be drawn up, somewhat in the following terms:—

Memorandum of an agreement made the day of 185 , between A. B., of and C. D. of , as follows:—

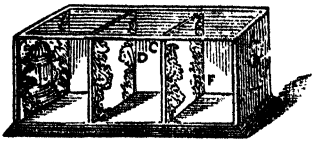
The said A. B. doth let unto the said C. D. a house (and garden, if any) with appurtenances, situate in , in the parish of , for three years certain. The rent to commence from day next, at and under the yearly rent of pounds, payable quarterly; the first payment to be at day next.

The said C. D. doth agree to take the said house (and garden) of the said A. B. for the term and rent, payable in the manner aforesaid; and that he will at the expiration of the term, leave the house in as good repair as he found it (wear and tear excepted). Witness our hands.

A. B.
Witness, E. F. C. D.

A person taking a house under either of these agreements is for the time being the *bonâ fide* possessor of the tenement, and no person can dispossess him without rendering himself liable to an action for trespass. Even the landlord himself cannot enter the premises forcibly without being considered a trespasser; and if he wishes to enter the house to view repairs, or for any other purpose, he can only lawfully do so by the leave of the tenant.—See LEASE, LODGERS, NOTICE TO QUIT, RENT, &c.

LANDSCAPE, ARTIFICIAL.—Procure a box about a foot long, eight inches wide, and six inches high, or any other dimensions you please, so that they do not vary greatly from these proportions. At each of its opposite ends, in the inside of the box, place a piece of looking-glass which fits



exactly; but at that end where the sight-hole A is, scrape the silver off the glass, so that the eye may have an uninterrupted view of the objects. Cover the box with gauze, over which place a piece of transparent glass, which is to be fastened securely in. Let there be two grooves at each of the places, C, D, E, F, to receive two printed scenes, arranged as follows: On two pieces of pasteboard let there be skilfully painted, on both sides, any subject you desire, as woods, bowers, gardens, houses, &c.; and on two other boards the same subject on one side only, and cut out all the white parts: observe also that there ought to be in one of them some object relative to the subject placed at A, that the mirror placed at B may not reflect the hole on the opposite side. The boards painted on both sides are to slide in the grooves at C, D, E, F, and those painted on one side are to be placed against the opposite mirrors A or B; then cover the box with its transparent top, and place it in a strong light, so as to heighten its effect. When thus complete, and viewed through the sight-hole, the objects will present an unlimited prospect of rural scenery, gradually losing itself in the distance, and will be found to repay amply the pains bestowed upon its construction.

LAND STEWARD.—The land steward is to a whole estate what a bailiff is to the demesne or a particular farm. His business is to control the managers of the land in hand, as the forester, gardener, bailiff, &c.; to see that farmers fulfil the covenants of their leases; to attend to repairs, roads, public, and parochial matters on behalf of the landlord; and generally to receive rents. The situation of the land steward's place of business should be under the roof of the proprietor's principal place of residence, round which and in its neighbourhood some considerable part of his estate may be supposed to lie. The accommodations requisite for a principal office are, a commodious business room, a small ante-room, and a strong room, fireproof, for depositing valuable documents in. A general map of the whole estate on a large scale is obviously requisite, and portable separate maps, with accompanying registers and other descriptive particulars. Books of valuation are essential, and in these should be contained the number, name, and estimated value of each field, and every parcel of land, as well as of each cottage or other building not being part of a farmstead on the several

distinct parts or districts of the estate. the valuations being inserted in columns, as they arise, whether by general surveys, or incidentally, headed with the names of their respective valuers, so that whenever a farm is to re-let, these columns may be consulted, and the real value of the property fixed in a re-survey with the greater exactness. A general register of timber trees, copsewood, and young plantations, is particularly wanted where there is much *hedgerow timber*. *Contracts*, agreements, accounts, letters on business, and other documents, should be intelligibly indorsed, dated, and numbered, and arranged so as to be easily referred to. Among the instruments necessary for a land steward's office may be included those requisites for surveying, mapping, levelling, measuring timber, and every description of country work; together with boring machines, draught measures, weighing scales, some chemical tests, models, and such other articles as may be required or rendered useful by particular circumstances. An agricultural library may be considered an essential requisite, including works on rural architecture, the prices and measuring of work, and other fluctuating matters.

LANGUOR is that weariness and sense of fatigue without adequate cause, which, with a disinclination for any exertion, usually precedes fevers or other attacks of sickness: or it may in weakly constitutions exist without any morbid association, and, existing merely as a temporary lassitude and feeling of debility and exhaustion, come on at stated hours, and after a short continuance pass off as rapidly as it came on. When languor attacks a patient in this manner, it will generally be found to proceed from the state of the stomach and the want of food, and will in all cases yield to the exhibition of a mild stimulant, such as a few drops of spirits of lavender and hartshorn, or sal volatile.

LANTERN.—Lanterns are chiefly required in farmsteads, and other agricultural establishments. A proper form of lantern that will distribute a sufficient intensity of light on all around, and be safe to carry to any part of a steading, amongst straw, or other inflammable material, is what is required. The safest form of lantern is that represented in the engraving. It consists chiefly of a stout glass globe, which may be knocked against a piece of timber without being fractured. It has an oil lamp which screws and unscrews into its place from below, within the foot upon which it stands, and a ring by which it is carried; and the hand is elevated enough to be protected from heat,

which escapes along with the smoke from the ventilator.

LARCH.—A valuable genus of tree, of which there are several species. Its qualities are rapid growth, flexibility, and durability in situations between wet and dry. There

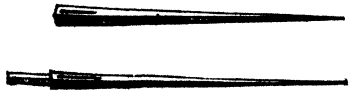
are two varieties of larch generally cultivated in Great Britain—the white and the red. The white is the variety which attains the greatest dimension of timber, and is the sort most generally cultivated. No timber-tree begins to repay the expense of culture so soon as the larch does. It is a rapid growing tree, and is well adapted for almost every country purpose. The circumstances which are found favourable to the healthy development of the larch are as to soil it is not particular, but the roots must have a constant supply of water, in order to keep the earth in which they grow in a pure state. On very arid soils, the larch never grows freely, and soon dies off with a stunted lichen-clad pole; and on flat ground where water is liable to stagnate, though the young trees may succeed for a short time, yet they are never found to prosper, but die away in a few years as soon as the mere surface turf is exhausted of its nutritious properties by the roots.

LARD—This substance consists of the fat of the pig melted down, and in that separated from the cellular membrane in which it is contained. This melting is usually called "rending," and is sometimes performed soon after the pig is killed, and at other times at a considerable interval, the fat being in the meantime preserved in salt. In England, lard is chiefly made from the kidney-fat, which is the most pure and free from oily fluid; but a great deal of the foreign lard is melted down from the fat of the surface, mixed with that surrounding the kidneys, and from this circumstance is much softer than English lard. Extensive adulterations are practised in lard, by mixing flour, water, and starch, lime or alum with it, and in some cases carbonate of soda or potash, and salt. In addition to these adulterations, veal and mutton fat are also mixed with lard, in order to give the inferior

qualities the consistence which good lard ought to have. Water is easily detected by the sputtering made in melting. Flour and starch can only be discovered by the microscope, excepting that on melting lard containing these articles, an opaque body usually is seen floating in it, and generally falling towards the bottom. The saline ingredients mentioned above, require chemical tests in order to render them apparent. The uses of lard are manifold, not only for a variety of culinary preparations, but in a medical sense, as it is largely employed in the mixing of ointment, salves, &c.

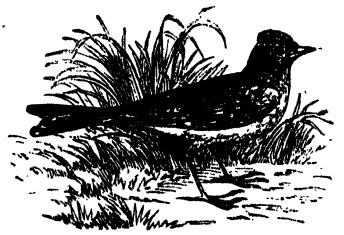
LARDER.—The place set apart for keeping provisions in. The situation of the larder in relation to the atmosphere is a matter of great importance, the chief conditions being that it should be subjected to a thorough draught, and at the same time sheltered from the sun; a northern aspect is therefore the most suitable, or, next to that, an easterly one. The construction of the larder itself should be carefully attended to; it should be cool and dry, and be provided with good ventilation by windows on opposite sides, which ought to be covered with wired cloth to admit the air; and at the same time to exclude the flies, which lay their eggs on the meat, and occasion it to be what is commonly known as fly-blown; as from these eggs, if suffered to remain, maggots will be produced. The larder should be large enough to contain all the meat, dressed or undressed, in the house. It should also be furnished with strong iron meat-hooks above, and should be fitted up with separate wire safes for meat, game, and vegetables. A marble slab for making paste is also a desirable addition to a larder; together with a balance for weighing meat, and a block to chop it upon. When the thorough draught cannot be directly obtained, a large air-drain may be carried under the floor to the opposite side of the house, where a grating may be fixed, and thus free draught may be obtained.

LARDING.—This is a culinary process by which lean meat is rendered less dry than in its ordinary state, and thereby not only renders the food more grateful to the palate, but makes the meat go further than it would without it. The process of larding is as follows:—Procure what is called a larding needle, which is a piece of steel from six to nine inches long, pointed at one end, and having four slits at the other to hold a small strip of bacon when put between them. Cut



the bacon into pieces, two or three inches long, and a quarter to half an inch square; put each one after the other into the needle, insert it in the meat, and leave only about half an inch out, using eight pieces to each pound. The above engravings represent the larding needle as sold, and the same instrument with the lardoon in it.

LARK.—This bird is somewhat delicate and difficult to rear in confinement; the common field or skylark is that which is



best adapted to the cage. The time for taking these birds out of the nest is when the tail is about three-quarters of an inch in length, when they are to be fed with bread and poppy-seed soaked in milk; though ants' eggs, if they can be obtained, form a preferable diet. The young males may be distinguished by the yellow tinge of their plumage. The education of such as are taught to whistle, ought to commence before they are fully fledged, as they then begin to practise their own song; and the facility with which they adopt the song of other birds renders it necessary to hang the cage in a room by itself. When the bird is allowed to range about the room, it will thrive on the universal pastes; but if confined to the cage, they may be fed on poppy-seed, crushed hemp-seed and oats, barley, groats, malt, bread-crumbs, varied with a little watercress, lettuce, and cabbage.

LARKS ROASTED.—Larks should be roasted encased in fat bacon, and covered with vine leaves. Rub the larks over with egg, and dip them in fresh bread crumbs; sprinkle a little salt over them; roast them before a quick fire, basting with fresh butter, the spit turning rapidly.

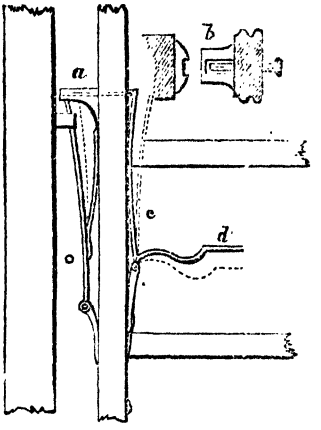
LARKS STEWED.—Put a number of fat larks well cleaned into a stewpan, previously inserting a delicate piece of bacon into the inside of each, and adding a sufficient quantity of good stock gravy: place sage leaves over the breast of each bird, and over that a thin layer of bacon; stew them gently, and serve hot. Another way is as follows:—Bone half a dozen larks, make a forcemeat with their livers and a little veal, and an equal quantity of fat bacon, pounded finely; season with herbs and allspice; fill the larks with this; put them into a stewpan with a little good gravy; bake them for a quarter of an hour, glaze them; dish them up on a border of mashed potatoes, filling up the centre and the sides with carrots, turnips, &c., as represented in the engraving; pour a rich gravy round the dish and serve.

LARKSPUR.—The annual sorts and varieties of this flower are sown yearly in

September or October, or early in spring in patches where the plants are to flower—for they do not succeed by transplantation—observing that those of the autumn sowing grow stronger, flower earlier, and the flowers are generally larger and more durable than the spring-sown plants. It is, however, proper to sow some in spring, in February, or March, to continue a longer succession of

bloom. Dig with a trowel small patches of about nine inches in diameter, in different parts of the border towards the middle, as also in the fronts of the shrubbery clumps, and in each such patch sow eight, ten, or twelve seeds, a quarter of an inch deep; and when the plants are an inch or two high, thin those of the unbranched sorts to about six or eight in each patch, and of the branched kinds to three or four in each place, which is all the culture they require. But when intended to grow in beds by themselves, they are commonly sown in drills, forming them lengthwise, the beds a foot asunder, and half an inch deep. The unbranched kinds are the best adapted for this mode of culture. The perennial sorts are also raised plentifully from seeds sown in autumn or spring, in a bed or border of common earth, for transplantation when the plants come up. Weed them occasionally, and thin them to three or four inches distance; to remain till October or November; then plant them out where they are to remain to flower. Their roots will endure for many years.

LATCH.—There are a variety of latches, each more or less secure and adapted to its particular use. One of the best kind of latches for gates is that shown in the engraving, and which possesses the advantage of fixing itself so firmly that it cannot be shaken out. In this engraving, *a* is a side screw, and *b* a transverse section. The upright latch, *c*, is held in the catch by a spring, so that it cannot easily be shaken out by the rubbing of cattle, or the shaking of idlers, while it can be readily opened by a person on horseback placing the end of his whip or stick in the hollow thumb-piece, *d*, which, acting as a lever on the upright



piece, *c*, pulls back *c*, and compresses the spring, by which the gate is opened.

LAUDANUM.—The word laudanum is derived from the Latin verb *laudare*, to praise, because of its excellent and most laudable qualities in the amelioration and cure of many diseases in which it had been employed; it is, perhaps, one of the oldest preparations in the pharmacy of any nation, and though made of many strengths, and by different formularies, all have possessed the same general characters. Though used as a narcotic, antispasmodic, tonic, stimulant, and anodyne, it is chiefly as a sedative that laudanum is so invaluable, there being probably no disease, class, or nature of pain or suffering in which this article has not, or may not, be employed with more or less of benefit. There is no drug or compound used in the practice of physic that, properly employed, is capable of affording so much comfort and relief to the patient, in almost every disease with which he is affected, as laudanum, for it may, by skilful combination, and a judicious adaptation of the dose, be made to exert any special or general action desired; and since the introduction of a less violent mode of practice, it has, or may, in conjunction with nitre and antimony, be depended upon for the cure of nearly every inflammation that can assail the system, and thus entirely set aside the use of the lancet in those diseases which were formerly thought only curable by depletion and bleeding. In repeated small doses, laudanum acts as a stimulant; in larger doses, as a sedative; and in full doses, as a narcotic; at the same time, by a modification of the quantity given, it may be made to act as a tonic in cases of weak digestion, as a diaphoretic in colds and influenza, and as a diuretic in affections of the kidneys; for its employment in all these affections the reader

is referred to the several diseases mentioned, and for a general account of the properties of the drug, its actions, influences, and antidotes, to the article OPIUM. Laudanum is a preparation of opium made by macerating a certain quantity of opium, cut into small pieces, for fourteen days in a given amount of proof spirits, which is generally equal parts of spirits of wine, and water, shaking the bottle frequently, and on the fifteenth day filtering the liquor.

Medical men who prepare their own drugs, and know the advantage of always having a tincture they can depend on, and of a uniform strength, simmer their opium in the proper amount of water for about ten minutes, and to this, when cold, add the spirits of wine. Unfortunately the colleges of London, Edinburgh, and Dublin differ in the strength of this, as of their other preparations, the consequence of which is, that the dose of laudanum varies in each country, the dose being in Scotland 21 drops, and in England 19.

LAUNDRY.—See CRIMPING MACHINE, IRONING, WASHING, &c.

LAUNDRY MAID.—The duties of the laundry maid consist of washing, ironing, &c., the household linen and family clothes. The weekly employment is divided as follows. On Monday the business of the laundry begins with collecting and sorting the various articles that are to be washed, in preparing the coppers, filling them with water, and laying the fires ready for kindling. On Tuesday, the laundry maid should rise at five o'clock, light the fires under the coppers, and, as soon as the water is hot, she should commence with her assistants to wash. As it is the main object to hang out early in the morning all articles (such as sheets and body linen) which may be improved by the bleaching power of the morning air and sun, the first hours of the day should be diligently employed, and the evening should be occupied in scouring and cleaning the washhouse and the utensils which have been used. On Wednesday, the principal part of the washing being completed, the business of drying and folding the linen for the mangle and iron is to be begun, as well as that of starching and clearing the fine linen. Thursday and Friday are occupied with mangling, ironing, and getting up the whole of the linen. Saturday is devoted to separating the various articles according to the marks affixed to them, and putting by each division in its appropriate place. The rest of the day is given up to the cleaning of the laundry, and the depositing in their places all things connected with the business carried on in it.

LAUREL.—Under this title are collected several species of the plant. The common laurel, though it will grow as high as the Portugal laurel, is in its habit decidedly a shrub, though it is occasionally seen trained to a single stem as a low tree. The growth of the common laurel is rapid for an evergreen in ordinary seasons, but it suffers a great deal more from very severe frosts than the Portugal laurel, and is sometimes killed down to the ground. In Britain, the common laurel is considered one of the most ornamental of our evergreen shrubs; and it is also used for covering walls, and for hedges to afford shelter. Laurel leaves have a bitter taste, and the peculiar flavour of prussic acid, which is common to bitter almonds. These leaves, in consequence of their flavour, are used in a green state in custards, puddings, blancmange, and other culinary and confectionary articles, but always in very small quantities. Any soil tolerably dry will suit the common laurel; but to thrive, it requires a sheltered situation, and a deep free soil.

LAVENDER.—Of this plant there are two varieties cultivated, the common and the broad-leaved; the former is smaller on the spike, but much more aromatic; the latter, however, is the most extensively grown for distillation. When grown for this purpose, the flowers should be left on the spikes and gathered when quite dry, and just before they are fully expanded. They should be cut with about six inches of stalk, and tied up in small bundles about an inch in thickness, and suspended from the roof of a dry chamber at a temperature of from sixty to seventy degrees; they will be dry in twenty-four hours, and fit for storing for use. When the flowers fall from the spikes during drying, they should be gathered up and placed in paper bags, and in this state they are as fit for use as if they had remained on the spikes. This plant is readily propagated by seeds, cuttings, or slips; the former produce the best plants. The seed is procured from France. It should be sown in March, in poor light soil; and when the plants are about two inches in height they should be transplanted into nursery beds, there to remain till the following spring, when they may be permanently planted out. Cuttings are struck in the same manner as with all other shrubby hardy plants, and when rooted, should be treated as directed above for seedlings. A dry poor soil is most favourable, and a warm situation fully exposed to the sun, the best place for it.

LAVENDER SCENT BAG.—Take of lavender flowers free from stalk, half a pound; dried thyme or mint, half an ounce each; ground cloves and caraways, a quarter of an ounce each; common salt dried, one ounce. Mix the whole well together, and put the product into silk or cambric bags. These placed in drawers with wearing apparel and linen will keep away moths and other insects, and impart an agreeable perfume to the various articles.

LAVENDER TINCTURE.—Take of cinnamon and nutmeg bruised, two and a half drachms each; red sanders wood sliced, five drachms; rectified spirit, one quart; macerate for seven days, then strain, and dissolve in the strained liquid, oil of lavender, one and a half drachms (fluid); oil of rosemary, ten drops. This tincture acts as a stimulant, cordial, and stomachic. Dose, one to three teaspoonfuls, in cases of lowness of spirits, faintness, flatulence, &c.

LAVENDER VINEGAR.—Put a pint of vinegar into a stone bottle, and add to it half an ounce of fresh-gathered lavender

flowers; cover closely and set it aside for a day or two; then set the jar upon hot cinders for eight or ten hours; and when cold, strain and bottle it. This will be found a refreshing perfume, and especially in close apartments or sick chambers.

LAVENDER WATER.—Mix in a quart bottle, three drops of oil of lavender and one pint of rectified spirit of wine; shake them well together, and add an ounce of orange-flower water, an ounce of rose-water, four ounces of distilled water, and if agreeable three drachms of essence of musk.

LAW, PRECAUTIONS RESPECTING HAVING RECOURSE TO.—As there are few persons who are fortunate enough to pass through life without being involved in litigation, and as on many occasions a little timely reflection would obviate this evil, or a judicious line of conduct render it less pernicious, the following hints will be probably found acceptable to those who contemplate taking this step. A case is not always decided upon its merits, but frequently upon the manner in which it is put or made to appear; therefore, however just your cause may be, and however weak that of your adversary, do not on that account calculate upon a successful issue. Sometimes gaining a cause is merely a nominal benefit, and it rarely secures to the successful litigant that amount of good fortune which it promises; there are also some cases, and by no means uncommon ones, of persons gaining a cause and yet losing money by it. Before taking any very active steps, endeavour to avoid litigation by any proposal which you conceive to be equitable and which does not compromise you; or should a proposition come from the other side, it should not be hastily rejected, as is frequently the case, but be duly considered by the person interested, and advised upon by some friend on whose judgment and discretion reliance is to be placed. If litigation must of a necessity be had recourse to, great caution should be exercised in selecting a solicitor of talent and respectability; and it should be also borne in mind that, when the solicitor is so consulted, a full and fair statement should be made of the circumstances of the case; neither keeping back what may be deemed the weak points on the one side, nor exaggerating those on the other. Sometimes a case is undertaken by an attorney, on the understanding that if unsuccessful the client shall be at no expense, the attorney of course calculating upon reimbursing himself out of the award, in the event of his client proving victorious. While the case is in progress, the client should avoid interviews and correspondence with his solicitor as much as possible, unless he is in a position to pay the enormous fees, which repeated consultations and letters entail. Before commencing an action, consider well whether you will be able to pay the expenses which are likely to be incurred; and in order to estimate this position the more justly, imagine yourself to be unsuccessful; the overweening confidence of litigants in the justice of their cause, and the consequent miscalculation of their responsibility, has been the means of much ruin and unhappiness. But there are other important considerations in connection with going to law irrespective of the cost. As a rule the progress of legal contests is slow and tedious, dragging its course on for weeks and months, and sometimes for years; during the whole of that time, the hopes and fears occasioned by suspense, literally absorb a person's thoughts, thereby materially interfering with his avocations, and marring the success of his business plans or professional pursuits. In his hours of leisure, also, which should be devoted to recreation and domestic happiness, the same all-engrossing theme intrudes itself, and serves to embitter the hitherto enjoyable moments of his life. Finally, speaking in a general sense, it is advisable that no person should voluntarily go to law, but if drawn into it against his will, he should endeavour to free himself as speedily as possible.

LAWN.—In horticulture, that breadth of mown turf formed in front of, and extending in different directions from, the garden-front of the house. When first constructed, after the ground has been dug over as level as may be, it must be rolled, the hollows filled up, and this process repeated until a level surface of earth is obtained. It must then be slightly pointed over with a fork, and the turf laid or the grass seed sown. If seed be employed, the following is a good selection, and in the requisite proportions for an acre: *Festuca duriuscula*, four and a half pounds; *Avena flavescens*, one pound and a half; *Lollium perenne*, thirty pounds; *Poa nemoralis*, three pounds; *P. sempervivens*, two pounds; *P. trivialis*, two pounds and a half; *Trifolium repens*, eleven pounds; and *T. minus*, three pounds. The best season for sowing is during moist weather in March In dry weather, all lawns should be watered, and if a little guano and muriate of lime be dissolved in the water, it will keep the surface gently moist even in dry weather. An excellent kind of grass for improving a lawn, is *Crested Dogstail;* it may be sown in March. Bush-harrow the lawn, in order to stir the soil gently for the seed, which should be sown broadcast when the ground is damp, passing a garden roller over it when the ground becomes sufficiently dry. Much of the fine appearance of lawns depends upon the regularity in mowing; if they are left too long in the spring before the operation is commenced, or if allowed to grow strong during summer, and more especially if not closely mown at the latest period in autumn, the growth becomes coarse, the smoothness of the surface is destroyed, and alternately the whole becomes patchy and unsightly. All lawns, unless the subsoil be a porous alluvial gravel, should be thoroughly drained at their formation, and a drain should be carried along the bottom of each terrace slope, so that the turf may be at all times comfortable and dry to walk upon. Although worms are rather annoying at particular seasons, by casting up the material they have removed during their tunnelling operations, still it should be borne in mind that by these very perforations, air is admitted

to the roots of plants, upon which so much of their health depends.

LAXATIVES.—This is a term applied to that class of drugs which produce a moderate action on the bowels, lying, as it were, between the extremes of an aperient and a cathartic. Laxatives are especially serviceable in cases of convalescence, when the system having been exhausted by strong remedies to cure the disease, requires keeping in judicious restraint by a medium course, till restored nature can act for itself. Though cathartics in reduced doses, and by combination with less potent substances, may be, and often are, employed as laxatives, there are so many drugs which are properly so, that the practice is a very censurable one. The best laxatives are derived from the vegetable kingdom, and consist of the pulp of the cassia, manna, lenitive electuary, prunes, rhubarb, gray powder, olive oil, phosphate of soda, nearly all the preparations of potass, and most ripe fruits; besides these, blue pill, aloes, and scammony, may be included, though the two latter always require to be given in combination, or else they will act as purgatives, and probably defeat the object for which the medicine was taken. The dose of cassia pulp and lenitive electuary is from two to four drachms, according to the constitution; of the manna, from one to two drachms. Prunes should be simmered in a little water and sugar; and if eaten hot, a few teaspoonfuls will be sufficient; but when cold, a larger quantity will be requisite. The dose of powdered rhubarb is from half a drachm to a drachm in a little water. Gray powder, from eight to ten grains. Of olive or almond oil, the dose is ordinarily an ounce, taken in a little mint or camphor water. Phosphate of soda, being devoid of taste, may be administered in the beverage, and if so taken, and warm, or simply in hot water, about two or three drachms will suffice; from that quantity to half an ounce constitutes the laxative dose of all the other salts. Blue pill may either be taken alone, in doses varying from four to six grains, or in combination, the same as aloes and scammony, as shown in the following three forms of laxative pills. No. 1—Take of

Blue pill	15 grains,
Compound rhubarb pill	15 grains.

Mix and divide into six pills, of which take one, once or twice a day. No. 2—Take of

Aloes	20 grains,
Castile soap . . .	12 grains,
Ginger powder . .	8 grains.

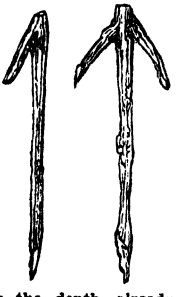
Mix and divide into six pills; take one night and morning. No. 3—Take of

Scammony . . .	1 scruple,
Gray powder . . .	18 grains,

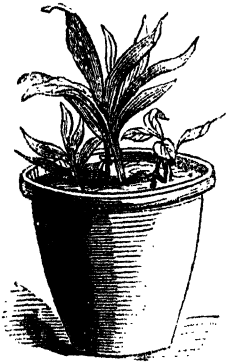
Castile soap, enough to make into a mass, which divide into six pills; one to be taken daily.

Besides these, the common rhubarb pill, and the pillacocia, or colocynth pill, sold in the shops, may be used as laxatives, though, as a generally useful and convenient laxative, the formula No. 3 will be found most beneficial.

LAYERING.—A mode of propagating trees and plants. In general, the operation of layering in trees and shrubs is commenced before the ascent of the sap, or delayed till the sap is fully up; and hence the two seasons are early in spring, or at midsummer. With plants in the artificial atmosphere of a hothouse, the case is different, and the operation may be performed at such times as the plant is found to be in a fit condition, irrespective of the above seasons. The manipulations of this mode of propagation are exceedingly simple; the following will explain the routine. In ordinary cases of nursery layering, the plant to be propagated is called the stool. Stools are cultivated only for the production of shoots proper for layering, hence they are cut close down to facilitate the operation. The stool occupies the centre, the young healthy wood is reserved, and the slender and unhealthy is cut out. The ground around being loosened up, shoot after shoot is gently drawn down from the stool; a notch, tongue, or other incision is made on its under side, and from six to ten inches from its base the earth is opened, and the layer is fitted into the soil, of a depth according to its nature and strength. It is then secured in the desired position by double and single hooked pegs, as seen in the engraving, or by a shoot of flexible nature, such as willow, which is twisted in the middle, and the two ends thrust into the ground, one on each side of the layer; the soil is laid over it, the point of the shoot is cut off, leaving one or two eyes above the ground surface. The incision, for the most part, consists in simply entering the knife below a bud, and cutting to the depth already pointed out, drawing the knife upwards, and leaving what is called a tongue; sometimes a simple notch is cut out; in the former case, a piece of tile, thin stone, or chip of wood is inserted, to keep the tongue open, or the wound from collapsing. Some plants will root freely without any incision being made; others, if only a small portion of the bark be pared off; some if they are slightly twisted or fractured; while others will not, unless a ring of bark be taken off, or tightly bound round with a piece of wire. The effects of all these are the same, namely, the obstruction offered to the descending sap, and the consequent formation of granulous matter, and the after protrusion of roots. In the case of trees which are too strong or too brittle to bend down, the process of plashing, or of elevating the soil in pots, boxes, or raised banks, must be resorted to. The time required for layers becoming suffi-

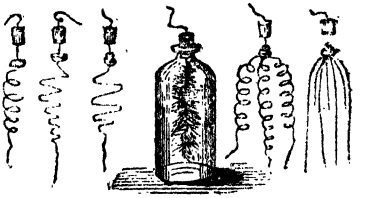


ciently rooted to be fit for separation from the stool, depends on a variety of circumstances. Some trees and a few shrubs require two years; roses, and the majority of similar shrubs, of their present year's wood, operated upon when about half ripened, will be fit for removal the same autumn; if laid in spring, or the winter preceding, they will be ready about the same time; while herbaceous and soft-wooded plants will produce their roots in a few days or weeks; and the same will occur with many plants under artificial excitement. *Layering herbaceous plants* is had recourse to in the case of rare or valuable plants, as being attended with much less risk of losing the plant than if the more ordinary process of making the cuttings were adopted; it is also practised with a view of obtaining stronger plants in a less space of time. The process is commenced when the shoots are of sufficient length and have attained some degree of consistency, which state usually occurs about the time the plant is coming into flower. The annexed figure



shows the principle in the case of a double sweet william. The lower leaves of the best formed shoots being cut off, the budding-knife is inserted below a joint or bud, is passed through half the branch, and continued about three-quarters of an inch upwards, the bending of which upward keeps the cut open, while the shoot is pegged down and covered with soil somewhat sandier than that on which the plants are growing. The form of the peg used in laying is as previously represented; but often, and more conveniently, a small twig of willow is used cut to the length of six or eight inches, and bent over, with both ends thrust into the ground, to keep the layer in its proper place. And in some extreme cases, where a shoot is sent from a distance, or accidentally separated from the original plant, the root end is placed in a phial of water, and the top end laid in a pot, the intention being to supply it with moisture while the rooting is taking place.

LEADEN TREE.—This beautiful and interesting object may be produced as follows: Put half an ounce of sugar of lead, in powder, into a clean wine decanter or large phial, filled with water; add ten drops of nitric acid or a little vinegar, and shake the mixture well; then take a piece of zinc about the size of a hazel-nut, tie it to a string, which is made to pass through the cork that fits the phial; round the piece of zinc twist once or twice a piece of fine brass or copper wire, and let the end of the wire depend from it in either of the forms seen in the engraving.



Place the zinc and wire thus prepared, so that it shall hang as near as possible in the centre of the bottle, and that no part shall touch either the top, bottom, or sides of it. Let the whole remain undisturbed for a short time, having previously fitted in the cork with the zinc attached. The metal will very soon be covered with the lead, which it precipitates from the solution, and this will continue to take place until the whole is precipitated on the zinc, which will then assume the form of a tree or bush, with leaves and branches of a metallic lustre.

LEAD, IN METALLURGY.—This metal is very malleable and ductile, but soft and unelastic. Though readily oxydised by exposure to the air, the oxydisation does not proceed far; hence its durability for roofing, and other external purposes. Perfectly pure water, put into a leaden vessel, and exposed to the air, soon oxydises and corrodes it; but river and spring water exert no such solvent power. Hence it is, that leaden cisterns are used with impunity for the preservation of common water, and that the crust which forms upon the metal prevents all further action. As this crust partly consists of carbonate of lead, which is very poisonous, great care should be taken to prevent its diffusion through the water upon any occasion, as by scraping or cleaning the cistern. Lead is not a proper metal to be used in any vessel for containing food in a liquid or moist state, for it is so readily acted upon by the vegetable and mineral acids as to be highly prejudicial to health, and even fatal to life itself. Rain water collected from the roofs of houses in leaden gutters, and coming down through leaden pipes, is apt to imbibe a poisonous salt, and to render the water unfit for consumption. Lead can be plated with tin, and as the latter metal is much less deleterious than the former, this method may be advantageously resorted to in pipes. To effect this, heated lead is rubbed with melted tin, using at the same time turpentine, or some other resinous matter, as a

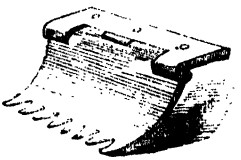
flux. The lead being thus covered with tin, any quantity of the latter metal will readily adhere to the surface of the cylinder of lead, which is then ready to be drawn into pipes.

LEAD, IN MEDICINE.—Next to mercury, there is no metal that has more preparations, or varieties of form, than lead; and none that probably enters so largely into the arts and sciences, and as a pigment giving us almost all the colours and their shades, from black to white, though in medicine the preparations of this mineral may be said to resolve themselves into two, or rather one, for the second is only a solution of the other. They are, however, distinctive in their appearance and character, though not in their qualities, the one being called sugar of lead, or the *acetate*, and the other liquor of lead, or the solution of the acetate, a compound often referred to in these articles as extract of lead, or the *liquor plumbi*.

The use of lead as an internal remedy is now almost exclusively confined to that class of disease known as hæmorrhage, such as spitting or vomiting of blood, under which heads a full account of the dose and mode of employment will be found. As an external remedy, lead is employed extensively as a lotion or ointment to subdue inflammatory action, and also as a collyrium in ophthalmia and other affections of the eye. Lead is chiefly beneficial from its cooling and astringent properties, and would be a valuable remedial agent if it could always be preserved in the system in its acetate form; but as this is almost impossible, its employment is attended with great risk—hence its expulsion, except in this form, from the pharmacopœia. Lead exerts on the system a disease nearly analogous to palsy, and this as readily from handling as from taking it into the system—a disease which painters are particularly subject to, and from whence it has been called both the painters' palsy and the painters' colic. The best antidote for lead when taken in excess, is vinegar, which converts it into an acetate, and Epsom salts to carry it off.—See POISONS.

LEAF IMPRESSIONS.—To take perfect impressions of the leaves of plants, the following process should be adopted: Hold oiled paper in the smoke of a lamp, or of pitch, until it becomes coated with the smoke; to this paper apply the leaf of which you wish the impression taken, having previously warmed it between your hands, to render it pliable. Place the lower surface of the leaf upon the blackened surface of the oiled paper, in order that the numerous veins which are so prominent on this side may receive from the paper a portion of the smoke. Lay a paper over the leaf, and then press it gently upon the smoked paper, either with the fingers, or, better still, with a small roller, covered with woollen cloth, or some soft material, so that every part of the leaf may come in contact with the smoke on the oiled paper: a coating of smoke will thus adhere to the leaf. Then remove the leaf carefully, and place the blackened surface on a sheet of clean white paper, covering the leaf with a clean slip of paper, and pressing upon it with the fingers on the roller as before. Thus may be obtained the impression of a leaf, showing its perfect outlines and veins, more accurately than in the most careful drawing.

LEAVES, AGRICULTURAL VALUE OF.—The leaves of trees which fall during autumn and winter, form an excellent manure for living plants, and will always repay a careful and systematic collection. A machine known as the leaf collector considerably economizes time and labour when used in parks, woods, and other extensive enclosures. This apparatus consists of a large cylindrical tub, about five feet in diameter and seven feet long, which swings upon an axle, and is open at top, in order to receive the leaves as they are collected. The collectors are hollow iron scoops, or scrapers attached to bars, extending across the machine from two iron hoops, which work round the cylindrical receiver, and, as they revolve, scrape the ground, collect the leaves together, lift them up, and turn them into the tub. The collectors or scoops, as seen in the engraving, are made of several distinct pieces, set in rows with springs behind each, by which any part of the scraper is enabled to give way should it come in contact with a stone or other obstacle. The hoops carrying the scrapers are lowered and adjusted to meet the ground by having their pivots supported in a lever attached to the carriage, upon which it is adjusted by means of a circular rack and pinion. The scrapers revolve as the carriage moves forward, by means of a span wheel upon the nave of one of the carriage-wheels, which works into a cog-wheel upon the axis of the scraper frame.



LEASE.—A conveyance of premises or lands for a specified term of years, in consideration of rent or other recompense, with definite conditions as to alterations, repairs, payment of rent, forfeiture, &c. Being an instrument of importance, it should always be drawn by a respectable attorney, whose duty it is to see that all the conditions in the interest of the lessee are fulfilled. He should also carefully examine the covenants of the lease; or if he take an underlease, he should ascertain the covenants of the original lease; otherwise, when too late, the lessee may find himself so restricted, that the premises may be wholly useless for his purpose, and he may be involved in perpetual difficulties and litigation; for instance, he may find himself restricted from making alterations convenient and necessary for his trade; he may find himself compelled to re-build or pay rent in case of fire, or discover that he is subject to forfeiture of his lease, or other penalty, if he should underlet or assign his interest. The covenants on the lessor's part are usually the granting of legal enjoyment of the premises to the lessee; the saving him harmless from all

other claimants to title; and also forfeiture of insurance. The tenant undertakes on his part to pay the rent and taxes (save such of the latter as may be exempted), to keep the premises in suitable repair, and to deliver up possession when the term is expired. If a lessee do not deliver up possession at the expiration of his term, he is of course liable for rent; and if he be allowed to retain possession without any new contract, he is deemed a tenant by sufferance, at the same rent as he had been previously paying; and on the landlord's acceptance of any sum for rent accruing after the termination of the lease, the tenant may hold the premises from year to year, till half a year's notice has been given by him. A lease may be *assigned* over for the *whole or part* of the term; the last, however, is properly only an underlease; the difference between the two is, that in an assignment the assignee is bound to observe the covenants in the original lease, but an under-lessee is tenant to the lessor only, and has nothing to do with the terms of the original lease, further than his possession may be affected by the observance of them by the lessor. A tenant who covenants to keep a house in repair, is not answerable for its natural decay, but is bound to keep it wind and water-tight, so that it does not decay for want of cover. A lessee who covenants to pay rent, and keep the tenement in repair, is liable to pay the rent, although the premises may be burned down. If a landlord covenants to make certain repairs, and neglect to do so, the tenant may do it, and withhold so much of the rent; but it is advisable that notice thereof should be given by the tenant to the landlord, in the presence of a witness, prior to commencing the repairs. Copyholders may not grant a lease for longer than one year, unless by custom or permission of the original holder; and the lease of a steward of a manor does not hold good, unless he is duly invested with a power for that purpose. Married women cannot grant leases, unless the power is specially reserved them by their marriage settlement; but husbands seised in right of their wives, may grant leases for twenty-one years. If a wife is executrix, the husband and wife have the power of leasing, as in the ordinary case of husband and wife. Married women cannot (except by special custom) take leases; if husband and wife accept a lease, she may, after his death, accept or reject it, and is not bound by the covenants, though she continue a tenant. Leases may be forfeited by alienation, or when the tenant grants to another a greater estate in the premises than he has himself. If the lessee commit felony, or any act that in a court of record amounts to a forfeiture of his estate; by waste, as pulling down houses, suffering buildings to decay for want of necessary repairs, tearing away floors or doors, or destroying the timber, rabbits in a warren, fish, &c.; by the tenant ceasing to reside on the premises; by non-payment of rent;—in all these cases of forfeiture the landlord has a power of re-entry. In purchasing a lease, it is advisable that a portion of the purchase-money should be kept back for a certain time, in order to discharge any outstanding claims upon the property, for which the previous possessor is liable. Upon leases of freehold property, or for a long term, money may be borrowed, the sum lent, and the rate of interest chargeable, being of course regulated by the value and nature of the property. As leases are very valuable instruments, they should be preserved with the greatest care; and if the owner of a lease has not an appropriate place on his own premises to place it in, he should deposit it with his banker, or his solicitor, taking at the same time an acknowledgment that such lease is deposited with the holder for safe custody, together with an understanding that it shall be given up when demanded. The cost of drawing up a lease varies considerably, some solicitors undertaking to perform the service at a much more moderate charge than others. But although it is undoubtedly desirable to incur as little expense as possible on these occasions, it is in point of fact a secondary consideration, the most material point being that the solicitor employed is conscientious, efficient, and responsible.

LEATHER.—The prepared skin of animals. The principal object of the art of converting skin into leather is to render it strong, tough, and durable, and to prevent its destruction by putrefaction. The skins are first cleansed of hair and cuticle, and then impregnated either with vegetable tar and extract, as in the production of tanned leather, or with alum and other salts, as for tawed leather. These processes are sometimes combined, and tanned leather often undergoes the further operation of currying, or impregnating with oil. As instances of these different results—thick sole leather is tanned; white kid for gloves is tawed; the upper leather for boots and shoes is tanned and curried; and fine Turkey leather is tawed, and afterwards slightly tanned.

LEATHER CEMENT.—An adhesive material for uniting the different parts of leather, may be made as follows:—Take one pound of gutta percha, four ounces of India-rubber, two ounces of pitch, one ounce of shellac, two ounces of oil. Melt these ingredients, and stir them well together, and apply the mixture hot.

LEATHER TO CLEAN AND PRESERVE.—A mixture for cleaning leather may be made thus:—Take of French yellow ochre, one pound; sweet oil, a dessertspoonful. Mix these well together until the oil be no longer seen; then add a pound of pipe-clay, and a quarter of a pound of starch. Mix the whole with boiling water, and when cold lay it on the leather. Leave it to dry; then rub the leather well with a cloth, and afterwards brush it briskly. For hat-cases, writing-desks, and similar articles, dissolve in warm water a small quantity of oxalic acid, and wash the articles with a sponge dipped in the solution. When dry, they will appear almost equal to new. To preserve leather from the attacks of mildew, pyroligneous acid will be found serviceable, and will also recover the leather when it has been thus injured. The acid should be passed over the

surface, after having expunged any existing spots by the application of a dry cloth. This remedy will prove of equal efficacy when applied to boots and shoes which are damaged in the same manner.

LEATHER, TO RENDER WATERPROOF. —Take of spermaceti, four parts; India rubber, cut small, one part; melt with a gentle heat, then add tallow or lard, ten parts; amber or copal varnish, five parts. Mix these ingredients thoroughly, and apply the composition to the leather with a paint brush. The India rubber should be cut into very small pieces, and allowed four or five hours to dissolve.

LEATHER, TO VARNISH. — The best varnish for leather is thin gum-water, mixed with an equal quantity of the white of egg; but it should be observed, that for book covers and other articles likely to be much handled, white of egg and water alone should be used, beaten together in equal parts.

LEATHERN WALLET. — This article as seen in the engraving, is used in nailing, wall-trees, and will be found very serviceable, in cases where the walls are so high as

to require the operator to stand on a ladder. In the figure there may be seen, besides the large pocket for the shreds and nails, two small pockets above it, for a knife and a sharpening stone. It is a great improvement to a wallet of this kind to have it kept open by three pieces of light wood, one on each side and one in the centre.

LEAK.—A defect in a vessel, by which water is admitted. The manner of stopping a leak is to put into it a plug wrapped in oakum, and well tarred; or nailing a piece of sheet lead over the spot. A leak is sometimes temporarily stopped by the primitive method of thrusting a piece of salt beef into it. The sea water being fresher than the brine contained in the meat, penetrates into its body, and causes it to swell so considerably as to bear strongly against the edges of the broken plank, and thus stop the influx of water. With regard to leakages in domestic utensils, it is always better to have them properly repaired immediately the defect is discovered, as any temporary patching-up only serves to increase the defect, and is not to be relied upon as a remedy.

LEDGER.—The ordinary ledger of commerce is well-known; a book having the same purpose and on a similar plan may be very profitably kept by private individuals as a record of their dealings and expenditure. Thus accounts might be opened with the butcher, baker, brewer, &c., which if carefully kept, would not only prevent the possibility of a mistake, but would enable the person keeping it to ascertain in a moment the state of his income and expenditure.—See BOOK-KEEPING.

LEECHES.—The leeches usually employed in medicine are brought to this country from Sweden and Poland, and though the striped kind are considered the best, if in a state of health the colour makes little difference in the quality. The leeches common in our ponds of England are equally good as those brought from the Continent, although they are somewhat depreciated. The leech, though not nearly so much used as formerly, is a very valuable remedy in all severe cases of local inflammation, for they act beneficially in a double capacity, first, as extractors of blood from the part, and secondly, by the counter-irritation produced by their bites. When applied to children, in whom the circulation on the surface is much greater than in adult life, the leech should always be placed over a bone, so that if the bite bleeds freely, it may easily be checked by pressure. Much apprehension exists about stopping the bleeding from leech bites, but this can always be effected by taking up the part in the thumb and finger and retaining the pressure over the bleeding vessel till the coagulum forms; in general, a bit of lint soaked in extract of lead and laid in the part will be found to act effectively, but pressure will always do so, and it is seldom the skin is so tense in any part that it may not be grasped for a few minutes. When the leech is to be removed earlier than its own falling off, all that is necessary is to insert the edge of the nail under the mouth of the leech and detach its sucker. Leeches are often—from sickness, and the heat or impurities of the skin—reluctant to bite; if this continues after washing the part, immerse the animal for a few minutes in a little porter, let it crawl on a cloth to dry itself, when it will generally be found vicious enough to bite anywhere. In applying leeches, grip the body about the middle between the thumb and finger, and directing the head to the part desired for it to fix on, maintain a steady but not a hurtful pressure, till the arched neck and working of the rings round its head shows it has fixed; but wherever practicable, the leech-glass should be employed, or a little cone of paper may be extemporised into a substitute, through the apex of which, the leech being only able to protrude its head, is to be held over the part till it bites. Where, in spite of all precautions, the leeches will not bite, rather than sicken them by long handling, it is better to scarify the part so as to obtain a single drop of blood, which, if spread over the part or in the direction desired, and the leeches then

applied, they will all bite instantly. As they fall off, whether wanted for immediate or future use, they should be disgorged at once. To effect this, the leech should be grasped by the tail firmly with the left thumb and finger, while the right should be drawn down the body to the mouth, ejecting the blood in a stream into a plate; it is then to be put in clean water, and if wanted immediately, dropped for a moment into a little porter; in this way one leech may be made to do the service of eight or ten. Salt should never be employed for the purpose of disgorging, as it not only makes the animal sick, but excoriates its cuticle. Though it is customary to change the water in which they are kept every day, this is a duty not necessary as far as their health is concerned, as they will live as well in dirty as clean water, indeed often better, and have been kept for years in oil.

LEEK, CULTURE OF.—This well-known plant is propagated by seed, and for a bed four feet wide by eight feet in length, one ounce is requisite. The soil should be light and rich, lying on a dry sub-soil; and the situation should be open. The ground should be dug in the previous autumn or winter, ready for sowing in spring. For the principal crop, allow beds four or five feet wide. A small crop may be sown thinly with a main crop of onions, and when the latter are drawn off, the leeks will have room for full growth. When the plants are three or four inches high in May or June, weed them clean, and thin them where too crowded. Water well in dry hot weather, to bring the plants forward. The leek is much improved in size by transplanting; those designed for which, will be fit to remove when the plants are from six to ten inches high, from the month of June to the month of August. For this purpose thin out a quantity regularly from the seed-bed, either in showery weather, or after watering the ground; trim the long weak tops of the leaves and the root fibres, and plant them by dibble in rows from nine to twelve inches asunder, inserting them nearly up to the leaves, or with the neck part mostly in the ground, to whiten it a proportionate length. Press the earth to the fibres with the dibber, but leave the stem as loose as possible, and as it were standing in the centre of a hollow cylinder. Give water if the weather be dry. Those remaining in the seed-bed thin to six or eight inches distance. Keep the whole clear from weeds. In hoeing, loosen the earth about the plants to promote their vigorous growth. The main crops of leeks will have attained a mature useful size in September, October, and November, and continue in perfection all winter and the following spring. When frost is apprehended, a portion may be taken up and laid by in sand. The late-sown crop will continue till May, without running to stalk. To save the seed, transplant some of the best full plants in February or the beginning of March, into a sunny situation, or in a row near a south fence. They will shoot in summer in single tall seed-stalks. Support them as necessary with stakes, and they will produce ripe seed in September. Cut the ripe heads with part of the stalk to each; tie two or three together, and hang them up under cover, to dry and harden the seed thoroughly, when it may be rubbed out, cleaned, and put by for future service.

LEEK MILK.—Wash a large handful of leeks, cut them small and boil them in a gallon of milk till it becomes as thick as cream; then strain it: a small basinful of this twice a day will be found efficacious in cases of coughs and colds.

LEEK SOUP.—Put the liquor in which a leg of mutton has been boiled into a stew-pan, with a liberal admixture of pea-shells; simmer gently for a quarter of an hour, strain off the liquor, throw away the pea-shells, and return the liquor to the stew-pan; then add two leeks, chopped fine, to every quart of liquor, with pepper and salt to taste; simmer gently for an hour, then mix some oatmeal quite smooth, with a little of the soup, set it over a slow fire to simmer again, taking care that it does not burn. When done, pour into a tureen and serve hot.

LEG, BROKEN.—The leg, under its general denomination, consists of two parts—the thigh and the leg proper, and is consequently composed of three bones; but leaving the upper portion or the thigh to be considered under its proper head, these remarks will be confined to the two bones constituting the leg from the knee to the ankle. The two bones entering into the formation of this member are the *tibia* and *fibula*; the first, the largest and innermost, so called from a rude resemblance to a shepherd's pipe; and the other, outermost and smallest, from the fibula or buckle of the garter usually fastened over it. Of these bones the outer, as most exposed and the weakest, is by much the more frequently broken, though it frequently happens that the same accident fractures both bones. The tibia, on the other hand, is much less frequently injured by itself, as the force that has been sufficient to fracture the larger, generally involves the smaller bone in the injury. Fracture of the bones of the leg, like that of other long bones, is either transverse or oblique; in the former case there is seldom any diminution in the length of the limb; but in the latter the fractures are most frequently attended with shortening of the leg. Fractures most generally occur about the middle of both bones, or at the lower third of their length, and are detected by a change in the shape and direction of the limb, pain, incapacity of walking or standing on the member, with mobility at the fractured part, and a distinct crepitus or grating sound when the leg is moved. Fractures of the leg, like those in other parts of the body, are of two kinds, those in which one or both bones are broken without any injury to the skin or muscles, and called *simple fracture;* and that where, in addition to the fracture, the skin and flesh are more or less lacerated, contused, and injured, which is known as *compound fracture*. In the treatment of fracture of the leg, the first duty is to place the ends of the broken bones in exact and natural position, apply a long

narrow pad the length of the limb on the inner and the outer side of the leg, and outside of each, adjust the splints, the short one on the inner, and the long splint on the outer side of the member; both being retained in their position by a series of tapes, as explained in the article ARM, BROKEN, and by a strap above, which secures the long splint to the waist, and another to the foot below. Some surgeons are in the habit of enveloping the limb in a roller bandage before applying the splints, but as this prevents the leg from being examined, and may injuriously bind and confine the limb, the practice has no benefit to justify it. The time necessary to effect a perfect union of the bones, depends upon the age of the patient, the general state of his health, and the severity of the accident that caused the fracture; though in ordinary cases, the requisite time is from ten to fifteen weeks. Where only one bone has been broken, much less time will be requisite to effect a reunion. After the removal of the splints, the limb must be strengthened by cold salt water bathing, and frequent friction with anodyne embrocations.

LEG REST.—A contrivance bearing this name is used in cases of gout or any complaint of the legs that requires them to be kept up in a certain position. The simplest of these, and one which may be easily constructed, is shown in *fig.* 1, which consists merely of two pieces of board at right angles to each other, one of them being stuffed and covered, or covered with cloth only. *Fig.* 2 is a more complete article, being made of mahogany, well stuffed, and so constructed as to be capable of being raised to any desired angle by a rack.

Fig. 1.

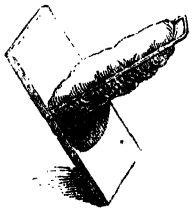
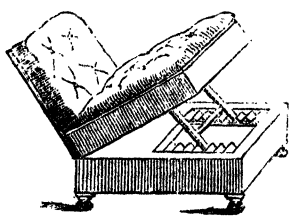


Fig. 2.



LEGACY.—A bequest, or gift of money, goods, or chattels, by will or testament. The bequest of a legacy confers only a contingent property on the legatee, which does not become complete till the assent of the executor or administrator with the will annexed, as the case may be, has been given. But before such assent, the bequest is transmissible to the personal representative of the legatee, and will pass by his will. The assent of executor or administrator, however, cannot be refused, except so far as this, that he is not bound to admit that there is any property due to the legatee till the debts of the deceased are first paid. If executors omit to pay legacies at the expiration of one year after the death of the testator, the legatee will be entitled to interest from that period. But no action can be brought for the nonpayment of a money legacy; the Court of Chancery being the proper jurisdiction for redress. Generally, an executor cannot be compelled to pay legacies until after the expiration of twelve months from the testator's decease; and not even then, unless the assets should be realized and the debts paid and provided for; but, as the rule is only for the several convenience of executors, if it should appear that all the debts of the testator are paid, the executor may be compelled to pay legacies before the twelve months have expired. In case of a deficiency of assets to pay the debts, all the general legacies must abate proportionally; but a specific legacy of a piece of plate, a horse, or the like, is not to abate, unless there be not sufficient without it. And, if the legatees have been paid, they are afterwards bound to refund a rateable part, in case debts come in amounting to more than the residue after the legacies are paid. If a legatee die in the lifetime of the testator, the legacy falls into the residue of the personal estate; but if the bequest is so clearly worded as to show that the testator intended that it should go to the children or representative of the legatee, in case of his death in the testator's lifetime, the case will not fall into the residue. If a contingent legacy be left to any one, as when or if he attain the age of twenty-one, and if he die before that time, *it is a lapsed legacy. But a legacy to be* paid when he attains the age of twenty-one is a vested legacy; and if the legatee die, his representative shall receive it at the time it would have become payable had the legatee lived. The reason of this distinction is, that the insertion of the words "*to be paid*" has the effect of immediately vesting the legacy, and the period mentioned is not a condition of payment, but the completion of the time when the legatee should be put in complete possession. General conditions imposed on legatees not to marry are void: but conditions, which restrain marriage within a reasonable time or to particular persons are good, because the liberty of marriage is not taken away, but a qualification imposed, which may be expedient: so a condition by a husband, that his wife shall be entitled to a legacy he has left her only so long as she shall continue his widow, is binding. Legacies bequeathed to married women ought, in general, to be paid to their husbands; but the executor, with the consent of the wife, may withhold the payment of such legacies till the husband consents to a suitable provision or settlement on the

wife. An inaccurate description or addition of a legatee, correctly named, will not destroy the effect of a legacy given to him by nomination. So, also, if the testator mistake the name of the thing bequeathed, having no other object to which the term can be applied, the wrong description of the bequest will not defeat the legacy. In leaving two separate legacies of the same amount to the same person, it is proper to express whether the second legacy be an addition to, or in lieu of the first legacy. Unless the testator has otherwise directed, the residuary legatee is entitled, not only to what remains after the payment of debts and legacies, but also to whatever may fall into the residue after the date and making of the will. No legacy can be recovered in any court beyond twenty years next after a present right to receive it accrued to some person capable of giving a discharge or release for the same, unless some principal or interest has been paid thereon, or an acknowledgment in writing signed by the party liable to pay, or his agent, and then only within twenty years after such payments or acknowledgments; and the recovery of interest is limited to the last six years. Legacies to witnesses of a will are void.

The duties on legacies and on succession to real property, are as follows:—Of the value of £20 or upwards, out of personal estate, or charged upon real estate, &c., and upon every share of residue. To a child or parent, or any lineal descendant or ancestor of the deceased, £1 per cent.; to a brother or sister, or their descendants, £3 per cent.; to an uncle or aunt, or their descendants, £5 per cent.; to a great uncle or great aunt, or their descendants, £6 per cent.; to any other relation, or any stranger in blood, £10 per cent. Legacy to husband or wife exempt.

LEMON BISCUITS.—To two pounds of flour, add three-quarters of a pound of moist sugar, and twenty drops of essence of lemon. Have ready three-quarters of a pound of lard, melted, and four eggs, well beaten; mix the lard and eggs together, and stir into the flour, which will form a paste; roll out and divide into biscuits, and bake in a moderately heated oven.

☞ Flour, 2lbs.; sugar, ½lb.; essence of lemon, 20 drops; lard, ½lb.; eggs, 4.

LEMON BRANDY.—Pare two dozen lemons, and steep the peels in a gallon of brandy. Squeeze the lemons on two pounds of powdered loaf sugar, and add six quarts of water. On the following day mingle the ingredients together, and pour in three pints of boiling milk; let the mixture remain for two days, then strain it off and bottle.

☞ Lemons, 24; brandy, 1 gallon; sugar, 2lb.; water, 6 quarts; milk, 3 pints.

LEMON BUNS.—Take of flour, one pound; bi-carbonate of soda, three drachms; muriatic acid, three drachms; butter, four ounces; loaf sugar, four ounces; one egg; essence of lemon, six or eight drops. Make into twenty buns and bake in a quick oven for a quarter of an hour.

☞ Flour, 1lb.; bi-carbonate of soda, 3 drachms; muriatic acid, 3 drachms; butter, 4ozs.; sugar, 4ozs.; egg, 1; essence of lemon, 6 or 8 drops.

LEMON CAKE.—Beat up the whites of ten eggs with a tablespoonful of orange-flower water; add a pound of sifted sugar and the rind of a lemon grated. When these ingredients have been well mixed, add the juice of half a lemon, and the yolks of ten eggs, beaten smooth. Stir in three-quarters of a pound of flour, put the mixture into a buttered pan, and bake the cake for an hour.

☞ Eggs, 10; orange-flower water, 1 tablespoonful; sugar, 1lb.; lemon, rind of 1, juice of half of 1; flour, ½lb.

LEMON CHEESECAKES.—Pare two lemons, boil the rinds till they are tender, and pound them thoroughly in a mortar. Then beat up together a quarter of a pound of butter, a quarter of a pound of loaf sugar, the juice of one lemon, the yolks of four eggs, and the whites of two; beat the eggs well by themselves before they are mixed with the other ingredients; with a very thin paste line the bottom of the patty-pans, and fill them rather more than half full; bake in a moderate oven.

☞ Lemons, rinds of 2, juice of 1; butter, ½lb.; sugar, ½lb.; eggs, 4 yolks, 2 whites.

LEMON CORDIAL.—To six ounces of dried lemon-peel add one gallon of proof spirit and three-quarters of a pint of water. Draw off by a gentle heat, sweeten with a little sugar, and bottle for use.

☞ Dried lemon-peel, 6ozs.; proof spirit, 1 gallon; water, ¾-pint; sugar to sweeten.

LEMON CREAM.—To the peel of one large lemon, thinly pared, add the juice of two lemons, half a pint of water; the whites of four eggs and the yolk of one, beaten well, and half a pound of loaf sugar, stir the mixture over a slow fire till it is of the consistence of cream: strain it, pour it into glasses, and serve cold.

☞ Lemon, rind of 1, juice of 2; water, ½-pint; eggs, 4 whites, 1 yolk; sugar, ½lb.

LEMON CUSTARD.—Beat the yolks of eight eggs till they are as white as milk; add a pint of boiling water, the rinds of two lemons grated, the juice of one, and sugar to sweeten. Stir this over the fire till it thickens: then add a wineglassful of white wine and a tablespoonful of brandy. Give the whole one scald, and turn them into cups or glasses, to remain till cold, when serve.

☞ Eggs, 8 yolks; water (boiling), 1 pint; lemons, rinds of 2, juice of 1; sugar to sweeten; white wine, 1 wineglassful; brandy, 1 tablespoonful.

LEMON DROPS.—Express the juice from three lemons and strain it thoroughly; mix with it a pound of refined sugar, sifted through a lawn sieve; beat these ingredients together for an hour; then deposit the mixture, in the form of drops, upon fine writing paper, and dry them before the fire.

☞ Lemons, juice of 3; sugar, 1lb.

LEMON DUMPLINGS.—Take the juice and the rind of a lemon, and a slice of bread, grate the two latter very fine, and add a quarter of a pound of suet, chopped very small, a quarter of a pound of moist sugar, and two eggs; mix all well together, put the mass into teacups, tie them over with cloths, and boil them.

☞ Lemon, 1; bread, 1 slice; suet, ¼lb.; sugar, ¼lb.; eggs, 2.

LEMON JELLY.—Dissolve an ounce of isinglass in a pint of water, then add a pound of loaf sugar, and the juice and rind of two lemons; boil for ten minutes; then strain it into a mould.

☞ Isinglass, 1oz.; water, 1 pint; sugar, 1lb.; lemons, 2.

LEMON JUICE.—In order to keep this article ready for use, the best plan is to buy the fruit when it is cheap, and lay it by for two or three days in a cool place. Squeeze the juice into a basin, and strain it through muslin, so as not to allow any of the pulp or pips to pass. Having prepared some small phials, perfectly dry, fill them with the juice so near the top as only to admit half a teaspoonful of sweet oil, which put in each. Cork the bottles securely, and set them upright in a cool place. When the lemon-juice is required for use, open only such a sized bottle as can be used in two or three days. Remove the oil, by dipping into the phial a skewer with some clean cotton wound round it, to which the oil will be attracted; and when all of it is removed, the juice will be as fresh and pure as when fresh bottled.

LEMON LOZENGES.—To a quarter of an ounce of gum arabic add ten or twelve drops of the essential oil of lemons; dissolve in half a pint of water, and add a pound and three-quarters of loaf sugar. Work all together into a stiff paste on a marble slab, which should be dusted with starch powder to prevent adhesion. Roll the mass out into a thin sheet, and stamp it out for lozenges.

☞ Gum arabic, ½oz.; essential oil of lemons, 10 or 12 drops; water, ½-pint; sugar, 1½lb.

LEMON MARMALADE.—Squeeze the lemons, boil the peels in water till soft; then take out the pith and pound the remainder in a mortar till quite fine, mixing with them a little of the juice; pass it all, with the remainder of the juice, through a sieve into a preserving pan. To every pound of the pulp add three-quarters of a pound of loaf sugar, boil it for half an hour or more, till it sets, when cold, into a jelly; it may then be poured into jelly-pots for future use.

LEMON MINCE PIE.—Squeeze a large lemon, boil the outside of it till very tender, and then reduce it to a mass. Add to it three large apples chopped, four ounces of suet, half a pound of washed currants, and four ounces of sugar. Put in the juice of a lemon and candied fruits, as for other pies. Make a short crust, and fill and cover the patty pans in the ordinary way. Bake in a moderately heated oven.

LEMON PEEL CANDIED.—Cut the fruit lengthwise, remove all the pulp and inner skin; then put the peel into salt and water, and let it remain for six days; at the end of this time boil the peels in spring water, until they are soft, and place them in a sieve to drain; make a thin syrup with a pound of sugar-candy added to a quart of water; boil the peels in this for half an hour, or until they appear clear; make a thick syrup with sugar and as much water as will melt it; put the peel into this, and boil it over a slow fire until the syrup candies in the pan; then take the peel out, dust it with powdered loaf sugar, and dry before a slow fire, or in a comparatively cool oven.

LEMON PEEL SYRUP.—Take three ounces of fresh lemon-peel, and infuse them for twelve hours in a pint and a half of boiling water, in a closely covered vessel; then strain the liquor: let it stand to settle; and having poured it off, clear from the sediment, dissolve in it two pounds of double-refined loaf sugar, and reduce it to a syrup with a gentle heat.

☞ Lemon-peel, 3ozs., water, 1¼ pint; sugar, 2lbs.

LEMON POSSET.—Steep the rind of a lemon thinly pared in a pint of sweet white wine, two hours before the mixture is required; add to it the juice of a lemon, and sugar to taste; put it in a bowl with a quart of milk or cream, and whisk it in one direction, until it becomes very thick. Serve in glasses.

LEMON PRESERVE. — Choose clear fresh lemons, wipe them perfectly clean, and cut upon the rind any devices of stars, rings, flowers, &c., being careful not to cut lower than the white pith. Put them into a saucepan with cold water, and boil them till partially tender; then turn them into cold water; when they are cold, drain them and wipe them dry; then put them in boiling syrup, and let them boil for three or four minutes; afterwards, empty the whole together into an earthen pan, to cool. The next day, and for three or four consecutive days, repeat the boiling in rather stronger syrup each day; lastly, put them into appropriate jars or glasses, pour syrup over sufficient to cover them, and then tie a piece of bladder over each.

LEMON PUDDING.—Beat the yolks of four eggs thoroughly, add four ounces of white sugar, the rind of a lemon being rubbed with some lumps of it, so as to take the essence; then peel and beat it into a paste, with the juice of a large lemon, and mix all together with four ounces of warmed butter. Line a shallow dish with a crust, and put the above mixture into it; bake in a moderately heated oven.

☞ Eggs, 4 yolks; sugar, 4ozs.; lemon, 1; butter, 4ozs.; paste, sufficient.

LEMON PUDDING, WITH APPLE.—Boil three or four small apples into a pulp, with a very little water; add the peel of one lemon thinly pared, the juice of half a one, the yolks of four eggs, a tablespoonful of brandy, and two ounces of butter melted; sweeten to the taste. Line a dish with

puff paste, and fill with the mixture; then bake it.

☞ Apples (small), 3 or 4; water, sufficient; lemon, rind of 1, juice of half of 1; eggs, 4 yolks; brandy, 1 tablespoonful; butter, 2ozs.; sugar, to sweeten.

LEMON PUDDING, WITH BREAD.—Mix together three ounces of bread grated, three ounces of loaf sugar; boil three-quarters of a pint of milk, and pour over it; when cold, add three eggs well beaten, and the juice of one lemon. Line a dish with paste, put in the above ingredients, and bake.

☞ Bread, 3ozs.; loaf sugar, 3ozs.; butter, 3ozs.; lemon, 1; milk, ¾-pint; eggs, 3; paste, sufficient.

LEMON PUFFS.—Beat and sift a pound and a quarter of double refined sugar, grate the rinds of two large lemons, and mix thoroughly with the sugar. Then beat the whites of three eggs separately, add them to the sugar and lemon-peel, and beat the whole together for an hour. Make the mixture into the form of puffs, put them on paper laid on tin plates, and bake them in a moderate oven.

☞ Sugar, 1¼lb.; lemons, 2 rinds; eggs, 3 whites.

LEMON RICE.—Boil sufficient rice in milk till it is soft, and sweeten to taste with white sugar; put it into a basin or an earthenware blancmange-mould, and leave it till it is cold. Peel a lemon thickly; cut the peel into shreds of about half or three-quarters of an inch in length; put them into a little water; boil them up, and throw the water away, lest it should be bitter; then pour a teacupful of fresh water upon them; squeeze and strain the juice of a lemon, add it with white sugar to the water and shreds, and let it stew gently at the fire for two hours; when cold, it will be a syrup. Having turned out the jellied rice into a dish, pour the syrup gradually over the rice, taking care to distribute the shreds of peel equally over the whole, and serve.

LEMON SAUCE. — Cut thin slices of lemon into very small dice, and put them in melted butter; give it one boil, and serve it with boiled fowls or other appropriate dishes.

LEMON SPONGE. — Dissolve half an ounce of isinglass in a little boiling water, add to it the juice of eight lemons, and sugar to taste; whisk the whole together until it becomes a sponge, then wet the mould, and put the mixture in; when set, turn it out.

LEMON THYME.—A herb cultivated in the kitchen garden. It is capable of increase by cuttings, and also from seed; but, being a low creeping plant, it is usually propagated by the division of the roots. These should be planted a foot apart in a poor dry soil. For winter use, the plants should be cut over when just coming into flower, tied up in small bundles, and suspended from the roof of a warm kitchen, so as to dry rapidly without losing their green colour.

LEMON, USES AND PROPERTIES OF.—In addition to the various uses to which the lemon is put for culinary purposes, it also fulfils a number of offices in a medicinal capacity. The juice of the lemon has been found an efficient agent in checking the ravages of scurvy; it has also been known to cure the gout, and complaints of a similar tendency, when all other remedies have failed; and taken occasionally in small quantities, it acts as a corrective where the stomach is disordered. The peel of the lemon is also employed in medicine, and forms a valuable addition to bitter tinctures and infusions. The inner or white spongy part of the peel should be rejected, and the outer part of the peel only taken. This should be hung up to dry in a warm dark situation, and when dried, kept in a close tin box until required for use.

LEMON-WATER ICE. — Take lemon-juice and water, of each half a pint; strong syrup, one pint; the rinds of three lemons grated, and with lump sugar added to the juice; mix the whole; strain after letting it stand for an hour, and freeze. Beat up with a little sugar the whites of two or three eggs, and, as the ice is beginning to set, work this in with a spatula, which process will facilitate its consistence, and improve its taste.

LEMON WHEY. — Pour into boiling milk as much lemon-juice as will make a small quantity quite clear; dilute it with hot water to an agreeably sharp acid, and sweeten to taste.

LEMON WINE.—Express the juice from six lemons, steep the rinds in the juice, and put in a quart of brandy. Let it stand for three days in an earthen vessel closely stopped; then add the juice of six more lemons, and mix with it two quarts of spring water, and as much sugar as will sweeten the whole. Boil the water, lemon, and sugar together, and let it stand till it becomes cool; then add a quart of white wine, and the other lemon-juice and brandy; mix them together, and strain it through a flannel bag into a cask. Let it stand three months, and then bottle it off. Cork the bottles well; place them in a cool situation, and the wine will be fit to drink in a month or six weeks.

☞ Lemons, 12; brandy, 1 quart; water, 2 quarts; sugar, to sweeten; white wine, 1 quart.

LEMONADE. — This beverage forms a very pleasant and cooling drink in summer. It should, however, be drunk in moderation, as large quantities have an enervating and depressing tendency. The ordinary lemonade may be made according to the following recipe:—1. Pare two dozen lemons as thin as possible, put the rinds of eight of the lemons into six quarts of hot water, and cover it over for three or four hours. Rub some fine sugar on the lemons, to absorb the essence, and put it into a bowl, into which squeeze the juice of the lemons. To this add a pound and a half of refined sugar, and when it is cool it is fit to drink. 2. Take four ounces of lemon-juice; half an ounce of lemon-peel, thinly pared; four ounces of white sugar; mix them with three pints of boiling water, let it stand

till cool, then strain for use. 3. Powdered sugar, four pounds; citric or tartaric acid, one ounce; essence of lemon, two drachms; mix well. Two or three tablespoonfuls of this, in a glass of cold water, makes an agreeable draught of extemporaneous *lemonade*.

☞ 1. Lemons, rinds of 8, juice of 24; water (hot), 6 quarts; sugar, 1¼lb. 2. Lemon-juice, 4ozs.; lemon-peel, ½oz.; sugar, 4ozs.; water (boiling), 3 pints. 3. Sugar, 4lb.; citric or tartaric acid, 1oz.; essence of lemon, 2 drachms.

LEMONADE, EFFERVESCING.—Boil two pounds of white sugar with a pint of lemon-juice, bottle, and cork. Put a tablespoonful of the syrup into a tumbler about three parts filled with cold water, add twenty grains of carbonate of soda, and drink it quickly.

LEMONADE, GINGER.—Boil twelve pounds and a half of loaf sugar for twenty minutes in ten gallons of water; clear it with the whites of six eggs. Bruise half a pound of ginger, boil it with the liquor, and then pour it upon ten lemons, pared. When perfectly cold, pour the whole into a cask with two tablespoonfuls of yeast, the lemons sliced, and half an ounce of isinglass. Bung up the cask on the following day. In three weeks it will be ready to bottle, and in another three weeks it will be fit to drink.

☞ Sugar, 12½lbs.; water, 10 gallons; eggs, 6 whites; ginger, ½lb.; lemons, 10; yeast, 2 tablespoonfuls; isinglass, ½oz.

LEMONADE MILK.—Dissolve twelve ounces of loaf sugar in a quart of boiling water, add a pint of lemon-juice, and half a pint of sherry; then add a pint and a half of cold milk, stir the whole well together, and strain through a jelly bag.

☞ Sugar, 12ozs.; water (boiling), 1 quart; lemon-juice, ½ pint; sherry, ½ pint; milk, 1½ pint.

LEMONADE, PORTABLE.—Take half an ounce of tartaric acid, three ounces of loaf sugar, and half a drachm of essence of lemon. Pound the tartaric acid and the sugar into a fine powder, in a stone or marble mortar; mix them together, and pour the essence of lemon upon them by a few drops at a time, stirring the mixture after each addition till the whole is incorporated; give the ingredients a final thorough mixing, and divide the whole into twelve equal parts, wrapping each up separately in white paper. When required for use it is only necessary to empty the powder into a tumbler full of cold water, and an excellent lemonade will be obtained.

☞ Tartaric acid, 3ozs.; loaf sugar, 3ozs.; essence of lemon, ½ drachm.

LEMONADE POWDERS.—Take half a pound of loaf sugar, one ounce of carbonate of soda, and three or four drops of the oil of lemon. Pound and mix these ingredients together in a mortar; divide the mixture into sixteen portions, and use one when a draught is required.

☞ Sugar, ½lb.; carbonate of soda, 1oz.; oil of lemon, 3 or 4 drops.

LEMONADE PUDDING.—Make a sufficient quantity of the lemonade according to recipe No. 1 or No. 2; adding the juice of a Seville orange to every pint; when cold, soak in it thoroughly a French roll or rolls, allowing them to remain whole, and inserting into their surface blanched almonds. Pour over them liquefied currant jelly, and serve. This will be found a delicious and cooling summer dish.

LEMONADE SHRUB.—Take the juice of eight lemons, three ounces of the juice of berberries, half an ounce of white sugar, and half a pint of white wine. Mix these ingredients well together, bottle it, and dilute any quantity of it with water or milk at pleasure, when a draught is required.

☞ Lemons, juice of 8; berberry-juice, 3ozs.; sugar, ½oz.; white wine, ½ pint.

LENITIVE ELECTUARY.—This medicine is prepared as follows:—Take of best senna leaves, in very fine powder, four ounces; pulp of prunes, one pound; pulp of cama, a quarter of a pound; pulp of tamarinds, three ounces; treacle or simple syrup, a pint and a half; essential oil of caraway, two drachms. Boil the pulps with the syrup or treacle to the thickness of honey; then add the senna, and, when the mixture is nearly cold, the oil of caraway; finally mix the whole well together. When properly prepared, this electuary is a mild and pleasant aperient, and may be used in cases of constipation. It is particularly well adapted for children, females, and delicate persons. It may be used either alone, or combined with a small portion of sulphur or cream of tartar. When united with an equal quantity of flowers of sulphur, it forms one of the best remedies for hæmorrhoids known. Employed alone, the dose is from one to three teaspoonfuls taken at bed-time. Lenitive electuary is rarely to be obtained genuine, decayed fruit and other noxious ingredients being frequently used in its composition. The best is to be procured at Apothecaries Hall.

LEPROSY.—A disease that in its ancient and Biblical signification, may be said no longer to exist; for what is modernly known by this name, although a foul and pertinacious disease, has none of those virulent and deep-tainting characters which are represented in Holy Writ as appertaining to this dreaded and life corrupting malady. Leprosy is a disease of the skin so inveterate as to convert the cuticle into white dry plates, or thin scurfy scabs, which laying one over the other give the skin the appearance of the scales of a fish. Leprosy appears to be a severe form of scrofula, and arises from a vitiated state of the blood, and an imperfect nutrition; the remedies most serviceable are such as will correct the impure state of the fluids, promote a healthy digestion, and restore tone to the skin, such as the warm bath, mercury, iodine, sarsaparilla, tonics, mineral acids, quinine, exercise, and the flesh brush.

LETHARGY is a peculiar sluggishness of the system, attended with a heavy, drowsy sense of sleep, rather the consequence of disease than a disease itself; though for-

merely regarded as such, instead of being considered, as it truly is, a mere symptom, the consequence of some grave disease, and synonymous with coma. Lethargy is characterized by a dull apathetic state of the system; a weak, languid condition of the pulse, cold feet and swollen extremities, disinclination to motion, and a rooted repugnance to all exercise and exertion; the eyes become heavy and dull, a universal torpidity taking possession of the body, and an unconquerable drowsiness keeps the brain in a state of oppressed slumber, from which the patient is only roused to relapse into deeper forgetfulness. Lethargy, when it succeeds any attack of severe or lengthened disease, is always to be regarded as a very grave and serious symptom, and, whatever may have been the cause that has induced it, must be encountered at once by energetic remedies: and of these the most important are hot water and mustard to the feet, cold lotions to the head, and ether and ammonia as restorative draughts, with, where congestion of the brain is apprehended, leeches to the temples, and a blister at the nape of the neck.

LETTER OF ATTORNEY.—See ATTORNEY, LETTER OF.

LETTER WRITING.—The art of writing a correct and appropriate letter is of so much importance in every department of life, as to render the study well worthy of being assiduously cultivated by every person. The class of letters which are of most importance are those relating to business matters. These should be clear, concise, and straightforward; and solely devoted to those subjects upon which it professes to treat, without interlarding it with any private communications or extraneous matter. It should be particularly borne in mind that dates, amounts, and other important items should be stated and written with such perspicuity as to prevent the possibility of any misunderstanding; the handwriting should be legible, and abbreviations rarely had recourse to. When a person has a business letter of great importance to write, he should previously collect his ideas, and con the subject over in his mind, so that the statements he makes shall fall into their natural order; the communication as a whole forming a clear exposition of the matter in hand Failing to do this, the chances are that the writer will probably forget some important facts; or express himself so vaguely and incoherently as to render his communication unintelligible. There cannot be a doubt that the business letter of a man, reflects in a great measure his general aptitude for business pursuits, and is generally judged accordingly; and when it is considered what incalculable injury may be done to a person's prospects, by the unfavourable impression which an ill-worded and slovenly written letter is calculated to create amongst men of business, it shows that if a person is desirous to have his character and position properly estimated, he must himself furnish the credentials by which the judgment is arrived at. Letters of a social nature, although not so important as the foregoing, are still not without their value; the pleasure which a well-written communication affords, and the disappointment which a meagre and tame epistle occasions, are results almost sufficient in themselves to regulate the efforts of the writer when he takes up the pen. Much of the appropriateness of private letter-writing also depends upon the tone which characterizes the epistle. Thus, to a person occupying a superior position in life to the writer, or removed to a distance from him by age or other distinction, the tone adopted should be respectful and deferential. To correspondents on an equality with the writer, the style may be free and chatty, just such, in fact, as though the two persons were absolutely talking with one another. The talent displayed in writing a letter about nothing, however much it may be despised, is not without its merit and good results; by the exercise of this talent persons are enabled to afford pleasure and gratification to those to whom their correspondence is addressed; while others who cannot be persuaded to write without they have some special information to impart, often cause great anxiety and disquietude to anxious friends by their neglecting to write, and gain the character of being thoughtless and unfeeling. Much mischief is done by the delay in writing letters: if a person has an unpleasant communication to make, he generally defers it from day to day, forgetting that with the lapse of time the unpleasantness will only become more intense. And he has sometimes the chagrin to find that the information which should have come from him, has already been imparted by another, much to his prejudice and loss. The answering of letters should be as soon after their receipt as is compatible; delay on such occasions is frequently attended by serious consequences, and at all times it displays an amount of ill-breeding and disrespect which no one can afford to be charged with. The style of letter-writing should be simple and unaffected, not raised on stilts and indulging in pedantic displays, which are mostly regarded as cloaks of ignorance. Repeated literary quotations, involved sentences, long-sounding words, and scraps of Latin, French, and other languages are, generally speaking, unworthy of one Englishman writing to another in his native tongue. The mechanical execution of a letter should be in keeping with its style, fairly and legibly written, without interlineations and blots, and with the letters perfectly formed, and of such a size as to render them easily distinguishable. After a letter is written it should be carefully read over, so that any existing errors may be corrected, and the punctuation supplied. When a person is writing a letter, he is more intent upon what he shall say than how he shall say it; and numberless errors, therefore, are liable to creep in, which require especial supervision. When there are a number of subjects to write upon the writer should make a note of them, upon a piece of paper which lies before him while he is writing, so that he may take the items one after the other, and cross them off as they are attended to.

In replying to a person on a variety of subjects, the correspondent's letter should lie before the writer while he is answering the communication, and each question replied to, in the same order as it appears in the original letter. And when the answer is finished, it should be read together with the communication received, so as to ensure a full and correct reply being sent. The crossing of letters should always be avoided; it is an absurd custom, which is apt to imperil the meaning of the writer, and to cause the reader much annoyance, and a series of painful and useless efforts.

LETTERS, LEGAL IMPORTANCE OF.—As a great many important transactions are carried on chiefly through the medium of letters, they have by custom become to be regarded as legal testimony; and in disputed questions either the originals of letters or their verbatim copy, are unquestionably received as evidences of the facts to which they relate. It is essential, therefore, that copies of letters relating to important matters should always be taken; they should also be copied into a book kept expressly for that purpose, in their regular order, so that in the event of any letter being referred to, it may be done more readily, and also prove by the relative position it occupies in the book, as regards date, that it is the genuine copy of the letter sent at the time represented. The posting or delivery of letters is another important feature in correspondence, and for this purpose a book should also be kept in which the letters so posted or delivered should be entered, with the signature of the person who charged himself with the delivery attached; by this means a double clue is furnished in the event of any question arising respecting the receipt of certain communications, inasmuch as one book is found to contain the copy of the letter, and another book has the entry of its transmission under the same date. In communications of very great moment it is always better, where practicable, to send the letter by hand, with instructions to the bearer to deliver it only to the person to whom it is addressed; under this circumstance the clearest and most straightforward evidence is furnished of the delivery of the letter. The same degree of importance also attaches to letters received. These should be folded in two lengthwise, indorsed with the writer's name and address, and the date of receipt, and deposited in some place in such order that any particular letter may be referred to at a moment's notice.

LETTUCE, CULTURE OF. — Of this well-known esculent there are two principal families, the cos and the cabbage lettuce. The cos lettuce grows upright, and its leaves are of an oblong shape; the cabbage has rounder leaves, folded together, and forming a low full head, spreading full out to the ground. Lettuce being a hardy and free growing plant, may be obtained early in the season if sowed in a warm border, and protected from the frost during the night. For early use, the cabbage is the best, as in that stage it is more delicate in flavour than the other, but when both have arrived at maturity the cos is the most succulent. The only mode of propagation is by seed, and the sowings take place from the beginning of February to the end of September; for a seed-bed four feet wide by ten feet in length a quarter of an ounce is sufficient, and will produce upwards of four hundred plants. For the main summer and autumn crops it is advisable to sow every month from February to July; and to sow distinct sorts in August and September, to produce late autumn and winter plants, of which a reserve is to stand for spring and early summer heading lettuces in the following year. The first crop sown in February should be in a slight hot-bed, and when about two inches high should be transferred to a colder bed covered with glass, and protected from frost. These may, in the beginning of April, be transplanted to the bottom of a wall having a southern exposure, where they will be protected by the projecting coping, and by the trimmings used to protect the blossoms of the trees. In default of such, plant in the warmest border the place affords, and protect by branches, or other means close at hand. The sowing should be performed broadcast, and moderately thin, each variety separate and raked in even and light, care being taken that the bed is trampled upon as little as possible. In the successive crops raised from the opening of spring till the close of summer, when the plants reach from two to four inches in growth, they should be thinned; of those removed, let a requisite number be planted out from one to fifteen inches asunder, to remain for cabbaging. Such as remain in the seed-beds may be either gathered sparingly, in progressive stages till the final reserve advance in close heading, or, as they increase in size, be planted out at the square distances specified above, especially those designed to stand till of stocky growth. In dry weather, water well at transplanting. Also weed and hoe the beds thinned, and water them if necessary. Those which are intended for winter culture should be planted out about the beginning of October, an abundant supply of the hardier varieties should be planted out at the bottoms of garden walls, on dry warm borders, and on raised banks, sloping both towards the sun and also from it. On these, in open places, lettuces often stand the winter well; and should those on the southern side be cut off by strong sunshine succeeding severe frosts, those on the opposite side may escape, as the process of thawing will take place more gradually on them; in planting lettuce to stand over winter at the bottom of walls, every aspect should be made use of; for it is often found that those set behind a north wall will succeed better than those having the protection of a south one. Besides planting at the bottom of walls for protection during winter, wherever there are pits or frames and glasses to spare for the purpose, these should in like manner be filled with young lettuce plants, to afford a spring supply should the others fail. In every stage of growth they must be kept free from weeds, well watered, and the earth around them frequently stirred for the extirpation of

slugs and snails, which are particularly injurious, and are very prevalent in moist seasons. When the cos varieties have attained an advanced growth they require their leaves to be drawn together with a shred of bast matting, to render the interior blanched; care should be taken that the tying is not performed so tightly as to bruise the plants. The process of blanching prevents the formation of the bitter or acrid principle, which is very perceptible in all the varieties if allowed to remain in the ground, and conduces to their growth when the leaves expand and the flower-stalk begins to ascend. Frequently during dry seasons the plants will run to seed before the heart is perfectly blanched; to retard this it is an effectual practice, at the time of tying them up, to cut out the centre of each with a sharp knife. Lettuces thrive best in a light rich soil with a dry substratum. In a poor or tenacious one the plants never attain any considerable size, but run to seed prematurely. That soil is to be preferred which is rich rather from prior cultivation than from the immediate application of manure. It is of advantage to trench the ground; and if manure is necessarily applied at the time of insertion, it should be in a state of forward decay. *To produce seed*, some of the finest and most perfect plants of each variety that have survived the winter, or from the earliest sowing of the year, should be selected. The seed from any that have run up prematurely cannot be depended upon. All other plants must be removed from their neighbourhood, themselves being left at least a foot apart; neither is it allowable for two varieties to flower near each other, as only mongrel varieties will be obtained. Each stem is advantageously attached to a stake, as a provision against tempestuous weather. It is to be observed that the branches are to be gathered as the seed ripens upon them, and not left until the whole is ready, as some will ripen two or three weeks before others, and consequently the first and best seed will be shed and lost. The seed must be well dried previous to being beaten out and stoned. Lettuce seed is considered to be best the second year, but when three years old it will not vegetate. When lettuces are *gathered for use*, the whole plant should be pulled up by the roots; but as there would be a great chance of the earth, particularly from amongst the fibres, getting in amongst the leaves in their transit to the house, it is better to cut the roots off and bury them in the ground in which they grew. The outer leaves should be cut off, and the root part of the stem cut clear over with a sharp knife, the whole plant carefully washed and rinsed in clean cold water. Any of the tops of the leaves injured by frost in winter, or by insects or drought in summer should be carefully cut off, and the utmost vigilance exercised, that no insects are allowed to remain attached to the leaves, and that all sandy and earthy particles be carefully washed out; the lettuce should be then set on end, the top undermost, in a clean salad-basket, to allow the water to drain completely out; and it should be understood that it requires no further cleansing after being thus sent from the garden.

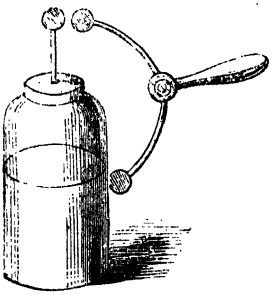
LETTUCE, DRESSED AS SALAD.—Lettuce usually forms the chief ingredient for salad, mixed with beet-root, onions, radishes, cress, &c. The cos lettuce is the most appropriate for this purpose, and the heart part of the lettuce is most esteemed. Before the lettuce is used, it should be freed from the water which it contains; when cut up, the pieces should not be very small; it is dressed with oil, vinegar, salt, and pepper, in the usual way.

LETTUCE, EXTRACT OF.—This is reputed to possess, though in an inferior degree, the virtues of opium, without producing the same deleterious effects; and therefore it is held that it may be safely administered where the more powerful medicine is not desirable or even admissible. This extract is obtained as follows: As soon as the flower-stems have attained a considerable size and height, but before the flowers begin to expand, a portion of the top is cut off transversely. This operation is performed when the sun has excited the plants into powerful action. The milky juice contained in the plant, quickly exudes from the wound, while the heat of the sun renders it immediately so viscid, that it does not flow down in a fluid state, but concretes around the part where it issued, forming a brownish scale about the size of a sixpence. When it has acquired the proper consistence, it is removed; and as the inspissated juice closes up the extremities of the divided vessels, it is necessary to cut off another small piece of the stem; this causes the escape of the juice again, and another scale is formed. The same process is repeated as long as the plant is favourable, or the plant will yield any juice. Under so variable an atmosphere as that of Britain, a crop of this kind must necessarily be precarious, except in those places where there is generally a week or two of settled drought about the warmest period of the year, and when the cultivator has sufficient local knowledge to enable him to time the state of his plants accordingly. The following method, therefore, may be adopted under any circumstances, although the extract yielded must, as a matter of necessity, be inferior to the before-mentioned in quality. Take the stalks of the lettuce when the plant has arrived at its full growth, cut them into pieces, pound them in a mortar, and when all the juice is expressed, take away the pulp, and leave the juice to dry in the sun. The dose of the extract which is usually given, is from three to five grains.

LETTUCE, FORCED.—Having cleaned the lettuces, tie them separately with a string, and boil them. Leave them to drain and cool; then open the leaves, and lay in a forcemeat between each; tie them up carefully, and stew them gently in a braise made of thin slices of bacon, a carrot, an onion, a small bunch of sweet herbs, and a little good gravy. Skim the gravy, strain it, add a glass of white wine, reduce it, and serve it quite hot.

LETTUCE, PROPERTIES OF.—The lettuce is accounted slightly anodyne, soporific, and laxative; it also possesses cooling qualities, and is altogether a wholesome food, and especially well adapted to be eaten at supper by persons whose rest is usually feverish and disturbed. On this account, however, those of an apoplectic tendency should refrain from making a hearty meal off this vegetable.

LEYDEN JAR.—This name is given to an instrument by which an accumulation of electricity is obtained. It consists of a cylindrical glass jar, coated within and



without, nearly to the top, with tin-foil. The cover consists of baked wood, and is inserted with sealing-wax, to exclude moisture and dust. A metallic rod, rising two or three inches above the jar, and terminating on the top in a brass knob, is made to descend through the cover till it touches the interior coating. The outer coating being made to communicate with the ground, by holding it in the hand, the knob of the jar is presented to the prime conductor when the machine is in motion; a succession of sparks will pass between them, while at the same time, nearly an equal quantity of electricity will be passing out from the exterior coating, through the body of the person who holds it, to the ground. The jar, on being removed, is said to be charged; and if a communication is made between the two coatings by a metallic wire extending from the external one to the knob, the electric fluid which was accumulated in the positive coating, rushes, with a sudden and violent impetus, along the conductor, and passes into the negative coating; thus at once restoring an almost complete equilibrium. This sudden transfer of a large quantity of accumulated electricity is a real explosion; and it gives rise to a vivid flash of light, corresponding in intensity to the magnitude of the charge. The effect of its transmission is much greater than that of the simple charge of the prime conductor of the machine; and it imparts a sensation, when passing through any part of the body, of a peculiar kind, which is called the electric shock. In the accompanying engraving there is seen a bent discharging rod, for establishing a direct communication between the inner and outer coatings of the jar, and restoring the electrical equilibrium; the handle is a glass insulating one, to prevent the operator from receiving the charge of the jar. By uniting together a sufficient number of jars, we are able to accumulate an enormous quantity of electricity. For this purpose, all the interior coatings of the jars must be made to communicate by metallic rods, and a similar union must be established among the exterior coatings. When thus arranged, the whole series may be charged as if they formed but one jar, and the whole of the accumulated electricity may be transferred from one system of coatings to the other, by a general and simultaneous discharge. Such a combination of jars is called an electrical battery.

LIBEL.—Libel is defined to be a malicious defamation of another, expressed in writing or printing, or by signs, pictures, or representations, and differs from slander, which is verbal or spoken defamation. The remedy for libel is either by indictment, by action, or information: the former for the public offence, as tending to provoke the person libelled to a breach of the peace, which is the same whether the matter of the libel be true or false. In a civil action, however, a libel must appear to be false as well as scandalous. A proceeding by information is generally directed against libels on the established religion or government. Between libel or written scandal and mere verbal defamation there is an important distinction, because the former is presumed to be a more deliberate injury, and propagated in a wider and more permanent form. Printing or writing may be libellous, though the scandal be not directly charged, but obliquely and ironically. So is hanging up or burning in effigy, with intent to expose some person to ridicule and contempt, a libel. Defamatory writing, expressing only one or two letters of a name, providing the accompanying matter clearly designate an individual, is as properly a libel as if the whole name had been expressed at length. To publish a full, true, and entire account of proceedings in courts of justice upon a trial, is not in general libellous. But a party will not be justified in publishing conclusions unfavourable to another, which he draws himself from the evidence delivered in a court of justice, instead of stating the evidence itself. Nor can a correct account of the proceedings in a court of justice be published, if such account contain matter of a scandalous, blasphemous, or criminal tendency; and if it do, it is a ground for a criminal information. Also, the publication of the proceedings of a court of law, containing matter defamatory of a person who is neither party to the suit, nor present at the time of the inquiry, seems to amount to a libel. Writings reflecting on the memory of the dead are punishable, provided it appear that the author intended, by the publication, to hurt the feelings, or to bring dishonour and contempt on the relations of the deceased. It is not competent for a man charged with libel to justify, by urging that one similar to that for which he is

prosecuted was published on a former occasion, by other persons who were not prosecuted. Though malice is an essential requisite in every criminal libel, yet the act of publication is deemed presumptive evidence of malice, which the defendant will be required to disprove. The party who writes a libel dictated by another, and has discretion to understand its nature; he who originally procures it to be composed; he who actually composes it; he who prints or procures it to be printed; he who publishes or causes it to be published;—all, in short, who assist in framing or diffusing it, are implicated in the guilt of the offence.

LIBRARIES, PUBLIC.—Of the public libraries in the metropolis, open to students under certain restrictions, the first is the library of the British Museum. This library contains between six and seven hundred thousand volumes of books, comprising every department of literature, and in many languages. About one-fourth of this number are placed in shelves accessible to the reader for immediate and constant reference without any impediment. The remaining works are to be found in the catalogue of the institution, and for any of these which the reader requires, tickets have to be written, and the books are brought to him by an attendant. The authorities do not allow books to be taken out of the building, but in order to facilitate the studies of persons who are engaged upon any especial theme, and require certain works for that purpose, the books may be secured to the reader from day to day, if he intimate his desire to retain the volumes by placing in them a slip of paper bearing his name. The British Museum library is open daily from 9 till 5 in the spring, 9 till 6 in the summer, and 9 till 4 in the winter; excepting three weeks in the year, namely, the first week in January, May, and September. A ticket to admit a reader to the reading-room, and the consequent privileges attached thereto, may be readily obtained by application to the chief librarian, accompanying such application by a recommendation from a clergyman, or any person of recognised position. Another public metropolitan library is that known as Sion College, located at London Wall, in the city of London. This library contains between forty and fifty thousand volumes, and a reading-room is also attached for the convenience of students. A great advantage of this library is, that readers have the privilege of taking the books from the library, on condition of returning them within a specified time. Admission to this library is obtained by a recommendation from any city incumbent. A discretionary power is also given to the librarian to allow any qualified person to consult the library. A third library is known as Dr. Williams's, Red Cross Street, City, containing about twenty thousand volumes, chiefly of a theological nature. A fourth library is Archbishop Tenison's, Castle Street, Leicester Square, containing about four thousand volumes of general literature. Admission to be obtained through the medium of any responsible parishioner.

LIBRARY, TO FORM.—See, under various heads, BIOGRAPHY, BOTANY, DOMESTIC ECONOMY, FARMING, GARDENING, GEOGRAPHY, GEOLOGY, GEOMETRY, HISTORY, MEDICINE, POLITICAL ECONOMY, SCIENCE, THEOLOGY, &c.

LICE.—Want of cleanliness, immoderate warmth, violent perspiration, and a corrupted state of the fluids, tend to promote the generation of this kind of vermin. The most simple remedy is the seed of parsley, reduced to fine powder, and applied to the roots of the hair; or to rub the parts affected with garlic and mustard. To clean the heads of children, take half an ounce of honey, half an ounce of sulphur, an ounce of vinegar, and two ounces of sweet oil. Mix the whole into a liniment, and rub a little of it on the head repeatedly. Lice which infest clothes may be destroyed by fumigating the articles of dress with the vapour of sulphur.

LICENCES, ANNUAL.—These have reference to a variety of professions, trades, and occupations, which cannot legally be carried on without taking out a licence annually, and the neglecting to do so is visited with a penalty more or less heavy, according to the nature of the interests involved. Licences are issued at Somerset House by the commissioners of the police, or by local agents appointed to various districts. Licensed persons are to paint on the outside of the front of their premises, in letters at least one inch long, their names and the word "*Licensed*," adding thereto the words necessary to express the purpose, trade, or business for which such licence has been granted. The following list comprises the various licences annually granted:—

	£	s.	d.
Appraiser or conveyancer	2	0	0
Attorney, London, Edinburgh, and Dublin	9	0	0
Attorney, elsewhere	6	0	0
(Half only for the first three years)			
Auctioneer	10	0	0
Banker	30	0	0
Beer, seller of only, not brewers	3	6	1½
Beer retailers (publicans) whose premises are rated under £20 per annum (England and Ireland)	1	2	0½
At £20 or upwards	3	6	1½
Beer, retailer of, cider, and perry, to be drunk on the premises (England only)	3	6	1½
Not to be drunk on the premises	1	2	0½
Beer, retailer of, cider, or perry, only in Scotland, whose premises are rated under £10 per annum	2	10	0
At £10 per annum or upwards	4	4	0
Brewers of table beer only, not exceeding twenty barrels	0	10	6
Brewers of strong beer, not exceeding twenty barrels	0	10	6
Brewers for sale by retail, not to be consumed on the premises	5	10	3
Brewers of beer for sale who use sugar in brewing, an additional licence of	1	0	0

	£.	s.	d.
Chemist, or any trade requiring a still, in England	0	10	0
Scotland and Ireland	0	10	6
Coffee, tea, cocoanuts, chocolate, and pepper	0	11	6½
Carriages, if with less than 4 wheels and weighing less than 4 cwt., for each	0	15	0
If with 4 wheels or weighing 4 cwt. and upwards	2	2	0
Dog, for each	0	5	0
Foreign liqueurs for retailing	2	2	0
Game, licence to sell	2	0	0
Game, licence to kill, annually	3	0	0
From 6th April to 31st October	2	0	0
From 1st November to 5th April	2	0	0
Game-keeper, being an assessed servant, if deputed or not	2	0	0
If not assessed	3	0	0
Gun, licence to carry	0	10	0
Hawker and pedlar on foot	0	1	0
And for each horse, &c., used	4	0	0
Horse, for every, or mule	0	10	0
Horsedealer	12	10	0
House agent	2	0	0
Male servant of any age	0	15	0
Maltster, making not exceeding fifty quarters	0	7	10½
Malt roaster	20	0	0
Malt, roasted, dealer in	10	0	0
Passage vessels, on board which liquors or tobacco are sold	1	1	0
Patent medicine vendor, London	2	0	0
Any other corporate town	0	10	0
Elsewhere	0	5	0
Pawnbroker, London	15	0	0
Elsewhere	7	10	0
Plate dealers, selling above 20z. gold, and 30oz. silver	5	15	0
Under the above weight	2	6	0
Playing-card maker	2	0	0
Postmasters (Ireland)	2	2	0
Postmasters keeping one horse or one carriage	7	10	0
Spirits: distiller, rectifier, or dealer, not retailer	10	10	0
Spirits retailers of, whose premises are rated under £10 per annum (England and Ireland)	2	4	1
Spirits and beer, retailers of, whose premises are rated under £10 per annum (Scotland)	4	4	0
Spirits, retailer of, in Ireland, being duly licensed to sell coffee, tea, &c., whose premises are rated under £25 per annum	9	18	5½
Stage carriage, licence to run in Great Britain	3	3	0
Stage carriage, supplementary licence	0	1	0
Stage & hackney carriage driver or conductor (London)	0	5	0
Sweets, retail (United Kingdom)	1	2	0½
Tobacco & snuff, manufacturers of, not exceeding 40,000lbs.	10	10	0
Not exceeding 20,000lbs.	5	5	0
Tobacco and snuff, dealers in	0	5	3
Vinegar makers	5	5	0

	£	s.	d.
Wine, foreign dealers in, not having licences for retailing spirits and beer	10	10	0
" " having a licence for retailing beer, but not for retailing spirits	4	8	2½
" " having licences to retail beer and spirits	2	4	1

LIEN.—In law, a right which one person has to detain the property of another on account of labour expended on that property, or for the general balance of an account due from the owner. The general opinion appears to be, that the right of lien extends to every trade and profession exercised for the benefit and advantage of the community. Attorneys and solicitors have a lien for their costs on the papers of their clients; bankers, upon all securities in the way of trade; brokers, factors, and agents, on the property of their principals in possession, or even in the hands of purchasers; masters of vessels, on their cargoes for wages, or necessary repairs during the voyage; carriers have a lien for the carriage price; innkeepers, on the goods and property of their guests for their food and lodging, and on their horses for their keeping and stabling; insurance-brokers have a lien for the general balance of their account on the policies effected by them for their principals; and among others, millers, packers, wharfingers, dyers, coachmakers, calico-printers, and others, have all a lien on the goods respectively confided to them in the way of business. But as the right of lien is admitted for the benefit of trade, it is confined in its operations to trade only. Therefore no lien lies for the pasture of cattle, or the keep of the dog; or where there has been a special agreement to pay a certain sum for workmanship, in which case the owner of the goods on which the labour has been bestowed can only be made personally liable. Under the following circumstances the right of lien cannot be exercised:—1. If the possession of the property has been obtained wrongfully, or by misrepresentation. 2. If it has been intrusted solely on the personal credit of the owner of the lien, or delivered by an authorized servant or agent. 3. And lastly, no lien can be acquired over property delivered by a bankrupt, or one in contemplation of insolvency. A right of lien gives no general right to sell goods, except where the detention of goods is creative of expense, when the lien is saleable.

LIFE BOAT.—See BOAT.

LIFE-PRESERVER.—A number of contrivances have been devised for the preservation of life from shipwreck, or from drowning under any circumstances. In all life-preservers the simplicity of construction, and the ready mode of adjustment, are the chief recommendations. An excellent and cheap life-preserver for persons proceeding to sea, bathing in dangerous places, or learning to swim, may be thus made:—Take a yard and three-quarters of strong jean, double, and divide it into nine compart-

merts. Let there be a space of two inches after each third compartment. Fill the compartment with very fine cuttings of cork, which may be made by cutting up old corks, or purchased at the cork-cutter's. Work eye'et holes at the bottom of each compartment, to let the water drain out. Attach a neck-band and waist strings of stout book-web, and sew them on strong. The life-preserver will then be complete.—See CORK WAISTCOAT, FIRE ESCAPE, &c.

LIGHTNING.—The injury frequently occasioned both to person and property by this destructive element, renders it highly essential to observe certain precautions by which the evil consequences ordinarily occurring may be prevented. Houses and other buildings may be protected from the injurious effects of lightning by the adoption of a conductor. This is simply a rod of copper or iron, which is elevated above the top of the structure, and runs down its side to the ground; the electric fluid is by this means attracted towards the metal, and carried by it to the surface of the earth. If the conductor be made of iron, its pointed extremity should be gilded, to avoid rust: the rod should be of sufficient diameter, and so fixed that it shall project some feet above the highest point of the building, and sink some feet into the ground till it comes in contact with moisture. When a thunder-storm, attended with vivid flashes of lightning, is raging, any articles of bright metal lying about rooms should be removed or covered over. Within doors, the safest position is the cellar, for when a person is below the surface of the earth, the lightning must strike it before it can reach him, and will probably be expended on it. The centre of the room is the best to sit in, and this position will be improved by placing the feet on another chair. It will be safer still to lay two or three mattresses in the middle of the room, and to place chairs upon them. When a person is struck by lightning, cold water should be thrown upon him as speedily as possible. Out of doors it is safest to avoid trees, walls, iron railings, or any object by which the lightning can be attracted: if no house be near in which to take refuge, it is best to stand in the middle of a field, or in the open road until the storm has subsided.

LIGNUM VITÆ.—The popular name of a plant of the genus *judaicum*. The common lignum vitæ is a native of the warm latitudes of America, and of several of the West India islands. It becomes a large tree, having a hard, brownish, brittle bark, and its wood firm, solid, ponderous, very resinous, and of a blackish yellow colour in the middle, and of a hot aromatic taste. It is of considerable use in medicine and the mechanical arts, being wrought into utensils, wheels, cogs, and various articles of turnery.

LILAC.—Of this hardy shrub there are many varieties: the white, red, and blue flowered; and of the Persica, also the parsley-leafed, and the sage-leafed. They may be raised from suckers, layers, cuttings, and seeds; the sowing and planting may be made during the autumn in any common soil.

LILY.—Of this plant there are many varieties. The proper time for planting and transplanting them is in autumn, when their flowers and stalks decay, which is generally in August and September, the roots being then at rest for a short space of time, though the bulbs taken up at the above season of rest may be kept out of ground, if necessary, till October or November; the white lilies, however, do not succeed if kept long out of the earth, and all the others succeed best when planted again as soon as possible. Plant them four or five inches deep, and at good distances from one another. None of the sorts require any particular culture, for they will endure all weathers; so no more is necessary than destroying weeds about their stems, and supporting the plants with sticks. They may all remain undisturbed two or three years, or longer; nor, indeed, is it proper to remove those out of bulbs oftener, for by remaining they flower stronger after the first year. It is, however, advisable to take up the bulbs entirely every three or four years. The lily may be propagated by offsets or by seeds. The roots yield offsets abundantly every year, which, when gently watered, may be taken off annually in autumn, otherwise once in two or three years. The small offsets should then be planted in beds a foot asunder, and three deep, to remain a year or two; and the large bulbs should be planted again in the borders, &c., singly. Propagation by seed is sometimes practised, but more particularly with a view of obtaining more varieties. In autumn, soon after the seed is ripe, sow it in pots or boxes of rich light earth, half an inch deep; place the pots in a sheltered situation all winter, and the plant will appear in the spring; in April remove the pots to have

only the morning sun all the summer, giving moderate waterings; in August, transplant the bulbs into nursery-beds in flat drills an inch deep, and three or four asunder; but as the bulbs will be very small, scatter the earth and the bulbs together in the drills, and cover them with earth the above depth; in August or September following, trans-

plant them into another bed, placing them eight or nine inches each way asunder, here to remain to show their first flower, then transplant them finally. *The lily-of-the-valley* requires a rather more careful culture than the ordinary sorts. Before planting, dig over and well break the ground about nine inches deep, then plant the roots, about four inches apart, all over the surface of the ground, giving them a gentle press down with the thumb and finger, and then cover them about four inches thick with the same sort of soil. On forming new plantations of this plant, select all the flowering buds from the stock of roots, and plant them by themselves. If equal quantities of each can be had, there will be equal quantities of flowers for two or three successive seasons, after which they should be all taken up, the roots divided, and replanted in the same way. At the time of replanting, it will be requisite to leave a sufficient quantity undisturbed for the purpose of lifting, for forcing during the winter months. For forcing, pot them in thirty-two-sized pots, filled to within three and a half inches of the rim with rich loam, upon which the roots are closely placed, and then covered about two inches in thickness with equal parts of leaf mould and sand; they are then well watered, so as to settle the mould about the roots; and afterwards placed on a shelf, near the glass, in a moist stove, or forcing-house, the temperature of which may range from sixty-five to seventy degrees, taking care that the soil does not become dry. When they are so far advanced that the plants show their heads of flowers, remove them into a warm greenhouse, still placing them near the glass, until as they advance in growth they are withdrawn by degrees into a shaded part of the house, from whence they are removed to the drawing-room as required, their places to be immediately filled with others, which are similarly treated, and thus an uninterrupted succession will be kept up. Care and attention are requisite in lifting and selecting the plants for forcing; they require a minute examination to distinguish those that will flower from those that will not, the only difference being that the buds of the former are more round and short than those of the latter.

LIME.—The chemical uses of lime to vegetation are very considerable, and highly important. In its direct action as a food or constituent of plants, it must be regarded as an essential ingredient. The chemical action of the lime on the soil is very remarkable; mixing with the heavy adhesive clays, it renders them more flexible, less liable to be injuriously acted upon by the sun, and much more readily permeable by the gases and vapours of the atmosphere. The quantity of lime used per acre, of necessity varies with the soil and the expense with which it is procured. The heavy clay and peat soils require the largest proportions; the light lands need a much smaller quantity to produce the maximum benefit. As a general scale, twenty-five bushels per acre, mixed with earth, may be used for light soils, and never more than a hundred bushels per acre on clays. A calm day should be chosen for spreading the lime; but should there be the least wind, the single horse carts should be so placed at the heaps as that the lime-powder which rises into the air should be blown away from the horses and men. Powdered lime is heavy; but all that can lie upon a shovel is so light in weight, that each ploughman takes a heap, and spreads the lime from it upon the ridges allotted to him. The direction in burning should have the wind a little ahead; and when a number of men take from different heaps, they should so arrange themselves along the ridges as that the cart farthest down the wind take the lead in spreading. It is proper to put a cloth over the horse's back and harness, and the men should cover their faces with crape, to avoid the cauterizing effects of the quick-lime. The horses, when loosened from work, should be thoroughly wiped down and brushed, to free the hair of any lime that may have found its way into it; and should the men feel a smarting in the eyes or nose, sweet thick cream is the best emollient. Lime is usually procured in summer and autumn, as the kilns are only kept in activity in those seasons; so when it is intended to apply it in spring, it is necessary to procure it in autumn, and keep it all winter. To preserve it in a desirable state in winter, the heap of shells should be covered with a thick coating of earth, and every crevice that appears in it should be immediately filled up. The qualities of lime vary according to the localities in which it is found; and the lime of some districts is not at all suitable as a manure. Some specimens contain a very large proportion of magnesia, which absorbing carbonic acid very slowly, remains in a caustic state, to the injury of the roots of the plants, and the diminution of benefit from the carbonic acid evolved by the decomposing constituents of the soil.

LIME, MEDICAL PROPERTIES OF.—Lime is a corrosive, antacid, and depilatory. It is employed in surgery as a caustic, and in chemistry and pharmacy, to make lime-water, to render the alkalies caustic, to make several calcareous salts, abstract water from various substances, &c. *Lime-water* is made by pouring six parts of boiling water upon a quarter of a pound of fresh burnt lime. They are to be agitated together, and the vessel covered directly, and set apart for three hours; afterwards the solution is to be preserved upon the undissolved lime, in well stoppered glass bottles, and the clear fluid poured off when it is wanted for use. It is tonic, antacid, and beneficial in cases of scrofula and extreme debility. Milk disguises the flavour of lime-water *without* impairing its virtues. The dose is from half an ounce to half a pint, once or twice a day. The use of lime in domestic economy is very important. Lime water has been recently made to perform another office, for which it is said to be excellently adapted. It has lately been found that water saturated with lime, produces in bread the same whiteness, softness, and capacity of retaining moisture, as results from the use of alum

while the former removes all acidity from the dough, and supplies an ingredient needed in the sustenance of the human bones, but which is deficient in the cereals. The best proportion to use is, five pounds of water, saturated with lime, to every nineteen pounds of flour. No change is required in the process of baking. The lime most effectually coagulates the gluten, and the bread weighs well.—See CHLORIDE OF LIME.

LIME PLANT, CULTURE OF.—The lime is one of the citron family. It grows to about eight feet in height with a crooked trunk, and many diffused branches with prickles. It is a native of Asia, but has long been common in the West Indies, where it is

grown both for its fruit and fences. The fruit of this plant supplies an excellent juice, highly prized on long sea voyages, and efficacious in preventing the ravages of scurvy, and alleviating its attacks.

LIMITED LIABILITY.—This term has a legal reference to joint-stock companies and partnership associations. Thus it is enacted, that any seven or more persons, associated for any lawful purpose, may, by subscribing their names to a memorandum of association, and otherwise complying with the provisions of the Act in respect to registration, form themselves into an incorporated company, with or without limited liability. The names of the shareholders in limited liability companies are to be registered, together with the amount of shares for which they are liable. Every limited company is to have its name affixed outside its office of business in legible characters, and engraven on its seal; and in order to point out its constitution, the word "limited" is to form the last in the title. In the event of any limited company being wound up by the court, or voluntarily, any person who has ceased to be a holder of any share within the period of one year prior to the commencement of the winding-up, shall be deemed, for the purposes of contribution towards payment of the debts of the company, and the costs and expenses of winding up, to be an existing holder of such share or shares, and shall have in all respects the same rights, and be subject to the same liability to creditors, as if he had not ceased to be a shareholder.

LINE FOR ANGLING.—This part of the fishing tackle is generally to be bought better than it can be home made. But if the angler still prefers to make the line himself, he should use silk and hair, rather than any other material, and plait, not twist them. A machine, fabricated especially for amateur line-makers, may be purchased at the shops; and this will be found of great assistance. The most useful line is about four yards in length. A single hair line, with a small porcupine float, is sufficient for general fishing. The plaited silk lines are best for trolling; the line should be shotted, that it may sink to the desirable depth in the water; the shots should be affixed near together, within two or three inches of the bottom loop of the line. The line-maker should observe that the line is finest near the end, and stoutest at the top. As a great deal of the success in angling depends upon the manner of *casting the line*, the following hints in connection with this proceeding will be found of service:—When you have properly fixed the winch of the rod, and have brought your line from it through the links, fix your fly on, and let out your line about the length of the rod, or something less; take the rod in your right hand, and the fly in your left, holding by the head between your thumb and finger, with the point outwards. By observing this precaution, you will avoid hooking yourself. When you move the rod backward to cast the line, let the latter go from your left hand. Practise several throws at this length, and increase it gradually as you improve, until you are able to throw almost any moderate length with ease to within an inch of any spot you desire. Draw the fly lightly towards the shore, and watch it narrowly, so as to be able to strike instantly, but not violently, if a fish should rise at it; if you do not, you will most probably lose him, for, by your inadvertence, he quickly discovers the nature of your bait. In raising your line for the second and subsequent throws, wave your rod around your head instead of bringing it directly backwards. You should not return the line before it has gone its full length behind you, lest you whip off your fly. In order to exhibit your flies naturally to the fish, when you have thrown, raise your hand by degrees, with a slight quivering motion; and as you thus draw the bait towards you, let it go down the stream (for you must never bring your fly against it); and before it comes too near you, prepare to cast again. If you see a fish rise at a natural fly, throw your line a little above him, so that the bait may descend gently and naturally towards him; fish every yard of water likely to afford sport, and never despair of success; for sometimes it so happens that after many fruitless hours spent without a fish ever rising at your fly, you will fill your bag or basket during the last hour. The lighter your fly descends upon the water, the greater

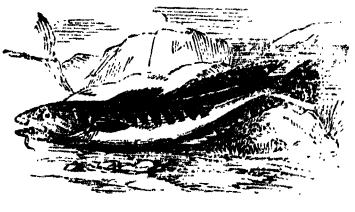
chance you have of a rise. Use only one hook at a time till you can throw to any given distance with precision. By dint of observation and practice you may acquire such a mastery as to be able to cast your fly under banks, into holes, among bushes, &c., where the best fish are frequently found. Always fix your eye upon the spot towards which you are throwing, and you will scarcely fail after a time to cast your fly in the right place.

LINEN.—This well-known article of wearing apparel, and general domestic use, is made in every variety of quality, from the coarsest to the finest. It is difficult to give directions for judging of the fineness of linen, the best guide being furnished by the comparison of one quality with another, and bearing in mind the peculiar characteristics of each. One of the most striking properties of this material is, that it is a non-conductor of heat, and therefore it is better adapted for summer wear than for winter use. Yet even in this capacity it must be adopted with caution, and with delicate persons, especially, it should never be worn immediately next to the skin, the reason being that the perspiration, instead of being passed off through the fabric, as with cotton, remains on the inner surface, and by thus interrupting the free exercise of the pores, creates that cold and clammy sensation, which is as disagreeable to the feelings as it is injurious to the health. For external articles of clothing, however, linen will be found a cool and agreeable wear during the hot summer months; thus, a linen jacket, or a linen bonnet or cap, by its non-conducting properties, is enabled to resist the heat of the sun which is brought in contact with it, and to prevent its penetrating inwards to the body or the head. The cool and soothing nature of linen renders it especially well adapted for binding up wounds or applying to sores, and neither cotton nor any other material should be used when this can be obtained. For this purpose every housewife should always have a store of linen rags deposited in some accessible place, and in a fit condition to apply immediately, so that they may be used upon an emergency.

LINEN, PRESERVATION OF.—When linen is well dried, and laid by for use, the chief precaution to attend to for its preservation, is, to secure it from damp and insects. The former is effected by placing the linen in wardrobes, drawers, or boxes situated in apartments which are naturally dry, and which have fires occasionally lighted in them: the ravages of insects may be prevented by the use of a judicious mixture of aromatic shrubs and flowers, cut up and sewn in linen bags, and interspersed among the shelves and drawers. These ingredients may consist of lavender, thyme, roses, cedar-shavings, powdered sassafras, cassia lignea, &c., to which a few drops of rose water, or other strong scented perfume have been added. When linen is placed by for any length of time without being used, it should be brought forth occasionally and hung up in the open air; by this means, it is prevented from becoming discoloured, and the creases are prevented from wearing into holes. Mildewed linen may be restored by soaping the spots while wet, covering them with fine chalk scraped to powder, and rubbing it well in. In all cases, it will be found more consistent with economy to examine and repair linen that may stand in need of it previous to sending it to the laundry. It should be borne in mind, that too frequent washing is liable to wear out linen more than ordinary use; and therefore the process should not be repeated oftener than is absolutely necessary. It will also be found an excellent plan to have every article numbered, and so arranged after washing that each may be worn in its regular turn, and accomplish its proper term of domestic use.

LINEN, TO REMOVE STAINS FROM.—*Fruit stains* may be removed by rubbing the stain on each side with yellow soap; then tying up a piece of pearlash in it and soaking it well in hot water; the stained part should afterwards be exposed to the sun and air until removed. *Ink stains* may be removed by wetting the part with warm water, and applying salts of lemon. *Wine stains* will disappear, if the articles stained are placed in boiling milk, and suffered to boil until the stains disappear. Scouring drops for removing spots, grease &c., from linen, may be compounded from an ounce each of spirits of turpentine and essence of lemon, and applied with a camel's hair brush. The essence must be recently made, or it will leave a circle round the spot.

LING.—A salt-water fish, of which small numbers only are consumed, although it is

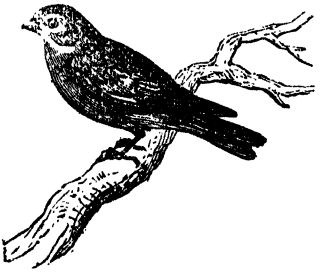


of agreeable flavour, and possesses nutritious qualities.

LINIMENT.—A remedy used externally as a local stimulant to relieve deep-seated inflammations when other means cannot be employed. Independently of their general efficacy, these remedies possess certain specific properties, and may be compounded as follows:—*Anodyne and discutient.* Take two drachms of scraped white soap, half a drachm of extract of henbane, and dissolve them by a gentle heat in six ounces of olive oil. To be used in portions of two or three drachms at a time, for glandular enlargements which are painful and stubborn. *Strong ammoniated.* Add one ounce of strong liquid ammonia to two ounces of olive oil; shake them well together until they are properly mixed. To be employed as a stimulant in rheumatic pains, paralytic numbness, chronic glandular enlargements

lumbago, sciatica, &c. *Compound ammoniated.* Add six teaspoonfuls of oil of turpentine to the preceding liniment. To be used for the same diseases, and for chronic affections of the knee and ankle joints. *Lime and oil.* Take equal parts of common linseed oil and lime water, and shake the whole thoroughly. To be applied to burns, scalds, sun-blisters, &c. *Camphorated.* Dissolve half an ounce of camphor in two ounces of olive oil. To be used as a stimulant, soothing application, in glandular enlargements, dropsical swellings, and rheumatic pains. *Soap liniment with Spanish flies.* Take three ounces and a half of soap liniment, and half an ounce of tincture of Spanish flies; mix and shake well. To be used as a stimulant to chronic bruises, sprains, rheumatic pains, and indolent swellings. *Turpentine.* Melt two ounces and a half of resin cerate; add an ounce of oil of turpentine, and mix. To be used as a stimulant application to ulcers, burns, scalds, &c.

LINNET.—A well-known song-bird which usually builds in a thick black or white thorn hedge, or in a furze bush. Nestlings



may be taken at ten days old, about the middle of May, when the shafts of the feathers have just begun to appear. Cover them up warm, and feed every two hours, from six in the morning till six or seven in the evening, on a mixture of moistened crumb of white bread, soaked rape-seed, and hard-boiled egg. When they are able to feed themselves, give them summer rape-seed entire, but moistened with water, so that the husk may be easily disengaged. Vary the food by the addition of millet, radish, cabbage, lettuce, and plaintain-seeds, and sometimes a few melon-seeds or barberries. The more their food is varied, the less subject will they be to disease: but care must be taken not to overfeed them. A supply of summer rapeseed may always be within the bird's reach, but the other kinds of food must be given sparingly, and by turns. Birds that have liberty to range the apartment may be more freely fed than those that are wholly confined to their cages. Hemp-seed must be given sparingly, because it fattens them so much that they either die or discontinue singing. A little salt mixed with their food is very agreeable to them, and prevents many diseases. As linnets are very fond of bathing, and of dusting their feathers with sand, they should have a bath of fresh water daily attached to their cage, and should also be supplied with a bed of fine sand, removed from time to time. A small piece of chalk should also be put into their cages, to prevent looseness, to which they are liable; and also to guard against epilepsy; the symptoms of which are silence, melancholy, and a bristling of the feathers; the bill becomes hard, the veins thick and red, the feet callous and so swollen that the bird can scarcely sit on its perch. Linnets are also subject to asthma, which may be easily detected by shortness of breath, and by the bird keeping his beak open, as if to gasp for air. This disease is generally produced by dry and heating food; and by the air of overheated rooms. The best remedy is to substitute for their customary food, bread and milk, lettuce and rue, and watercresses. The song of the linnet is very lively and sweetly varied; its manners are gentle, and its disposition docile. When confined with other birds it easily adopts their song; and when taken young, it may readily be taught to modulate its voice to any sound to which it is accustomed. The male bird may be distinguished from the hen by the browner tinge of the feathers on its back; and to ascertain this more precisely, hold the bird gently in the hand and stretch out its wing; if you observe the white on three or four feathers clear and bright, and extending up to the quills, you may conclude that it is a male bird, as the white upon the hen's wings is less and fainter. The females are smaller than the males, and, when nestlings, may be distinguished by the back being more grey than brown. The male nestlings may also be known by their white collar, and by their having more white about their wings and tail.

LINSEED.—The seed of the common flax, possessing soothing and emollient properties, and employed both as an internal and external remedy. To make *linseed poultice*, obtain ground linseed free from grit. Pour a sufficient quantity of boiling water into a hot basin, and stir the meal in till the whole is of the proper consistence; beat the mass smooth, spread it evenly upon the linen lying ready to receive it, and apply it as hot as it can be borne. To make *linseed tea*, pour two quarts of boiling water upon one ounce of linseed, and two drachms of liquorice-root, sliced; in cases of stubborn coughs, a few slices of lemon may be added; let it stand in a covered jug for six hours, then strain it off, and drink as occasion demands.

LINT.—This material was formerly old linen cloth scraped, to give it a soft woolly surface; but it is now manufactured on purpose, of new material, and may be purchased of any chemist. Lint may be made on the instant by nailing the corners of a piece of old linen to a board, and scraping its surface with a knife. *Scraped lint* is made into various shapes for particular purposes. When it is twisted up into a conical and wedge-like shape, it is called a tent, and is used to dilate fistulous openings and plug

wounds, so as to promote the formation of a clot of blood, and thus arrest bleeding. When rolled into little balls, they are called boulettes, and are used for absorbing matter deposited in cavities, or blood in wounds. Another useful form is made by converting a mass of scraped lint into a long roll, and then tying it in the middle with a piece of thread; the middle is then doubled and pushed into any deep-seated wound so as to press upon the bleeding vessel, while the ends remain loose, and assist in forming a clot; or it is used in deep-seated ulcers to absorb the pus, and keep the edges apart.

LIP, AFFECTIONS OF.—The lips, or rather the lip, for it is to the lower lip that disease is generally confined, is subject to several affections, such as inflammation and enlargement, ulceration, chapping, and excoriation—all in themselves trivial and harmless—and is only subject to one, and fortunately rare, disease of any serious moment—cancer. Leaving this for the present out of consideration, all the others may be regarded as symptomatic of the state of the stomach, or else are caused by direct irritation from contact with jagged teeth. The most prevalent form of sore lips is that of deep cracks or fissures, that on the first stretch of the cuticle bleed; in persons of a scorbutic habit, instead of cracking, the skin peels off in scales, leaving a raw, irritable, and painful abrasion, aggravated by heat or moisture, and which sometimes continues for weeks; both of these conditions are dependent on the state of the system, and can always be cured in a few hours, or in the worst case in two or three days, by a dose or two of aperient medicine, such as a dose of blue pill, and a spoonful of Epsom salts some hours after, repeating both for two or three times, should the obstinacy of the case require it. When inflammation and swelling of the lip takes place, as it sometimes does, from the presence of a broken tooth, keeping up a constant irritation from the sharp edge pressing on, or coming in contact with, the soft part, the spicule should be at once filed down, or else the tooth withdrawn, for while the exciting cause remains, no means will afford relief. This having been done, a cold lotion of sal-ammoniac, vinegar, and water applied by means of wetted pledgets of rag will speedily reduce the swelling, when a pill and a draught, such as has been already ordered, will ensure a permanent recovery of the part to health. The lip in all cases should be kept as dry as possible, and especially from the saliva and the tongue: and as all such cases are symptomatic of the state of the system, their own permanent cure is, as we have shown, by an aperient medicine. An excellent application is a little tallow rubbed in by the finger before going to bed, the tallow having the advantage over all other grease, in not becoming rancid. Cancer of the lip is usually characterized by a callous thickening of the cuticle and the formation of a warty excrescence; or it may begin by a painful pimple, which after once or twice being removed, degenerates into a small irritable ulcer, which discharges a thin ichorous exudation, and rapidly affects the glands under the jaw, which become distinct and knotty; the ulcer, after remaining for a length of time in a passive, irritant state, closing over, and again breaking out, suddenly assumes an active form, and is attended with stiffness in the muscles of the jaw and darting pains, till it finally assumes all the features of this much dreaded disease; for which, though caustic and arsenic are the best remedies we possess, there is no certain cure but excision, in the same manner as for hare-lip. Though cancer of the lip is generally confined to *men* in mid-life, and inveterate smokers, it would appear more to depend upon some occult state of the blood than to any social habit, however objectionably pursued.

LIP SALVE.—A remedy for chapped and wounded lips, usually made as follows:—Take two ounces of oil of sweet almonds, half an ounce of white wax, and half an ounce of rose-water; set a mortar in a vessel containing boiling water, and put the wax, cut into very small pieces, into a mortar. When the wax has melted, take out the mortar, and add the oil by degrees, beating with the pestle until it is cool; then mix the rose-water with the mass. If it is desired to be coloured, rub up a little carmine with the oil before mixing it with the wax.

LIQUEURS. — These are made in two ways, either by distillation or infusion; but there are very few liqueurs which are not nearly as good when made by infusion as they would be by the other more tedious process; it is only when the flavouring substance has a deteriorated flavour in the form of essential oil that distillation is necessary. As liqueurs are generally sold at a high price, and can thus be as easily manufactured at home, the latter mode of obtaining them in preference to the former is a matter of considerable importance.—See CURACOA, LOVAGE, MARASCHINO NOYAU, RATAFIA, &c.

LIQUORICE, CULTURE OF.—This is a hardy perennial plant, a native of the South of Europe. It is propagated by cuttings of the roots. On account of the depth to which the root strikes, when the plant has room to flourish, the soil should have a good staple of mould, about three feet deep. Taking the small horizontal roots of established plants, cut them into sections six inches long; having traced out rows a yard asunder, plant the sets along each row, at distances of eighteen inches, covering them entirely with mould. During the first year, a light crop of lettuces or onions may be cultivated between the rows. During the summer, keep the plot clear from weeds; and when the subordinate crop comes off, hoe and dress the ground. At the close of autumn, or as a winter dressing, fork or dig between the rows, to stir and refresh the surface; and cut down the decayed stems. After three or four years' growth, the main roots will be of a mature size, and fit for consumption. In the course of the following winter, begin to dig them up, opening a trench close to the first row as deep as the

roots; then, with the spade, turn out all the roots close to the bottom; so proceed from trench to trench, and prepare the ground for some other crop.

LIQUORICE, USES AND PROPERTIES OF.—The extract of this root, known as "Spanish juice," is used chiefly as a demulcent remedy in coughs and irritation of the throat, and in irritations of the stomach and bowels. It has the advantage over many other pectoral medicines of being slightly laxative and at the same time harmless to the stomach. Many persons take it largely, and find it useful in heartburn. The extract is also employed to cover the taste of *nauseous drugs*, and is added to demulcent drinks generally.

LITHOGRAPHY.—The art of taking fac-similes of drawings, printing, or writing on stone. The drawing is made on a peculiar kind of stone suitable for the purpose; a pencil of chalk is also used, or ink specially prepared, or a camel-hair pencil. A weak solution of nitrous acid is then poured over the stone, which unites with and neutralizes the alkali or soap contained in the chalk, and renders it insoluble in water. After this, the usual course is to float a solution of gum over the whole face of the stone, and when this is removed, if a sponge and water be applied to its surface, the drawing is found to be no longer removable. In this state the work is ready for the printer, who obtains impressions by the following process:—Having thrown with the ends of his fingers a few drops of water on the stone, and spread them with a sponge, so as to damp the whole surface equally, the printer finds that the water has been imbibed by the stone only on those parts not occupied by the drawing, which, being greasy, repels the water, and remains dry. A roller, properly prepared with printing ink, is now passed over the whole stone, which will not even be soiled where it is wet, from the antipathy of oil and water. But the parts occupied by the drawing, being dry and greasy, have an affinity for the printing ink, which therefore passes from the roller and attaches itself to the drawing. Damped paper is then put over it, and the whole being passed through a press, the printing ink is transferred from the stone to the paper, and this constitutes the impression. By repeating in this manner the operations of damping the stone and rolling in the drawing, an almost unlimited number of impressions may be obtained. The modes of lithography are various, but the illustration given, will explain the principle of them all. The art, in whichever way pursued, requires great delicacy and dexterity. In drawing on the stone, the slightest mark of the hand will fasten on the surface, and appear in the impression. The execution of the impression in an equally clear and dark manner, is evidently a matter of difficult accomplishment.

LIVER, DISEASES OF.—All affections of this organ are divided into two classes, *acute* and *chronic*; of the latter, there are many forms and varieties; of the former, only one disease, which is called *inflammation of the liver*, or *hepatitis*, which is known by the symptoms of general fever, great tension and pain in the right side and under the ribs, extending across the abdomen, a full, quick, and often bounding pulse, pains in the head, between the shoulders and right arm, nausea, vomiting, and a coated tongue. Besides these symptoms, there is difficulty of breathing and pain in lying on the left side, the secretions are suppressed, and the water a deep yellow.

Treatment.—In this disease the most active measures against inflammation should be resorted to at once; and where the patient is young, *bleeding* adopted to the extent of twelve or sixteen ounces; where the irritation of the stomach is great, an emetic of twenty grains of ipecacuanha given, and followed by two pills composed of five grains of calomel and six grains of compound colocynth pill, divided into two; concluding in an hour or two after, by half an ounce of Epsom salts or a black draught; bearing in mind that the more immediately and the more effectively the bowels can be acted on, the more sure and expeditiously will the disease be abated. If after the adoption of these remedies the pain continues, and the pulse remains full and hard, and other symptoms indicate the unsubdued nature of the disease, rather than return to bleeding, the patient should be put in a hot bath for five minutes, and the following mixture and pills given every two and four hours till perspiration ensues, and the gums and mouth are rendered tender, each being suspended as the effect is produced. Take of

Nitrate of potass (saltpetre) . . .	30 grains,
Tartar emetic . .	2 grains,
Camphor water . .	8 ounces,
Laudanum . . .	1½ drachms.

Dissolve and mix. Two tablespoonfuls to be given every four hours. Take of

Calomel . . .	12 grains,
Powdered kino . .	1 scruple,

Extract of gentian, enough to make into a mass, which divide into eight pills; one to be given every two hours.

Sometimes in spite of all precaution the disease terminates by suppuration, or the formation of matter in the liver, and an abscess; a state known by chills and shivering, and the remission of the febrile action, in which case the matter either discharges into the bowels, or the abscess points externally, and requires to be opened. The moment this condition is expected the depleting system must be set aside, and the patient's strength supported by wine and tonics, with light food and gentle aperients.

The *chronic* form of diseased *liver* is, however, by far the most severe and frequent. Under this head are to be included all forms of enlargement, hypertrophy, schirrus, tubercles, abscesses, and the many modified and mixed forms of disease to which this organ is liable. But as these in general assume almost analogous symptoms, and require nearly all the

same kind of treatment, it will be more convenient for the sake of perspicuity and application to generalise the whole, and proceed from the milder form of treatment up to the more complicated; such as is only required in very severe or long standing cases. A chronic condition of the liver is usually characterised by a pale flabby countenance, sometimes assuming a yellow, and at others a greenish cast; the *adnata*, or white part of the eye, is frequently injected with yellow lines, and the face is either puffed or doughy; there is general lassitude of the body, and disinclination to all exertion; occasional headache, a clammy metallic taste in the mouth, accompanied by a loaded and white-furred tongue, an uncertain and fastidious appetite, dry chilly skin, a reduction in the secretions, and an habitual confinement of the bowels. In addition to all these, there is usually thirst, restless nights, and an almost constant sense of weight in the right side, a sense of weariness in the shoulder or arm of the same side, and a dragging sensation in the loins.

The *treatment*, in all cases of chronic affection of the liver, consists in stimulating by direct and indirect means the organ to a healthier state of action; for this purpose very many remedies have been employed, though for all useful purposes the number may be reduced to two, or at the most four; of these, the chief are mercury in one or other of its various forms, and taraxacum, or dandelion. The first of these has a specific action on the structure and internal economy of the liver, and the other a direct purifying and discharging influence upon all the fluids of the body. The assistant remedies are the saline salts, known as the tartrate of potass, which when required can be taken in taraxacum tea, the hot-bath, electricity, and sometimes a blister.

In the milder forms of liver affections a Plummer's pill, taken night and morning for three days, and then one every night for three days longer, with a wineglassful of taraxacum tea every eight hours, and a dose of senna, or a small amount of Epsom salts every third morning, to carry off the secretions, will in all probability comprise all that will be needed. Should the symptoms, however, not yield to this course, it will be advisable to substitute blue pill for the Plummer's pill, taking it in doses of two and a half grains, in the same manner as the former, and by adding to each dose of taraxacum half a small teaspoonful of the tartrate of potass—cream of tartar. In more severe cases, in addition to either the first or second of these courses, and especially where the skin is dry, rough, and chilly, the warm bath should be used twice a week, and the body well rubbed, especially over the region of the liver, while in the water, with a flesh brush; or if the skin is too sensitive to bear so rough a friction, with a towel. The bath, when possible, should be used at bed-time, and the patient, enveloped in a blanket without drying, lie down and perspire. Sometimes the induration of the liver is so complete, that such ordinary means fail to rouse its dormant function, in which case the organ must be stimulated by the following course of treatment. Take of

Blue pill	1 scruple,
Powdered camphor .	6 grains,
Ipecacuanha . . .	2 grains,

Extract of taraxacum, enough to make the whole into a mass, which is to be divided into nine pills, one of which is to be taken every eight hours with a wineglassful of taraxacum tea; and the side over the liver, especially where the pain is most perceptible, is to be rubbed every night for a few times with a small quantity of the following ointment, first softening the cuticle by the application of a poultice or fomentation. Take of

Mercurial ointment .	1 ounce,
Camphor . . .	3 drachms,
Tartar emetic . .	1 scruple.

Mix. Where electricity can be procured, a few shocks passed through the side in the direction of the *duct*, will be found highly beneficial; or instead, a galvanic chain may be worn round the body. Sometimes it is necessary to apply a blister, though in general a strong *warming plaster*, in which some tartrate of antimony is blended, will be found to answer all purposes. In all cases the bowels must be acted on every third day either by senna, salts, or a black draught, and as much brisk muscular exercise taken as the patient can endure. The taraxacum tea is to be made by boiling two or three handfuls of the dandelion root, washed and cut small in a quart of water for fifteen minutes over a slow fire.

LIVER AND PARSLEY SAUCE.—Wash the liver of a fowl or rabbit, taking care that it is perfectly fresh, and boil it for five minutes in five tablespoonfuls of water; pound it in a small quantity of the liquor in which it has been boiled, and rub it through a sieve; wash about one-third the bulk of parsley leaves, put them on to boil in a little boiling water, with a teaspoonful of salt; lay it on a hair-sieve to drain, and mince it very fine; mix it with the liver; put it into a quarter of a pint of melted butter, and warm it up.

LIVER SAUCE, FOR FISH.—Boil the liver of the fish, and pound it in a mortar with a little flour; stir it into some broth, or a portion of the liquor in which the fish has been boiled; season with cayenne, and a little essence of anchovy, soy, or ketchup; a little lemon-juice may be added, or a piece of lemon cut into dice.

LIVER, TO DRESS. — See BULLOCK'S LIVER, CALF'S LIVER, &c.

LIVERY STABLES.—These are places where horses and vehicles are kept at the charge of the owner, either for a temporary interval or for a long term, at certain charges. If a person is likely to put up his horse and vehicle regularly at a livery stable, he should enter into an arrangement for the period, as a considerable reduction will be made on that account. A person should, however, in the first place, be careful in placing his horse under the charge of a

person who is likely to see that it is well fed and cared for. At livery stables, horses, gigs, broughams, &c., are let for hire, the terms varying with the style in which the equipage is supplied, and the length of time that it is required. Many persons who are compelled to use vehicles, such as medical men, find it less troublesome and expensive to make an arrangement with a livery stable keeper, by which he ensures a horse, vehicle, and driver being at his door at a certain hour every morning, without his having any trouble about it.

LOACH, sometimes called the stone-loach, from his great liking for haunts of stony places in rivers, is a dainty little fish, although, from his comparative scarcity, not much sought after; it is more used as a

bait for pike, trout, perch, and eels, than as an edible. The loach is in shape somewhat like the gudgeon, without its inclination to obesity, has a mouth with barbs or wattles like a barbel, and is marked with dark brown spots. He is caught with a gentle or a piece of worm on a No. 13 or 12 hook.

LOAN SOCIETIES.—These societies are established for granting loans to borrowers on personal security, and repayable by instalments. The mode of obtaining a loan is as follows:—The intending borrower obtains a printed form from the office of the society, and fills it in, according to the instructions given, with all the particulars relating to himself and his proposed security. The paper is then left at the society's office, and in a few days the applicant receives a communication that his application is granted or refused, as the case may be. If it be granted, he and his security have to attend at the office on a day named; and after jointly signing a promissory note, the loan, less the amount of interest, is handed over to the borrower. This loan has to be repaid generally by weekly or monthly instalments, and at the same time a small fee is paid with the amount, to defray what are termed the expenses of the society. In making application for a loan, the society lays great stress on the responsibility and respectability of the proposed security, the position of the borrower being a minor consideration; and therefore an intending borrower should exercise caution in the selection of the security which he makes, otherwise he is likely to be refused, and has also to forfeit the fee which he has paid for inquiry. The aggregate rate of interest which a borrower pays for the accommodation of a loan, averages from fifteen to twenty per cent. per annum; and as this is a heavy charge, a person should reflect whether he is absolutely in need of this aid, before he has recourse to it, at so heavy a rate of interest. It is to be regretted that many so-called loan societies exist, which systematically defraud the public by retaining in nearly every case the inquiry fee, without once intending to grant the loan asked for. Therefore, before a borrower makes application to an office, he should ascertain by inquiry, and by exercising his judgment, that the office he selects, conducts its business on just and honourable principles. In addition to these private loan societies, there are public ones, arising from an established fund, and lending money at a small rate of interest to specified classes of persons, on certain conditions. Thus there is a society which grants loans, at three or four per cent., to householders in the parishes of Westminster, Clerkenwell, &c. And there is a trust in connection with the City of London, which grants loans to necessitous tradesmen living within the boundaries, at a very low rate of interest. Many other loan societies also exist, which cannot be specified, but the particulars respecting which may be obtained by dint of inquiry, and by consulting the advertising columns of the leading newspapers.

LOBELIA. — This species of flower is much admired for its tall spikes of scarlet flowers, which continue to blow from July till the end of September, and, by skilful cultivation, assume a degree of magnificence rarely surpassed by other flowers. The

seeds should be sown as soon after they are ripe as possible, in pans or boxes filled with rich moist soil, well watered before the sowing. The seed, when sown, must either not be covered at all, or very slightly with a sprinkling of dry peat. The seed-pans should be kept out of doors in dry mild weather, but must be protected from frost

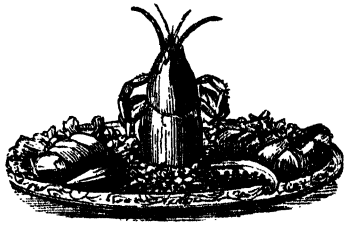
and heavy rain by a hand-glass or frame. The young plants will come up in spring, and ought to be kept moist, as dry weather is very prejudicial to their growth. They will thrive best in the open air, where only the morning sun can shine upon them. In May, or as soon as they are large enough, they may be potted off singly into small 60-sized pots, taking care that slugs do not get at them, or they will devour the whole. It will tend greatly to strengthen the plants, if they are re-potted as frequently as the roots fill the pots. They must be sheltered during winter, and re-potted in spring into the pots where they are to flower, which they will probably do in August, though some may not flower till the third year. This flower may be also propagated by cuttings taken from the stem, and potting them under a hand-glass during summer. Bushy plants are produced by stopping the centre stem after the last shifting, by which the side shoots become more vigorous and full of flower.

LOBSCOUS.—Mince, not too finely, some cold roast beef or mutton. Chop the bones, and put them into a saucepan with six potatoes peeled and sliced, with a seasoning of pepper and salt; of these make a gravy. When the potatoes are completely incorporated with the gravy, take out the bones, and put in the meat. Stew the whole together before it is served.

LOBSTER.—This well-known shell-fish begins to breed in the spring, and continues breeding during part of the summer. In some places they are caught by the hand; but they are generally taken by means of pots or traps, constructed of osier twigs, and baited with garbage; they are then attached to a cord thrown into the sea, and their stations marked by means of buoys. Lobsters are generally in their prime from the middle of October till the beginning of May.

LOBSTER BUTTER.—Pound the coral part of one or two fresh hen lobsters to the smoothest possible paste; mix with it about an equal proportion of fresh firm butter, and a moderate seasoning of mace and cayenne, with a little salt, if needed. Mix the whole thoroughly together, and set it aside in a cool larder, or place it over ice until it is sufficiently firm to form into pats. Serve it garnished with curled parsley, or with any light foliage which will contrast well with its brilliant colour. The coral may be rubbed through a fine sieve before it is put into the mortar, and will then require but little pounding. Another variety of preparation is produced by mingling equal proportions of lobster and of anchovy butter in the mortar, or one-third of the anchovy with two-thirds of lobster; and to this some of the white flesh can be added, to give a still further variety.

LOBSTER COLD, DRESSED.—Before a lobster is sent to table, take off the large claws, hold each of them firmly with the edge upwards, and, with a quick light blow from a hammer or other convenient implement, crack the shell, without disfiguring the fish. Split the tail open with a very sharp knife, and dish the lobster in the manner shown in the engraving, either with



or without a napkin under it. When the soft part of the body is required to mix with the dressing, take it out before it is served.

LOBSTER CUTLETS.—Prepare and beat to a paste about three-quarters of a pound of the flesh of a couple of fine lobsters, one of which must be a hen lobster; add to it, when it is partially beaten, an ounce and a half of fresh butter, a saltspoonful of salt, and about two-thirds as much of mixed mace and cayenne, with a dessertspoonful of the inside coral, the whole of which should be rubbed with a wooden spoon through a hair sieve, to be in readiness for use. When all these ingredients are well blended, and beaten to the finest and smoothest paste, the mixture should be tested by the taste, and the seasoning heightened if needful; but, as the preparation is very delicate, it should not be over-spiced. Mould the mass into the form of small cutlets about the third of an inch thick, insert into each a short piece of the smallest claws, strew the coral lightly over them, so as to give them the appearance of being crumbled with it; arrange them round the dish in which they are to be sent to table; place them in a very gentle oven for eight or ten minutes only, to heat them through, or warm them in a Dutch or American oven, placed at some distance from the fire, that the brilliant colour of the coral may not be destroyed.

LOBSTER, DIETETIC PROPERTIES OF.—Lobster is esteemed a very rich and nutritious aliment for persons with strong stomachs; but for delicate persons it is a very inappropriate food, being one of the most indigestible kinds of shell-fish. To render it less injurious, the flesh should be beaten to a fibreless paste; and, to assist its digestion, it is always better to eat with it some greenmeat, as lettuce, &c. Lobsters should never be partaken of unless they are perfectly fresh, for, when in the least stale, they are apt to produce the most injurious consequences.

LOBSTER FRICASSEED. — Take the flesh from the claws and tails of two moderate sized lobsters, cut it into small scollops or dice, heat it slowly quite through in about three-quarters of a pint of bechamel sauce, and serve it when it is at the point of boiling, after having stirred briskly to it

a little lemon-juice, just as it is taken from the fire. Good shin of beef stock made without vegetables, and somewhat reduced by quick boiling, if mixed with an equal proportion of cream, and thickened with arrowroot, will answer extremely well in a general way for this dish.

LOBSTER FRITTERS.—Chop very fine the meat, with the coral part and the spawn of two large lobsters, add grated bread crumbs, and a little butter, and season with pepper and salt, and a very small quantity of chopped sweet herbs; make this into a kind of paste with yolk of egg; and having formed it into pieces about two inches in length, and an inch thick, dip them into a good thick batter, and fry.

LOBSTER PATTIES.—Prepare the lobster as in the preceding recipe, with the addition of a few oysters, and a little white wine. Roll out a puff paste a quarter of an inch thick, cut it into squares, line the requisite number of patty-pans, put upon each a bit of bread the size of half a walnut; roll out another layer of paste, of the same thickness, cut it as above; wet the edge of the bottom paste, and put on the top, pare them round to the pan, and notch them at certain distances with the back of the knife; rub them lightly with yolk of egg; bake them in a quick oven for a quarter of an hour; in the meantime heat the lobster mixture, and when the patties are done, take a thin slice off the top, then with a small knife or spoon take out the bread and the inside paste, and put in the fish.

LOBSTER PIE.—Pound the flesh of boiled lobsters, including the coral part and the spawn, in a mortar, with pepper, salt, and nutmeg; then mix with the pounded meat melted butter, in the proportion of a quarter of a pound to a large lobster; add some very finely grated bread crumbs, and a little lemon-juice, and bake with a puff paste. As this is a very rich dish, it is generally eaten cold, and in small quantities at a time.

LOBSTER, POTTED.—This should be made with fine hen lobsters, when full of spawn; boil them thoroughly; when cold, pick out all the flesh, mince it quickly with a very sharp knife, and turn it into a mortar; strew on it a seasoning of cayenne pepper, pounded mace, grated nutmeg, and salt. Mix the whole well up with butter, in the proportion of three ounces to a large lobster, and beat it to the consistence of paste, press it down hard in preserving pots, pour clarified butter over the surface, and cover it with wetted bladder. Lobster may also be potted without pounding it, and only cut into such pieces as if prepared for sauce, minced with the spawn and soft parts, and seasoning, and pressed together as closely as possible. In packing it, place the coral and spawn in layers, so that it may have a regular and sightly appearance when cut out. If inteuded for store this latter method is the best, but if for sandwiches, &c., the directions first given are the most proper to follow

LOBSTER SALAD.—Cut up the flesh of a fine lobster into pieces, not of too small a size, together with two lettuces, washed with the most scrupulous care, and rendered perfectly dry on a napkin; cut three hard-boiled eggs into square pieces; add eight or ten slices of beetroot, and a stem or two of mint; mix these all well together, and pour over it a dressing made as follows:—Take half a pint of best Florence oil, and three new-laid eggs, and beat them together; add two tablespoonfuls of mixed mustard, half a pint of melted butter, a pinch of cayenne pepper, some salt, and half a pint of vinegar. This mixture, put into bottles and tightly corked down, will keep for months, and may be used as occasion requires.

LOBSTER SAUCE.—Choose a lobster that is well filled with spawn; pull the flesh to pieces with a fork, and bruise it with the spawn with the back of a spoon; break the shell, and boil it in a little water to extract its colouring matter; strain it off; melt some butter very smoothly on it, with a little horseradish; after a few moments, take out the horseradish, mix the body of the lobster well with the butter; then add the flesh, and give it a boil, either with ketchup, or gravy, or butter.

LOBSTER SAUSAGES. — Chop finely the flesh of a large lobster, with two ounces of butter which has been browned with two tablespoonfuls of flour; season with cayenne pepper, pounded mace, and salt, and heat it over the fire with sufficient stock, or plain water, to form a mass, but not too liquid; when cold, shape it like small sausages; cover with bread crumbs and yolk of egg, and fry brown.

LOBSTER, STEWED.—When the lobsters are boiled, pick the meat clean from the shells, take a pint of water, a little mace, a little whole pepper, and the shells of the lobster; let them boil till all their goodness is extracted; strain off the liquor, and put it into a saucepan; place on the lobster, with a piece of butter rolled in flour, a wineglassful of sherry and a little lemon-juice; after having boiled, dish them, and serve them in their liquor.

LOBSTERS, TO BOIL.—Set over the fire a saucepan containing water salted in the proportion of a tablespoonful of salt to a quart of water; when the water boils, put the lobster in, and keep boiling briskly from half an hour to an hour, according to the size of the fish; then take the lobster out, wipe all scum from it, and rub the shell with a very little oil or butter, to give it a gloss.

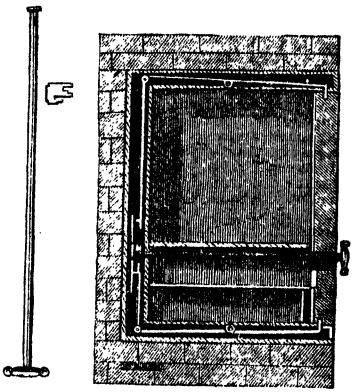
LOBSTERS, TO CHOOSE.—As a rule, it is better to buy lobsters alive. Choose those which are heavy and lively, and full of motion, which is an index of their health and freshness. Those of middle size are the best. Always reject them when the shell is encrusted, this being an infallible sign that they are old. The hen lobster is distinguished from the male by having a broader tail, and less claws. When boiled, the tail of the lobster preserves its elasticity if fresh, but loses it as soon as it becomes stale. The heaviest lobsters are the best; and when they are light and watery, they are unfit for eating.

LOCKED JAW.—This formidable and fatal disease is only a local form of that mysterious condition of the nervous system, known as *tetanus*, and which receives different names according to what part of the body is thrown into convulsion or rigidity; when it affects the muscles of the head and face, it is denominated *trismus*, or locked jaw. This affection, like the general disease of which it is a part, is divided into that form which results from exposure to rain and sun, atmospheric changes, or what is known as *idiopathic*, or spontaneous, and that the far more general condition which is excited by punctures, wounds, and accidents, generally, and called *traumatic*. There are certain conditions of the system when an injury received will degenerate into a mortal evil; and others, where it is powerless to effect mischief; but unfortunately science has discovered no means to determine when either condition is present. Locked jaw is almost always the result of accident, and the length of time that takes place between the receipt of the injury and the termination of the disease, depends on the age, constitution, and strength of the patient, and the heat or coldness of the weather. The shortest case on record, lasted a quarter of an hour, though the time may be generally stated at from twelve hours to as many days.

The first *symptoms* are a sense of stiffness in the back of the neck, which, gradually increasing, renders difficult every motion of the head, the muscles becoming rigid, with a pain at the root of the tongue, difficulty of swallowing, with tightness about the chest, and a fixed pain behind the breast-bone, shooting out through the back; at the same time the rigidity of the muscles of the face increases, impacting the jaws so closely that nothing can possibly pass them. Sometimes the disease is entirely confined to the head, at others the spasmodic action extends over the body, showing the worst form of tetanus and hydrophobia, the patient dying in fearful suffering. As punctures and cuts from rusty nails, broken glass, or splinters, have frequently led to this painful disease, all such wounds should be immediately washed, any irritating particle lodged in the flesh removed, and a warm poultice laid over the part as a precautionary measure; and if in the foot, strict rest enjoined. As the treatment of lock-jaw is so precisely analogous to that of tetanus, the most available means of cure will be given under the one head of TETANUS.

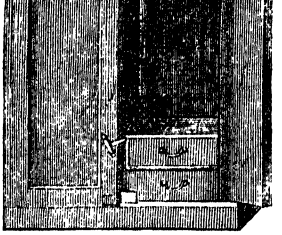
LOCKS.—The amount of security which locks are capable of affording to property, should induce persons to exercise care in their selection. A lock which can be easily picked, is in fact less secure than having no lock at all, since persons are apt to place reliance on the defective implement, and to imagine they are being protected all the time they are being robbed. For doors, cupboards, and every kind of domestic receptacle, the patent locks of both Chubb and Hobbs are held in high estimation. For safe locks, that shown in the engraving, and recently invented, is proved to be of great efficacy. This lock is situate at the back, as shown in *figs.* 1 and 2. The bolts

Fig. 1.



shooting upwards and downwards, are hinged at their ends to levers, which work inside the top and bottom casing of the safe. These levers have hooks at their front ends, and when the bolts are shot by the key, these levers rock, and their hooks fasten into

Fig. 2.



the edge of the door, or into eyes inside the door. Unlocking the door relieves it from these hooks, and it is then free to open. The key of this lock is made on a new principle; that is to say, the handle and the wards form (as seen in the engraving) two distinct portions, and may be screwed on and off as required, and the portion absolutely applying to the lock, being comprised within a small compass, may be easily carried about in the pocket. The handle has a button on its end, to prevent it being drawn out of the keyhole further than to attach the key, so that it cannot be mislaid, and is always ready at hand; while, by its being so left in, access to the lock is made still more

difficult. All locks are apt to get out of order at times, and especially when they are not treated with care. Owing to dust and other causes, they will sometimes not work easily; a little sweet oil should then be applied to them with a feather, and the key turned gently backwards and forwards several times; but if this will not amend the defect, the lock should be taken off, and thoroughly cleaned and oiled. When locks do not act freely, they should never be forcibly acted upon, as this generally injures the lock and breaks the key; the better way is to humour them, and try to move them by gentle means, and if this does not succeed, a locksmith should be consulted.

LODGERS AND LODGINGS.—Before lodgings are taken, it is essential to know that the rent and taxes of the house are paid; for the goods of a lodger are liable to distress for arrears at any time while on the premises. If lodgings are taken for a certain and specified time, no notice to quit is necessary. If the lodger, however, continues after the expiration of the term, he becomes a regular lodger, unless there is an agreement to the contrary. If he owes rent, the housekeeper can detain his goods whilst on the premises, or distrain, as a landlord may distrain the goods of a tenant. No distinction exists between lodgers and other tenants as to the payment of their rent, or the turning them out of possession; they are also similarly circumstanced, with regard to distress for rent, as householders. The rent of weekly tenants should be paid weekly, for if it is once allowed to run a quarter, the tenant cannot be forced to quit without a quarter's notice. Lodgings by the year should only be taken from a person who is either proprietor of the house, or holds possession for an unexpired term of years. *Furnished Lodgings* are usually let by the week, on payment of a fixed sum, part of which is considered as rent for the apartment, and part for the use of the furniture. In some instances an agreement is made for so much per week rent, and so much for the use of the furniture, and to place all monies received to the account of the furniture, until that part of the demand shall be satisfied; for the landlord cannot distrain for the use of his furniture. Persons renting furnished apartments frequently absent themselves, without apprising the housekeeper, perhaps with the rent in arrear. If there is probable reason to believe that the lodger be left, on the second week of such absence the householder may send for a police constable, and, in his presence, enter the lodger's apartments, and take out the property of the latter, and secure it until application is made for it. He may then enter upon the possession of the apartment; and if, after fourteen days' notice given by advertisement in the *London Gazette*, the lodger does not pay the arrears of rent, the householder may sell the property to satisfy his claim, reserving any surplus money, and such goods as it may not be necessary to sell, and must keep them ready for delivery to the lodger when he shall demand them. If a person makes a verbal agreement to take lodgings at a future day, and declines to fulfil his agreement, the housekeeper has no remedy; but if he pay a deposit, he partly executes an agreement, and the housekeeper has a remedy against him for not occupying the lodgings according to agreement. If a landlord enter and use apartments while his tenant is in legal possession, without his consent, he forfeits his right to recover rent. If a lodger quits apartments without notice, the landlord can still recover his rent by action, although he has put a bill in the window to let them. Removing goods from furnished lodgings, with intent to steal, is a felony; unlawfully pledging is a misdemeanour. When the lodger has removed, and there are no goods whereon to make a levy, the rent beomes a debt, and can only be recovered in the County Court of the district. For *agreement of tenancy and notice to quit*, see LANDLORD AND TENANT.

LOGWOOD.—A medicinal agent used as an astringent. To obtain the decoction, boil an ounce and a half of bruised logwood in two pints of water until it is reduced to one pint; then add a drachm of bruised cassia, and strain. *Dose*, from one to two ounces.

LOO.—A game at cards which is subdivided into limited and unlimited loo. It is played two ways, both with five and three cards, though most commonly with five. dealt from a whole pack, either first three and then two, or by one at a time. Several persons may play together, but the greatest number can be admitted when the game is played with three cards only. After five cards have been dealt to each player, another is turned up for trump. In general, the knave of clubs, or sometimes the knave of the trump suit, as agreed upon, is the highest card, and is styled "pam;" the ace of trumps is next in value, and the rest in succession as at whist. Each player has the liberty of changing from the pack all or any of the five cards dealt him; or of throwing up his hand in order to escape being looed. Those who play their cards, either with or without changing, and do not gain a trick, are looed; as is likewise the case with all who have stood the game, when a flush or flushes occur; and each, excepting any player holding "pam" of an inferior flush, is required to deposit a stake, to be given to the person who sweeps the board, or to be divided among the winners at the ensuing deal, according to the tricks which may then be made. For instance, if every one at dealing stakes half-a-crown, the tricks are entitled to sixpence each, and whoever is looed must put down half-a-crown, exclusive of the deal; sometimes it is settled that each person looed shall pay a sum equal to that which happens to be on the table at the time. Five cards of a suit, or four with "pam" compose a flush which sweeps the board, and yields only to a superior flush, or the elder hand. When loo is played with three cards, they are dealt by one at a time; pam is omitted, and the cards are not exchanged, nor permitted to be thrown up.

LOOKING-GLASSES, TO CLEAN.—Wash thoroughly a piece of soft sponge and remove all gritty particles from it, dip it slightly into water, squeeze it out again, and then dip it into some spirits of wine; rub it over the glass, dust it with some powder blue or whiting, sifted through muslin; remove it lightly and quickly with a cloth; then rub it well with a clean cloth, and finish with a silk handkerchief. If the glass be a large one, clean one half at a time, otherwise the spirit of wine will dry before it can be removed. If the frames are gilt, the greatest care must be taken to prevent the spirit of wine from touching them. To clean such frames, rub them with a little dry cotton wool; this will remove all dust and dirt without injury to the gilding. If the frames are varnished, they may be rubbed with the spirit of wine, which will take out all spots, and give the varnish a superior polish.

LOTIONS.—Applications principally composed of water, used either to the skin or to the mucous surfaces, as the inside of the mouth, or of the nostrils. The variety of lotions, from plain water, upwards, is very great. Lotions may be classed as cooling, stimulating, astringent, soothing, and sedative. Of the first, water is an example, either alone, combined with spirit, from half an ounce to an ounce to the half-pint, or combined with vinegar. Water with one-third or one-half spirit of wine, applied to the skin by means of lint, which is covered to prevent evaporation, is a good example of a stimulating lotion. Very cold water, the lotion of sulphate of zinc, or of white vitriol, in the proportion of from one to ten grains to the ounce of water, form an astringent; the various preparations of opium, decoction of poppies, decoction of hemlock, &c., are soothing lotions; the prussic acid lotion a sedative one.

LOVAGE.—Cordial. Take of the fresh roots of lovage, valerian, celery, and sweet fennel, each one ounce; essential oil of caraway and savin, each two drachms; spirit of wine, one gill; proof spirit, three gallons; loaf-sugar, three pounds. Steep the roots and seeds in the spirit for fourteen days; then dissolve the oils in the spirit of wine, and add them to the unsweetened cordial drawn off from the other ingredients. Dissolve the sugar in the water for making up, and fine, if necessary, with alum.

LOVING-CUP.—A beverage made as follows:—Toast some bread, and place it in a large cup or bowl, which will hold two quarts; grate nutmeg over it, and pour on a quart of ale, and two-thirds of a bottle of sherry; sweeten this to taste, and immediately before serving add a bottle of soda water.

LOZENGE.—A hard compound of sugar and gum, which contains either simple flavouring or some medicinal agent.—See BLACK CURRANT, IPECACUANHA, PEPPERMINT, &c.

LUCIFER MATCHES, CAUTIONS RESPECTING.—The number of accidents which have occurred from lucifer matches, and the ease with which both life and property may be destroyed by these dangerous, though useful articles, ought to induce persons to use them with caution and to guard them with care. A great many of the disasters which have been recorded as resulting from lucifer matches, have arisen through the boxes in which they are kept having been carelessly left about, within the reach of children, or even animals, as cats, rats, and mice. To prevent this, it is always better to keep them in a tin box, which should be fastened high up against the wall. When children are detected in the act of playing with lucifer matches, a sport of which they are extremely fond, they should have pointed out to them, in a clear manner, the dangers which are likely to ensue, and the accidents which have occurred to other children through playing with lucifer matches; and they should be cautioned, on pain of severe punishment, never to meddle with them again. Adults are also extremely careless with lucifer matches; sometimes, when the matches will not light readily, they throw them down one after another, and these are afterwards ignited by the friction of the foot, or any other opposing body, and smouldering perhaps for a time, eventually set light to the carpet and surrounding furniture. Carrying matches about the person is obviously attended with the greatest danger, and should never be attempted, on lighting lucifer matches, the action of the hand should be a brisk movement from the body, not towards it, for by the disregard of this simple act many accidents have occurred.

LUGGAGE, PACKING AND CARE OF.—Luggage should always be packed systematically and with order, as it will thus be found far more convenient to persons when travelling. Where there is only one package, as a trunk or portmanteau, the heaviest and most substantial articles should be placed at the bottom, and the most tender and fragile at the top. When it is not quite full, some stray articles should be placed to render it so, and to prevent the contents from shaking about. All materials that are likely to soil or stain the articles with which they come in contact, such as ink, wine, oil, &c., should be carefully corked, and placed in vessels not liable to break, and to protect them the more surely, they should be rolled in some such article as an underwaistcoat, and placed in a corner where they will ride securely. When there are more packages than one, the articles should be appropriately placed in their receptacles, according to the order in which they are likely to be wanted; so that one package need only be opened instead of three or four. In all cases, it will be found convenient and conducive to comfort, to pack such articles as are likely to be required for immediate use, into one portmanteau or bag, such as the night-dress, slippers, brushes, combs, &c., for by this means persons when arriving fatigued at the end of their journey, have those articles necessary to their comfort ready at hand, without being compelled to search one box after another, and perhaps without finding

what is wanted after all. When going on a journey, trunks, boxes, &c., should be securely corded; and portmanteaus and bags locked; the name and destination of the owner should also be prominently placed on each package, so as to prevent their being mis-sent or carried away by mistake. The owner of luggage, previous to starting on a journey, should see that it is deposited in a place of safety and protection; and having noted the place well, he should hasten there when he arrives at his journey's end, and superintend its removal; he should also prevent its being touched by irresponsible persons—railway or ticket porters, and licensed drivers of vehicles being the most reliable. When persons are packing up their luggage, they should avoid encumbering themselves with articles which they are not likely to want, or omitting to take such things as will in all probability be required; either of these inconveniences may be avoided by a little timely thought. When the cordage, canvas, &c., used for luggage is removed, it should not be thrown away, as though it were not likely to be required again, but carefully placed aside, so that it may be ready to the hand whenever it is again wanted.—See BOX, PORTMANTEAU, TRUNK, &c.

LUMBAGO.—A painful affection of the muscles of the loins and small of the back; a rheumatism, or sub-acute inflammation of the muscular fibres of the part. Lumbago, like other forms of rheumatism, is induced by exposure to cold, moisture, or wet, from over-heating the body, and while in a state of perspiration, being exposed to draughts or cold air. When of long standing, it is not unusual for the kidneys to sympathise with the external inflammation, and complicate the disease.

The *symptoms* of lumbago are too well known to require recapitulation; and as respects the *treatment*, the hot bath, either the complete or hip, is in all cases the first and most important means to adopt, being followed up by a vigorous rubbing in of the following embrocation twice a day, and the exhibition of thirty drops of the spirits of turpentine in a little gin, with a small quantity of water, upon going to bed. Take of

Camphorated oil . .	2 ounces,
Oil of amber and turpentine, of each . .	1 ounce,
Spirits of hartshorn .	½ an ounce.

Mix, and use as an embrocation.

Where the pain is excessive, and the rest is disturbed, ten grains of Dover's powder should be taken at bed-time in a little gruel, and a bottle of hot water placed under the hollow of the back. When the acuteness of the disease is subdued it is advisable to wear a warm plaster on the loins for some short time afterwards, to keep up the heat, and guard against cold and a relapse.

LUNAR CAUSTIC.—This is efficacious in destroying warts, proud flesh, and unhealthy edges of ulcers. It is also a remedy in erysipelas, when applied in solution, in the proportion of one drachm of the salt to an ounce of water, this to be brushed all over the inflamed part, and for an inch beyond it. The skin thus treated becomes blackened, but soon peels off, and leaves a new skin in its place. Bed sores, pencilled over with a solution of the same strength, will soon disappear when thus treated.

LUNCHEON.—The mid-day repast, known under this name, may be served in two ways. One method is to place all the things wanted on a butler's tray furnished with let-down sides, so that when placed on the table it will answer the purpose as well as though the tablecloth were laid. The other plan is to lay the tablecloth in the same manner that it is spread for dinner, with the pickle-stand and cruets opposite each other, and water jug and tumblers, and, if in season, a vase filled with flowers in the centre of the table. The sides of the table are occupied by the requisites for each guest, namely, two plates, large and small forks and knives, and a dessertspoon, a folded napkin, with the bread placed beneath, upon the plate of each guest. If French or light wines be served, they may remain in the original bottles, and may be placed in ornamental wine vases, between the top and bottom dishes and the vase of flowers, with the corks drawn, and loosely replaced. The dishes usually served for luncheons are the remains of cold meat, neatly trimmed and garnished; cold game, hashed or plain; curries; minced meats; cold meat and fruit pies; cutlets, plainly cooked; chops; steaks; eggs; omelettes, &c Ale and porter are generally served, and occasionally sherry, Marsala, port, or home-made wines are introduced, with biscuits and ripe fruit. As luncheon is a meal served about the time that friends and acquaintances usually drop in, a good housewife will always have something in the house ready to convert into a luncheon to meet exigencies, and, in most cases, the remains of the previous day's dinner will afford an ample supply for this purpose.

LUNCHEON CAKES.—Take a pound of flour, two drachms of muriatic acid, two drachms of carbonate of soda, three ounces of sugar, three ounces of butter, and a quarter of a pound of currants; mix these in a pint of milk, till they attain the proper consistence, and bake in a hot oven for an hour.

☞ Flour, 1lb.; muriatic acid, 2 drachms; carbonate of soda, 2 drachms; sugar, 3ozs.; butter, 3ozs.; currants, ½lb; milk, 1 pint.

LUNGS, AFFECTIONS OF.—The diseases or forms of disease to which the lungs are liable are remarkably numerous, as they sympathise with the disease of every other organ; with all the affections of the skin; besides complaints proper to themselves; and may be either acutely or chronically inflamed, enlarged, congested, tuberculated, or wasted by suppuration. Many of these forms have already, or will be yet, treated under their special heads, as consumption, phthisis, catarrh, bronchitis, some of which, though not strictly appertaining to the lungs, are so intimately connected with their

functions and the whole respiratory system as to be inseparable from those organs

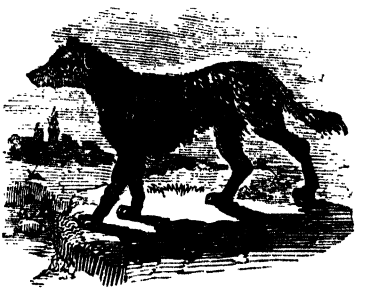
Acute inflammation of the lungs, or pneumonia, is marked by all the inflammatory and febrile symptoms developed in an aggravated degree, attended with great pain, difficulty of breathing, cough, dry skin, and thirst, with a full, strong, hard pulse, that after a time sinks to a wiry flutter.

The *treatment* is much the same as for other inflammatory diseases, bleeding, antimony, and opium being the chief and almost only remedies. But as the lungs perform one of the most, if not *the* most important part in the great system of life, it should be observed that whatever depleting measures are adopted, the chief force of them must be employed in the first stage; and should the inflammatory action continue, relief must be obtained by indirect evacuants, as purgatives, diaphoretics, and counter-irritants. —See PNEUMONIA.

LUPINE.—This family of plants is generally divided into annuals, perennials, and frame evergreen shrubs; but they also

produce seed so freely that it is easiest to propagate them by that means; only the evergreens, instead of being sown in the open ground, should have the assistance of a gentle hotbed, to rear them before planting out. The white lupine was cultivated by the Romans as a legume, and is still occasionally grown in Italy and France. The seeds were formerly, and are sometimes now used as food; but more generally, the whole plant is mown and given as herbage to cattle, and sometimes the crop is ploughed down as manure.

LURCHER.—A dog of a cross-breed between the greyhound and harrier, and re-crossed with the terrier. His limbs are strong; his head less sharp than that of a greyhound; his ears are short, erect, and half pricked; and his hair coarse and wiry. His principal forte lies in killing rabbits, as



he has a fine scent, and runs his game without giving tongue.

M.

MACAROONS, ALMOND.—Blanch and dry a pound of sweet almonds; pound them to a smooth paste, with a little white of egg, then whisk to a firm solid froth the whites of seven eggs; mix with them a pound and a half of the finest sugar; add these ingredients by degrees to the almonds, whisk the whole well up together, and drop the mixture upon wafer paper; bake the cakes in a moderate oven to a very pale brown.

☞ Almonds, 1lb.; sugar, 1½lb.; eggs, 7 whites.

MACAROONS, COCOANUT.—Rasp a fresh cocoanut, spread it on a dish or tin, and let it dry gradually for a couple of days; add to it double its weight of fine sifted sugar, and the whites of eight eggs, beaten to a solid froth, to the pound. Roll the mixture into small balls, place them on a buttered tin, and bake them in a very gentle oven for about twenty minutes. Move them from the tin while they are warm, and store them in a very dry canister as soon as they are cold.

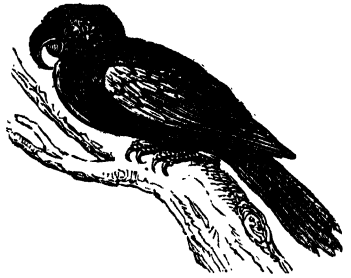
☞ Cocoanut, ½lb.; sugar, 1lb.; eggs, 8 whites.

MACAROONS, ORANGE FLOWER.—Have ready two pounds of very dry white sifted sugar. Weigh two ounces of the petals of freshly gathered orange blossoms after they have been fresh gathered from the stems; cut them very small with a pair of scissors into the sugar; add the whites of seven eggs; whisk the whole well together until it attains a snowy whiteness; then drop the mixture on to paper without delay, and place the cakes in a very cool oven.

☞ Sugar, 2lbs.; orange blossoms, 2ozs. eggs, 7 whites.

MACASSAR OIL.—The preparation for the toilet thus named is compounded in various ways; the following is one of the most agreeable forms:—Oil of behn, one pint; cocoanut oil, half a pint; essence of bergamot, a quarter of an ounce; essence of musk, a quarter of an ounce; attar of roses, six drops. Infuse these ingredients in a bottle near the fire for two or three hours; then set the bottle by for a week, shaking the contents frequently; the oil will then be fit for use.

MACAW.—A bird of the parrot tribe, valued for its distinct and fluent articulation, and for the intelligence which it displays towards those to whom it is accustomed. It is, however, very capricious in temper, and when it forms dislikes, often evinces much malice. The red and blue macaw is a remarkably beautiful species. Another favourite variety is the blue and orange macaw, which is somewhat less in size than the preceding. This species does not learn to talk so readily as others, but is a better imitater of sounds, bleating like a sheep, mewing like a cat, and barking like a dog with admirable correctness and facility.



MACCARONI BOILED.—Drop the maccaroni lightly and by degrees into a large pan of fast boiling water, into which a little salt and a piece of butter, the size of a walnut, have been previously thrown. In about three-quarters of an hour it will be sufficiently tender. Pour it into a large cullender, and drain the water well from it. The pipe maccaroni should be suffered to remain entire, and served in that form. The ribbon maccaroni is more quickly boiled than the pipe maccaroni. Drop it gradually into plenty of boiling water, and turn it over occasionally, that it may be equally done. Drain it thoroughly when it is perfectly tender, and serve it quickly, either quite plain, or with a compote of fruit.

MACCARONI PUDDING.—Mix a quarter of a pound of maccaroni with a pint of good milk, and, when quite tender, sweeten with brown sugar, and add a little more milk, and three eggs well beaten. Bake in a buttered dish in a Dutch oven for three-quarters of an hour.

☞ Maccaroni, ¼lb.; milk, 1 pint; sugar, to sweeten; eggs, 3.

MACCARONI SOUP.—Take four onions, two carrots, and one turnip; cut them into slices with an ounce of butter, an ounce of allspice, and a few sweet herbs; fry these ingredients together in a stewpan until they are of a delicate brown; then boil them in four quarts of stock for half an hour. have ready a pound of dry flour, and mix it with cold water, together with two spoonfuls of salt, and one of pepper; strain it through a sieve, and let it boil for five minutes; have ready half a pound of maccaroni; put it to the stock, and serve.

☞ Onions, 4; carrots, 2; turnip, 1; butter, 1oz.; sweet herbs, a few; allspice, 1oz.; stock, 4 quarts; flour, 1lb.; water, sufficient; salt, 2 teaspoonfuls; pepper, 1 teaspoonful; maccaroni, ½lb.

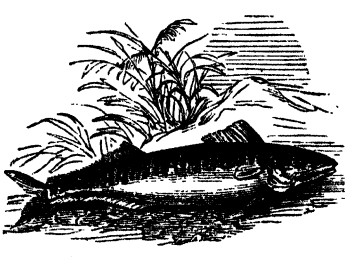
MACCARONI, SWEET.—Drop gently into a pint and a half of new milk, when it is boiling fast, four ounces of pipe maccaroni; add a few grains of salt, and about a dozen thin strips of lemon or orange rind. Simmer the maccaroni by a gentle fire until it is tolerably tender, then add from two to three ounces of sugar broken small; boil the maccaroni till the pipes are soft, and swollen to their full size; drain and arrange it in a hot dish; stir the milk quickly to the yolks of three eggs well beaten; agitate them briskly over the fire until they thicken, pour them over the maccaroni, and serve it immediately.

☞ Milk, 1¼ pint; pipe maccaroni, 4ozs.; strips of lemon-rind, 12; sugar, 2 to 3ozs.; eggs, 3 yolks.

MACE.—The second coat of the nutmeg. It is highly aromatic, but distasteful if employed in excess; many persons dislike the flavour of it altogether, therefore it should never be used when cooking for mixed parties. As a stomachic, it resembles nutmeg in its effects. The essence of mace may be made in the same way as the essence of clove.

MACERATION.—A process frequently required to be performed in compounding medicines, and in culinary operations. It is performed by simply immersing the substance which is to be acted upon in cold water or spirits for a certain time.

MACKEREL.—This well-known fish is one of the most beautiful as regards the brilliancy of its colours, and at the same time one of the most useful to man as an article of food. The usual length of the



mackerel is about fourteen inches, or varying from twelve to sixteen. It is a voracious feeder, and its growth is rapid; but it is not the largest kind that are accounted the best for the table. Those taken in May and June are considered superior in flavour to such as are caught either in the spring or autumn. There are various modes of fishing for mackerel; but the way in which the greatest numbers are taken, is by drift-nets.

MACKEREL BAKED.—Open the fish only just sufficient to admit of their being emptied and perfectly cleaned. Wash and wipe them dry, then fold them in a soft cloth, and let them remain in it awhile. Replace the roes, and put the fish into a baking-dish of suitable size, with a tablespoonful of wine, a few drops of chili vinegar, a little salt and cayenne, and about half an ounce of butter, well blended with a saltspoonful of flour for each fish. They must be turned round with the heads and tails towards each other, that they may lie compactly in the dish, and the backs should be placed downwards, that the sauce may surround the thickest part of the flesh. Lay two buttered papers over the fish, and press them down upon them; set the dish into a gentle oven for twenty minutes, take off the papers, and send the fish to table in their sauce.

MACKEREL BOILED. — Wash and cleanse the fish thoroughly, put them into cold water, with a handful of salt in it; let them simmer rather than boil; a small mackerel will be sufficiently done in about a quarter of an hour; and the surest indication that they are done is by the eye starting, and the tail splitting. After this, remove them immediately from the water; for they are so delicate, that the heat of the water will break them. In general, the mackerel is boiled too much, and the roe too little. The best way is to make a slit opposite the middle of the roe; this will allow the water to have access, so that the roe will be done as soon as the fish. For sauce, see FENNEL SAUCE, GOOSEBERRY SAUCE, and PARSLEY AND BUTTER.

MACKEREL BROILED. — Cleanse a fine large mackerel, wipe it on a dry cloth, and cut a long slit down the back; lay it on a clean gridiron, over a clear slow fire; loosen it gently should it stick, which it will do unless often moved; when one side is done, turn it on the other; and when both sides are finished, turn the back to the fire: about half an hour will broil it well. For sauce, mix well together a little fine minced fennel or parsley, seasoned with pepper and salt, and a bit of fresh butter, and when the mackerel are ready for table, put some of this into the fish.

MACKEREL FRIED. — After washing and cleansing the fish thoroughly, cut off the heads and tails, split the bodies quite open and remove the back-bones; wipe the mackerel very dry, dust fine salt and pepper over them; flour them well; fry them a fine brown in boiling lard, drain them thoroughly, and serve with the following sauce:—Dissolve in a small saucepan an ounce and a half of butter smoothly mixed with a teaspoonful of flour, and a little salt and cayenne; shake these over a gentle fire until they are lightly coloured, then add by slow degrees half a pint of good broth or gravy, and the juice of a large lemon; boil the sauce for two or three minutes, and serve it very hot.

MACKEREL MARINADED. — Clean the fish thoroughly and cut off the heads; rub plenty of pepper, salt, and allspice into the inside; place them in layers in a baking-dish, with bay leaves between the layers, and add three parts vinegar and one of water, sufficient to fill the dish; add a little whole pepper, and a blade or two of mace. Bake slowly for about five hours. When cold, remove the fish and marinade into another dish, taking care not to bruise or break them.

MACKEREL PRESERVED. — Select fine fish, cleanse them thoroughly, and lightly fry them in oil; divide the fish, remove the bones, heads, and skins, and rub the flesh well over with the following seasoning:—for every dozen fish, take three tablespoonfuls of salt, an ounce and a half of black pepper, half a dozen cloves, a blade or two of mace, and a nutmeg grated; mix these ingredients well together, and cover the surface of the fish well with the seasoning; then place the fish in layers packed into a stone jar (not glazed), cover the whole with vinegar; and if the fish is to be preserved for any length of time, pour salad oil or melted suet over the top. In this way the fish will keep for months.

MACKEREL SOUSED. — Wash and cleanse the mackerel well, and remove the roes; boil the fish in salt and water; take them out when done enough, and lay them in a deep dish; pour away half the liquor they were boiled in, and add to the rest of the liquor as much vinegar as will cover them, together with two or three bay leaves. They should be two or three days before they are eaten.

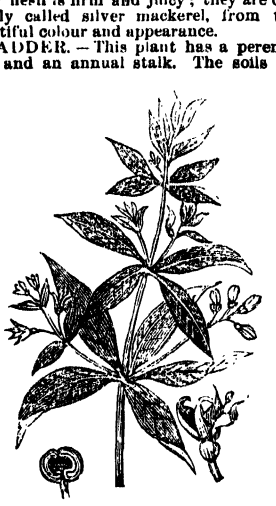
MACKEREL STEWED. — Work very smoothly together a dessertspoonful of flour with two ounces of butter, put them into a stewpan, and stir them round over the fire until the butter is dissolved; add a quarter of a teaspoonful of mace, half a teaspoonful of salt, and a little cayenne; pour in by slow degrees three glasses of claret; and when the same boils, lay in a couple of fine mackerel well cleansed and wiped dry; stew them very gently for fifteen or twenty minutes, and turn them when half done; lift them out, dish them carefully, stir a teaspoonful of made mustard to the sauce, give it a boil, and pour it over the fish.

MACKEREL, TO CARVE. — Mackerel should be served in pieces cut through the side, when they are large. If small, they may be divided through the back-bone and served in halves. The shoulder part is considered the best.

MACKEREL, TO CHOOSE. — This fish loses life as soon as it leaves the sea, and the fresher it is the better. The firmness of the flesh, the clearness of the eyes, and the bril-

liancy of its colour, are the criteria of fresh mackerel. Mackerel are in their highest perfection early in the season, when they have the least roe; when they are fullest of roe they are valuable for the roe only, the flesh having scarcely any flavour. After they lose their roes they are not worth catching, the roe, which was all that was good of them, being gone. There is also an after-season, when a few large fine mackerel are taken, about the month of October; these fish having had time to fatten and recover their health, are full of high flavour, and their flesh is firm and juicy; they are commonly called silver mackerel, from their beautiful colour and appearance.

MADDER. — This plant has a perennial root and an annual stalk. The soils best



suited to the cultivation of madder are deep, fertile, sandy loams, not retentive of moisture, and having a considerable portion of vegetable matter in their composition. The preparation of the soil may either consist in trench ploughings, lengthwise and across, with pronged stirrings, so as to bring it to a fine tilth; or, what will often be found preferable, by one trenching two feet deep by manual labour. The sets or plants are best obtained from runners, or surface roots of the old plants These, being taken up, are to be cut into lengths of from six to twelve inches, according to the scarcity or abundance of runners. Sets may also be procured by sowing the seeds in a fine light earth a year before they are wanted, and then transplanting them; or sets of an inch may be planted one year in a garden, and then removed to the field plantation. The season of planting is commonly May or June, and the manner is generally in rows nine or ten asunder, and five or six inches apart in the rows. The after-culture consists in hoeing and weeding, with stirring by pronged hoes, either of the horse or hand kind. The crop is taken at the end of the third autumn after planting, and generally in the month of October. Drying the roots is the next process, and, in very fine seasons, may be sometimes effected on the soil, by simply spreading the plants as they are taken up; but in most seasons they require to be dried on a kiln, like that used for malt and hops. They are dried till they become brittle, and then packed up in bags for sale to the dyer. In judging of the qualities of the madder root, the best is that which, on being broken in two, has a bright red or purple appearance, without any yellow cast being exhibited. The use of madder-roots is chiefly in dyeing and calico-printing. The haulm which accumulates on the surface of the field, in the course of three years, may be carted to the farm-yard and fermented along with the horse-litter. Madder-seed in abundance may be collected from the plants in the September of the second and third years.

MADEIRA CAKE. — Whisk four eggs until they are as light as possible, then, continuing still to whisk them, throw in by slow degrees the following ingredients, in the order named:—six ounces of sifted sugar, six ounces of flour dried and sifted, four ounces of butter slightly dissolved, but not heated; the rind of a fresh lemon; and the third of a teaspoonful of carbonate of soda, beat well in just before the cake is moulded; bake it for an hour in a moderate oven. In making this cake, be particular that each portion of the butter is beaten into the mixture until no appearance of it remains, before the next is added.

☞ Eggs, 4; sugar, 6ozs.; flour, 6ozs.; butter, 4ozs.; lemon, 1 rind; carbonate of soda, ½ teaspoonful.

MADEIRA CIDER. — Take new cider from the press, mix it with honey till it will float an egg; boil it gently for a quarter of an hour, but not in an iron saucepan; take off the scum as it rises, let the liquor cool, then barrel it, without filling the vessel quite full; bottle it off in March. In six weeks after it will be fit for use, and strong as Madeira.

MADNESS.—Disease of the brain eventuating in loss of reason, assumes many shapes, and has many forms and conditions; though the term madness with some degree of reason is applied to all, abstractedly considered, and relatively understood, no phrase can be more faulty and objectionable. Insanity, idiocy, cretinism, imbecility, dementia, and melancholia, or melancholy madness, are some, though by no means all, the forms of mental aberration that come under this very comprehensive term. Each of these forms of madness, or loss of judgment and imagination, has a distinctive character of its own, and has either been excited by some other disease; some great commotion of the system, caused by violent excitement of the passions; by direct injury to the head; exposure, uncovered, to the influence of the summer sun, causing a sun stroke or some diseased condition of the brain, induced by some specific affection of that organ; or an hereditary cause, the consequence of a redundancy or diminution

in some of the lobes of the brain, in which case, the disease being born with the patient, there can be no hope of cure or improvement.

Insanity, or that madness which — of a temporary character, produced and kept alive by an active disease elsewhere in the body than the brain itself, though that organ occasionally is the primary cause—is a symptomatic form of madness subsiding, in general when the disease that provoked it is cured —See INSANITY.

Idiocy, being that hopeless state of fatuity, the consequence, as has been said, of a defective development of the brain, and born with the patient, it has been thought unnecessary to refer to it in a more particular manner, the great variety of such cases only filling the mind with painful images.

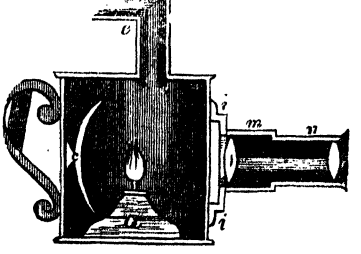
Cretinism is a special variety of idiocy, indicated by a large head, square visage, wide mouth, thick ears, and goitres; in fact, it is the idiocy peculiar to that form of scrofula whose most marked feature is the *goitre*, attacking whole tribes of people in different parts of the world, and who, in addition to a fatuity of mind and an enlarged neck, are noted by a dwarfish stature, seldom exceeding four feet.

Melancholia is that variety of madness depending on some chronic state of disease, whose chief attributes are, a sad and desponding state of mind; a settled melancholy, that only sees despair and sorrow in every purpose of life; and though the imagination may only pursue one line of reasoning, the patient contemplates it as devoid of every ray of hope, and eagerly seeks to terminate his existence before the event he broods upon can overtake him. To such persons an unreasonable dread of poverty is the most frequent form in which the madness shows itself, and from the apprehension of which no relief offers itself to the patient but suicide. Melancholy madness most frequently results from a chronic state of insanity, or, in other words, insanity, if long standing, is in certain constitutions liable to degenerate into melancholia. The *treatment* of this disease is almost entirely of a moral character, and must consist in frequent change of scene and society, exercise, and lively conversation, any temporary oppression of the head being relieved by a few leeches, and an occasional aperient; at the same time, without seeming to do so, maintaining an unceasing watch over the patient, and while apparently reposing confidence in his honour, never relaxing the vigilance of supervision.

Hypochondriasis, or vapours, as it is sometimes called, very often assumes a species of aberration closely resembling melancholy madness; and like the many varieties of what is called *monomania*, or madness on one subject, difficult to determine whether primarily depending on a diseased state of the brain, or of the digestive organs. The treatment in all such cases must conform as near as can be traced to the exciting cause, though in all such cases, medicine is generally much less necessary than moral suasion, and the promotion of a healthier action of mind and body, by change of air and invigorating exercise, especially such as rowing, swimming, fencing, climbing hills, horse-riding, and quick walking.

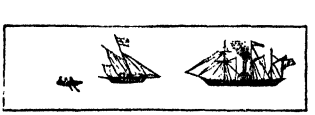
There only remains one other form of madness to be considered, *mania*, properly so called, or raving madness; but as this is a subject so distinct from all the other forms of temporary aberration; is induced by so many and contrary causes; and demands a course of treatment so distinct, that it would be unnecessary to do more than give the general symptoms, and indicate the broad principles on which the treatment is based; all patients so affected, both for their own comfort and to further the chance of their recovery, are treated in establishments specially adapted for the purpose. There are many cases of confirmed madness, where the patient is neither raving nor furious, but in which more or less of the same symptoms are common to that condition: these are, delirium without fever, flushed face, and wild expression of countenance, sharp pains in the head, ringing in the ears, rolling and flashing eyes, grinding of the teeth, loud roarings, and violent muscular exertions, rooted antipathies to objects and places formerly beloved or attached to, insensibility or indifference to heat and cold, hunger, thirst, or watching, and attended throughout by a quick, full, and hard pulse. A remarkable peculiarity with all maniacs is, that periodically, or once a month, or at the full of the moon, all the symptoms are exaggerated, and occasionally a perfect remission of the symptoms, the patient enjoying lucid intervals; from this periodicity they are called lunatics. The *treatment* consists in carrying out the three following objects, each indication, as it is called, requiring a distinct treatment: first, to gain a perfect command over the maniac; secondly, to divert his mind from the existing train of thought; and thirdly, to diminish the preternatural action of the brain.

MAGIC LANTERN.—The object of this ingenious instrument is to represent, in a dark room, on a white wall or cloth, a succession of enlarged figures of remarkable,



natural, or grotesque objects. The mechanism of the magic lantern is illustrated in the accompanying engraving. It consists of a tin box, with a funnel on the top, repre-

sented by *e*, and a door on one side of it. This funnel, by being bent, serves the double purpose of letting out the smoke and keeping in the light. In the middle of the bottom of the box is placed a moveable tin lamp, *a*, which must have two or three good lights at the right of the centre of the polished tin reflector, *c*. In the front of the box, opposite the reflector, is fixed a tin tube, *m*, in which there slides another tube, *n*. The sliding tube has at its outer extremity a convex lens, of about two inches diameter; the tube *m* has also a convex lens fixed in it, as shown in the figure, of three inches diameter. The focus of the smaller of these lenses may be about five inches. Between the tube *m*, and the lamp, there must be a slit or opening, as at *ii*, to admit of the passage of glass sliders, mounted in paper or wooden frames, upon which sliders it is that the miniature figures are painted which are intended to be shown on the wall. The distinctness of the enlarged figures depends not only on the goodness of the magnifying glass, but upon the clearness of the light yielded by the lamp *a*. *To paint the glasses*, first draw, on a paper of the size of the glass, the subject you desire to paint; fasten this at each end of the glass with paste, or any other cement, to prevent it from slipping. Then, with some very black paint mixed with varnish, draw with a fine camel's hair pencil, very lightly, the outlines sketched on the paper, which, of course, are reflected through the glass; and when dry, fill up the other parts in their proper colours. Transparent colours must be used for this purpose, such as carmine, lake, Prussian blue, verdigris, sulphate of iron, tincture of Brazil wood, gamboge, &c.; and these must be tempered with a strong white varnish, to prevent their peeling off. Then shade them with black, or with lustre, mixed with the same varnish. One of the most striking effects produced by a magic lantern is that of a storm at sea. This is effected by having two sliders painted, as seen in the annexed

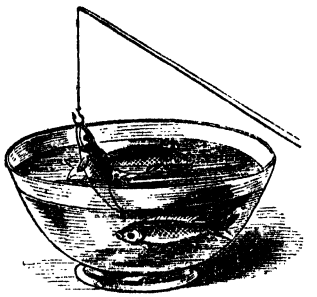


figures, one with the tempest as approaching on one side, and continuing in intensity till it reaches the other. Another slider to have ships painted on it, and while the lantern is in use, the slider representing the ships is dexterously withdrawn before the other, so that the two represent ships in a storm. *To exhibit the magic lantern*, the lamp being lighted, and the room darkened, place the machine on the table, at some distance from the white wall or suspended sheet, and introduce into the slit, *ii*, one of the sliders, with the figures inverted. If the moveable tube, *n*, be then pushed in, or drawn out, till the proper focus be attained, the figures on the slider will be reflected on the wall, in their distinct colours and proportions, with the appearance of life itself, and of any size from six inches to seven feet, according to the distance of the lantern from the wall. Movements of the figures are easily made by painting the subject on two glasses, and passing the same through the groove. The effects of sunrise, moonlight, starlight, &c. may be imitated by means of double sliders, and figures may be introduced sometimes of ludicrously exaggerated proportions. Heads may be made to nod, faces to laugh, eyes to roll, teeth to gnash; crocodiles may be made to swallow tigers; and combats may be represented. One of the most instructive uses of this instrument is to make the sliders illustrative of astronomy, and to show the rotation of the seasons, the cause of eclipses, the mountains in the moon, spots on the sun, and the various motions of planetary bodies and their satellites. To construct a *solar magic lantern*, make a box twelve inches high eighteen inches wide, and about three inches deep. Two of the opposite sides of this box must be quite open, and in each of the other sides there should be a groove wide enough to admit a stiff paper or pasteboard. The box must then be fastened against a window on which the sun's rays fall direct; and the rest of the window must be closed up, that no light may enter. Next, provide several sheets of stiff paper, blacked on one side. On these papers cut out such figures as fancy may dictate; place them alternately in the grooves of the box with their black sides towards you, and look at them through a large and clear glass prism; and if the light be strong, they will appear painted with the most lively colours. If you cut on one of these papers the form of a rainbow, about three-quarters of an inch wide, you will have a very good resemblance of the natural one.

MAGNESIA.—An alkaline earth largely used in medicine, in the form of the pure or calcined magnesia; also in the form of the carbonate or bicarbonate, which latter, being soluble, constitutes the fluid magnesia of the shops. In combination with sulphuric acid, it forms sulphate of magnesia or Epsom salts. The principal use of magnesia is an antacid in acidity of the stomach and bowels; and at the same time, provided it meets with acid, acts as a gentle aperient; it is often combined with rhubarb, Epsom salts, &c. The effectual manner in which magnesia neutralizes acid in the stomach, thereby relieving heart-burn and other uneasy sensations, has led to its being considerably abused by dyspeptics generally, whereby much evil has resulted; for the continued use of magnesia as an antacid greatly impairs the digestion; moreover, if used in the form of calcined magnesia, or of carbonate, should it not encounter sufficient acid in the alimentary canal to convert it into a soluble aperient salt, it is apt t

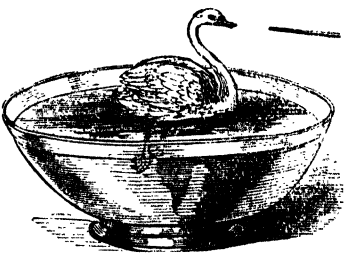
accumulate, and, if taken regularly and largely, to collect into and form concretions in the bowels; on this account, persons who insist upon taking magnesia habitually, ought to be careful to clear the bowels thoroughly, at intervals, by means of a dose of castor oil; the same rule being observed with regard to children, if magnesia is given to them regularly. Fluid magnesia in doses from half an ounce to two ounces, may be taken either alone or in milk, the latter mode being convenient for children; or it may be given as an effervescing draught with lemon-juice.

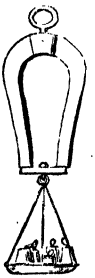
MAGNETISM.—The power of the magnet to attract or repel iron and certain other substances, enables us to perform some very amusing experiments with startling effect. The magnetic fish are experimented with as follows:—These fish are to be purchased at the toy shops, they are made hollow, and will float on the water. In the mouth of each should be inserted a piece of magnetic wire. The angling rod is like any other rod, and has a silken thread



for a line, and an iron hook also, strongly magnetised. To catch the fish it is only necessary to put the hook in contact with the gills of the fish, and they will be immediately taken. *The magnetic swan.*—Cut in cork the figure of a swan, and cover it with a coat of white wax, making the eyes of glass beads; conceal within its body a piece of magnetised steel, and set it afloat upon a basin of water. Round the edge of the basin may be placed various devices, and, among others, a swan-house, such as is seen upon a river; here the swan may take shelter occasionally, and in it he may be made to turn round to increase the astonishment of the spectators. By means of the magnetic bar placed within the swan, and the magnetic wand, the figure may be made to approach or recede, by presenting to the edge of the basin the north and south poles alternately. The wand is thus made: Bore a hole three-tenths of an inch in diameter through a round stick, or get a hollow cane, about eight inches long and half an inch thick; provide a small steel bar, and let it be very strongly magnetised; insert this rod into the hollow part of the wand, and close it at both ends

by two small pieces of ivory. This contrivance is applicable to several other floating objects, as ships, &c. Magnets frequently consist of a single bar bent in the form of a horse shoe. In this form of magnet, the two poles are brought near each other, and are connected by means of a piece of untempered iron, called an armature, by which the sustaining power of the magnet is much increased. It also enables us to apply the two poles to the experiment, as seen in the engraving, where, from a hook attached to the armature, there hangs a scale in which weights are placed to the amount of many pounds. Before applying the armature, if you place on the smooth ends of the poles a thin piece of wood or paper, you will find that the armature will still adhere with considerable force. If the magnet be hung up in this position, and the weight gradually increased day by day, its lifting power will increase very materially. *To make a number of little magnets*, proceed as follows:—Employ a bar-magnet, at one end of which a notch is cut to indicate the north pole. Place this magnet upon paper, and sift over it iron filings, when such as are not attracted by the magnet, will, when shaken off, arrange themselves nearly in a star-like form, in greatest number at and about the poles, where the attraction is strongest. The filings may be also made to fall into beautiful curves by the following contrivance. Stretch a large sheet of paper upon a frame of wood, and place it flat upon a table. Put under the paper, so as just to touch it, a bar-magnet; sift a thin layer of iron filings upon the paper, gently tap its under surface, when it will vibrate, and the magnetic force will arrange the filings in pretty figures. In this experiment each filing becomes a perfect magnet. If a steel ring be magnetised, the magnetic properties remain concealed while the ring is whole, but if it be broken at any point, each fragment will be found to possess the properties of a common magnet. *A string of magnets* may be made by placing a bar-magnet upon a table, with its north pole projecting over the edge; then hold a key near it, present a

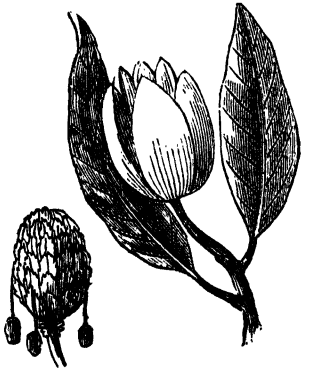




small nail to the end of the key, and it will be suspended in consequence of its induced magnetism. To the first nail, a second, third, and fourth may be successively attached. The lower end of the key and the points of the nails are then respectively north poles, while the upper end of the key and the heads of the nails are respectively south poles. Then gradually remove the key and the attached nails from the projecting magnet, when they will get beyond its influence, and, consequently, losing all magnetic power, the nails will fall to the ground. If, instead of holding the key at a certain distance from the magnet, you at once bring it close to it, and apply the nails to the key, and then place the south side of another magnet near to or in contact with the lower end of the key, its handle will be repelled and the north end of the first magnet will be attracted by the south end of the second; consequently, the key with the hanging nails will fall. A great number of other interesting experiments may be made through the medium of the same agents.

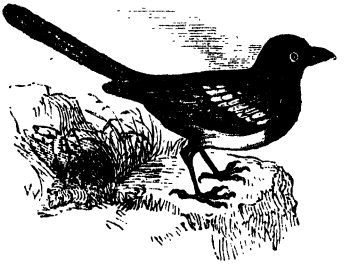
Books: *The Boy's Own Book*, 6s.; *Every Boy's Book*, 5s. 6d.

MAGNOLIA.—A genus of plant of a noble form, and in general white flowered. It is propagated by seeds, layers, graftings, and budding, and each of these modes is suited to the several kinds. The seeds



should be sown in a hot-bed in spring, and as the seeds successively appear, they must be potted and kept several years in a cold pit in winter. Though the most vigorous plants are thus raised, yet as they are a long time ere they bloom, preference is usually given to plants raised from layers of all the stronger growing kinds. These are generally laid down in the autumn, and the better part of two years usually elapses before they are fit to be moved, when they should be potted and kept in a pit until well established. No one should purchase a young plant, except in a pot as the few, but large fleshy roots are easily injured. Some of the more succulent-stemmed kinds, with large pith, can neither be easily layered nor grafted. For these, cuttings are the best. Most of the varieties may be budded, grafted, and in-arched on the kinds which are the strongest and most easily recased. All the sorts when planted out flourish best in a deep sandy soil, quite dry and enriched with peat and leaf mould.

MAGPIE.—A handsome-looking bird, of a variegated black and white plumage, beautifully shaded with green, blue, and purple. Young birds should be taken from



the nest at about a fortnight old, if it is wished to render them tame; and when sufficiently fledged, they may be allowed to fly to a neighbouring tree, enticing them back again to the place where they are intended to remain: this is repeated until they are fully fledged, when the pinion feathers should be slightly clipped. By this means they will soon become familiar with their home, and frequently return to it after enjoying a few hours' liberty. The magpie imitates musical sounds, the voices of animals, and will speak with tolerable distinctness. It is capable of becoming attached to its attendant, which it evinces by following him about, rubbing itself against him until it is stroked, and by various other actions. The magpie in its domesticated state will eat almost anything, but is fondest of cooked meat, and other viands brought to table. This bird has a singular habit of secreting things, especially those of a bright and shining nature, as silver spoons, forks, &c., and pieces of gold and silver money.

MAHOGANY. — A well-known timber, extensively used in the manufacture of various articles of household furniture, and for many other purposes. The great recommendation for this wood is its durability,

for chairs, tables, sofas, bedsteads, &c., made of it will, with ordinary care, last for very many years. The polish also, which gives it such a handsome appearance, may be preserved by bestowing a little attention upon it from time to time. Care should be taken not to place heated plates, dishes, and other vessels upon tables, by which the veneer is apt to be drawn from the wood; neither should mugs or cups with wet rims be placed on tables, by which stains are left that are very difficult of removal, and sometimes cannot be eradicated except by putting on a fresh coat of veneer. *To restore the colour of mahogany*, wash it well with soap and water, and then polish it daily with the following mixture:—Take half an ounce of alkanet root, cut small, and add to it a pint of linseed oil; when this has stood for a week, add half an ounce of gum arabic, and an ounce of shellac varnish; let these stand by the fire for a week; then strain. Rub well in. *To improve the colour of mahogany*, put into a pint of cold drawn linseed oil an ounce of alkanet root and an ounce of rose pink, mix these in an earthen vessel, and let the mixture remain all night; then, after stirring it well, rub some of it over the mahogany with a linen rag; when it has lain some time, polish with a linen cloth. *An artificial mahogany* may be produced from any species of wood of a close grain, by the following method:—Plane the surface of the wood smooth, and rub it with a solution of nitrous acid; dissolve an ounce of dragon's blood in a pint of spirits of wine, and a third of an ounce of carbonate of soda; mix them together, filter the liquid, and lay it on with a soft brush. Repeat the process, and in a short interval afterwards the wood will be found to possess the external appearance of mahogany. When the polish diminishes in brilliancy, it may be restored by the application of a little cold-drawn linseed oil. *To remove stains from mahogany.*—See INK-STAINS, WINE-STAINS, &c.

MAID OF ALL WORK.—A domestic servant, who undertakes the whole duties of a household without assistance; her duties comprising those of cook, housemaid, nurserymaid, and various other offices, according to the exigencies of the establishment. The situation is one which is usually regarded as the hardest worked and worst paid of any branch of domestic servitude; it is, therefore, usually filled by inexperienced servants, or females who are so circumstanced that they are only desirous of securing a home, and of earning sufficient to keep themselves decently clad. In many of these situations, a servant may be very comfortably circumstanced, especially if it be a limited family of regular habits, and where there is a disposition to treat the servant with kindness and consideration. The duties of a maid of all work being multifarious, it is necessary that she should arise early in the morning; and six or half-past six o'clock is the latest period at which she should remain in bed. She should first light the kitchen fire, and set the kettle over to boil; then she should sweep, dust, and prepare the room in which breakfast is to be taken. Having served the breakfast, she should, while the family are engaged upon that meal, proceed to the various bedchambers, strip the beds, open the windows, &c. This done, she will obtain her own breakfast, and after washing and putting away the things, she will again go upstairs, and finish what remains to be done there. As the family will in all probability dine early, she must now set about the preliminaries for the dinner, making up the fire, preparing the vegetables, &c. After the dinner is cleared away, and the things washed and put by in their places, she must clean the kitchen; and this done, she is at liberty to attend to her own personal appearance, to wash and dress herself, &c. By this time the preparation for tea will have to be thought of, and this being duly served and cleared away, she must employ herself in needlework in connection with the household, or should there happen to be none requiring to be done, she may embrace this opportunity to attend to her own personal necessities. Supper has then to be attended to; and this finished, the maid of all work should take the chamber candlesticks, hot water, &c., into the sitting-room, and retire to rest as soon as her mistress or the regulation of the establishment will permit her. The duties here set down can only be regarded as an outline rather than a detail, the habits of every family varying, and thereby regulating the amount of labour demanded, and the order in which the duties are to be performed. As a rule, however, a maid of all work, if she wish to retain her situation, must be industrious, cleanly, and thoughtful; and not only able to work, but to plan.

MAIDS OF HONOUR.—Cakes made as follows:—Beat a pound of broken loaf-sugar, with the yolks of twelve eggs, in a mortar, an ounce of blanched sweet almonds, and twelve bitter, and four tablespoonfuls of orange-flower water. The almonds must be mixed in, the last thing, before the patty-pans are filled. Bake in a moderately heated oven.

☞ Sugar, 1lb.; eggs, 12 yolks; almonds, 1oz. sweet, 12 bitter; orange-flower water, 4 tablespoonfuls.

MAIZE.—See INDIAN CORN.

MALT.—A term applied to grain which has been made to germinate artificially to a certain extent, after which the process is stopped by the application of heat. The barley is steeped in cold water for a period not less than forty hours; when it is sufficiently steeped, the water is drained off, and the barley thrown upon the malt floor, where it is formed into a rectangular heap, sixteen inches deep. In this state it remains for about twenty-six hours. It is then turned by means of wooden shovels, and diminished a little in depth; this operation is repeated twice or thrice a day, and the grain is spread thinner and thinner, till, at last, its depth does not exceed a very few inches. On the comb it absorbs oxygen from the atmosphere, which it converts into carbonic

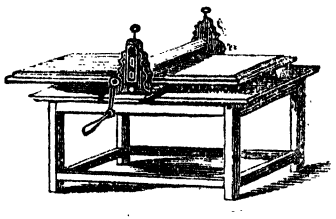
acid; the temperature gradually increases, and in about four days the grain is ten degrees hotter than the surrounding atmosphere. The grain now becomes moist, and exhales an agreeable odour; this is called sweating. The maltster must prevent the temperature from becoming excessive by turning. It may vary from fifty-five to sixty-two degrees. At the period of sweating, the roots of the grains begin to appear. In one day after the sprouting of the roots, the rudiments of the future stem may be seen to lengthen. As it shoots along the grain, the mealy part undergoes a considerable change. The glutinous and mucilaginous matter is taken up and removed, the colour becomes white, and the texture so loose, that it crumbles to powder between the fingers. As soon as this change is accomplished, the process is stopped by drying the malt upon a kiln. The malt is then cleaned, to separate the small roots, which are considered injurious. Barley, by malting, generally increases two or three per cent. in bulk, and loses about one-fifth of its weight.

MALT WINE.—Boil thirty pounds of sugar with ten gallons of water for half an hour; skim the liquor well; set it by to cool; and when milkwarm, add five gallons of new ale; simmer the whole gently; let it cool; place it in a tub, and leave it to ferment for two days: at the end of that time, transfer it to a cask, with a pound of powdered sugar-candy, and four pounds of raisins, chopped small; when the fermentation ceases, it may be racked and fined. It will be fit to bottle at the end of six or twelve months, and may be drunk two or three months afterwards.

☞ Sugar, 30lbs.; water, 10 gallons; ale, 5 gallons; sugar-candy, 1lb.; raisins, 4lbs.

MANGE.—A cutaneous disease in dogs, very closely resembling itch in the human species; it is hereditary as well as contagious. There are many causes which beget this disease, but the acrid effluvium from their own secretions is the most common; when it is generated by numbers, particularly when it is confined within a limited space, it is sure to appear. Close confinement of any dog will usually produce this complaint, and most certainly so, if the animal be at the same time fed on salt provisions. Food too nutritive in quality, and too considerable in quantity, is productive of mange; and, *on the contrary*, food in a great measure withheld or being very poor in quality, is equally a parent of the disease. The following will, in general, be found effectual: Powdered sulphur, four ounces; hydrochlorate of ammonia (sal-ammoniac) powdered, half an ounce; aloes powdered, one drachm; Venice turpentine, half an ounce; lard, or other fatty matter, six ounces; the whole to be mixed, and administered in boluses. A wash may also be made of two ounces of foxglove leaves, put into a jug, and a quart of boiling water poured over them. When the liquor is cold, wash the dog with it, and repeat the washing every other day; a few drenchings mostly effect a cure. In very virulent cases, however, no one should attempt doctoring his dog, but should apply to a regular practitioner.

MANGLING.—A process in connection with the laundry, which is usually adopted for articles of domestic use, or wearing apparel of a coarse or plain kind. The articles to be mangled are wrapped round rollers, and are forced backward and forward under a heavily loaded case. The art consists chiefly in laying the clothes smoothly upon the cloth, and in arranging them in such a way that those of equal substance shall come together, so that the surface may not be rendered irregular. Most articles are folded two or three times, and come out better when so arranged than they do when put in the mangle in single folds. Beyond this, it is only necessary to roll them evenly on the rollers, and lay them in the mangle. Articles which have buttons attached to them, are not adapted for the mangle; when the buttons are made of slender material they are liable to be crushed, and if made of metal they are apt to cut the fabrics brought into contact with them, and also to cause iron-moulds. The ordinary mangle is a machine of large dimensions, which the premises of a private establishment are sometimes not large enough to contain. A smaller kind of mangle has been therefore invented, acting by means of a spring or some other substitute for the mere force of weight. Of these, the mangle shown in the engraving is the best. It is portable; and the bed on which the linen is mangled is



not a fixture as in the ordinary mangle, but traverses backward and forward, whilst the roller on which the linen is placed, remains stationary. The pressure is obtained by means of springs adjusted by a screw, and the roller is either of metal or wood. The figure shows the machine placed upon an ordinary table; but when taken to pieces it consists of the bed, and also of the roller and works, which may be contained within a box two feet eight inches long and one foot square.

MANGOLD WURZEL.—A root cultivated for feeding cattle in the winter months. About three or four pounds of seed per acre are drilled or dibbled in in May, at a distance of eighteen or twenty-four inches. The produce is so abundant that an acre will keep twelve cows, at sixty pounds per day, for five months. Mangold wurzel is a hardy and reliable root, and is

singularly free from the attacks of the fly or the grub; it is off the land early, and is useful as a change of fallow crop, when the soil is exhausted by turnips; it will grow on land where turnips cannot be raised.

MANHEIM BREAD.—Mix together two eggs, six tablespoonfuls of flour, three tablespoonfuls of sugar, a quarter of a salt-spoonful of salt, and six drops of essence of aniseed; work these ingredients well together; cut the paste into the shape of long round biscuits, and bake in a quick oven.

☞ Eggs, 2; flour, 6 tablespoonfuls; sugar, 3 tablespoonfuls; salt, ½ of a salt-spoonful; essence of aniseed, 6 drops.

MANNA.—A medicine which acts as a very gentle laxative, and is therefore used for children and delicate persons. *Dose*, for children, from one to four drachms; and for adults, from one to two ounces, combined with rhubarb and cinnamon water.

MANURE.—By the term manure is meant any substance which is added to a soil to render it productive. Manures are either animal, vegetable, or mineral. They directly assist the growth of plants, by entering into their composition, by absorbing and retaining moisture from the atmosphere, by absorbing the gases of the atmosphere, and by stimulating the vascular system of the plants. Manures directly assist vegetation, by killing predatory vermin and weeds, by promoting the decomposition of stubborn organic remains in the soil, and by protecting plants from violent changes of temperature. All animal manures contain, in large proportion, the chief constituents of the food of plants—oxygen, hydrogen, and carbon, particularly the latter, in the form of ammonia, developed by the putrefactive fermentation. Vegetable manures act in three ways: they open the pores of the land, and lighten it by loosening its particles; they supply organic food to the roots of the growing plants, and they yield saline and earthy matters to the soil. Mineral manures are chiefly used in forming composts. Lime is the most important of all the mineral manures, but it is seldom used in the caustic state (that is, as quicklime) in gardens, unless it is in cases where the land has become soured by neglect and want of drainage. Marl, chalk, and shell-sand produce the same effect as lime, but in a more moderate degree, and marl is especially good for almost any soil. Manures of all kinds lose their efficacy, unless accompanied by sufficient drainage. When drenched with water, manures, both vegetable and animal, either decompose very slowly, or produce acid compounds more or less injurious to the plant. The absorbing power of manure is much influenced by the state in which it is presented to the atmosphere. In a finely divided state, mere capillary attraction assists it; hence the importance of keeping the soil frequently stirred by hoeing, &c. Stable manure, and all decomposing animal and vegetable substances, have a tendency to promote the decay of stubborn organic remains in the soil, on the principle that putrescent substances hasten the process of putrefaction in other organic bodies with which they come in contact. Salt, in a small proportion, is gifted with a similar septic property. Liquid manure is too strong, when applied fresh and undiluted, to any growing crop; for the ammonia which is disengaged is so acrid, that it will burn the plants to which it is applied. This is obviated, either by fermenting for two months or more, or by diluting largely with water, say three-fourths of water to one-fourth of liquid manure. Liquid manures must be applied sparingly to flowers, otherwise they will produce engorgement in the plants, from over-abundant nourishment, and do more harm than good.

Farmyard manure is one of the most common fertilizers applied to land. Some little care and discretion is required to economize this material properly, and to have it invariably ready for use. The situation of the dung-pit should be near the stables and cow-houses, and placed so that the refuse liquids from them should flow directly into their receptacle, so that nothing be lost. This pit may be three or four feet deep, and of a size proportionate to the stock of cattle usually kept by the farmer. It is not necessary that it should be built round with a wall, or have a particular descent, as it may slope gently inwards, and deepen gradually towards the centre. It should, if possible, be covered by a roof, to prevent the action of the sun. If the bottom be found firm, impervious, and capable of containing the juices, no further trouble is requisite, and the work is complete; in many instances, however, it will be necessary first to puddle with clay, and then line the bottom with flag-stones. Into this pit, earth with refuse straw should be brought, and strewed over the bottom and sloping sides, to the thickness of from nine to twelve inches, and this will form an inferior layer to absorb all that portion of that liquid manure which naturally runs to the bottom. The pit is now prepared to receive all kinds of animal and vegetable manure, which, when brought, should be always laid evenly over the surface. It is customary to cart away the material thus collected, at convenient opportunities (usually during the frosts in winter), to a place in the fields, near where it used to be, and there pile it up in a quadrangular heap about four feet high. Sometimes these dung-heaps, by exposure, lose a part of their valuable properties. In every instance, the dung-heap in the fields should be placed in a hollow situation, with a substratum of earth, and should have a scattering of a few inches of earth over it, and around the sides, to keep in the volatile gases. When the dung-pit has been thus emptied, it may again be progressively filled as before; and when it is carted out in any of the spring months, it will be found necessary to turn it once or oftener, for the purpose of accelerating the decomposition of the strawy part of the mass.—See LIME, MARL, PEAT, SALT, SOOT, &c.

MAP.—A plane figure representing the surface of the earth, or a part thereof.

Maps are not always to be used as they lie before us, for sometimes any part is uppermost; but generally the top is the north part, the bottom the south, the right hand the east, and the left hand the west. The degrees of longitude are always numbered at top and bottom, and the degrees of latitude on the east and west sides. In general maps the circles corresponding with those in the heavens are inscribed, viz.: the equator is expressed by a straight line east and west; and the first meridian, the polar circles, the tropics, and the other meridians and parallels, which are drawn at every five or ten degrees, intersect each other at right angles. There may be as many different projections as there are points of view in which a globe can be seen; but geographers have generally chosen those which represent the poles at the top and bottom of the map; these are called the stereographic, or the graphic and globular projections. If the eye be supposed to view the earth from an infinite distance, the appearance represented on a plane is called the orthographic surface. In this case the parts about the middle are very well represented, but the extreme parts are contracted. In the stereographic projection the eye is supposed to be on the surface of the earth, and looking at the opposite hemisphere. The globular projection is that in which meridians, equidistant upon the surface of the earth, are represented by equidistant circles in the map.

MAPLE TREE.—This is a fast-growing tree, and is well adapted for situations near the sea, as the salt spray seems to have no bad effect on its vegetation. The timber is very close and compact, easily cut, and not liable either to splinter or warp. Sometimes it is of a uniform colour throughout, and in other cases beautifully curled and mottled. This wood is not apt to warp, either with the variations of heat or of moisture; it is a suitable material for saddle-trees, wooden dishes, and many other articles both of furniture and machinery. When kept dry, and free from the attacks of insects, this tree will last a considerable time; but if exposed to humidity, it is one of the most perishable of trees. There are many varieties of this species, all partaking in a greater or less degree of the same characteristics.

MAPS, TO VARNISH AND COLOUR.—Maps may be effectively varnished by running a very delicate coating of gutta percha solution over the surface. *Wash colours* for maps may be used as follows: Yellow, gamboge dissolved in water. Red, Brazil dust steeped in vinegar, and alum added; or litmus dissolved in water, and spirit of wine added; or cochineal, steeped in water, strained, and gum added. Blue, Saxon blue diluted with water; or litmus, rendered blue by adding distilled vinegar. Green, distilled verdigris dissolved in water, and gum added; or litmus, rendered green by adding prepared kali to its solution.

MARASCHINO. — A delicate liqueur spirit, distilled from a peculiar cherry growing in Dalmatia, and afterwards sweetened with sugar. The best is from Zara, and is obtained from the marasca cherry only. An inferior quality is distilled from a mixture of cherries and the juice of liquorice root. It ferments, and furnishes by distillation a prussic alcohol; but by putting it first to infuse in brandy for some time, there is obtained, by distillation in a bath heat, a spirit of a very agreeable aromatic flavour, and which, properly sweetened, forms a liqueur comparable to the best maraschino of Italy. It is necessary to bruise the fruit and the nuts before infusing them in brandy. The spirit must also be brought back to 21 degrees before sweetening it; then add nearly 12ozs. of sugar to every quart of liqueur.

MARBLE, TO CLEAN.—Mix a quarter of a pound of soft soap with the same quantity of pounded whiting, an ounce of soda, and a piece of stone-blue the size of a walnut; boil these together for a quarter of an hour; whilst hot, rub it over the marble with a piece of flannel, and leave it on for twenty-four hours; then wash it off with clean water, and polish the marble with a piece of coarse flannel. *To remove spots and grease from marble.* Make a paste with fuller's earth and hot water; cover the spots with it, and let it dry on; and the next day scour it off with soft or yellow soap.

MARBLE, TO IMITATE.—Dissolve an ounce of curd soap, grated in four ounces of water, in a glazed earthen vessel; add an ounce of white wax cut in thin slices; when the whole is incorporated, it is fit for use. Having dried the figure before the fire, suspend it by a string, and dip it into the mixture; when it has absorbed the varnish, dip it a second time, and that generally suffices. Cover it carefully from the dust for a week, then rub it gently with soft cotton wool, and a brilliant shining gloss will be produced exactly resembling polished marble.

MARBLING.—The process of transferring to books or paper the veins and marks resembling marble, is performed as follows: Dissolve four ounces of gum arabic in two quarts of filtered water; then provide several colours mixed with water in pots or shells, and, with pencils peculiar to each colour, sprinkle them, by way of intermixture, upon the gum-water, which must be put in some broad vessel; then, with a stick, curl them or drain them out in streaks, in every variety of design. Having done this, hold the book or books close together, and just dip the edges in on the surface of the water, and thus colour them very slightly.

MARCH, GARDENING FOR.—The following is an alphabetical list of plants and roots in the *kitchen garden*, which require attention during the month:—*Artichokes*, plant out, trench. *Asparagus*, sow in the third week, fill up vacancies. *Beans*, sow. *Brussels sprouts*, sow for autumn and winter crop. *Cabbages*, sow. *Cardoons*, sow. *Carrots*, sow. *Cauliflowers*, sow in the last fortnight for a full crop. *Celery*, sow. *Cives*, plant. *Composts*, form. *Horseradish*, plant. *Indian cress*, sow. *Insects*, destroy. *Lettuce*, sow and transplant. *Liquorice*, plant. *Onions*, sow for a full crop. *Parsnips*, sow. *Peas*, sow. *Perennial edibles*, propagate. *Rhubarb* (forced),

litter and trench. *Salads* (small), sow every fortnight. *Savoys*, sow for an early crop, and towards the end of the month for a full crop. *Sea-kale*, plant. *Shalots*, plant. *Turnips*, sow.

General Remarks.—When the various crops of esculents have been obtained during the month, remove the litter from the trenches, and fill them with rich mould. Pay attention to the economy of seed, and drop them only where absolutely required. Do not lose a season for any of your kitchen garden seeds, most of the common sorts of which may, however, be now sown in sheltered borders, if the ground be in a good state. Stake peas, earth up cabbages, and put down cuttings of potherbs. Pick up and re-make gravel, and mow turf walks; dig and rake borders.

Flower Garden.—Anemones, earth up and water. *Auriculas*, top-dress, and cover frames on cold evenings. *Carnations*, plant slips, and top-dress. *Cuttings*, plant for forcing. *Dahlias*, sow in pairs, pot seedlings, and place near glass. *Pinks*, plant slips, top-dress. *Ranunculuses*, earth up and water. *Roots* of various plants, slip and part. *Roses*, peg down and finish pruning. *Stocks*, top-dress. *Seedlings*, prick out. *Tuberoses*, plant in pots for forcing. *Tulips*, guard carefully against frost and storms.

General Remarks. — This being the first month of spring, renders the flower garden a busy scene; and everything recommended for February should be continued through March, with the addition of many other things of equal importance. All plots and borders must now be smoothed by the rake, preparatory to sowing the first general crop of hardy annuals. All the different sorts of what are termed tender annuals, should now be sown in hotbeds, to raise plants ready for potting as soon as they are large enough to handle. Sow hardy annuals in the second, third, and last week; and some of the more robust of half hardy annuals, about the end of the month. Sow, also, such biennials as flower the same year, and also perennials towards the end of the month. Propagate by rooted slips and offsets. Plant dried roots. Transplant annuals from patches in the borders, and biennials and perennials from the flower-garden nursery into their final sites. Dry, dress, hoe, rake, &c., only in dry weather. Clean up all borders, and prepare vacant ground.

MARCH, THINGS IN SEASON. — *Fish:* brill, carp, cockles, cod, conger eels, crabs, dabs, dory, eels, flounder, ling, lobsters, mackerel, mullet, mussels, oysters, perch, pike, plaice, prawns, salmon, salmon-trout, shrimps, skate, smelts, soles, sturgeon, turbot, tench, and whiting.

Fruit: Apples — French pippins, golden russet, Holland pippins, John apple, Kentish pippin, nonpareil, Norfolk beaufin, Wheeler's russet. Chestnuts; oranges. *Pears:* bergamot, bugi, Charmontelle, St, Martial, bon chrétien, strawberries (forced).

Meat: beef, house lamb, mutton, pork, veal.

Poultry and Game: capons, chickens, ducklings, fowls, green geese, grouse, leverets, moor-game, pigeons, rabbits (tame), snipes, turkeys, woodcocks.

Vegetables: artichokes, beet, brocoli, Brussels sprouts, cabbage, cardoon, carrots, celery, chervil, colewort, cresses, endive, garlic, herbs (dry), kale, lettuces, mint, mushrooms, onions, parsley, parsnips, potatoes, rosemary, sage, shalots, spinach, tarragon, thyme, turnips. *Forced vegetables:* asparagus, beans, cucumbers, rhubarb.

MARIGOLD.—Of this flower there are several varieties, but the mode of culture is common to all. The soil should be light

dry, poor, and unshaded. Sow any time from the close of February until June, or in autumn during September. For a seed-bed four feet by four, sown in drills one foot asunder, a quarter of an ounce will suffice. When the plants are two or three inches high, thin them to about twelve or fifteen inches asunder, or transplant them at the same distance. They will grow freely either way, and come into flower the following May or June, and continue flowering in plentiful succession throughout summer and autumn, to be cut for use as wanted. A store for winter should be gathered when in full flower, spread out to dry in the sun, and afterwards put into paper bags. A distilled water, a kind of vinegar, and a conserve are made from the flowers. It is occasionally used in broths and soups, partly to give them a colour, and partly to impart the peculiar flavour and warm aromatic taste which belongs to the flower.

MARJORAM.—Of the different kinds of this plant, the sweet evergreen is propagated solely by seeds; the others by seed, as well as by parting their roots, and slips of their branches. Sow from the end of February, in open weather, to the commencement of June, but the early part of April is best. Portions of the rooted plants, slips, &c., may be planted from February until May, and during September and October sow in drills six inches apart, the seed being buried not more than a quarter of an inch deep. When the seedlings are two or three inches high, thin to six inches, and those removed may be

pricked in rows at a similar distance. Those of the annual species are to remain; but those of the perennials to be finally removed during September, water being given at every removal, and until the plants are established. Plant slips, &c., in rows ten or twelve inches apart, where they are to remain; they must be watered moderately every evening and shaded during the day, until they have taken root. In October the decayed parts of the perennials are cut away, and some soil from the alleys scattered over the beds about half an inch in depth, the surface of the earth between the stools being previously stirred gently. The tops and leaves of all the species are gathered when green, in summer and autumn, for use in soups, &c.; and a store of the branches are cut and dried in July or August, just before the flowers open, for winter's supply. To obtain the seed, a plant or two of the pot-marjoram should be left ungathered, and the seed will ripen in the course of autumn. When the green tops of this plant are much in request they may be forced, by sowing a small quantity of the seed of summer marjoram in a moderate hotbed, in the months of January and February.

MARKETING.—The process of properly providing provisions and other necessary articles for a household, may be said to elevate itself almost into an art, by the practice of which, an income may be considerably economized, and at the same time a greater amount of satisfaction afforded to all parties concerned. The chief thing which conduces to good marketing is, as a matter of course, the possession of means by which it can be achieved, for, with ready money a person may not only buy better articles, but obtain them at some ten or fifteen per cent. cheaper than the person who goes to market on credit. The person who pays ready money is free to go to any shop she pleases, in the event of not being well served, and the fact is so obvious to the tradesman that he considers it a wise policy to pay particular attention to the wishes of his ready-money customers. When persons go marketing, they should not trust to memory for the articles they require, but put them down in a little book, or on paper; and previously to setting out they should ascertain whether or not a fresh supply is wanted of the ordinary articles of consumption. Persons should be especially warned not to make a practice of buying low-priced commodities, for, whether these are in the shape of provisions, or for household use, they almost invariably turn out unsatisfactory, and the value of the parts wasted, or compelled to be thrown away as unfit for use, far exceeds the imaginary saving attending the lowness of price. In purchasing articles of consumption, as meat, fish, vegetables, it is of the utmost importance that they should be tender, sweet, and fresh. Whether they are so or not, may be readily ascertained by paying attention to the indications which articles of food in their fit or unfit state always give. To assist this knowledge, this work furnishes the external appearance and condition of the various articles of consumption, when treating of them. Another useful piece of knowledge is that some classes of provisions are more economical than others. In the different joints of meat this is especially the case; the inexperienced housewife, therefore, should study this essential point, as she will find it of the greatest service. Tradesmen generally have a way of endeavouring to persuade persons to buy certain articles which it is to their interest to sell, but not to the interest of the purchaser to buy. In such cases, housewives should cut short the tradesman's ill-bestowed eloquence by at once declaring that those articles will not suit her. When the shopkeeper discovers, by the mode of meeting him, that the purchaser knows what she is about, he will not again endeavour to force his refuse upon his acute customer. Of the kinds of articles which improve by keeping, it is as well, where the money can be spared, to lay in a supply which will last for some time. The same plan applies to articles in which there is a periodical and almost certain rise in the prices; for by thus anticipating the market, a considerable saving may be of course effected. Many housewives remain in ignorance all their lives of the principles of economical and judicious marketing, simply because they will not inform themselves of the rules by which this useful knowledge may be attained. This either arises from indifference or from a false shame in letting other people see that a certain amount of inexperience exists, which the most notable housekeeper of after-life must have displayed when young. Beginners, therefore, should not hesitate to ask for information of their older or more experienced friends, and adding to their store of information little by little, attain at length a perfect knowledge of how to go to market.

MARKING INK.—This ink may be made after a variety of methods; the following is one of the best: dissolve separately an ounce of nitrate of silver, and an ounce and a half of carbonate of soda, in distilled or rain water. Mix the solutions, and collect and wash the precipitate in a filter, whilst still moist; rub it up in a marble or wedgewood mortar, with three drachms of tartaric acid; add two ounces of distilled water, mix six drachms of white sugar, and ten drachms of powdered gum arabic, half an ounce of archil and water to make up six ounces in measure Apply with a clean quill pen. *Red marking-ink* may be compounded thus: take half an ounce of vermilion, and a drachm of salt of steel; let them be finely levigated with linseed oil, to the thickness or limpidity required for the occasion. The ink thus obtained has not only an attractive appearance, but will be found perfectly to resist the action of acids, as well as of all alkaline lyes; it may be employed with either a hair-pencil or a pen. *Marking ink may be removed from linen* by a saturated solution of cyanuret of potassium, applied with a camel's-hair brush. After the marking-ink has disappeared the part should be well washed in cold water.

MARKING, VARIOUS ARTICLES.—It is of essential importance that both wearing

apparel, and all articles of domestic use should be marked and numbered. By this means the absence of articles may be always detected, and their use by a certain rotation insured. The marking should be performed with a fine new quill pen, and the articles laid before the fire to dry as they are severally marked. It is better to mark with ink, as the marks are then less easily obliterated; as, however, some persons prefer to mark with silk, it is performed as follows: two threads are to be taken each way of the fabric, and the needle must be passed three ways in order that the stitch may be complete. The first is aslant from the person, towards the right hand; the second is downward towards the person; and the third is the reverse of the first—that is, aslant from you towards the left hand. The needle is to be brought out at the corner of the stitch nearest to that you are about to make. The shape of the letters and figures may be learned from an inspection of any common sampler.

MARL, AGRICULTURAL USES OF.—Marl contains certain chemical properties, which render it an excellent fertilizer. One essential point is to determine the qualities of the different earths and stones to which marl is to be applied, and to ascertain the quantity of calcareous earth in their composition, their value in agriculture commonly increasing in proportion to the greater quantity of it which they contain. The following process will be found the best for this purpose: the marl being dried and reduced to powder, put half an ounce of it into a half-pint glass, pouring in clear water till the glass is half full; then gradually add a small quantity of strong marine acid (spirit of salt), and stir the mixture well together. As soon as the effervescence thus excited subsides, add a little more marine acid, thus continuing the operation while any of the earthy matter appears to dissolve, and till the liquor, after being well stirred and allowed to stand for half an hour, appears sensibly acid to the taste. When the mixture has subsided, if the liquor above it be colourless, that marl will be found the best which leaves the least sediment or deposit in the bottom of the glass. This experiment is sufficient to determine which of the samples tried is the most proper for the uses of agriculture, as pure calcareous earth or lime, which is the earth useful in agriculture, will be entirely dissolved, but clay or sand will not be sensibly acted upon by the acid.

MARLBOROUGH PUDDING. — Take four ounces of butter, melted; four ounces of loaf sugar, finely powdered; and four eggs well beaten; mix all well together. Line a dish with puff paste and a layer of preserves; add the batter, and bake it for an hour.

☞ Butter, melted, ¼lb.; sugar, ¼lb.; eggs, 4.

MARMALADE.—See APPLE, APRICOT, CURRANT, LEMON, ORANGE, PEARS, &c.

MARMALADE, TRANSPARENT. — Take very pale Seville oranges, cut them in quarters, take out the pulp, and put the fruit into a basin; pick the seeds and skins out; put the peels in a little salt and water: let them stand all night; then boil them in a large quantity of spring water till they are tender; then cut them in very thin slices, and add them to the pulp. To every pound of marmalade put a pound and a half of double-refined sugar beaten fine. Boil gently for twenty minutes; if it is not then clear and transparent, boil it for five or six minutes longer; continue stirring it all the time, and take care not to break the slices; when it is cold, put it into jelly-glasses, and tie them down with brandied papers over them.

MARRIAGE.—The lawful conjunction of man and wife. Marriage, to be lawful, must comply with certain ecclesiastical laws; and if celebrated in contravention of these laws, it is not a valid contract, and may be, under special conditions, dissolved. Thus, marriages cannot be solemnized between persons within the Levitical degrees; but if so solemnized, they are not void until after the sentence of the proper court. Marriages by licence, where the parties are not of age, must not be without the consent of the father or guardian, and may be annulled. If the guardian or parent is beyond sea, or insane, the Lord Chancellor will proceed upon relation in their stead. On the other hand, many marriages which are seemingly illegal, are in reality not so. Thus a person being married in an assumed name, is just as legally married as though he had been married in his true name. A marriage between a Roman Catholic and a Protestant need not necessarily be solemnized in a place of worship dedicated to each religion, but if the ceremony be performed in either place of worship only, the marriage is perfectly legal. Some misapprehension appears to exist respecting the right of a married person, whose husband or wife is absent, to re-marry, provided the parties have not been heard of for seven years. The fact is, that the law excuses a second marriage under such circumstances, but it does not legalise it. So, if a woman already married to a husband who had been away from her for seven years, and from whom she had not heard during that time, were to return after the second marriage was contracted, he would still be the woman's lawful husband, the second marriage would be null and void, and any issue of such union would be illegitimate. A marriage celebrated with a lunatic is illegal, and may be dissolved, because a lunatic is considered to be irresponsible for his actions, and therefore disabled from entering into any contract whatever. Marriage is dissolved by death. The dead wife *was* a wife, but is a wife no longer; consequently all relationships subsisting during the wife's lifetime on account of that marriage, are dissolved by the wife's death; therefore, a man who was a person's brother-in-law whilst the wife lived, is brother-in-law no longer when she is dead; but he is called by courtesy brother-in-law, and his children by the sister are by blood related to the brother. His children by another wife are not related

at all.—See AFFINITY, BREACH OF PROMISE, &c.

MARRIAGE BY REGISTRATION.—By this mode marriage may be celebrated without the publicity of banns, and unattended by the expense attached to licence. The manner of proceeding is to give notice of your intention to the registrar of the district, and at the end of twenty-one days, that functionary will give you a certificate, which the officiating clergyman will receive as equivalent to the licence or banns. Under these circumstances, the marriage fees will amount to twelve or fourteen shillings, exclusive of any gratuity you may choose to make to the parish clerk, sexton, pew-opener, &c.

MARRIAGE LICENCE.—Marriage by an ordinary licence must be solemnized in the church of the parish where one or other of the parties resides. The licence must be taken out for the place where the marriage is to be solemnized. It may be taken out by any person who can make oath that both parties are of full age, and have the consent of parents or guardians if not of age. A special licence permits persons to be married at any licensed place not named. By one of the canons of the church, a clergyman is to marry only between the hours of eight and twelve in the forenoon. Marriage by licence is distinguished from other modes, as being more "fashionable" and select.—See BANNS OF MARRIAGE.

MARRIED WOMAN, LEGAL POSITION OF.—When a woman becomes married, her individuality, in a legal point of view, becomes merged in that of her husband. She is relieved of the responsibility, and indeed disabled from performing any contract, or effecting any act as a sole and independent person. She is, also, to a certain extent, absolved from moral responsibility, provided she act under the direction of her husband. A married woman, except under certain conditions, cannot exercise a separate and independent control over monies, houses, lands or other possessions, it being held in law that those which belong to her belong by a still stronger claim to her husband. If a married woman purchases stock, the Bank of England will not permit her to take the dividend, or sell the stock. Married women cannot grant leases, unless the power is expressly reserved them by marriage settlement. Nor can married women, except by special custom, take leases. A married woman who is deserted by her husband, or living apart from him by mutual consent, is entitled to a certain allowance from him, according to his means; and in the event of his refusing to contribute to the support of his wife, he may be sued by persons who have supplied her with goods, or have maintained her and given her a lodging. It has been ruled, however, that in cases of goods supplied, the cost must not be excessive and disproportionate to the husband's income and position in life. By a recently introduced law, a married woman may be judicially separated from her husband by reason of infidelity, cruelty, and desertion, under aggravated circumstances. Police magistrates have also the power of granting protection to the property and possessions of married women, who have been deserted without any means of support, and who are in fear of the husband returning to appropriate to himself the goods, monies, and effects upon which she depends for her subsistence.—See ALIMONY, SEPARATION JUDICIAL, &c.

MARROW.—The fatty matter which fills up the centre of the shaft of the long bones. As an article of diet, it possesses the same nutrient properties as the fat generally. *To preserve clarified marrow*, take the marrow from the bones while it is perfectly fresh, cut it small, put it into a perfectly clean jar, and melt it with a gentle heat, either in a pan of water placed over the fire, or at the mouth of a cool oven; strain it through muslin, let it settle for a minute or two, and pour it, clear of sediment, into small jars. Tie skins or double folds of thick paper over them as soon as the marrow is cold, and store it in a dry and cool place; it will remain good for months.

MARROW BONES.—Put a bit of paste made with flour and water over the end where the marrow is visible; tie a cloth tightly over them and boil them for two hours; take the paste off before the bones are sent to table, and serve them on slices of dry toast.

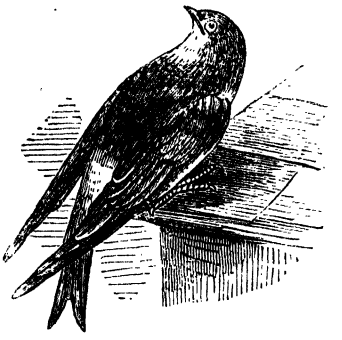
MARROW PUDDING.—Grate a penny loaf into crumbs, pour on it a pint of boiling cream. Cut very thin a pound of beef marrow, beat four eggs well, add a wineglassful of brandy, with sugar and nutmeg to taste. Mix all well together, and either boil or bake it for three-quarters of an hour. Cut two ounces of candied citron very thin, and when served up, stick the pieces all over it.

☞ Bread, a penny loaf; cream, 1 pint; beef marrow, 1lb.; eggs, 4; brandy, 1 wineglassful; sugar and nutmeg to taste.

MARSH MALLOW.—A plant found frequently in England near the sea; it bears pale bluish red flowers on an upright stem; the leaves are heart-shaped, cut at the edges, and, like the stem, are covered with soft, hairy down. The whole plant is mucilaginous, but the root is chiefly used. It is used for the same purposes as the linseed, and drunk in similar quantities. The decoction is made by boiling four ounces of the dried root with two ounces of raisins in six pints of water, until the whole is reduced one-third, and straining the liquid through calico before use. The marsh mallow is also used externally, both as a fomentation and a poultice in inflammatory cases, and it is also employed as an enema.

MARTIN.—A bird of the swallow tribe, chiefly remarkable for building beneath the windows of houses. The peculiar habits of this bird, and the absence of song, does not render it suitable for cage confinement. The damage done to buildings by this bird building its nest is sometimes very considerable,

and if it is desired to prevent their building, rubbing the places usually selected by



them, with oil or soft soap, will be found effectual.

MARVEL OF PERU.—A greenhouse herbaceous perennial. It is propagated by seeds sown in a hotbed, in spring, and the plants are hardened off by degrees to stand in the open border. The roots are taken up and preserved in sand or dry moss during the winter; this plant flourishes best in a rich sandy loam, its general culture is much the same as that of the dahlia.

MASTER AND SERVANT.—The mode of hiring is by what is commonly called a month's warning or a month's wages. But this arrangement varies considerably, and is regulated for the most part according to the customs of the particular branch of service or employment. A grocer or linendraper in the metropolis, may, by the custom of the trade, discharge an assistant without any notice. Here the bargain in the outset is for so much salary per year. An usher engaged in much the same way, is entitled to a quarter's notice. A parliamentary reporter is engaged for the session of Parliament. An editor is sometimes dismissed with a month's notice, but mostly three months' notice from any day. In every trade or calling, in the absence of any stipulation upon the point, the Courts hold that the customary notice is understood by master and servant. If a master would require, or has required a monthly notice from his clerk, the clerk is entitled to the same from his master. Where a mercantile house has fifty or sixty assistants, the custom of the particular house, and not of the trade, will prevail. If a servant be disabled in his master's service, by an injury received through another's default, the master may recover damage for loss of service. If a domestic servant falls ill, a master is not bound to provide medical attendance and medicines, yet if he calls in his own medical attendant, and pays for such attendance, he cannot set off the amount against the servant's claim for wages, unless there was a special agreement between them that he should do so. If a servant hired by the year, meets with an accident or is disabled while employed in his master's business, he cannot be lawfully dismissed, nor can his wages be abated. If a servant wilfully disobeys any lawful order of his master, he is liable to be discharged immediately, without either notice or compensation. A master may not only maintain an action against any one who entices away his servant, but also against the servant; and if without enticement, a servant leaves his master without just cause, an action will lie against another who retains him with a knowledge of such departure. In cases where a person hires a servant already engaged to another, although the person hiring is not aware of any existing engagement, the original master may claim the services of his servant, and the second hiring is null and void. A master is entitled to correct his servant in a reasonable manner, to enforce fidelity and obedience to all his lawful commands. Acts of the servant are, in many instances, deemed acts of the master; and he is responsible for them where they are pursuant to his authority. If a servant commit an act of trespass by command or encouragement of his master, the master may be held liable. But in so doing, his servant is not excused, as he is bound to obey the master in such things only as are honest and lawful. If a servant of an innkeeper rob his master's guest, the master is bound to make good the loss. Also, if a waiter at an inn serve a person bad wine, by which the health of the person is impaired, an action will lie against the master. In like manner, if a servant be permitted to frequently do a thing by the tacit consent of his master, the master will be liable. If a servant is usually sent upon trust with any tradesman, and he takes goods in the name of his master, and appropriates them to his own use, the master must pay for them. But if a person usually deals with a tradesman himself, or constantly pays them ready money, he is not answerable for goods supplied on credit to the servant in his name. Or if a person forbid a tradesman to trust his servant on his account, and the servant continue to purchase on credit, the master is not liable. The act of a servant, though he has quitted his master's service, has been held to be binding on the master, by reason of the former credit given him on his master's account, and the fact of the servant's discharge not being known to the party trusting. The master is also answerable for any injury arising by the fault or neglect of his servant when executing his master's business. A master is likewise chargeable for any nuisance occasioned by his servant, to the damage or annoyance of any individual, or the common nuisance of Her Majesty's subjects. A servant is not answerable to his master for any loss which may happen, unless it be through wilful neglect; but if he be guilty of fraud or of gross negligence, an action will lie against him by his master. When servants are drawn for the militia, the position of the parties appears to be this:—If the servant return to his employ

within a reasonable time after training, the master is bound to receive him, subject to the right of deducting such a sum from his wages as is proportioned to the duration of absence. If he refuse to receive him, the servant may either treat the service as continuing, and wait for his wages until the end of the year, or other period agreed upon; or he may treat the service as ended by mutual consent, and at once recover so much wages as is proportioned to the time he served before he went out training. If a servant stipulate to remain for a certain period in his master's service, and he discharges him before the expiration of that period, he is not entitled to recover any wages for the portion of time that he has remained.

MASTER AND SERVANT, MUTUAL OBLIGATIONS OF.—It is universally admitted that a good master makes a good servant; and one of the best signs of a proper understanding existing between the employer and the employed is furnished by servants remaining for a lengthened period in the same situations. A master should treat his servant with firmness but not with severity; he should lead his servant to understand that when he once ordered anything to be done, he expected it to be promptly and properly obeyed, without being compelled to reiterate the order. A master should observe habits of regularity in his own proceedings, and thus set an example to those under him, which they are almost sure to follow. A servant should be paid at a fair and just rate for his services; no saving is in reality effected by underpayment; it sometimes makes servants dishonest, and always renders them careless and negligent. As length of service increases, and when the servant has conducted himself well, an occasional augmentation of wages will not be ill-bestowed; or the recognition of fidelity and good service may take the form of some periodical and seasonable gift. A master may advantageously drop occasionally the character of the employer for that of the friend, giving good advice on personal matters, and making inquiries in connection with their welfare; but on doing this, anything approaching to familiarity should be avoided, nor should such intercourse partake of an inquisitorial character. Servants should never be reproved before strangers; whatever faults they commit should be censured privately; the reproof will then have all the greater force, and the manner of giving it will be appreciated by every sensible servant. A master should carefully avoid commissioning his servant in questionable offices, as, for instance, inducing him to tell a falsehood, or ordering him to commit some mean act by which a petty advantage may be gained. By such a course of conduct all moral restraint will be lost, and the servant will in all probability avail himself of similar acts against his master's interest. Family quarrels and disputes with any member of the household should never be carried on in the presence of a servant; such displays have a tendency to lessen the parties in the eyes of the servant, and encourage acts of insubordination. No master should make a confidant of his servant, or intrust him with any secret to his prejudice; this at once gives a servant undue importance, and leads him to take liberties which he would not otherwise dare to contemplate. Some allowance should be made for the feelings and sufferings of a servant; thus, when he is overtaken by illness, or visited with affliction, he should be treated with merciful consideration; such a concession is never thrown away, for should the employer subsequently share a similar fate, he will find in his servant a sincere sympathizer and a watchful attendant. Servants should be indulged in occasional holidays and hours of relaxation; under these conditions, labour will be performed with more alacrity and greater interest.

The duties of a servant towards his employer may be summed up as follows: He should implicitly obey the orders given him, without murmur or dissent. He should also endeavour to gain a knowledge of his employer's habits, and anticipate his wishes, so as to spare the necessity of being continually reminded of duties which he is sure to be called upon to perform. A servant should avoid giving himself airs of consequence, or acting or speaking impertinently; such conduct only serves to display his ignorance, and an unfitness for the situation he holds. All duties should be performed as conscientiously in the employer's absence as in his presence; eye-service is a species of hypocrisy which must be sooner or later detected, with very humiliating consequences. A servant should act with the same zeal and probity on his employer's behalf as he would for his own; any petty advantage gained by an opposite course is more than counterbalanced by the guilty consciousness of wrong, and may be attended by an irretrievable loss of character. Whatever is done or said by the members of a family, which may be repeated to their prejudice, should never be carried beyond the walls of the house; a servant who circulates gossip and scandal respecting the household in which he lives, is unworthy of his trust, and brands himself as a domestic spy and a traitor. Harsh expressions and hasty words, occasionally addressed by an employer to his servant, should be overlooked instead of being resented. This is sometimes difficult of observance, but it never fails to be appreciated, and will invariably win respect and esteem. A servant should always be true to his promise; thus, when he is permitted leave of absence on condition that he return at a stated time, he should be back at his post to the minute: any extra liberty taken beyond that stipulated for is calculated to irritate an employer, and by shaking his confidence, renders him reluctant to grant a like indulgence on a future occasion. Truthfulness and straightforward conduct should be ever observed; when a servant has committed an error, or has met with some mishap in the performance of his duties, he should not endeavour to screen himself by subterfuge and misrepresentation, but at once acknowledge the fault he has committed, or reveal the acci-

dent that has befallen him. A servant should be cheerful and willing, and content with the station which has been assigned him; he should remember that there must of necessity be some grades in life lower than others; and, in order that he may reconcile himself to this order of things, he should contrast his lot with that of thousands who are much worse situated than himself; and find comfort in the fact that he is spared the responsibilities and vexations which attach themselves to the higher spheres of society.

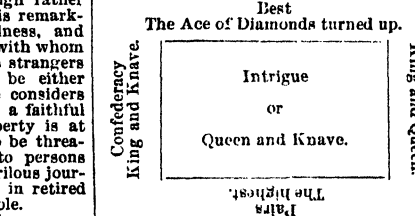
MASTIFF.—A variety of dog, having a large and powerful frame, and with a somewhat savage and sullen aspect. He has a large

flat head, and a short blunted muzzle; his lips are full, and hanging considerably over the lower jaw; his ears, although rather small, are pendulous. This dog is remarkable for his courage, watchfulness, and fidelity; he is gentle with those with whom he is familiar, ferocious towards strangers and intruders, and refuses to be either bribed or coaxed from what he considers his duty. In short, this dog is a faithful and trusty servant, when property is at stake, or the person is likely to be threatened; thus, as a companion to persons travelling on a lonesome and perilous journey, or as a guard for a house in retired situations, the mastiff is invaluable.

MAT.—An article of domestic use employed for the purpose of protecting tables, carpets, floorcloth, &c. Table-mats are usually made of wicker-work or of oiled cloth, of various sizes, according to the dimensions of the dishes which they are to be placed beneath. By thus interposing the mat between the heated dishes and the table, the former are prevented from doing injury to the latter. These articles are inexpensive, and will last a long time. Mats placed at the entrance of passages, rooms, &c., hold an important place in domestic economy, by preventing dirt from being brought into the house or the apartments; so that the place is not only kept clean, but by rendering frequent sweeping of the carpet less necessary, does not cause it to wear out so soon. The mats placed at outer doors and passages are usually made of rope; these should be cleaned every morning by beating them against a wall, and then by placing the upper side downwards, and striking the dust out with a broom. Mats placed at the entrances of rooms are usually made of finer materials, and may be contrived out of cloth and worsted remnants, &c. A mat for use in rooms, which is at once ornamental and comfortable, may be made from sheepskins, as follows: Dissolve a pound of alum and a pound of salt in a gallon of water. Put the skin in soon after it is taken from the sheep, and let it soak for twenty-four hours. Then nail it on an old door or other surface, skin uppermost, till quite dry. Cut it into shape, and line it with a piece of old carpet, to prevent it greasing the floor. A new species of mat, made of cocoa-nut fibre, has been recently introduced, which is found to be very serviceable, and to wear well.

MATHEMATICS.—Books: *Orr's Circle of the Sciences* (*Mathematics*), 4s. 6d.; *Young's Mathematics*, 2s.; *Ingram's Concise System*, 7s. 6d.; *Trotter's Mathematics*, 3s.; *Goodwin's Problems to Mathematics*, 6s.; *Quested's Mathematics*, 2s. 6d.; *Hutton's Mathematics*, 2 vols. 24s.; *Christie's Elements*, 2 vols. 31s.; *Davidson's Mathematics*, 10s. 6d.; *Hutton's Recreations in Mathematics*, 16s.; *Kelland's Lectures on Mathematics*, 4s. 6d.; *Gregory's Mathematics for Practical Men*, 21s.; *Davies' Solutions*, 24s.; *Rutherford's Mathematician*, 21s.; *Mathematician's Guide*, 1s.; *Practical Mathematics*, 6s. 6d.

MATRIMONY.—A game of cards played with the entire pack, by any number of persons from five to fourteen. It consists of five chances, usually marked on a board, or sheet of paper, as follows:—



The game is generally played with counters; the dealer lays any stake he pleases on each or any chance, the other players depositing each the same amount, except one; that is, when the dealer stakes twelve, the rest of the players lay down eleven each. After this, two cards are dealt to every one, beginning on the left; then to each person one other card, which is turned up, and he who happens to have the ace of diamonds, sweeps the board. If it be not turned up, then each player shows his hand; and any one having matrimony, intrigue, &c., takes the counters on that point; and when two or more players happen to have a similar combination, the eldest hand has the preference; and should any chance not be

gained, it stands over to the next deal. *Observe*. The ace of diamonds turned up takes the whole pool, but when in hand ranks only as any other ace; and, if not turned up, nor any ace in hand, then the king, or next superior card, wins the chance styled best.

MATTOCK.—An agricultural implement consisting of two parts; the handle, which ought to be formed of sound ash timber or oak, such as is obtained from the root or butt end of a middle-aged tree; and the head, which should be formed of the best iron and pointed with steel. The handle ought to be perfectly cylindrical, as in using it, one hand slides along it from the end next the operator towards the head. This implement is also known by the name of pick.

MATTRESS.—An article of bedding sometimes placed between the bedstead and the bed, and sometimes employed as a bed itself. Mattresses are made of various materials, according to the particular use to which they are to be put. Down and feathers are the materials best adapted for the aged and the young, wool and hair for the middle-aged and the robust. And in hot climates, or for persons who perspire very freely, mattresses made of aloe, manna, and paper shavings are the best. Wool mattresses, when well made, are exceedingly healthy and pleasant to lie upon, and they may be rendered still more yielding and agreeable by placing a spring mattress beneath. Mattresses require a periodical beating and cleaning, and should be occasionally exposed to the action of the air so as to render them wholesome, and to free them from any insects or vermin with which they may be infested.

MAY, GARDENING FOR.—*Kitchen garden.*—*Beans*, sow in cool situations. *Beet*, continue to sow in rows, as for carrots. *Brocoli*, continue sowing a little more seed of the later sorts, including Grange's white, Walcheren, and early Cape. *Cabbages*, transplant the spring-sown sort eighteen inches apart every way; make a succession sowing for late autumn use. *Capsicums*, plant out against a south wall, if the weather prove fine. *Cardoons*, sow a full crop in a trench similar to a celery trench, put in decayed manure, and sow ten inches deep. Keep the plants freely growing by frequent application of liquid manure. *Carrots*, thin, as they are large enough. *Cauliflowers*, plant from seed-beds. *Endive*, sow a little seed for early autumn; green curled is the best for the present season. *Kidney beans*, continue to plant for general crop, three or four inches apart, and two feet, row from row. *Lettuces*, transplant some of the strongest, and sow a little for succession. *Melons*, attend with constant care, and regulate the number of fruit. *Peas*, continue to sow for succession some of the best late sorts, British queens, Knights' marrow, and any of the late tall sorts of marrows. *Radishes*, continue to sow for succession; when wanted the turnip radishes succeed best now. *Scarlet runners*, sow for a general crop the first week in the month. *Sea-kale*, remove the fermenting material from such as are required for next year's supply. *Spinach*, sow once a fortnight if much be required. *Turnips*, hoe and thin such as are fit, and make a fresh sowing. *Vegetable marrow*, plant out towards the end of the month, on a rich light soil.

Flower garden.—Annuals, pot out the tenderest sorts, and of the hardy kinds sow another succession, and transplant some of those sown in former months. *Asters*, thin superabundant. *Auricula*, remove to north-east aspect. *Bulbous roots*, take up as the leaves decay. *Carnations*, sow. *China roses*, propagate by cuttings. *Chrysanthemums*, protect from the cold and the east winds. *Dahlias*, protect from cold by covering with mats. *Heart's ease*, of the best varieties, place in shady situations. *Larkspurs*, plant out. *Mignonette*, plant out. *Neapolitan violets*, place in beds of manured loam. *Parterres*, plant with groups of fuchsias, calceolaria, Petunia, verbena; and form masses of scarlet and variegated gerania. *Peruvian heliotrope*, propagate by the division of the roots. *Ranunculus*, plant to flower in autumn. *Rose-trees*, prune back to obtain a late bloom. *Stocks*, transplant in pots for winter. *Tulip-beds*, protect from mid-day sun, rain, winds, &c. *Violets*, make new beds of. *Wall-flowers*, propagate by slips.

General remarks.—This is one of the most eventful months of the year, and constant attention is needed to encourage the development of the various plants, and to keep down noxious agents, as weeds, insects, &c. The routine culture consists of hoeing, raking, weeding, and clearing the ground. Whenever rain has battered the ground, it should be stirred up and refreshed as soon as it is nearly dry. Stir the surface around close patches of annuals, and refresh and top-dress all pots of prolonged annuals, now in full flower or in seed. Destroy insects and pick the grubs off roots. Detach seed-pots from all plants not required to ripen seeds. Water, thin, and shade with judgment, and keep a vigilant eye to order and neatness. Nearly all seeds which have been sown under the protection of frames may now be finally transplanted into their respective quarters, and no time should be lost to get the ground covered and cropped. Keep always a reserve stock of the various tribes of brassica ready for transplanting as vacancies occur; keep down weeds, and on no account allow any to run to seed; it ought to be remembered, that it is easier to kill weeds when they are young; and, independently of this, the crops will be much benefited by frequent hoeings and surface-stirrings. Be careful to thin young crops of all sorts; the first operation should be performed early, and another may be required when the plants are more advanced. All plants, when allowed to remain thick, run up tall and slender, and seldom succeed well.

MAY, THINGS IN SEASON.—*Fish*—Brill, carp, chub, cod, conger eels, crabs, cray-fish, dabbs, dace, dory, eels, flounders, gurnets, haddock, halibut, herring, ling, lobsters, mackerel, mullet, perch, pike, plaice, prawns,

salmon, shrimps, skate, smelt, soles, sturgeon, tench, trout, turbot, whitings.

Fruit.—Apples—John apple, golden russet, winter russet. May-duke cherries, currants, gooseberries, melons. *Pears*—L'Amozette, winter green. *Forced*—Apricots, cherries, nutmeg peaches, strawberries.

Meat.—Beef, grass-lamb, house-lamb, mutton, pork, veal.

Poultry and Game.—Chickens, ducklings, fowls, green geese, leverets, pigeons, pullets, rabbits, wood-pigeons.

Vegetables.—Angelica, artichoke, asparagus, balm, beans, cabbage, carrots, cauliflowers, chervil, cucumbers, fennel, herbs of all sorts, lettuce, mint, onions, parsley, peas, potatoes (new), purslane, radishes, rhubarb, salad of all sorts, sea kale, sorrel, spinach, thyme, turnips.

MAYONNAISE.—A sauce for cold meat, poultry, fish, &c., made as follows:—Put into a large basin the yolks of two new laid eggs, with a little salt and cayenne; stir these well together, then add a teaspoonful of good salad oil, and work the mixture round until it appears like cream. Pour in by slow degrees nearly half a pint of oil, continuing at each interval to work the sauce as at first, until it resumes the smoothness of cream, and not a particle of the oil remains visible; then add two tablespoonfuls of tarragon vinegar, and one tablespoonful of cold water to whiten the sauce.

☞ Eggs, 2 yolks; salt, ½ saltspoonful; cayenne, 1-10th saltspoonful; oil, ½ pint; tarragon vinegar, 2 tablespoonfuls; cold water, 1 tablespoonful.

MEAD.—A liquor made chiefly from honey, according to various methods, of which the following are a selection:—1. To every gallon of water put four pounds of honey, and boil for three-quarters of an hour, skimming it well in the meantime. To every gallon of this liquor add an ounce of hops, then boil for half an hour, and let it stand till the following day, when it is to be put into the cask, and to every thirteen gallons of the liquor, add a quart of brandy. Let it be tightly stopped till the fermentation is over, and then bung it very close. If a large cask be made, a year should elapse before bottling; for smaller casks, the time to be proportioned accordingly. 2. Mix well the whites of six eggs in twelve gallons of water; and to this mixture, when it has boiled for half an hour, and has been thoroughly skimmed, add thirty-six pounds of the finest honey with the rinds of two dozen lemons. Let them boil together for some little time, and on the liquor becoming sufficiently cool, work it with a little ale yeast. Put it with the lemon-peel into a seasoned barrel, which must be filled up as it flows over with some of the reserved liquor; when the hissing noise made by the liquor ceases, drive the bung close. After the wine has stood for five or six months, bottle it for use. 3. Boil fourteen pounds of honey in six gallons of water for half an hour, breaking into it four eggs; then add some small bunches of marjoram, balm, and sweetbriar; half an ounce each of cinnamon, cloves, mace, and bruised ginger, and boil for a quarter of an hour longer; pour it out to cool, then toast a large slice of brown bread, spread it over with fresh yeast, and put it into the liquor; let it ferment for a day, then turn it into the cask, keep it open till the fermentation has ceased, then bung close. It may be bottled in a month, and the corks should be securely tied or wired, as mead thus made is sparkling and effervescent.

MEADOW.—Under this term is included all such land as is kept under grass chiefly for the sake of a hay crop. The most valuable meadows are such as are either naturally moist, or are rendered so by means of irrigation. There are three descriptions of these meadows—those on the banks of streams and rivers; those on the uplands or more elevated grounds; and bog-meadows. River meadows are in general by far the most valuable. They are the most productive of grass and hay, yielding sustenance for cattle through the summer and the winter, and producing a constant source of manure for the improvement of the adjoining lands. The principal defects to which such lands are liable are, the oozing out of springs towards their junction with the rising lands, and the inundations of the river or stream. The former evil is to be remedied by under-draining, and the latter by embanking. Upland meadows are next in value. The soil is either naturally good and well adapted for grass, or, if inferior by nature, it is so situated as to admit of enrichment by ample supplies of manure. The culture of upland meadows requires more attention, and entails more expense than that of valleys, being more difficult to drain, and requiring regular supplies of manure. The irregular surface of uplands is apt either to contain springs, or to stagnate the surface water; the first produce marsh plants and coarse herbage, and the latter destroys or weakens whatever is growing on the surface, and encourages the growth of moss. Both evils are to be remedied by the obvious resources of drainage. Bog-meadows are the least valuable of any; but their culture and management differ in nothing essential from those of the river kinds. A lighter roller is used in spring, the greatest care is taken in eating down the latter grass, and in some cases, in very dry weather, the main drains are stopped up for a few weeks, in order to stagnate the water, and supply the soil with moisture.

MEALS, NUMBER AND TIMES OF TAKING.—The average number of waking hours is sixteen out of the twenty-four. The time required to digest food is in general from four to five hours, so that meals are required to be taken at these intervals to supply the necessary repair to the system. The arrangement of meals, therefore, is commonly as follows:—Breakfast, eight o'clock; dinner, one o'clock; tea, five o'clock; supper, nine o'clock. This may be deemed the most rational distribution, and in accordance with the ordinary pursuits of life; although peculiar avocations, and certain customs, may dictate a different method. Exceptions

must also be made in favour of delicate persons and young children, the times for meals for the former being those which they find best to agree with them; while with the latter the interval should rarely exceed three hours and a half or four hours, as their digestion is quicker than that of adults. Whatever hours are fixed upon for taking meals in the first instance, should be consistently maintained afterwards. Habit exercises the greatest influence in the matter, and the person who has been in the practice of taking food at a certain hour of the day, will always, whilst in good health, feel hungry at that hour. Indeed, it sometimes happens that the stomach will work only at those hours to which its operations have been long accustomed; and infirmity may be frequently traced to a change in the hour of taking a meal. In cases where the interval between meals is as above mentioned, eating and drinking should not be carried on except at those meals; it is not only unnecessary, but disturbs the stomach, and interferes with the regular process of digestion. When the interval is longer than that named, as, for instance, where a person breakfasts at eight o'clock, and does not dine till four, an intermediate repast is necessary, and the food taken should be of a substantial nature though not great in quantity. With persons engaged in sedentary occupations during the chief part of the day, it is certainly wiser that the principal meal should be delayed until the work is done, or a long interval of rest may be indulged in. Supposing persons thus circumstanced to breakfast at eight o'clock, lunch of bread and meat may be partaken of at twelve or one o'clock, and dinner at four or five. Persons should not partake of their meals alone when it can be avoided; under such circumstances, the mind is apt to busy itself with deep and anxious thought, and the body, sympathizing with the mental disturbance, is liable to suffer from the interruption caused to the digestive organs. The habit of eating to repletion at various meals should be avoided, for by this pernicious practice the system receives far more injury than it derives benefit, and the plan should be to rise from the table with a feeling of moderate gratification rather than satiety.—See BREAKFAST, DINNER, SUPPER, TEA.

MEASLES.—This is a disease characterized by a species of inflammatory fever, attended with all the symptoms of a severe cold, running at the nose and eyes, sneezing, cough, cold chills, tightness at the chest, languor, lassitude, pain in the back and head, and in fact by all the indications of constitutional disturbance and fever; though the sign by which it may be most readily known and determined, is the running of humour from the eyes, and constriction at the chest, with a short dry cough. The great secret in the treatment of measles to be borne in mind, is not to discontinue the treatment with the subsidence of the symptoms, for no disease leaves behind it so many and hurtful consequences; therefore, to purify the system and save the body of the child from mumps, dropsy, tumours, bad eyes, and many other distressing affections, it is necessary to keep up for some weeks, after the disease is cured, a mild but steady action on the body; give the child change of air, plenty of exercise, and a nutritive but light and stimulating diet.

The *symptoms* of measles commence with cold chills and flushes, lassitude, heaviness, pain in the head, and drowsiness, cough, hoarseness, and extreme difficulty of breathing, frequent sneezing, defluction or running at the eyes and nose, nausea, sometimes vomiting, thirst, a furred tongue, the pulse throughout is quick, and sometimes full and soft, at others hard and small, with other indications of an inflammatory nature. On the *third* day, small red spots make their appearance, first on the face and neck, gradually extending over the upper and lower part of the body.

On the fifth day the vivid red of the eruption changes into a brownish hue, and in two or three days more the rash entirely disappears, leaving a loose powdery disquamation on the skin, which rubs off like dandriff. At this stage of the disease, a diarrhœa frequently comes on, and being what is called "*critical*" should never be checked unless seriously severe. Measles sometimes assume a typhoid or malignant character, in which form the symptoms are all greatly exaggerated, and the case from the first becomes doubtful and dangerous. In this condition the eruption comes out sooner, and only in patches, and often, after showing for a few hours, suddenly recedes, presenting instead of the usual florid red, a dark purple or blackish hue, a dark brown fur forms on the gums and mouth, the breathing becomes laborious, delirium supervenes; and, if unrelieved, is followed by coma, a fœtid diarrhœa takes place, and the patient sinks under the congested state of the lungs and the opposed functions of the brain. The unfavourable symptoms in measles are a high state of fever, excessive heat and dryness of the skin, hurried and short breathing, and a particularly hard pulse. The ordinary after-consequences of measles, are croup, bronchitis, mesenteric disease, abscesses behind the ear, ophthalmia, and glandular swellings in other parts of the body.

Treatment.—In the first place the patient should be kept in a cool room, the temperature of which must be regulated to suit the child's feelings of comfort, and the diet adapted to the strictest principles of abstinence. When the inflammatory symptoms are severe, bleeding in some form is often necessary, though, when adopted, it must be in the first stage of the disease; and if the lungs are the apprehended seat of the inflammation, two or more leeches, according to the age and strength of the patient, must be applied to the upper part of the chest, followed by a small blister; or the blister may be substituted for the leeches, the attendant bearing in mind that the benefit effected by the blister can always be considerably augmented by plunging the

feet into very hot water, about a couple of hours after applying the blister, and keeping them in the water for about two minutes. The first internal remedies should commence with a series of aperient powders, and a saline mixture, as prescribed in the following formularies; at the same time, as a beverage to quench the thirst, let a quantity of barley-water be made, slightly acidulated by the juice of an orange, and partially sweetened by some sugar-candy; and of which, when properly made and cold, let the patient drink as often as thirst, or the dryness of the mouth, renders necessary.

Aperient Powders.—Take of scammony and jalap, each twenty-four grains; grey powder and antimonial powder, of each eighteen grains. Mix and divide into twelve powders, if for a child between two and four years of age; into eight powders, if for a child between four and eight years; and into six powders for between eight and twelve years of age. One powder to be given, in a little jelly or sugar and water, every three or four hours, according to the severity of the symptoms.

Saline mixture.—Take of mint-water, six ounces; powdered nitre, twenty grains; antimonial wine, three drachms; spirits of nitre, two drachms; syrup of saffron, two drachms. Mix. To children under three years, give a teaspoonful every two hours; from that age to six, a dessertspoonful at the same intervals; and to children between six and twelve, a tablespoonful every three or four hours. The object of these aperient powders is to keep up a steady but gentle action on the bowels; but whenever it seems necessary to administer a stronger dose, and effect a brisk action on the digestive organs—a course particularly imperative towards the close of the disease—two of these powders given at once, according to the age, will be found to produce that effect. Thus, two of the *twelve* for a child under four years; and two of the eight, and two of the six, according to the age of the patient. When the difficulty of breathing becomes oppressive, as it generally does towards night, a hot bran poultice laid on the chest will be always found beneficial. The diet throughout must be light, and consist of farinaceous food, such as rice and sago puddings, with beef tea and toast; and not till convalescence sets in, should hard or animal food be given. When measles assumes the malignant form, the advice just given must be broken through; food of a nutritious and stimulating character should be at once substituted and administered in conjunction with wine, and even spirits, and the disease regarded and treated as a case of typhus. But as this form of measles is not frequent, and, if occurring, hardly likely to be treated without assistance, it is unnecessary to enter on the minutiæ of its practice here. What we have prescribed in almost all cases will be found sufficient to meet every emergency without resorting to a multiplicity of agents. The great point to remember in measles is not to give up the treatment with the apparent subsidence of the disease, as the after-consequences of measles are too often more serious and more to be dreaded than the measles themselves. To guard against this danger, and thoroughly purify the system after the subsidence of all the symptoms of the disease, a corrective course of medicine, and a regimen of exercise, should be adopted for some weeks, according to the cure of the disease.

MEASURES.—These are either of length, of surface, of solidity, or capacity. Those now in use in Great Britain are as follows:—

MEASURES OF LENGTH.

12	inches	1 foot.
3	feet	1 yard.
5½	yards	1 rod or pole.
40	poles	1 furlong.
8	furlongs	1 mile.
3	miles	1 league.
69½	miles	1 degree.

An inch is the smallest lineal measure to which a name is given; but subdivisions are used for many purposes. Among mechanics, the inch is commonly divided into eighths, and with scientific persons, it is divided into tenths, and hundredths.

EXCEPTIONAL MEASURES OF LENGTH.

2¼	inches	1 nail.
4	nails	1 quarter.
4	quarters	1 yard.
5	quarters	1 ell.

Used for measuring cloth of all kinds.

4	inches	1 hand.

Used for the height of horses.

6	feet	1 fathom.

Used in measuring depths.

792,100	inches	1 link.
100	links	1 chain.

Used in land measure, to facilitate the composition of the contents, 10 square chains being equal to an acre.

MEASURES OF SURFACE.

144	square inches	1 square foot.
9	square feet	1 square yard.
30¼	square yards	1 perch or rod.
40	perches	1 rood.
4	roods	1 acre.
640	acres	1 square mile.

MEASURES OF SOLIDITY.

1728	cubic inches	1 cubic foot.
27	cubic feet	1 cubic yard.

MEASURES OF CAPACITY.

4	gills	1 pint	34¾	cubic inches
2	pints	1 quart	69½	,,
4	quarts	1 gallon	277¼	,,
2	gallons	1 peck	544½	,,
4	pecks	1 bushel	2218½	,,
4	bushels	1 sack	5½	cubic feet.
8	bushels	1 quarter	10¼	,,
5	quarters	1 load	51¼	,,

These measures are used for all liquids, and for all dry goods, except those which are comprised in the next division:—

2 gallons 1 peck	.	704 cubic inches.
8 gallons 1 bushel	.	2815½ "
3 bushels 1 sack	.	4⅝ cubic feet.
12 sacks . 1 chaldron	.	58⅔ "

These last are for coal, coke, culm, lime, potatoes, fruit, and other goods commonly sold by heaped measure. The following items are also worth remembering:—About twenty-five drops of any thin liquid will fill a common-sized teaspoon. Three tablespoons will fill an ordinary-sized wine glass. Four wine glasses will fill a common-sized tumbler.—See APOTHECARIES' WEIGHT, WEIGHTS, &c.

MEAT BALLS.—Chop the meat fine as for sausages; then mix a small quantity of crumbs of bread, and a seasoning of mace, pepper, cloves, and salt, all well pounded; mix these with an egg, and make the mass into balls the size of a goose's egg. Roll them in bread crumbs and egg, and fry them; dish them up with gravy flavoured with walnut ketchup.

MEAT CAKES.—Mince cold dressed meat with a little fat bacon or ham; season it with pepper and salt; mix the whole well, and make it into small cakes three inches long and an inch and a half wide and thick: fry them a light brown, and serve with good gravy; or pour it into a mould and bake it.

MEAT, DIETETIC PROPERTIES OF.—By this is understood animal food; which, as an article of human sustenance, performs a most important part. From meat, certain juices are extracted in the process of digestion, which afford the greatest amount of nourishment to the system and nearly assimilate with the blood; and it is generally admitted that without meat, man, in England especially, would be unable to maintain his strength and vigour. Of all the meats, mutton, beef, and lamb are considered the most digestible, and pork and veal the least so. Boiled meat is more easily digested than roast, but the latter is more nutritious; baked meat is less wholesome than either. Animal food should seldom be eaten more than twice a day, except it be by persons of very robust constitution, and such as have a great deal of exercise in the open air; those persons whose occupation is sedentary, should partake of it in small quantities. Meat should be eaten with vegetables and bread, as these tend to assist its digestion, and to counteract its over-stimulating properties.—See BEEF, LAMB, MUTTON, PORK, VEAL, &c.

MEAT PICKLED.—Six pounds of salt, one pound of sugar, and four ounces of saltpetre, boiled with four gallons of water, skimmed and allowed to cool, forms a very strong pickle, which will preserve any meat completely immersed in it. To effect this, which is essential, either a heavy board or a flat stone must be laid upon the meat. The same pickle may be used repeatedly, provided it be boiled up occasionally with additional salt, to restore its strength.

MEAT, PRESERVATION OF.—Directly meat comes home from the butcher's, it should be put away in the safe. In summer, it should be wiped every day, or sprinkled with pepper, to keep off the flies; and should it give tokens of being tainted, it should be brushed over with pyroligneous acid; or even if already slightly infected, the acid, or roughly pounded charcoal, if well rubbed in, will restore it. The meat should also be brought into a cool place early in the morning, for exposure to the sun renders it sapid. In frosty weather, meat is sometimes in a frozen state, and may be thawed by putting it in cold water previous to placing it before the fire. Meat becomes more tender, and consequently, more digestible, by hanging. In summer, two days is sufficient for veal and lamb; and from three to four days for beef and mutton. In cold weather, these meats may be kept for more than double the before-mentioned time, without risk of their becoming tainted.

MEAT SALTED.—In salting meat, the chief care is to rub the salt thoroughly and evenly into every part, and to fill the holes with salt where the kernels have been taken out, and where the skewers have been. In summer, the sooner that meat is salted after it is killed the better, and care must be taken to protect it from flies. In winter, it will eat shorter and more tender, if kept a few days (according to the temperature of the weather) until its fibre has become short and tender. In frosty weather take care that the meat is not frozen, and warm the salt in a frying-pan. The extremes of heat and cold are equally unfavourable to the process of salting: in the former case, the meat changes before the salt can affect it; in the latter it is so hardened and its juices so congealed, that the salt cannot penetrate it.—See BEEF SALTED.

MEDALS, TO TAKE IMPRESSIONS FROM.—Melt a little isinglass glue with brandy, and pour it thinly over the medal, so as to cover its whole surface; let it remain on for a day or two, until it is thoroughly dry and hardened, it may then be taken off, and will be found to represent a clear impression of the medal. It will also resist the effects of damp air, which occasions all other kinds of glue to soften and bend, if not prepared in this way.

MEDICINE, CAUTIONS AND DIRECTIONS RESPECTING.—In many minor complaints and trivial ailments, a person may devise his own remedies, without having recourse to medical advice; but in such cases, it is necessary that a person thus prescribing for himself, should possess some knowledge of the action of the medicine which he administers, as also of the nature of the complaint for which the medicine is taken. The following items of information will afford a general guide in these respects. *Sex*—Medicines for females should not be so strong as those for males; therefore it is advisable to reduce the doses in the proportion of about one-eighth. *Age*—The greatest caution should be exercised in proportioning the dose to the age of the

patient, otherwise very injurious results may arise. The following table will illustrate a pretty accurate gradation of the age and the dose:—

For an adult, suppose the dose to be 1 drachm, under

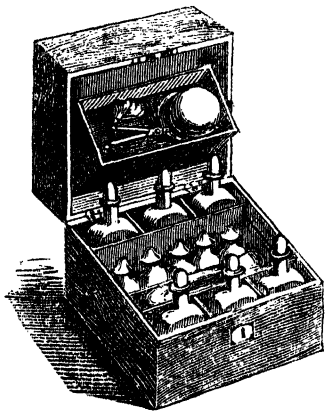
1 year	the dose will be	$\frac{1}{12}$ =	5 grains
2	,, ,,	$\frac{1}{6}$ =	8 ,,
3	,, ,,	$\frac{1}{4}$ =	10 ,,
4	,, ,,	$\frac{1}{3}$ =	15 ,,
7	,, ,,	$\frac{1}{2}$ =	1 scruple
14	,, ,,	$\frac{3}{4}$ =	½ drachm
20	,, ,,	$\frac{1}{1}$ =	2 scruples
21 to 60	,, ,,		1 drachm.

This table may be regarded as an average rule, but it is of course susceptible to exceptions. Thus, a strong child at three years of age may require, and may tolerate better a much stronger dose, than would a weaker child even one or two years older. *Time and interval*—Medicines of a purgative nature are in general best taken at bed-time, excepting those which are very active, such as castor oil, which should be taken two or three hours previously to retiring to rest, to avoid being disturbed during the night. Mild purgatives and medicines generally should be taken at intervals of every four hours, and so as not to interfere with meals; thus, eight o'clock in the morning, twelve o'clock, four o'clock, and eight o'clock in the evening, will be the most suitable division. As a general rule, medicines act more effectually when taken upon an empty stomach, and are then prevented from interfering with the process of digestion. *Temperament*—Persons of a cold and phlegmatic, bear stimulants better than those of a sanguine temperament; therefore the latter require smaller doses. *Habit*—Purgatives, by continual use, lose a part of their action; with persons, therefore, who are accustomed to take them it is better to change the form of purgative from pill to potion, powder to draught, or aromatic to saline. Stimulants and narcotics do not act so quickly upon persons who use spirits freely, as upon those persons who live temperately. *Climate*—The action of medicine is modified by climate and seasons. In summer, certain medicines act more powerfully than in winter, and in warm climates than in colder ones, the dose should, under such circumstances, be proportionately decreased. *Idiosyncracy*—This term means a peculiar temperament or disposition not common to people generally. For example, some persons cannot take calomel in the smallest dose without being salivated; while others, on the contrary, exhibit no symptoms of salivation, no matter how large the dose may be. With some persons, also, particular medicines produce the most extraordinary and unlooked-for results, such as convulsions, fainting, &c. In every case, where these peculiarities become manifest, the medicines should be immediately discontinued. *The most appropriate form of medicine*—Fluids act quicker than solids, and powders sooner than pills, but the latter are the best for taking at bed-time, and in all instances where a certain rather than an immediate remedy is desired. *To prevent the nauseous taste of medicines*, several methods may be adopted. One way is to have the medicine in a glass as usual, and a tumbler of water by the side of it, then take the medicine and retain it in the mouth, which should be kept closed, while the medicine is being swallowed; then immediately take a draught of the water, and the nauseous taste will be entirely removed. Another efficient method for disguising the taste of medicines is, to chew a piece of orange or lemon-peel just before, and immediately after swallowing the dose. Some medicines are peculiarly nauseous, and are on that account difficult of being administered. Castor oil and cod-liver oil are of this character, both of which may be effectually disguised by being mixed with peppermint water; a strong solution of extract of liquorice covers the disagreeable taste of aloes; milk, that of cinchona bark, and cloves that of senna.

The following cautions to be observed in administering medicine, are of some importance: Follow strictly the medical directions in taking or administering medicine at the time stated. Rinse the mouth well with water after taking medicine; it not only prevents a disagreeable taste, but tends to preserve the teeth, which are liable to be injured by the action of many drugs. Always read the directions appended to medicines, so as to prevent the possibility of making a mistake. Be particularly careful when a draught and a lotion are being used by the same person, to keep the bottles distinct; and to preclude the most remote probability of a mistake, place some distinguishing mark upon one of the bottles, so that its use may become fully impressed upon the mind. In administering or taking medicine during the night, do it by the aid of a light. The neglect of these two last-named precautions has been productive of considerable loss of life. Always use a clean glass with every fresh dose; the dregs of the previous draught, if suffered to mingle with the recent one, are apt to deteriorate its qualities and weaken its effects. Children have a great antipathy to medicine of every kind; when, therefore, you consider it necessary to administer a dose to them, do not suffer them to see the manipulation of it, but take them by surprise, so as to conceal your intention. When a person is undergoing a course of medicine, he should pay scrupulous attention to the orders given to him by his medical attendant, with respect to diet and regimen. It stands to reason that under the influence of medicine, the system is diverted from its ordinary course, and requires what may be termed humouring; this precaution, also, renders the struggle less obstinate, and expedites recovery.

MEDICINE CHEST.—A receptacle constructed to contain the most prominent drugs used in the practice of domestic medicine, with weights, scales, and other implements and vessels essential to their administration. Medicine chests are of the greatest convenience and importance

to families that travel much; or in cases where persons reside at a distance from a surgeon or druggist. It has frequently occurred that a serious illness has been occasioned, and life forfeited, owing to the delay which has been occasioned by the tardy arrival of the doctor, whereas a simple dose judiciously and opportunely administered, would have effectually prevented any further consequences. It is almost unnecessary to add, that the drugs should be the best that can be procured; and the chest itself should be kept in some convenient and special place, in order that it may be resorted to at a moment's notice.



An ordinary medicine chest may be fitted and furnished as follows:—Select a common deal box, made of smoothly-planed wood a quarter of an inch thick, of the following dimensions, eighteen inches long, ten inches wide, and seven inches deep: the corners of the box may be bound by two clasps of brass hoop, and the lid fastened by a hook, so as to be always available without the trouble of searching for a key. The whole length of the back is to be divided into ten divisions, to hold the bottles with liquids; this is effected by two long narrow strips of wood about half an inch deep, one resting on the bottom of the box, the other three inches above it; these are then to be subdivided into ten compartments, by two transverse slips, of the same thickness as the other. The front of the box is to be divided in the same manner, into five compartments, and the remaining space of the two sides into two each, making nine spaces in all to hold the powders. The space left in the centre will hold the few chip boxes with the pills, and the little box with scales, the glass measure, some lint, a bandage or two, and over all a folded sheet or two of wadding; a little piece of red tape, nicely tacked to the inside of the lid, and led across, as in a portmanteau, will hold tight and flat, a good piece of adhesive plaster; and thus give, in a compact and inexpensive form, a well-stored and efficient medicine chest. Such a box can be well and neatly made for four or five shillings. It will be well, before making the box, to buy the bottles, and let the carpenter understand that they are to fit easy; and for the facility of taking in and out and give room to expose the label, the upper rail must not come higher than three inches or a little over half the bottle. The powder bottles, being much shorter than the others, will not require so high a rail.

MEDICINES.

Liquids to be contained in ten 3-ounce octagon, short-necked, green bottles:—

Spirits of sulphuric ether	½oz.
Spirits of sweet nitre	2oz.
Spirits of sal volatile	1oz.
Spirits of lavender	1oz.
Hartshorn	2oz.
Tincture of kino	1½oz.
Laudanum	1oz.
Tincture of squills	1oz.
Antimonial wine	1½oz.
Ipecacuanha wine	1½oz.
Liquor plumbi, or extract of lead	3oz.

The quantities ordered here are quite optional, less can be procured, or each bottle can have its full quantity; though as some are apt to evaporate, it would be advisable not to exceed the prescribed amounts. As stoppered bottles are apt to become fixed, and the stopper broken in the attempt to remove it, corks will be found much more convenient, and quite as safe; but the chemists' corks must not be depended on. The very best velvet corks, bought from the cork cutter, at sixpence a dozen, are to be procured; such will last without breaking for months. Powders: these are to be contained in nine 3-ounce wide-mouthed, round, white bottles; each fitted with a bung.

Prepared chalk	2oz.
Volatile salts	1oz.
Ginger powder	1oz.
Magnesia, carbonate	1oz.
Rhubarb powder	1oz.
Carbonate of soda	2oz.
Tartaric acid	1oz.
Jalap powder	½oz.
Camphor	1oz.

In chip boxes:

Blue pill	½oz.
Compound colocynth pills	24oz.
Compound rhubarb pills	24oz.
Compound assafœtida pills	12oz.
Blister plaster	½oz.

To be kept in paper:

Calomel	½oz.
Scammony	½oz.
Senna leaves	1oz.
Quassia	½oz.

In addition to these, there should be half a yard of adhesive plaster, two or three bandages of different lengths and widths, an ounce of lint, some fine wool, and one or two sheets of wadding, neatly and smoothly

folded. A small box with scales, a spatula, or short knife, and a one-drachm minimum or drop glass measure. To those who desire it, a box containing a greater number of bottles on the same scale can easily be made; but for all ordinary uses, where a chemist's shop is near to obtain any extra article prescribed, this will be found abundantly sufficient. Such a family medicine chest, bottles, drugs, corks, and everything included, except the wadding, knife, and scales, can be procured for less than a guinea. Supposing the box to cost five shillings, all else but the excepted trifles can be procured for less than fifteen shillings; thus giving a family chemistry that, with occasional replenishing, will prove a serviceable and valuable friend in need for a lifetime.

MEDICINE, DOMESTIC.—Books: *Thomson's Dictionary*, 7s.; *Tegetmeier's*, 1s. 6d.; *Andrews's Cyclopædia*, 18s.; *Kesteven, W. B.*, 7s. 6d.; *Rapsail, F. V.*, 1s. 6d.; *Savory, J.*, 5s.; *Handbook of Domestic Medicine*, 5s.; *Graham's Modern*, 16s.; *South's Handbook*, 2s. 6d.; *Hogg's Manual*, 2s.

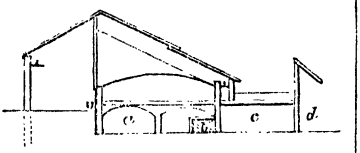
MEDLAR.—A small or middle-sized branching tree. The branches are woolly and covered with an ash-coloured bark, and in a wild state armed with stiff spines. The medlar is a fruit resembling the smaller apples; it has a peculiar taste and flavour, but is not fit for use until very ripe, or rather in a state of incipient decay. This ripeness is seldom or never obtained while the fruit remains upon the tree. The medlar is propagated by seeds, by layers, and by cuttings; or by grafting on seedlings of their own or any other species. If the stones are taken out of the fruit as soon as it is ripe, and immediately planted, they will come up in the course of the following spring, and make good plants in two years. The soil in which this tree thrives best is a loamy rich earth, rather moist than dry, but not on a wet bottom. When it is desired to have large fruit, all the dead and cankery wood should be cut out, and the branches thinned. Care is requisite to train standards with tall stems. Espaliers will require a summer and winter pruning, as in the apple tree. The only mode of keeping medlars so as to prevent mould and to preserve the moisture of the fruit, is to store them in a cool place where there is constant ventilation and a supply of fresh air.

MEDLAR JELLY.—Select medlars that are quite ripe; wash them and put them into a preserving-pan with as much water as will cover them; let them simmer slowly till they become quite a pulp, then strain through a jelly-bag, and to every pint of liquor add three-quarters of a pound of loaf-sugar; boil the mixture for an hour, or until it is quite clear, and put it into preserving pots or moulds.

MEERSCHAUM PIPE.—The substance of which meerschaum pipes are made is found floating in certain parts of the sea. It is also dug from the earth in several places in Turkey. A number of pipes are made to imitate meerschaum, and as such are palmed off upon the purchaser. To detect the imposition, draw a silver coin across the pipe; if genuine, no mark will be left; if spurious, the gypsum necessarily used will take a mark like that of pencil upon paper. The colouring of meerschaum pipes, by which their appearance is improved and their value enhanced, is best accomplished by sewing a piece of wash-leather round the bowl so as cover all but the mouth of it; by this means the oil exuded from the pipe in the progress of smoking is more surely retained, while the bowl is prevented from being scratched or suddenly cooled by being inadvertently laid on one side when it is done with. The speedy and perfect colouring also depends in a great measure upon persistent smoking and by consuming the whole of the contents of the bowl, so that the influence is spread through every part of it. Meerschaum pipes are apt to become foul from time to time, when the tubes should be cleaned by a wire with a small brush attached, and which may be purchased at any tobacconist's shop. From continual smoking, also, the interior of the bowl is apt to become encrusted by a deposit which deteriorates the flavour of the tobacco, and prevents the pipe from being properly filled; this should be scraped out with a small knife.—See TOBACCO PIPE; TOBACCO SMOKING, &c.

MELON, CULTURE OF.—This plant can be raised either from seed or from cuttings. Old seed is preferred to new, and when it has been kept for three or four years it will be quite old enough. A bottom-heat from seventy-five to eighty degrees is essential; and when the seedlings are up and just before the second set of leaves begin to appear, the young plants may be potted into five-inch pots. Towards the end of February make the first melon bed as for cucumbers, except that the mould should be more tenacious and the lights larger. One plant only should be put under each light, if the frame be of moderate size; but if two be planted, let them be fifteen inches apart lengthwise with regard to the frame. In general, melons raised from seeds should be stopped when they put off the rough leaves, and only one shoot should be allowed to run from the axils of each of the two rough leaves left on the plant. When the melon is in flower, watering overhead must be dispensed with, and gentle vapour only occasionally raised, to nourish the leaves. At this juncture every female blossom must be carefully impregnated, and as soon as the fruits are set and beginning to swell, a liberal supply of moisture and a closer atmosphere will be of the greatest service, until the fruit attains its full size, when moisture at the root and also on the leaves must be dispensed with. The impregnations of the blossoms is effected by applying the pollen of one flower to the stigma of another, and this is done by pinching off one of the male flowers, and after carefully stripping it of its corolla so as not to injure the stamen, or anther, inserting it into the female flower and leaving it there. Culture by cuttings has been recommended by some, as serving to restrict that excessive luxuriance which is frequently inimical to fertile blossoming. Under proper culture the method answers; but, on the whole, the

seedling plan is the better. It is, however, a certain mode of perpetuating choice kinds, and as such, should not be lost sight of. Healthy, free-growing, yet short-jointed shoots should be selected, and the usual bottom-heat and atmospheric temperature must be secured; in addition to this, there must be a liberal supply of atmospheric moisture, and the close treatment with shading, incidental to the growth of cuttings. When established, the plants will need no stopping, and they require a generous soil when finally planted. If a *melon-house* be employed, the form represented in the engraving should be adopted. This house is twenty-eight feet long and fifteen wide, and is heated by means of a saddle boiler, with four-inch pipes passing round the outside of the pit, which pipes are fitted with cast-iron troughs for holding water, to regulate the moisture of the atmosphere. Beneath the pit is an arched chamber, *a*,



along the front of which runs the flue, *b*, imparting a slight degree of heat to the soil above, and also serving to heat a series of arches, *c*, which run along beneath the path, and are entered from a house in front, *d*, and which are used for forcing rhubarb, &c., in the winter. The foliage of melons, of whatever kind, should never be ruffled or disturbed; training and stopping, therefore, must be attended to in due time. Melons should not be encouraged to become luxuriant until a crop of fruit commences swelling; after this it is almost impossible to encourage them too much. Again, they should never be indiscriminately watered overhead, unless it be some of the ordinary green-flesh kinds, during periods of continued heat and a dry atmosphere.

MELON PICKLE.—Gather one or two well-flavoured melons within three or four days of their becoming fully ripe; first pare off the outer rind, clear them from the seeds, and cut the fruit into slices of about half an inch thick; lay them in good vinegar, and let them remain in it for ten days; then cover them with cold fresh vinegar, and simmer them very gently until they are tender. Lift them on to a sieve reversed, to drain, and when they are quite cold insert a couple of cloves into each slice; lay them into a jar, and cover them well with cold syrup, let it drain from them a little; then put them into jars in which they are to be stored, and cover them again thoroughly with good vinegar which has been boiled for an instant and left to become quite cold before it is added to them. This pickle is intended to be served with roast meats, particularly mutton, venison, and hare, instead of currant jelly; it is also very good with stewed meats.

MELON PRESERVE.—When the melon is nearly ripe, pare it thinly and cut it into pieces resembling ginger; cover it with salt water, changing it every day for three days; then put it in clear spring water, changing it twice a day for three days. Make a thin syrup, and boil it with the melon once every day for three times. Next make a thick syrup, adding the peel of one or more lemons, according to the quantity of melon; then add some of the finest white ginger, with the outside pared off, so as to impregnate the syrup strongly with the ginger. Boil this, and when cold put to the melon. Finally, tie the preserve down in pots.

MELTED BUTTER.—Although this is a culinary preparation which is frequently required, and extremely simple to compound, yet it is rarely sent to table as it should be. It is either too thick or too thin, and not unfrequently filled with lumps of flour, or oiled. All this is the result of carelessness and inattention. The excellence of melted butter greatly depends upon the pains taken to blend it with the flour before it is put over the fire, the best plan of doing which is to rub them together with a knife upon a wooden trencher. When well mixed, add two tablespoonfuls of hot water, or the same quantity of milk; put it into a small pipkin, shaking it in a uniform direction until it boils, and not leaving it for an instant; it must boil for a minute to take off the rawness, and if made of fresh butter, a little salt should be added. It should be borne in mind that if the mixture is set on the hot coals, or over the fire, it will be oily; if the butter and flour be not well mixed, it will be lumpy; and if too much water be employed it will be poor and thin. *The recipes for making the various kinds of melted butter* are as follows:—*Rich melted butter.*—Mix to a very smooth batter a dessert-spoonful of flour, half a salt-spoonful of salt, and half a pint of cold water; put these into a very clean saucepan, with from four to six ounces of well-flavoured butter, cut into slices, shake the sauce well round, almost without cessation, until the ingredients are perfectly blended and the mixture is on the point of boiling; let it simmer for two or three minutes, and it will then be ready for use. *Ordinary melted butter.*—Put two large teaspoonfuls of flour with a little salt into a basin, mix with them very gradually and smoothly half a pint of cold water; put these into a small clean saucepan, and stir them constantly over a clear fire until they have boiled for two or three minutes; then add three ounces of butter cut small: keep the sauce continually stirred until the butter is entirely dissolved; give the whole a minute's boil, and serve it quickly. *White melted butter.*—Thicken half a pint of new milk with two teaspoonfuls of flour, and stir into it by degrees after it has boiled, two ounces of fresh butter cut small; stir the sauce continually until this is entirely dissolved; then serve. *Brown melted butter.*—Put three ounces of fresh butter into a frying-pan, and toss it round over the fire until it becomes brown; then dredge some flour over it, which has been previously browned by placing it either in the oven or

before the fire; stir the mixture round with a spoon until it boils. *Melted butter without flour.*—Put three tablespoonfuls of water into a small saucepan, and when it boils, add four ounces of fresh butter; as soon as this is quite dissolved, take the saucepan from the fire, and shake it round until the sauce becomes thick and smooth. It must not be allowed to boil after the butter is added. *French melted butter.*—Pour half a pint of good, but not very thick boiling melted butter to the well-beaten yolks of two or three fresh eggs, and stir them briskly as it is added; put the sauce again into the saucepan, and shake it high over the fire for an instant, but do not allow it to boil, or it will curdle. Add a little lemon-juice or vinegar, and serve it immediately. The melted butter which is not used need not be thrown away or wasted; it will answer the purpose excellently for mashed potatoes on the following day. On the other hand, the quantity made should not be insufficient for the number of persons who are to partake of it; so that, in order to prevent a scarcity or excess, the extent of the party should be taken into consideration, and the butter made in corresponding quantity.

MEMORY.—The exercise of memory is an art within the compass of any person possessed of ordinary ability and intelligence. Forgetfulness is, in the majority of instances, another word for indifference, since it is notorious that persons nearly always contrive to remember matters, however indefinite or remote, where self-interest is concerned. This view of the case is taken by the world generally; so that to tell a person that you have forgotten a certain thing in which that person was chiefly interested, is tantamount to confessing that you did not feel inclined to take the trouble which would be entailed. When we consider how much of our happiness and comfort in the world depends upon mutual assistance, and that many of these performances are the result of previous promises, it becomes essential to both ourselves and others that our word may be relied on. In business transactions, the exercise of memory is of the utmost importance; so much so, that when this faculty is defective, the unhappy possessor is simply regarded as incompetent, and totally unfit for the post he occupies. To escape the disgrace and humiliation which are thus entailed, it behoves every person, whose memory is what is usually termed constitutionally defective, to make the most strenuous exertions, and devise the very best means in his power to supply a remedy. One of the best means to ensure things being performed, is for a person to keep a record of coming events in which he is concerned, and a systematically arranged list of engagements and promises, and every other obligation, social or commercial, to which he stands pledged. For this purpose, diaries are published, in which a person should enter every engagement directly it is made, under its appropriate date; the possessor of the diary should then by habit bring himself to consult this diary every day at an early hour, so that he may commit to memory, or copy into a pocket memorandum-book the various appointments set down for that particular day. The same rule applies to promises which have no definite date of performance, but are left to opportunity and other contingencies—a memorandum should be immediately made of these; and from time to time they should be read over and acted upon, and never lost sight of until they are fairly out of hand. A very good method of reminding one's self of some particular thing one has to do, is to alter the position or form of some familiar object that is constantly meeting the eye, or coming in contact with the touch. Thus, turning a ring round, so that the part which is usually outwards, is reversed; or tying a knot in the neckerchief; or placing a pin in the cuff of the coat; with numerous other simple contrivances, all serve to act as reminders of some special circumstance with which these contrivances have become associated in the mind. Another plan is, when a name or number is heard for the first time, to connect it with some other words or phrase which have a somewhat similar sound but a different meaning. Thus, when you are told that a person's name is Graham, you have only to think of the colour *grey*, and the meat *ham*, and when at some future date you endeavour to recall the name to mind, the combination thus suggested will recur to the memory, and the name will be arrived at. Or when you are told that the number of a certain residence is five, you have only to connect that number with the fingers on the hand, and it will recall the memory to the number required. It will be found that there is scarcely a name of a person or thing, or any number, but is capable of being associated with some other representative idea.

MENDING, CLOTHES, &c.—A considerable saving in the expenditure of income, is effected by the timely repair of articles of wearing apparel and domestic use. In large families this is especially the case, the clothes of children standing in need of constant repairs. Next to strength, the great object in mending is, that the repair should be hidden as much as possible. For this purpose, it would be as well when purchasing the materials for new clothes, to buy a certain quantity over and above, to be kept as a sort of reserve store, and to be used as occasion requires. A bag or box should also be kept expressly for remnants of every kind to be placed in—cloth, silk, cotton, &c., so that when repairs are needed, the manipulator is never at a loss for the necessary materials. A thorough mending at once is better than a temporary patch, followed by successive attempts of a similar kind; the former method will be found more economical, and a considerable saving of time, as well as being far neater. In cases where a fracture or rent is caused in good clothes, and in a conspicuous place, it is better to leave it to a professed mender of clothes, as in many cases they are able to remedy the defect without leaving any trace of the damage that has been done.

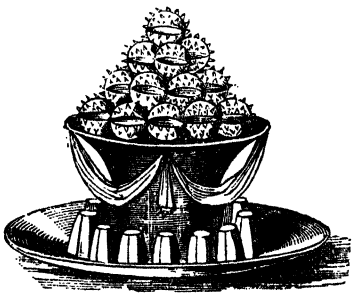
MENSURATION. — An application of arithmetic to dimensions and bulk. Every superficies is the multiple of its length by its breadth, in equal denominations. To reduce the product of inches into feet, divide by 144, the inches in a square foot; or if in feet, by 9, for square yards; or if in yards, by 4840, for acres. Every solid has three dimensions, length, breadth, and depth; and the multiple of these together is the cubic inches, feet, or yards, in whichever the dimensions are taken. Bring inches into feet by dividing by 1728, the cubic inches in a cubic foot; or, feet into yards, by dividing by 27, the cubic feet in a cubic yard. When lengths or breadths are irregular, several should be taken, added together, and divided for a mean by the number; or, a figure may be reduced to two or more regular figures, and the dimensions of each added for the whole. Very irregular figures are measured by immersing them in water in any regular vessel, and then determining the measure of the water which they displace.

MENTAL EXERCISE.—The mind, like the body, requires a certain amount of exercise to maintain it in a healthy condition; and like the body, it is also susceptible to fatigue, and liable to injury from over-exertion. It will thus be obvious that a certain portion of each day should be set apart for mental culture; while, on the other hand, the exercise of the mental faculties should not be carried beyond a certain limit when once symptoms of fatigue have unmistakably shown themselves. The best period for mental exercise, both as regards the powers of the mind itself, and the general health, is early in the morning; but at such times the student should not set out upon his task without taking some refreshment, which may be as light and as little stimulating as possible. It is always injudicious to enter upon mental labour immediately after a full meal; under such circumstances the work performed requires double the usual amount of labour, with only one half the effect. As a general rule, a code of laws, similar to those which regulate the exercise of the body, apply to the exercise of the mind; it is rarely, therefore, that a person can make a mistake, especially if he keeps before his eyes the leading principles of moderation and regularity.

MERCURY.—The mercurial preparations or salts, used as medicaments, are divided into the OXIDES—of which there are two kinds, the *protoxide* and the *peroxide*—the NITRATES, the SULPHURETS, and the CHLORIDES; one or two other compounds are occasionally employed, but the above are the chief divisions. Of these, the protoxides are the most simple, safe, and manageable; and the chlorides the most potent and powerful. Among the first, or protoxides, are included such preparations as the two grey powders, that of mercury and chalk, and mercury and magnesia; blue pill, mercurial ointment, and mercurial plaster. Among the chlorides are the well-known preparations of calomel, and corrosive sublimate.

The effect of mercurial compounds on the system is, first, by entering the circulation to excite the whole capillary arrangement of the body, and thereby increase all the secretions and excretions, through its direct stimulating action; yet by the manner in which the mercury is employed, the dose in which it is given, and the affected organ for which it is used, mercury, though a general stimulant to the system, may be made to act as a cathartic, a diaphoretic, expectorant, sialagogue, and emetic; as an errhine, to produce sneezing, or any other specific action desired. From this variety of operations, mercury has been employed in almost all the diseases of the body, and has been found especially serviceable in all febrile affections, spasms, glandular obstructions, cutaneous diseases, and inflammatory affections of the lining membranes.—See BLUE PILL, GREY POWDER, &c.

MERINGUES.—A species of confection which forms a part of a better class of repast, and which is made as follows:—Whisk to the firmest possible froth the whites of six new-laid eggs, taking every precaution to prevent the smallest particle of yolk from falling in amongst them. Lay some squares or long strips of writing-paper closely upon a board, or upon very clean trenchers. When all is ready, mix with the eggs three-quarters of a pound of the finest sugar, well dried and sifted; stir them together for half a minute, then with a tablespoon lay the mixture quickly on the



papers in the form of a half-egg: sift sugar over them without delay, blow off all that does not adhere, and set the meringues in a gentle oven. The process must be expeditious, or the sugar melting will cause the cakes to spread, instead of retaining the shape of the spoon as they ought. When they are coloured to a light brown, and are firm to the touch, draw them out, turn the papers gently over, separating the meringues from them, and with a teaspoon scoop out sufficient of the insides to form a space for some whipped cream or preserves, and put them again into the oven upon clean sheets of paper, with the moist sides uppermost, to dry; when they are crisp enough they are done; let them become cold, fill and join them together with a little white of egg, so

as to give them the appearance shown in the engraving. Spikes of almonds can be stuck over them as there represented.

☞ Eggs, 6 whites; sugar, ¾lb.; almonds, sufficient.

MERINO. — A fabric manufactured of wool, and the best qualities of which are imported from France. To judge of the quality of merino, it should be understood that the fineness of the cloth depends upon the number of threads which are discoverable in any given section. Manufacturers and buyers are provided with magnifying glasses, by which they are enabled to count the threads more readily. Upon a somewhat similar plan, a square may be cut in a piece of paper, and when several samples of merino are laid before the intending purchaser, the threads may be counted by the naked eye; and that sample in which the largest number of threads are discovered, will be the finest. Merino is one of the most durable and serviceable articles of wearing apparel that is manufactured, and the finer the texture is, the longer will it wear.

MERINO, TO CLEAN. — Grate two or three large potatoes; add to them a pint of cold water; let them stand for a short time, and pour off the liquid clear, when it will be fit for use. Lay the merino on a flat surface, and apply the liquid with a clean sponge, till the dirt is completely extracted; dip each piece in a pailful of clean water, and hang it up to dry without wringing. Iron, whilst damp, on the wrong side. It will then appear almost equal to new.

MESMERISM.—A physiological phase, in which sleep is supposed to be produced by the influence of certain definite operations. This influence is said to be regulated by the sympathy existing between the operator and his subject, and by the organisation and temperament of the person operated upon. Some persons are easily sent into a deep sleep, while others require much patient manipulation before they can be induced to close their eyes. The science has many disciples, and many antagonists; but it is always possible to set doubt at rest by making experiments upon persons, much after the manner of the professors, the mode consisting principally in passing the hand before the eyes with a persistent and regular action.

METALS, CARE OF.—Tin-plate vessels should be carefully dried after washing, or they will soon rust in holes. Iron coal-scoops are liable to rust from the damp of coals, if left in them. If cold water be thrown on a cast iron grate when hot, it will crack. Cast iron articles are brittle, and cannot be repaired. Ornamental furniture, inlaid with brass or buhl, should not be placed very near the fire, as the metal when it becomes warm expands, and being then too large for the space in which it is laid, starts from the wood. Articles made of German silver, if left in vinegar, or any acid mixture, will soon become coated with verdigris. Salt should never be left in silver cellars, or the metal will be much injured.

METALS, TO REMOVE STAINS FROM.—When metals become rusty, or are covered with verdigris, they should be rubbed with sand or emery; but if the substance is deeply affected, it will require filing. The polish may be afterwards restored by applying a very fine powder of emery, moistened with oil, and cleaned off with a leather covered with whiting. Silver, gold, or tin, which is stained by any sulphureous emanation, should first be washed with water slightly acidulated with vinegar, and then rubbed with whiting.—See PLATE-POWDER.

MEZEREON.—A hardy shrub, native of England, growing to the height of five or six feet, and having a smooth exterior bark of a grey colour. The root of this plant is employed in the form of an infusion to

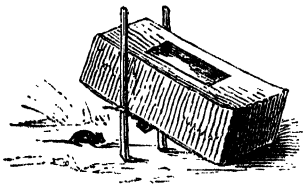
correct impurities of the blood, and is thus taken by itself, or as an auxiliary to sarsaparilla. The bark and berries, formed into ointments and infusions, are frequently used as external applications to obstinate ulcers and long standing sores.

MIASMA.—See AGUE.

MICE.—The ravages committed by these little animals are frequently serious, and the cause of much annoyance. When numerous, they are a greater nuisance than rats, as they make inroads into cupboards, and render the food which they do not eat unfit for use, by the dirt which they leave upon it. Traps of various kinds have been devised for catching mice; one of the most ingenious is a jar half filled with water, on which is strained a piece of parchment; towards the middle of the parchment it is cut through in different directions, and a piece of cheese is so placed, that when the mouse nibbles it, the parchment gives way, and causes the animal to fall into the water, in which he quickly dies, or may be easily captured. A variety of traps are also sold, each with some peculiar device; but the little creatures are so cunning, that in the course of time they frequently learn the art

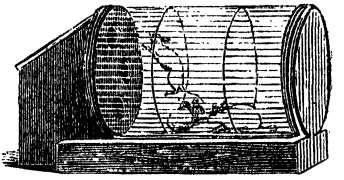
of securing the bait without forfeiting their liberty. Although there is a great difficulty in keeping away mice, it is always possible to prevent their touching the food: thus, bread, butter, cheese, &c, may be kept in appropriate pans which defy their entrance. This precaution will also tend to drive them away finally; for when, after repeated attempts, they discover that there is nothing to be obtained, they will, as a matter of course, transfer their attention to some more promising locality. Mice may also be destroyed by means of poisons and pastes; the following is found to be effective: Melt a pound of lard with a very gentle heat in a bottle or glass flask plunged into warm water, then add half an ounce of phosphorus, and a pint of proof spirit; cork the bottle securely, and, as it cools, shake it frequently, so as to mix the phosphorus uniformly; when cold, pour off the spirit (which may be preserved for subsequent use), and thicken the mixture with flour. Small portions of this mixture may be placed near the mice holes, and, being luminous in the dark, are readily seen, greedily eaten, and prove certainly fatal. The objection to this latter mode of destruction is that it may prove destructive to human life, either by becoming accidentally mixed up with food, or by being found by children.

Field and garden mice commit serious depredations by turning up seed, destroying young trees, and barking various shrubs and plants. If a little garlic is planted with any roots or seeds, it will prevent mice from eating them. Peas and beans are peculiarly liable to the ravages of mice, a successful mode of counteracting which, is to cover the surface of the soil over the rows to the depth of an inch, and the width of six inches, with finely sifted coal ashes. The mice will not scratch through this covering, and it has the additional advantage, by its black colour absorbing the solar heat, of promoting the early vegetation of the crop. A simple and effective trap may be made, as seen in the engraving; it con-



sists of a common brick with two pieces of wood inserted into the ground; a bit of sewing-thread is tied to each stick, and a loop is formed in the thread in the centre, into which a bean is put. To form this loop, it is only necessary to take the two ends of the string and cross them, in the same manner as when tying a common knot; then draw the ends, and the loop so formed will become smaller; insert the bean, and draw the thread tight, until it slightly penetrates the bean. Poise the bean half-way between the two sticks, and let the brick rest upon the string, which should be tied tightly. When the mouse nibbles at the bean, it will gnaw the thread, the brick will fall, and the mouse will be killed.

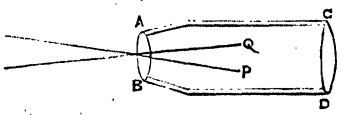
MICE, WHITE.—These little animals are kept as pets. They may be purchased for a moderate sum at any bird-shop; and they require but little attention. Born and bred in confinement, they are so gentle and familiar that even when suffered to run loose about a room they will not attempt to escape. The principal food for white mice is bread and milk, oatmeal, grits, and any other common food, except cheese or meat, which are objectionable. There are several sorts of cages for keeping mice. The most common is similar to that for the squirrel on a small scale, its size depending on the



number of inmates it is to contain. Some are furnished with a wire wheel, by which the little animals amuse themselves for several minutes at a time in the course of the day. Other cages are fitted up like houses, with separate rooms and staircases, which the mice are obliged to ascend in order to obtain their food, which is usually placed in the highest story. Particular care should be taken to keep the cage always thoroughly clean, for which purpose it should be attended to every morning; the bed, also, should be frequently changed, except after littering, when the sleeping box must not be opened at all for three or four days. The female mouse generally produces six or eight broods in the course of the year, consisting on each occasion of from three to eight young ones. The male will sometimes devour the young; and when once he has done this, it will be advisable to place him in a separate cage on future occasions until the young are about a fortnight old, when they are able to shift for themselves. When the female has a litter of young ones, and, indeed, at all times, care should be taken to keep the cage in a warm, dry situation, and out of reach of cats.

MICROSCOPE. — An instrument constructed for magnifying minute objects, and one which is capable of affording never-ending instruction and entertainment. The *solar microscope* is constructed in the following manner:—In the inside of a tube is placed a convex lens A B, and at a distance a little greater than its focal length, but less than double of it, is fixed some transparent coloured object Q P, at the focus conjugate to the place of the object. A broad lens, C D, is placed before the object to collect the

solar rays, for the purpose of illuminating it more strongly, and, consequently, making the image more distinct and vivid. A very convenient extemporaneous microscope may be made by pricking a fine hole in a card, or



piece of stiff paper. The narrow pencil of rays is manageable by the front of the eye, and objects may be distinctly seen at half an inch, consequently with linear increase of sixteen, and superficies of two hundred and fifty-six. At three or four inches, such a hole will supply the place of spectacles.

MIGNONETTE.—A hardy annual, native of Africa, and universally esteemed as an unpretending and sweet-smelling flower. The ordinary culture is to sow the seed in the open ground from the end of April to the beginning of July. If allowed to seed, and the soil suits it, mignonette will continue to propagate itself. If not allowed to ripen its seed, the same plants will bloom for two or more seasons. Mignonette being so much in demand as a chamber flower, it is of importance to have a succession of

plants in all seasons. For this purpose, to obtain a winter supply of fresh, strong plants, the seed should be sown in the open ground at the end of July; by the middle of September, the plants from this sowing will be strong enough to be removed into pots. For a week after this removal they must be shaded, after which they may be freely exposed to the sun and air, care being taken to protect them by frames from damage by heavy rains, and from injury by early frosts, until the beginning of November, at which time many of them will show their flowers; and they should then be removed to a greenhouse or conservatory, or to a warm window in a dwelling-house, where they will branch out and continue to blow until the end of spring. The crop for March, April, and May should be sown in small pots not later than the 25th of August; the plants from this sowing will not suffer from exposure to rain whilst they are growing; they must, however, be protected from early frosts; like the winter crop, they are to be thinned in November, leaving not more than eight or ten plants in each pot; and at the same time, the pots being sunk about three or four inches in some old tan or coal-ashes, should be covered with a frame, which it is best to place fronting the west; for in this situation the lights may be left open in the evening to catch the sun. The third, or spring crop, should be sown in pots not later than the 25th of February; these must be placed in a frame on a gentle heat, and as the heat declines, the pot must be let down gently three or four inches into the dung-bed, which will keep the roots moist, and prevent their leaves turning brown from the heat of the sun in April and May. The plants thus obtained will be in perfection by the end of May, and be ready to succeed those raised by the autumnal sowing. An early and abundant blow of mignonette may also be obtained by using a common box, placed on the window-sill, in a warm situation, exposed to the sun. In early spring this box should have a glass frame fitted as a covering, to be removed in summer, and which can be obtained at a very moderate expense. About the middle or the end of February fill this box with fresh light mould, to which add a little sand, and a sprinkling of lime or pounded chalk, or whiting. Then sow the seed rather thickly, and cover it over with a portion of the finely pulverized mould. The box should be kept inside the window until the plants appear, and then be put outside in March, taking care to cover it up in severe weather, and on frosty nights. As the plants advance, they are to be thinned out, air admitted in the sunny part of the day, and a sufficient supply of water given, so as to keep the mould moist. The glass frame may be removed in April or May, at the end of which latter month the plants will begin to flower; and if properly tended and watered, the bloom will continue till November. Mignonette requires the sun and air in order to produce its full and perfect odour; and, on this account, even the pots of this plant should be generally exposed to the open air. For the *tree mignonette*, sow the seeds at the end of April, and in order to ensure the tree lasting in good health for several years, lay a good foundation, to begin with. Employ a good rich compost of mellow loam, and one-third very rotten cow-droppings, with a little sand; and, to keep this from getting too close, add a handful of dry lime mortar to each pot of six-inch diameter, and so in proportion for larger or smaller pots; the mortar to be in lumps of the size of peas. Take as many three-inch pots as there are plants to fill

them; drain them with pieces of mortar, and over that put a little of the roughest of the compost; fill up the pot nearly level with the top, and place three seeds in the very middle of each pot, and nine or ten seeds all over the surface; cover them slightly with earth, and press them down tight. Water them, and put them up in the window of the greenhouse; and if the seeds are good, the plants will begin to show in less than ten days; give them abundance of air, and no forcing. When the day is at all fine, put them outside the window from ten in the morning till three in the afternoon. Water them gently in the morning when they are placed outside, as they will have time to drain and dry before they are taken in for the night. If the three seeds in the centre come up, the weakest of the three must be pulled out as soon as it can be got hold of; the rest must be thinned one half. The reason for sowing so many seeds in one pot, and for thus thinning them out afterwards, is to make sure of one good plant; if the middle one turns out to be so, that must be selected, but if not, the strongest and most promising must be chosen from the rest. When the plant which is to form the future tree is fixed upon, place a neat little stick down by the side of it, a foot long, and pushed down to the bottom of the pot. When the plant is two inches in height, tie it loosely to this stick with a piece of worsted. Continue tying it regularly as it grows, and when it reaches the top of the stick give it a longer one. Sometimes the tree is suffered to grow to the height of three or four feet or more. When they have attained the height desired, the shoots must be suffered to extend themselves from the top, but must be occasionally stopped at the ends to force them to form a bushy head, which, by the autumn, will be eight or nine inches in diameter, and covered with bloom. Whilst the plants are attaining their proper size, they should be shifted progressively into larger pots, and may be alternately left in those of six inches diameter at the top.

MILDEW.—A species of fungus which covers the surface of objects it attaches itself to with a whitish coating, thereby causing much injury, and, if not opportunely checked, ultimate destruction. *Mildew in agriculture* is often attended with the most serious consequences. In cultivated crops, it is said to be prevented by manuring with soot. Thinning and ventilation are also safe practical methods. Another prevention against mildew for plants is to syringe them occasionally with a decoction of elder leaves, which will prevent the fungus growing on them. *To take mildew out of linen, &c.*, mix soft soap with starch powdered, half as much salt, and the juice of a lemon; lay it on both sides of the part with a painter's brush. Let it lie on the grass day and night till the stain is removed. *Mildew infesting walls, closets, &c.*, may be easily prevented and remedied by general cleanliness, together with periodical painting and whitewashing.

MILK.—A substance consisting of three materials, which can be separated by artificial means, so as to form butter, buttermilk, and whey. When taken from the cow, milk should be removed to the dairy or milk-house, and after being sieved, placed in shallow pans, to throw up the cream. Of the milk drawn from any cow at one time, that part which comes off at the first is always thinner, and of a much worse quality for making butter than that afterwards obtained; and this richness continues to increase progressively to the very last drop that can be obtained from the udder. If milk be put into a dish, and allowed to stand till it throws up cream, the portion of cream rising first to the surface is richer in quality, and greater in quantity, than that which rises in a second equal space of time; and the cream which rises in the second interval of time is greater in quantity and richer in quality than that which rises in a third equal space of time; that of the third excels the fourth, and so on with the rest. Thick milk always throws up a much smaller proportion of the cream which it actually contains than milk that is thinner; but the cream is of a richer quality; and if water be added to the thick milk, it will afford a considerably greater quantity of cream, and consequently more butter than it would have done if allowed to remain pure: but its quality is at the same time greatly deteriorated. Milk which is put into a bucket or other proper vessel, and carried in it for a considerable distance so as to be much agitated, and in part cooled, before it be put into the milk pans to settle for cream, never throws up so much or so rich a cream as if the same milk had been put into the milk pans without agitation directly after it was milked. The quality of milk is affected by the variations of seasons and temperature. The formation of cream is facilitated by a rise of temperature, and retarded by a fall. In wet and cold weather the milk is less rich, than when the weather is dry and warm. The milk in spring is generally considered the best for calves; in summer for cheese, and in autumn for butter. The economy of milk is regulated by some important practical rules. Cows should be milked as near the dairy as possible, in order to prevent the necessity of carrying and cooling the milk before it is put into the creaming dishes. Every cow's milk should be kept separate till the peculiar properties of each are so well known as to admit of their being classed, when those most nearly allied may be mixed together. When it is intended to make butter of a very fine quality, reject entirely the milk of all those cows which yields cream of a bad quality, and also keep the milk that is first drawn from the cow at each milking entirely separate from that which is last obtained, as the quality of the butter must otherwise be greatly debased, without materially augmenting its quantity. For the same purpose, take only the cream that is separated from the first drawn milk. Cows less frequently milked than others give richer milk. The morning's milk is richer than

the evening's. The last drawn milk of each milking is at all times and seasons richer than the first drawn, which is the poorest.

MILK BAKED.—Mix new milk with buttermilk, in the proportion of a pint of the former to a wineglassful of the latter. Let it stand in a covered jar before the fire all night; in the morning it will be as thick as clotted cream. Pour from one jar to another, till it is again of the consistency of new milk; put it into a stone bottle, tightly corked; add a few lumps of loaf sugar, let it stand again before the fire for five or six hours, it will then be ready to drink. Care must be taken on opening the bottle, as the milk sometimes effervesces. Besides forming a very wholesome and strengthening drink, it is a most delicious and refreshing beverage in summer.

MILK BISCUITS.—Take a quarter of a pound of butter, a quart of milk, a gill of yeast, as much flour as will form the dough, and a little salt. Stir the flour into the milk so as to form a very thick batter, and add the yeast. This should be done in the evening; on the following morning cut up the butter, and set it near the fire where it will dissolve, without becoming hot; pour the melted butter into the sponge, and then stir in enough flour to form a dough, knead it well, and set it by to use. As soon as it is perfectly light, butter the tins, mould the dough into small cakes, and let them rise. When they are light, bake them in a very quick oven, take them out, wash the tops over with water, and serve them hot.

MILK, DIETETIC PROPERTIES OF.—As a food, milk is esteemed very wholesome and nourishing, as well for adults as for children. In some cases, however, it disagrees with persons taking it, being difficult of digestion, and causing flatulence and acidity; this latter effect may be remedied by mixing half an ounce of lime water to each pint of milk. Milk, when it agrees with a person, is useful in scrofulous affections, and where debility and want of tone exist, in the early stages of consumption, in cases of enlarged glands, diseases of the joints, and continued rheumatism. A milk diet is extensively employed for invalids, and consists of milk mixed with bread, rice, sago, oatmeal, and other farinaceous substances; and forms in every case a very nutritive and readily assimilated aliment.

MILK LEMONADE.—Dissolve six ounces of loaf sugar in a pint of boiling water, and mix with them a quarter of a pint of lemon-juice, and a gill of sherry; then add three-quarters of a pint of cold milk; stir the whole well together, and pass it through a jelly-bag till clear.

☞ Sugar, 6ozs.; water (boiling), 1 pint; lemon-juice, ¼ pint; sherry, 1 gill; milk, ¾ pint.

MILK OF ROSES.—A favourite cosmetic prepared as follows: Dissolve over a slow fire in a glazed pan, half an ounce of spermaceti, half an ounce of virgin wax, and half an ounce of white soap cut into shreds. Pound in a mortar half a pound of sweet almonds, and an ounce of bitter almonds, previously blanched; set three-fourths of the almonds on one side, and pour upon the remainder in the mortar the contents of the pan, pounding briskly, and incorporating thoroughly, and adding, by degrees, the almonds which have been taken out, until a fine paste is produced from the whole; mix in a large bottle, a quart of water, a pint of rose water, and half a pint of spirits of wine, in which about ten drops of attar of roses have been dissolved. Pour three-fourths of this mixture by degrees, upon the mass in the mortar and work it up thoroughly; then strain the milk through a cloth. With the remaining fourth of the mixture, work up in the mortar the pulp which remains in the cloth, strain it, and add to the milk first expressed. Before the milk is bottled, it should be strained through a fine sieve. A more simple mode of preparing this cosmetic is to mix twenty drops of the oil of tartar with an ounce of olive oil, and an ounce of almond oil, and having poured it off carefully, add it to a quart of rose water, and an ounce of spirit of wine, in which four drops of attar of roses have been mixed.

MILK PORRIDGE.—Stir four tablespoonfuls of oatmeal, smoothly, into a quart of milk, then stir it quickly into a quart of boiling water, and boil it for a few minutes till it thickens; sweeten with sugar.

MILK, PRESERVATION OF.—Milk is of a very delicate nature, and has a tendency to become sour in a comparatively short space of time. In warm weather, milk will turn in a few hours, but in the winter it will remain good for two or three days; very intense cold, however, will sometimes decompose it; so that it should be carefully kept from the action of frost; during the hottest weather, milk may be kept sweet for several days by boiling it night and morning, if a little carbonate of soda previously dissolved in water be put into it; for this purpose, an ounce of carbonate of soda should be dissolved in half a pint of water, and a tablespoonful of this mixture be added to a quart of milk. Above all, the jugs, pans, and other vessels, in which milk is placed should be kept scrupulously clean and dry, and scalded from time to time, so as to prevent the new milk being vitiated by the refuse of the previous portion. *To preserve milk for long voyages*, the following mode should be adopted. Provide bottles, which must be perfectly clean, sweet, and dry: draw the milk from the cow into the bottles, and as they are filled, immediately cork them up securely, and fasten the corks with twine or with wire. Then spread a little straw at the bottom of a boiler, and place two bottles in it with straw between them, until the boiler contains a sufficient number. Fill it up with cold water, heat the water, and as soon as it begins to boil, draw the fire; and let the whole gradually cool. When quite cold, take out the bottles and pack them in sawdust in hampers, and stow them in the coolest part of the house. Milk preserved in this manner will remain

in the bottles perfectly sweet for eighteen months.

MILK PUNCH.—Take a quart of lemon-juice, four quarts of rum, four quarts of water, two quarts of milk, and three pounds of loaf sugar. Mix the lemon-juice, rum, and water together, and dissolve the sugar in them; after which pour in the milk boiling hot, and put in the peel of four lemons. Strain it through a bag, and bottle it for use. It may be drunk immediately, or kept, as desired.

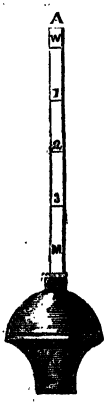
☞ Lemon-juice, 1 quart; lemon rinds, 4; rum, 4 quarts; water, 4 quarts; milk, 2 quarts; sugar, 3lbs.

MILK RESTORATIVE.—Boil a quarter of an ounce of isinglass in a pint of new milk till it is reduced to half, sweeten to taste, and drink either warm or cold.

MILK SOUP.—Take two quarts of new milk, with two sticks of cinnamon, a couple of bay leaves, a very little salt, and a small quantity of sugar; blanch half a pound of sweet almonds while the milk is heating, beat them into a paste in a mortar, and mix them by degrees with some milk, set them by the fire, and add a little grated lemon-peel and a small quantity of lemon-juice. Strain it through a coarse sieve, and mix it with the milk that is heating, let the whole boil up; cut some slices of French roll, and dry them before the fire, soak them a little in the milk, lay them in the bottom of the tureen, pour in the soup, and serve.

MILK SUET.—Cut an ounce of mutton or veal suet into shreds, and warm it slowly over the fire in a pint of milk, adding a little grated lemon-peel, and cinnamon and loaf sugar to taste.

MILK TESTER.—Milk is adulterated to a great extent, sometimes with water only, and at others with ingredients more or less hurtful. The smell and colour are ordinary signs by which the quality of milk may be judged. When the blue tint is evident, the milk is not unctuous; and when too clear, the presence of water may be suspected. If the substance of milk be good, a drop placed upon the nail of the finger will remain attached to it with a pearly appearance; if, on the contrary, it be poor, it will run off like water. The most reliable guide of any, however, is the milk tester, as seen in the engraving. In using this instrument, place it in water, and drop on the rings with which it is furnished until it floats at the line of the W (water), then place it in the milk which is to be tested, and its quality will be at once shewn. For instance, should the instrument float at 3, the mixture would be composed of three parts milk and one part water; at 2, half-and-half; at 1, one part milk, and three parts water. Should the instrument float at any part between the divisions, it must be calculated accordingly; for instance, should it float between the M and the 3, the milk would be three and a half to a half water; between the 3 and 2, two and a half milk to one and a half water, and so on.



MILK THICKENED.—Mix a pint of milk with a pint of water, and boil them with a tablespoonful of flour. Dissolve the flour first in half a teacupful of water; strain it gradually, and boil the whole for twenty minutes. This mixture, if properly made, forms a delicate and nutritious food for infants six months old and upwards.

MILK VINEGAR.—To a quart of milk add six tablespoonfuls of brandy; put this mixture into a bottle, which must be closely stopped and placed in a warm situation, giving air from time to time to assist the fermentation; at the end of a month this will have become good vinegar. It is then to be strained, and kept in a bottle, closely corked, for use.

MILKING.—This process should be performed upon the same principles which instinct has implanted in the calf, and the young of other milk-giving animals. First take hold of the teat by the hand, so as to simply encircle it, then lift the hand up in order to press the body of the udder upwards, by which the milk escapes into the teat; or if the teat be full, as is generally the case when long intervals elapse between milking times, grasp the teat close to its origin with the thumb and forefinger, to prevent the milk which is in the teat escaping upwards; then cause the rest of the fingers to close from above downwards in succession, thus forcing out the milk which the teat may contain through its orifice. The hand is again pressed up and closed as before; and thus, by repeating the action, the udder is completely emptied, without the rough treatment of the teat, which is so apt to engender disease.

MILLER'S-THUMB, Bull head, or Pope—called the first from its size and from its liking to the sharp stream of a mill tail; the second from the largeness of its head in comparison with its body—is an ugly, ill-shaped fish, but very good eating; it is caught with a worm or gentle, and consorts with gudgeon, roach, or barbel.

MINCEMEAT.—There are various recipes for compounding this mixture. The following will be found the best:—1. Take two pounds of raisins, stoned, two pounds of currants, one pound of sultana raisins, ten pounds of apples, three-quarters of a pound of sugar, two pounds of suet, the juice of two lemons, and the rind of one, chopped very fine, a quarter of a pound of mixed spice, a gill of brandy, two ounces of citron, and two ounces of candied lemon-peel. 2. Take two pounds of the fillet of a sirloin of beef, boiled, and freed from skin, together with four pounds and a half of suet, all minced very fine; add eight large apples, chopped, six pounds of currants, washed and dried, two rounds of bread, half an inch thick, grated, an ounce of nutmeg, half an ounce of cloves, a pound and

a half of sugar, and a little pepper and salt; grate the rind of an orange and a lemon, add the juice of six oranges and of two lemons; mix all these ingredients well together, pour over the whole a pint of port wine and a pint of brandy. 3. Take three-quarters of a pound of lean beef, well boiled, and finely mixed, two pounds of suet, chopped small, one pound of moist sugar, one pound of currants, washed and dried, one pound of raisins, stoned and minced, nine apples, the rind of a lemon, grated; season with mixed spice and a teaspoonful of salt, incorporate the whole thoroughly, add a wineglassful of port wine and a gill of brandy. 4. Take a pound each of currants, raisins, ribston pippins, calf's-foot, and pickled ox tongue, the two latter boiled, and the whole finely minced; add half a pound of suet, chopped fine, a quarter of a pound of sugar, half a pound of candied lemon-peel, a pint of port wine, half a pint of brandy, the juice of two lemons, and a teaspoonful of mixed spice.

☞ 1. Raisins, 2lbs.; currants, 2lbs.; sultana raisins, 1lb.; apples, 2lbs.; sugar, ¼lb.; suet, 2lbs.; lemons, juice of 2, rind of 1; mixed spice, ½lb.; brandy, 1 gill; citron, 2ozs.; candied lemon-peel, 2ozs. 2. Beef, 2lbs.; suet, 4½lbs.; apples (large), 8; currants, 6lbs.; bread, 2 rounds; nutmeg, 1oz.; cloves, ½oz.; pepper and salt, to season; sugar, 1½lbs.; oranges, rind of 1, juice of 6; lemons, rind of 1, juice of 2; port wine, 1 pint; brandy, 1 pint. 3. Beef, ¾lb.; suet, 2lbs.; sugar, 1lb.; currants, 1lb.; raisins, 1lb.; apples, 8; lemon, 1 rind; mixed spice, to season; salt, 1 teaspoonful; port wine, 1 wineglassful; brandy, 1 gill. 4. Currants, 1lb.; raisins, 1lb.; ribston pippins, 1lb.; calf's foot, 1lb.; pickled ox tongue, 1lb.; suet, ½lb.; sugar, ½lb.; candied lemon-peel, ½lb.; port wine, 1 pint; brandy, ½ pint; lemon, juice of 2; mixed spice, 1 teaspoonful.

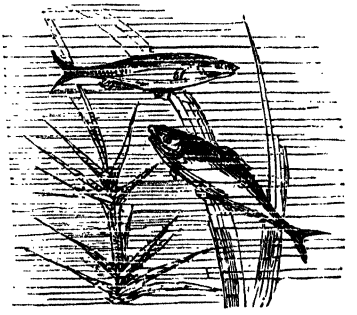
Any of these recipes being prepared, mix the ingredients well together with the hands and put the mixture into jars, tightly pressed down, and well covered. The flavour of the mincemeat will be much improved by being made some few days, or even weeks before it is used.

MINCEMEAT FRITTERS.—Mix half a pound of mincemeat with two ounces of bread crumbs grated fine, two eggs well beaten, and the strained juice of half a lemon. Mix these well together, and drop the fritters with a dessert-spoon into plenty of very pure lard or fresh butter; fry them for seven or eight minutes, drain them on a napkin, and send them very hot to table.

☞ Mincemeat, ½lb.; bread-crumbs, 2ozs.; eggs, 2; lemon, juice of ½ of 1.

MINCE PIES.—Butter some tin patty-pans well, and line them evenly with fine puff paste rolled thin; fill them with mincemeat, moisten the edges of the covers, close the pies carefully, trim off the superfluous paste, make a small aperture in the centre of the crust, and bake the pies in a quick oven for half an hour; lay a paper over them when they are partially done, should they appear likely to take too much colour.

MINNOW, OR PENK, is a very diminutive inhabitant of our rivers; and although in some parts it is at certain seasons taken in nets in such numbers as to be made into a cake with eggs and flour, is generally more used as a bait for other fish than as an article of food. The minnow is an elegantly shaped fish, very active and sportive, of a



kind of dappled or waved colour, like to a panther, on its sides inclining to a greenish grey colour, and as the spawning time approaches, of a yellowish tinge, its belly milk white, and its back almost black. The gills of a male minnow at spawning time are frequently ornamented with brilliant scarlet spots. The minnow is caught with a small worm, and gives good sport to those who are satisfied with small fry and plenty of them.

MINT.—There are several species of this plant cultivated in gardens; the principal

1. 2. 3.

are, *the peppermint (fig. 1), the pennyroyal mint (fig. 2), the spearmint (fig. 3).* All the species are raised by the same methods, namely, by parting the roots, by offset young plants, and by cuttings of the stalks. 1. By the roots

This is performed in spring or autumn. Select some full roots from any established beds, divide them as expedient; draw out drills with a hoe about two inches deep and six inches asunder, place the roots in the drills, moderately close, and earth them over to an equal depth. 2. By offsets in the spring. Procure those from established plants, and dibble them in rows, six inches asunder. 3. By cuttings of the young stalks in May, June, or advanced summer. Taking the opportunity of showery weather, cut them into lengths of five or six inches, and plant the cuttings by dibble, six inches apart, inserted half way into the earth. Propagated by any of these methods, the plants set in spring or summer will come into use the same year. Water new plants till they take root. Keep them clear from weeds. At the end of autumn, cut away any remaining stems; at which season, or in spring, spread a little loose earth thinly over the beds. For culinary use, or for salads, gather the mint when the young green tops are from one inch to six inches in length, and in their advanced growth throughout the summer. When nearly full-grown in June, July, or August, or beginning to flower, gather a store for winter. Spread the heads thinly in some dry place, shaded from the sun, to be well dried; then, tied in bunches, house the store. When designed for distilling, let them attain full growth, coming into flower; then cut and use the heads immediately. All the species continue by the roots for many years; but when the plants shoot thin and weakly, make a fresh plantation in time.

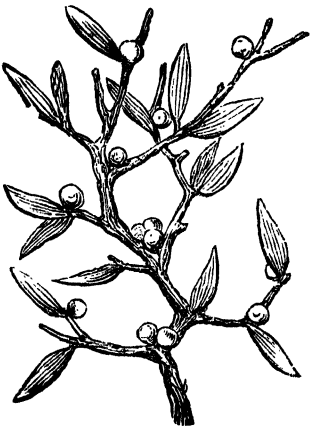
MINT JULEP.—A beverage first made in America, as follows:—Take three or four young sprigs of mint, fresh gathered, and put into a tumbler; half fill it with sherry; put some pounded ice into a second tumbler, and pour the mint and sherry over it, rapidly transferring the liquor several times from one tumbler to the other; finally place the tumbler on ice for a minute or two, till the frozen particles float over the top. It will then be found a very pleasant and cool drink.

MINT SAUCE.—Chop nine or ten stalks of green mint very small, add a pint of vinegar, and three tablespoonfuls of moist sugar. It will be all the better if made a day or two previous to being used.

MINT VINEGAR.—Put into a wide-mouthed bottle a sufficient number of mint leaves to fill it loosely; then fill up the bottle with good vinegar. After it has been kept stopped close for two or three weeks, pour it off clear into another bottle, and keep it well corked for use. It may be used as a substitute for mint sauce, or for any other purpose.

MIRROR.—See LOOKING GLASS, TOILET GLASS, &c.

MISTLETOE.—This plant is found for the most part on the apple tree, but sometimes also on the oak. If its berry be made to adhere to the trunk or branch of either of the foregoing trees, which from its glutinous nature it may be readily made to do, it germinates by sending out a small globular body attached to a pedicle, which after it acquires a certain length bends towards the bark, into which it insinuates itself by a number of small fibres which it now protrudes, and by which it abstracts from the plant the nourishment necessary to its



future development. When the root has thus fixed itself in the bark of the supporting tree, the stem of the parasite begins to ascend, at first smooth and tapering, of a pale green colour, but finally protruding a multiplicity of branches and leaves.

MOCK TURTLE SOUP.—Procure a fresh calf's head with the skin on, take out the brains, wash the head several times in cold water, let it soak for about an hour in spring water, then lay it in a stewpan, and cover it with cold water, and half a gallon besides; remove the scum as it rises; let it boil gently for an hour, take it up, and when almost cold, cut the head into pieces about an inch and a half by an inch and a quarter, and the tongue into smaller pieces. When the head is taken out, put in the stock meat, about five pounds of knuckle of veal and as much beef; add to the stock all the trimmings and bones of the head, skim it well, and then cover it close, and let it boil for five hours; then strain it off and suffer it to stand till next morning, then take off the fat, set a large stewpan over the fire with half a pound of fresh butter, twelve ounces of onion sliced, and four ounces of green sage; let them fry for an hour, then rub in half a pound of flour, and by degrees add the broth until the mixture is of the consistence of cream, season it with a quarter of a pound of ground allspice and half an ounce of black pepper ground very fine; add salt to taste, and the rind of a lemon thinly pared; let it simmer very gently for an hour and a half, then strain it through a hair-sieve; do not rub the soup to hasten it through the sieve; if it does not run easily,

knock the wooden spoon against the side of the sieve; put it into a clean stewpan with the head, and season it by adding to each gallon of soup half a pint of white wine and two tablespoonfuls of lemon-juice; let it simmer gently till the meat is tender, which will be in about three-quarters of an hour; take care that it is not overdone; stir it frequently, to prevent the meat sticking to the bottom of the stewpan. When the meat is quite tender, the soup is ready.

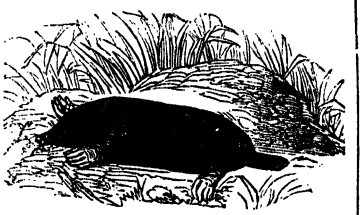
MODELLING.—See CORK, PLASTER OF PARIS, WAX, &c.

MOLASSES.—The thick fluid matter remaining after the sugar is made, resembling syrup. In addition to this substance being eaten by human beings, it is also said to be an excellent food for cattle; and is employed as a safe and economical method of feeding bullocks, sheep, young stock, and cart horses, as well as for milch cows to a certain extent. It is considered best used with roots cut small, and a little meal, well mixed together, with cut straw or inferior hay.

MOLASSES CAKES.—Cut up a quarter of a pound of fresh butter into a pint of molasses; warm it just sufficient to soften the butter, and cause it to mix easily; stir it well into the molasses, and add a tablespoonful of pounded cinnamon. Beat three eggs very light, and stir them gradually into the mixture, with a pint and a half of sifted flour. Add, finally, a teaspoonful of carbonate of soda dissolved in a little warm water. Butter some small tin cake-pans, put in the mixture, and set them immediately in the oven, which should be of a moderate heat, as these cakes are liable to scorch.

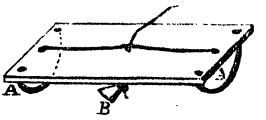
☞ Butter, ¼lb.; molasses, 1 pint; cinnamon, 1 tablespoonful; eggs, 3; flour, 1½ pint; carbonate of soda, 1 teaspoonful.

MOLE.—An animal chiefly remarkable for leading a subterranean life. It is from four to six inches in length; the body is thick and cylindrical, the head much prolonged, especially the muzzle, and the legs



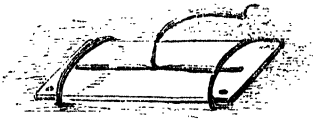
extremely short. These little animals are generally regarded as pests, and are suspected of committing great ravages with plants and agricultural produce. To exterminate this animal, it is sometimes considered best to remove the mole hills; these contain nests, which may be destroyed by the spade as follows:—Mark every new mole-hill by a slight pressure of the foot, and observe on the following day whether a mole has passed over it and destroyed such mark; this operation should be repeated two or three mornings successively, but without making the pressure so deep as to alarm the animal, and occasion another passage to be opened. Traps should be then employed, as shown in *figs.* 1 and 2. These traps are made of wood, and may be thus constructed: Take a piece of wood about four inches long, two inches wide, and about half an inch thick. In one side of this wood insert two half circles of wood, as at A A, *fig.* 1. Bore a hole through the centre, and

Fig. 1.



also one at each end. Make two loops of wire by simply bending the wire and pinching it through the holes at each end, so as to leave the ends standing up a little way out of the holes, above the surface of the wood, where they are to be tied to a string. In the half circle of wood cut small grooves, and open the wire loops so that the wire may lie in these grooves, then plaster them over with mould. To set the trap, select a tough green stick to act as a springle, and tie a piece of strong cord to the end of it. Pass the other end of this cord through the hole in the middle of the trap, and tie a knot in it. This hole must be large enough to allow the knot to pass through easily. A little wedge of wood, as seen in *fig.* 2, is then

Fig. 2.



pushed up between the knot and the wood underneath, so as to keep the knot from slipping through, and two pieces of wood are to be placed across the trap, to keep it down to the ground. The springle being fixed in the ground, is now driven down and tied to the string to which the wires are attached. The trap is then to be set in the places previously marked, and when the mole attempts to pass through its run, it is compelled to go through one of the half circles of the trap, and in doing so, it moves the wedge which holds the knot of the string tied to the springle. This done, the springle flies up, draws the wire loops tight, and the mole and the trap are by this means both suspended in the air.

MOLE, IN THE SKIN.—The common brown mole, which is so often to be seen on various parts of the human body, appears to be much of the same nature as freckles, and to be situated in the middle layer of the

skin, or membrane of colour. Moles are sometimes so situated as to improve rather than injure a fine face. They contrast with the delicacy of a fair skin, and give a pleasing archness of expression to the countenance. The colouring matter present in moles, is probably some chemical combination of iron; they have evidently abundant vitality, and a tendency to increased action, in consequence, perhaps, of the stimulus of the iron; and hence they are often slightly elevated above the surface, and the natural down of the skin is transformed into a tuft of hair. To attempt to remove these excrescences is dangerous, the application on the face frequently causing cancers to form, in place of the harmless tuft which has been subjected to the operation.—See FRECKLES, SUNBURNS, &c.

MONEY, MANAGEMENT OF.—Money being the all-important medium by which so many transactions are daily and hourly perfected, its proper management so as to occasion the least amount of inconvenience, is a matter worthy of consideration. The keeping of large sums of money in the house or about the person is very injudicious; not only is it liable to be lost, but it tempts servants to commit acts of dishonesty, or becoming more widely known, it affords a cue to desperate characters to commit highway robbery or burglary. Instead of keeping money in this dangerous manner, it should be deposited at a banker's, cheques upon whom will at any time be cheerfully received as payment of accounts by tradesmen with whom a person regularly deals; whilst money which may be wanted for immediate expenses may be easily drawn in limited amounts, as occasion may require. For domestic expenditure, always have a supply of change handy; this will obviate the inconvenience of keeping persons waiting at the door, or sending out at unseasonable times, or troubling other members of the household. If money for daily expenses has to pass through the hands of a domestic servant, it is always better to settle with her every night, and to make up her cash in hand to a similar sum; this will prevent many intricate calculations and puzzling queries. If you set out upon an expedition with other persons, and it is agreed that each shall pay a proportionate share of the expenses, the best plan is for one person to disburse the whole amount, and then to have a final settlement, by which means each may furnish his quota.—See CASH AND CREDIT, ECONOMY, HOUSEKEEPING, &c.

MONEY ORDER.—A system is established in connection with the Post Office, by which money may be remitted without risk. To procure a money order, fill up a form (supplied gratis at any money order office) stating amount required to be sent, the office at which order is to be payable, the name of person who is to receive the money, and the name and address of person sending the order. The money order office clerk on receiving the form and the amount of the order, with commission, as stated in next column, hands the order to the applicant.

The commission on inland money orders is:—

For sums under 10s.				1d.
,, of 10s. and under 1l.				2d.
,, ,, 1l. ,, ,,	2l.			3d.
,, ,, 2l. ,, ,,	3l.			4d.
,, ,, 3l. ,, ,,	4l.			5d.
,, ,, 4l. ,, ,,	5l.			6d.
,, ,, 5l. ,, ,,	6l.			7d.
,, ,, 6l. ,, ,,	7l.			8d.
,, ,, 7l. ,, ,,	8l.			9d.
,, ,, 8l. ,, ,,	9l.			10d.
,, ,, 9l. ,, ,,	10l.			11d.
,, ,, 10l.				1s.

If it is desired to send more than £10, it will be necessary to take out separate orders for the excess. Payment must be obtained before the end of the second calendar month after that in which the order was issued otherwise a new order will be necessary, for which a second commission will be charged. And if the order be not paid before the end of the twelfth calendar month after that on which it was issued, all claim to the money will be lost. The person in whose favour the order is made need not attend personally to receive the amount, but having attached his signature to the order, any one may be deputed to present it. But, whoever presents the order for payment, must give information as to the christian name and surname of the party who originally obtained it, unless such party comprise a firm, when the name of the firm will suffice. As, however, the post office is not liable to any further claim, when once the money has been paid, by whomsoever the order has been presented, the following cautions should be observed:—1. Never to send the money order in the same letter with the information required on payment thereof. 2. To be careful on taking out a money order, to state correctly the christian as well as the surname, of the person in whose favour the order is to be drawn. 3. To see that the name of the person taking out the money order is correctly known to the person in whose favour it is drawn. Neglect of these instructions will risk the loss of the money, besides leading to delay and trouble in obtaining payment. For the issue of a duplicate money order, for the alteration of the name of the payee or remitter, or for the transfer or repayment of an order, an additional commission is charged, which must be paid in postage stamps enclosed in an application to the comptroller of the money order office, London, Dublin, or Edinburgh, according as the order was issued in England (or Wales), Ireland, or Scotland. For stopping payment of an order, the same fee must be sent to the comptroller of the chief money order office of the kingdom, where the order is made payable; when, however, the same letter includes application both for the stoppage of payment, and for repayment to the remitter, only one fee will be required. The hours for obtaining money orders are usually from ten o'clock to four.

MONKEYS, MANAGEMENT OF.—The keeping of these animals affords a great deal of amusement, but is at the same time attended with some hazard, owing to their mischievous propensities. They may be fed upon bread, and upon fruit of any

kind, nuts, &c. But meat should not be given to them, excepting occasionally, small and delicate bones.

MONKSHOOD.—A perennial plant with a turnip-shaped root, found growing wild in various parts of Britain. Every part of this plant is a virulent poison; and it is all the more dangerous on account of the resemblance which the roots have to that of horseradish, for which esculent it has been frequently taken. A guide to the distinguishing of these two plants, is furnished in the accompanying figure. The stalk of the

plant grows erect to the height of three or four feet. The leaves are lobed, deeply laminated, and stand alternately upon long footstalks; the upper leaves being, however, almost sessile; the upper part dark green, the under part whitish. The flowers terminate the stalk; they are in general a purplish blue or deep violet, and shaped like a helmet or monk's hood; hence its name. Another distinguishing feature in monkshood is, that the scrapings assume a pinkish colour when exposed to the air, while the taste is acid instead of being pungent; the non-discovery of this latter peculiarity in instances where monkshood has been eaten by mistake, is on account of the vinegar which has been used with it. In cases of poisoning by this plant, the best mode of treatment is the immediate and free administration of animal charcoal mixed with water; this to be followed by a zinc emetic, then by brandy and ammonia. The charcoal has the power of retaining and separating the poisonous alkaloid, and thus stops the further action of the poison.

MONTROSE CAKE.—Wash a pound of butter in a little orange-flower water, and beat it to a cream; then mix into it by degrees, a pound and a half of powdered loaf sugar, and sixteen eggs well beaten; add a pound of well-dried flour, half a pound of sweet almonds blanched and pounded in a little rose water, and two ounces of caraway seed; beat the whole well together for half an hour, pour it into a buttered tin, lined with buttered paper, and bake it in a quick oven for two hours.

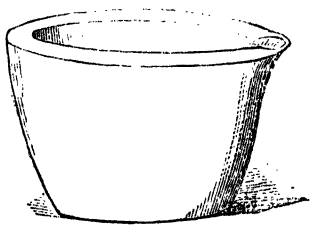
☞ Butter, 1lb.; orange-flower water, sufficient; sugar, 1¼lb.; eggs, 16; flour, 1lb.; sweet almonds, ¼lb.; caraway seed, 2ozs.

MOOR-GAME. These birds require to be kept for some time, and to be well dressed, otherwise they will be tough and comparatively flavourless. They should hang, therefore, until they arrive at that condition which indicates their being ready for the spit. Pick and draw them with exceeding care, as the skin is easily broken; truss them like pheasants, place them at a moderate distance from a clear brisk fire, baste them plentifully and constantly with butter, and serve them on a thick toast which has been laid under them in the dripping-pan for the last ten minutes of their roasting. Send rich brown gravy and bread sauce to table with the birds. From three-quarters of an hour to a full hour will roast them.

MOREEN CURTAINS, TO CLEAN.—Having removed the dust and clinging dirt as much as possible with a brush, lay the curtain on a large table, sprinkle on it a little bran, and rub it round with a piece of clean flannel; when the bran and flannel become soiled, use fresh, and continue rubbing till the moreen looks bright.

MORTAR, FOR BUILDING.—A cement employed to unite stone and bricks, and composed of quicklime, sand, and water. In making mortar, fresh sand from a pit is to be preferred to that taken from the seashore, the salt of which is liable to keep the building moist, and to weaken the strength of the cementing property. The more sand that can be incorporated with the lime the better, provided the necessary degree of plasticity be observed; for the cement becomes stronger, and it also sets or consolidates more quickly when the lime and water are less in quantity and more subdivided. The purer the lime, and the more thoroughly it is beaten or worked over, the more sand will it take up, and the more firm and durable will it become. Mortar for paving is improved by mixing the residuum of the distillation of aquafortis.

MORTAR.—An implement employed for reducing substances to powder, and for



mingling various ingredients together. Mortars are made of various materials—iron, brass, marble, glass, wedgewood ware, &c., the last being by far the most generally

useful and quite sufficient for all domestic purposes The wedgewood mortar is generally made of the form seen in the engraving, that size capable of holding about a pint, will be found most convenient for domestic use. The great advantage of the wedgewood mortar is, that whilst much stronger than glass, it is not, like marble or metal, acted upon chemically by different agents. In every case the mortar should be well cleaned and wiped dry, when it is done with; and should be dusted out previously to being again used.—See PESTLE.

MORTGAGE.—The act of pledging houses, land, &c., as security for money borrowed. It is usually accompanied with a proviso that if the principal lent, with interest thereon, be not repaid by a certain period, the property shall revert to the mortgagee, to be sold by him in satisfaction of his claim. When a person is about to borrow money on mortgage, he should do it through the medium of a respectable solicitor, for in this department of money-lending there are a number of persons engaged, whose mode of transacting business is based upon obtaining every advantage themselves at the expense of the person to whom the money is lent.—See LEASE.

MORTIFICATION.—The total death of any part of the living body, or that condition when any member or part loses its vitality, and when the circulation and other functions carried on, cease. In this case, the part loses its natural warmth and sensibility, feels moist and inelastic, becomes livid or streaked with dull purple patches, and small bladders or vesicles appear on the cuticle; this, after a time, becomes black and putrid, and a process sets in around the dead part by which it is detached from the healthy parts, and ultimately, the mass or member is thrown off in what is called a *slough*. Mortification is in general caused by some excessive inflammation, such as erysipelas, interruption of the circulation, caused by a tight bandage or ligature, mechanical injuries, intense cold, eating of poisonous food, such as diseased rye, and sometimes in old people, from poor living and an enfeebled circulation, when the foot or both feet mortify, and the shock to the system almost always proves fatal. When mortification supervenes on inflammatory action, it is attended with rapid prostration of the strength, the pulse is quick and feeble, the face pale and anxious, the spirits depressed, a cold sweat bedews the body, and a sharp irregular hiccough indicates approaching death. When only a part, however, is affected, the constitutional disturbance is much less severe, though the feeble pulse, and languid countenance generally indicates the bodily sympathy. The mortification of old age usually comes on with the presence of a black or purple spot on some part of the foot, or under one of the toes; but in whatever part it first shows, it gradually extends its discoloration, till the whole member or limb is involved; sometimes there is much pain, but often no sense of suffering whatever, the patient being unconscious of any ailment in the part beyond the absence of heat. The system, however, rapidly succumbs, the patient falls into a state of lethargy, which eventuates in coma, and death.

The *treatment*, in ordinary mortification, must depend upon the stage of the disease; when the inflammatory action is strong, bleeding and purgative medicines must be employed; but, when that condition is passed, and the weak, quick pulse indicates the coming debility, the patient is to be fed with rich animal food; wine, bark, and opium are to be given, and as often as necessary the system roused by diffusible stimuli, such as brandy, ammonia, and ether. For the mortification of old age, the first step to adopt is, to apply heat to the extremities, by bottles of hot water, and either a warm bran poultice over the foot, or the member enveloped in a powder, made by mixing one part of dry mustard with two parts of flour, or by putting the foot into a stocking partly filled with such a dry mixture, so as to keep up a steady surface heat, and reactionary stimulus. At the same time that these local means are adopted, the vital powers must be raised, and supported in their accelerated action by doses of the following mixture, and the judicious employment of wine, strong beef-tea and toast, eggs, and other light and substantial aliment; the great point being to supply quantities of such food every two, and not longer than every four hours. Take of

Carbonate of ammonia .	1 scruple.
Dover's powder . . .	½ drachm.
Camphor water . . .	6 ounces.
Aromatic tincture . .	1 ounce.
Sulphuric ether . . .	1 drachm.

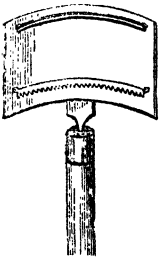
Mix. Two tablespoonfuls to be given every four hours, or one spoonful every hour, according as the patient is robust or feeble. After the first two days, quinine may be given, made into pills in half-grain doses, three times a day; and as far as possible the body kept in a state of warm perspiration, by means of hot bricks, or bottles of water placed about the bed, in near proximity to the patient. When sloughing sets in, the process is to be assisted by warm poultices, and to destroy the fœtid odour, the part occasionally washed with a solution of chloride of lime.—See FROST BITE.

MOSQUITO.—A gnat-like insect, common in America and the West India Islands. The stinging qualities of these insects are most annoying. The animals are furnished with a proboscis for piercing the flesh, and at the same time forming a kind of syphon, by which means a poisonous matter, which causes inflammation, is injected into the wound. Europeans, on first arriving in the localities infested by these insects, are especially liable to be attacked by them. To allay the inflammation, the parts affected should be bathed frequently with a solution of opium in water, or with the *liquor plumbi acetatis*, sufficiently diluted. At the same time a cooling purgative should be taken, and the diet should be temperate. Persons who habitually suffer from mosquito bites, should wear gloves and long linen trousers

by day, and by night they should sleep under cover of a net, which being made of thin lawn, is cool and affords an effectual protection.

MOSS, CULTURE OF.—In raising moss from seed, these, being very small, should be sown on the surface of peat earth, ground to the finest powder; the seed need not be covered, but the pots should be placed in the shade, or in a vault, and a moist close atmosphere produced, by covering with a bell-glass rendered semi-opaque by a thin smearing of mud. When the plants come up, they may be transplanted into pots of the smallest size, and placed in situations formed in imitation of their natural sites.

MOSS, TO PREVENT AND REMOVE.—The appearance of moss upon plants, lawns, or pasture lands is regarded by the horticulturist and agriculturist as an unfavourable omen, and as a hindrance to the development of vegetation. To prevent the growth of moss on pasture lands is a matter of great difficulty. Drainage, and the employment of rich composts are indispensably necessary. Harrowing and cross-harrowing with a common harrow, or with what are called grass-harrows, are the most likely means of destroying the moss and improving the pasture. Feeding sheep with oil-cake and allowing them to pasture on the land, has been also found effectual for the destruction of moss. But the radical remedy is to plough up such grass lands upon the first appearance of the moss, or before it has made any considerable progress, and to sow them with corn. To remove moss from lawns, water them with gas-water; or, if this cannot be done, use a good top-dressing of guano mixed with one-third of sulphate of ammonia. To prevent moss attacking fruit trees, and vegetation generally, drain the land to the depth of four feet, and then give the land a little manure; the trees will clean themselves. But if persons cannot wait patiently while this natural operation is being performed, the best way is to scrape the moss off the trees and burn it. The twigs need not be meddled with; the operation being confined to the trunk and main branches. For this process, the best instrument is a moss-scraper, as seen in the engraving,



which not only removes the moss, but takes off all loose bark as well. Having thus cleared the trees, apply the following composition: a peck of fresh cow-droppings, half a peck of quicklime, half a pound of flour of sulphur, some wood-ashes, and a quarter of a pound of lamp-black. Mix the whole together with as much chamber lye, and soap-suds in a boiling state, as will form the ingredients into a thick paint, and lay it on with a brush.

MOTH.—This insect commits great ravages on both furniture and wearing apparel. To prevent these attacks, the former periodically, and the latter before they are put by, should be beaten with a cane in the open air; then dissolve a drachm of camphor in two ounces of spirit of wine, and sprinkle each article plentifully with this mixture, which will not injure the most delicate colour; the smell will go off after an hour's exposure to the air, when the article which has been sprinkled is required for use. For furs and woollen articles, the only precaution necessary, is to expose them to the air for a few hours from time to time, and the security will be greater if the articles are wrapped up in linen, closely pinned or sewed.

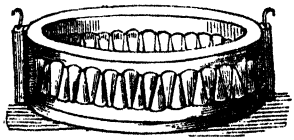
MOTHER.—See CHILDREN, DISCIPLINE OF; CHILDREN, DISEASES OF; CHILDREN, MATERNAL MANAGEMENT OF; INFANT, &c.

MOTHER-OF-PEARL.—This beautiful substance is produced in the shell of the oyster, from the same constituents as those which line the shell. It usually results from some irritation of the mantle, which causes it to excrete an unusual quantity of pearly matter at one spot. Sometimes, again, pearls have been found at points where the shell has been pierced by a boring mollusc. *To clean articles of mother-of-pearl*, wash them in whiting and water.

MOULD, FOR PLANTS.—Most of the hardy flowers and shrubs will thrive very well in common garden-mould, of a medium texture; it is to be well dug and pulverized to the depth of a foot. Bulbous plants, generally speaking, require a light sandy soil, though some of them succeed best in a strong rich loam. If it can be possibly avoided, flowers should not be planted in a clayey soil, nor a pure gravelly one. When the finer descriptions of flowers are cultivated, a variety of artificially formed soils will be required, according to the different natures of the plants; consequently, provided the subsoil be dry, the material of the surface-stratum is of less consequence.

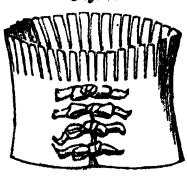
MOULDS.—Under this name are included several culinary utensils, in which materials

Fig. 1.



are to be baked or otherwise prepared, or by which their substance is economized, and they assume a sightly shape. These utensils are made in every variety of form; those seen in the engraving represent a raised pie mould (*fig.* 1); bun mould (*fig.* 2).

Fig. 2.



In using moulds for cakes, they should be

greased on the inside, so that the contents may be turned out without breaking; and in every case, when moulds are finished with, they should be scrupulously cleaned, and preserved in that state until they are again required.

MOURNING, ETIQUETTE OF.—The various degrees of relationship which the living bear to the dead, regulate the depth of the mourning worn, and the length of time that it is to be retained. Mourning for a husband in the widow's cap and crape, is usually extended over twelve months, and after that period the wearer may either adopt a half mourning, or put by mourning altogether, without appearing singular or wanting in feeling. In cases of this kind, the wearing of mourning beyond the prescribed interval depends, as a matter of course, greatly upon sentiment, the degree of affection which subsisted between the parties, the length of time which the marriage existed, &c. Mourning for parents is usually worn with crape for six months, afterwards without crape for the same period. For a brother or sister, six months; but in many cases for a longer period. For an uncle or aunt, three months; the same for a first or second cousin. Male attire, however, is not subject to very stringent rule; black is always expensive wear, and sometimes a person's pursuits and avocations will not permit him to wear it. The most prominent article in mourning with males, is the hat. For this purpose hat-bands of cloth are now made of various depths, as required. For a wife, the hat-band should, in the first months of mourning reach to the extreme verge of the hat, and be gradually reduced in depth as time passes by. For a parent, the hat-band should reach to within two inches of the crown, and so in proportion according to the degree of relationship. Pocket-handkerchiefs used during the period of mourning should be white, not coloured. Little or no jewellery should be displayed when persons are in deep mourning, the sombreness of the one, and the ostentation of the other, are incongruous. During the first few weeks for very near relatives, it is customary to observe comparative seclusion, balls, theatres, concerts, parties, &c., being alike unvisited. Custom, in general, only exacts the adoption of mourning from the relatives of deceased persons, but there are occasions when friendship may evince a proper delicacy in such a matter, not only out of respect to the departed, but in consideration of the survivors. Thus, if a person be going to visit a family, with the members of which he is on the terms of the closest intimacy, and who have recently experienced a heavy bereavement, such visitor, instead of appearing in coloured clothes, should dress in black. In England, when the monarch of the realm dies, every person who aspires to move in what is termed the better class of society, is expected to appear in slight mourning, for a prescribed period; or rather it may be taken in a negative sense, that is to say, if during the period of national mourning a person were to appear in many-coloured apparel, he would be considered as offending greatly against good taste and manners. Written correspondence during the interval of mourning is conducted on paper and with envelopes bordered with black; the depth of the border is regulated in the same way as are the clothes that are worn. When sealing-wax is called into requisition, it should be black. Visiting cards are, upon the same principle, edged with black.

MOUSTACHE.—This facial ornament is now more extensively adopted in England than it was formerly; it is said to afford protection to the lungs by acting as a sort of strainer, and intercepting particles of dust, and other agents inimical to the breathing apparatus. The growth of the moustache depends greatly upon constitutional tendencies; sometimes a youth of eighteen will display a bushy appendage on his upper lip, while another person who has long passed the period of manhood will only succeed in displaying a few straggling hairs. The growth of the moustache may, however, be encouraged by clipping the extreme tips of the hairs from time to time, and by applying to it those specifics, and putting it under that treatment, which are recommended in the articles BALDNESS, HAIRS, &c.

MOUTH, AFFECTIONS OF.—No portion of the body, in so small a compass, contains so many varieties of structure as the mouth; and though seemingly alike in their general appearance, each, anatomically, is remarkably different in organisation from even its most adjacent structure. These several parts, or minor organs, are: the lips and cheeks, the palate and tongue, the gums and teeth, the uvula and fauces behind, and the salivary glands all round.

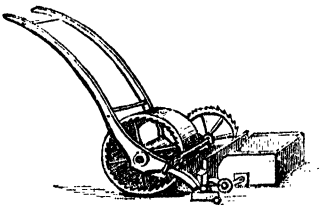
Except from accident, such as the inhalation of scalding steam, the application of boiling water, or corrosive acids, most of the diseases affecting this series of parts may be said to be sympathetic or the result of constitutional disturbance, or diseases of the digestive organs, such as an acute or chronic inflammation of the stomach, or mucous membrane of the alimentary canal: and are generally indicated by a papillary eruption of the mouth, thickening of the lining membrane, with a swelling and abraded state of the lips. Of such affections, the greater number appertain rather to the period of infancy and childhood than that of adult or old age. From birth till after teething, children are very subject to what are called *erythematous* affections of the mouth, either marked with great heat and redness of the mouth, accompanied with a congested state of the mucous membrane, and a dry red tongue, with more or less of fever; or else it assumes the appearance of small white spots, covering the lips and tongue; or that organ is entirely covered with a membranous lining, which, from the excess of bile in the system, is usually of a brown or yellow colour, and sometimes the whole of the mouth, as well as the tongue, is covered with the same hardened exudation. In this case, the voice is affected, making the child's cry sound hoarse and dull.

The *treatment* in most of such cases is nearly always alike and very simple, and consists in giving an aperient powder once or twice a day, to correct the unhealthy state of the stomach and bowels; and where the mouth and fauces are unusually loaded with this membranous fur, the mouth is to be washed with an infusion of rose leaves, or with a weak solution of chloride of lime. The best aperient powders for infants, in such cases, are those composed of grey powder, scammony, and jalap, either in equal quantities, or composed of one part of grey powder with two parts of the other ingredients, according to the age and strength of the child. When the congestion is obstinate, and the fever continues unabated, a small oleaginous mixture should be made, by rubbing two drachms of castor oil with enough mucilage and dill water to make an ounce and a half, to which eight drops of laudanum are to be added; and a teaspoonful of this mixture given to the child three times a day, if the patient is twelve months old; under that age, half a teaspoonful; and when older, the dose is to be regulated in the same proportion. But by far the most important disease with which the mouth is affected, is the well-known condition called *aphthæ*, or thrush, a very frequent and painful disease, affecting the delicate membrane of the mouth of adults; it is the formation of one or two small round ulcers, situated between the inside of the lip and the gum, and which continue for several days, causing a considerable amount of pain. As this uncomfortable ulcer is the consequence of some derangement of the bowels, the best remedy is a compound rhubarb pill, taken night and morning for two or three days; at the same time, a few grains of powdered loaf-sugar placed in the ulcers, will excite the vessels, and by the irritation produced promote absorption. The salivary glands become sometimes inflamed and enlarged, as in mumps, when they must be treated by the same means recommended in that disease.

For the fœtid breath and unpleasant taste so often experienced in the mouth, the most effectual remedy is a daily draught of wormwood tea for the first, and an aperient pill night and morning till the cause is removed. —See THRUSH.

MOVING.—See REMOVING.

MOWING.—This is one of the most laborious of agricultural and gardening employments. The chief art consists in cutting the crop as close to the surface of the ground as possible, and perfectly level, pointing the swaths well out, so as to leave scarcely any ridges under them. In the mowing of grain crops, scythes shorter in the blade than the common ones are made use of; they are also furnished either with a cradle or two twigs of osier put semicircular-wise into holes made in the handles near the blades, in such a manner that one semicircle intersects the other. Commonly, in mowing barley, oats, or other grain, the corn is on the right hand of the workman. After every mower, a gatherer follows within about five or six feet distance, and gathers up the corn into parcels. To do this work properly, the mower should form but one track with his feet, one foot chasing the other. In the practice of most districts, the scythe is swung horizontally or nearly level, leaving the stubble of almost an equal height. The Kentish practice—in which county, mowers excel—is somewhat different. Here the workman proceeds with his right foot forward, entering the point of his scythe with a downward stroke, and raising it as abruptly out, bringing the handle round to the left until it forms nearly a right angle with the line of the swath, carrying the corn in the cradle three or four feet behind the place where it grew, lifting it high and letting it fall behind his left foot. The disadvantages of this method are, the loss of some straw, the incumbrance arising from the length of stubble, and a little additional labour; but in districts where cattle is not abundant, these drawbacks are comparatively unfelt. For mowing lawns, meadows, &c., a machine has been invented, as represented in the engraving. This machine cuts, collects, and rolls the grass at one and the



same time. The operation of mowing is most easily performed whilst the blades of grass are wet, as they then cling to the scythe, and are consequently erect against its cutting edge. The operation, therefore, should be performed early in the morning, before the dew has evaporated, or whilst the grass is wet from rain or artificial watering.—See SICKLE, SCYTHE, &c.

MUFF.—An article appertaining to a lady's wardrobe, at present but little worn For preservation of, see FURS.

MUFFIN PUDDING.—Split in halves as many muffins as may be required, and having put into a tin shape a layer of any sort of preserve, lay over it a layer of muffin, then another of preserve, and so on alternately until the shape is filled; pour over it some warm milk, in which four or five eggs have been previously beaten up; cover the shape, and set it in a saucepan of boiling water; let it boil in this manner for twenty minutes, then turn it out, and serve with sweet sauce.

MUFFINS, TO MAKE.—Strain into a pan a pint of warm milk and a quarter of a pint of thick small-beer yeast; add sufficient flour to make the whole into a batter; cover it over, and let it stand in a warm place until it has risen; then add a quarter of a pint of warm milk, and an ounce of butter rubbed in some flour quite fine. Mix

these well together, then add sufficient flour to convert it into dough; cover it over, and let it stand for half an hour; then work it up again and break it into small pieces; roll them into a round form, and cover them for a quarter of an hour. Next, begin baking; and when laid on the iron, watch them carefully, and when one side changes colour, turn the other, taking care that they be neither burned nor discoloured. Be careful also that the iron does not become too hot. In order to bake muffins properly, a place should be built as if a copper was to be set; but instead of the copper, a piece of iron must be put over the top, fixed in form like the bottom of an iron pot, underneath which a coal fire may be kindled when required.

MUFFINS, TO TOAST.—Muffins should be toasted gradually; otherwise they become heavy. First hold one side of the muffin to the fire, then the other, so that it may become warmed through; then pull the muffin out, and toast each side in turn; when done, slip in the butter and set the muffins by the fire one on the top of the other; touch them as little as possible with a knife, as this causes them to become heavy.

MULBERRY, CULTURE OF.—This tree may be propagated by seed, layers, cuttings,

or grafting. The first is the least advisable mode, unless for stocks to in-arch upon. Layers will generally take root sufficiently the first year to bear separating from the parent tree, and should then be planted in a nursery, and trained up with single stems. In four years they will be fit to plant out where they are to remain. They should be planted at a proper distance to admit the sun and air, as the fruit, when the trees are too close, is apt to become mildewed; they should also be sheltered from the east, west, and north winds. In raising mulberries from cuttings, choose the former year's shoots, having one joint of the two-year-old wood. Plant them in autumn, if fine weather, or in the month of March, in rows nine inches apart, and at a distance of two inches in the rows, leaving only two or three buds above ground: prepare the ground with manure, and water the plants but little. If they succeed well, they may, next season, be transplanted into a nursery, and transplanted as directed for layers. These young trees, while they remain in the nursery, should be transplanted every three or four years. When propagated by grafting, the young mulberry trees are planted in pots, raised to the bearing branches of old trees, and grafted by approach. The soil most suitable for the mulberry is a rich light earth, and where there is a good depth. The best season for pruning is, when the blossoms first become visible in the spring. Pinch off every barren shoot which is not wanted to cover the wall, and stop every bearing shoot under similar circumstances, at the third or fourth leaf. The most forward berries attain maturity about the end of August; and there is a succession of ripening fruit on the same tree for about a month or six weeks. The ripening berries gradually change from a red to a black colour, and should be gathered accordingly for immediate use. This delicate fruit will not keep good off the tree above a day or two.

MULBERRY LEAVES.—These form the chief food of silkworms. The leaves must not be gathered from the mulberry until the trees are well-grown, when those which are youngest, and bear fruit regularly, should be selected, and the stripping made complete by passing the hand along the branches from bottom to top. The chief point to be attended to is, to leave the eyes from which the new branches spring, uninjured. A tree must on no account be stripped twice in the same year. The leaves, when gathered, should be carried away in damp bags, and kept in a cool dark place, being slightly watered if they appear faded. The best time for gathering them is early in the morning before the dew has disappeared.

MULBERRY PRESERVE.—Choose large and very ripe mulberries, put them gently into some strong syrup, and let them boil, covering over the pan, and shaking it gently from time to time; then take them off the fire, skim the syrup, and let it stand for two hours; then put the pan over the fire again, and let the contents boil until the syrup has become exceedingly thick; put by in pots securely covered.

MULBERRY RATAFIA.—Take half a pound of red currants, three pounds of ripe mulberries, and half a pound of raspberries; put them for a very short time over the fire; then set by the juice with half a drachm of mace, to infuse for three weeks in two gallons of brandy; then dissolve three pounds and a half of loaf sugar in a pint of water, mix this with the brandied juice, filter the whole, and pour into bottles.

☞ Red currants, ½lb.; mulberries, 3lbs.; raspberries, ½lb.; mace, ½ drachm; brandy, 2 gallons; sugar, 3½lbs.; water, 1 pint.

MULBERRY SYRUP.—Select mulberries which are very ripe, put them into a saucepan and let them break over a slow fire; pass them through a sieve, so as to extract the juice; let it run through a jelly-bag, add to it a quantity of very strong syrup, in the proportion of two pounds of sugar to a pint of juice; keep this near the fire until it is reduced about one-fourth, and when cold pour into bottles.

MULBERRY WINE.—To every gallon of mulberries add the same quantity of water. Only a small portion of the berries should be bruised at one time, that they may be done more effectually. The water is then added, and allowed to remain on the fruit for forty-eight hours, stirring well night and morning during that time, when they are to be squeezed and strained, and the juice measured into the fermenting tub. Add to each quart of juice a pound and a quarter of sugar, and proceed as with other wines.

MULBERRIES, PRESERVED DRY.—Gather mulberries when they are scarcely ripe, and give them a boil in syrup; then let them stand for twenty-four hours near the fire, so as just to keep warm; at the end of this time, take them out, drain them, and put them upon tins, powdering them well with fine sugar, and exposing them to the sun; when they are dry on one side, turn them, powder them in the same way, and finish the drying.

MULBERRIES, USES AND PROPERTIES OF.—This fruit is brought to the dessert, and recommends itself by its highly aromatic flavour and abundant sub-acid juice. It enters but little into pastry in a distinct form, but gives an additional flavour to some of the other fruits. It is very wholesome, cooling, and rather laxative; it does not undergo acetous fermentation, and may be, therefore, safely eaten by gouty and rheumatic persons. The syrup, used as a gargle, is beneficial in cases of sore throat.

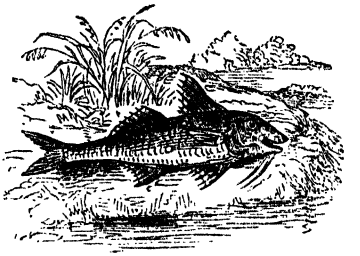
MULE.—A hybrid animal between the horse and the ass, differing in size, strength, and form, according to the predominance of its parental species; those between a male-ass, and a mare, being far superior to the progeny of a she-ass and a horse. In mountainous countries mules are highly serviceable, no beast of burden being either so sure-footed or so capable of enduring fatigue. They are sometimes fifteen or sixteen hands high, thick set, and capable of travelling for months together with six or eight hundred-weight on their backs.

MULLED WINE.—Add to a quart of wine a pint of water and a tablespoonful of allspice; boil them together for a few minutes; beat up six eggs, with sugar added to taste; pour the boiling wine on the eggs, stirring it all the time. Be careful not to pour the eggs into the wine, or they will curdle.

☞ Wine, 1 quart; water, 1 pint; allspice, 1 tablespoonful; eggs, 6; sugar, to taste.

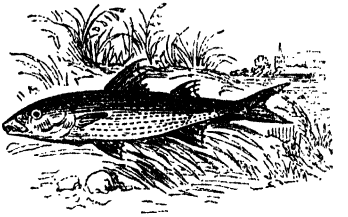
MULLET.—A fish of which there are several kinds, the grey mullet and the red mullet (*fig.* 1) being the best known. The grey mullet (*fig.* 2) is commonly an inhabitant of the Mediterranean and northern seas, where it is chiefly found frequenting the shallow water near the shores. In the spring and early summer months this fish ascends rivers to a considerable distance, and when preparing for these expeditions, is observed in shoals near the surface of the water. They rise freely at the flies used for trout, and when hooked, require great care in the management of them, as they are strong in the water, and plunge violently. They are

Fig. 1.



fond of resting in the sand or soft mud, in search of food. The red mullet is caught

Fig. 2.



chiefly in the Mediterranean; it is of a smaller size than the species just described, and is considered very delicate food.

MULLET BAKED.—Remove the gills only, without interfering with the liver and tail; bake the fish for about half an hour in a moderately heated oven; season them well; and cover them with chopped mushrooms, shalots, chives, or truffles, together with parsley and sweet herbs of any sort; put them into a dish of brown gravy, with a gill of either white or red wine; baste them frequently, and when done squeeze a little lemon-juice over them and serve.

MULLET BOILED.—After cleaning the fish thoroughly, boil them in salt and water, and put to the remainder of the water, after pouring away a part, a pint of port wine, some salt and vinegar, two onions sliced, with a bunch of sweet herbs, some nutmeg, pounded mace, and the juice of a lemon; boil these well together with two or three anchovies; then put in the fish; when they have simmered for some time, dish them, strain the sauce over them, and serve.

MULLET BROILED.—Remove the gills, and wipe the fish with a dry cloth from head to tail; flour them; butter well half a sheet of butter paper, season it with pepper and salt; rub a little butter over the mullet and season it; envelope the fish in the paper, fasten the ends securely, and broil it for twenty minutes; serve in the paper.

MULLET FRIED.—Scale and gut the

fish; melt some butter, and pour it into a deep dish; score the mullet across the back, and dip them into the butter; then set some butter over the fire in a stewpan; let it clarify, fry the mullet in it; when they are done serve on a hot dish, with melted butter and anchovy.

MULLET STEWED.—Put three mullet into a shallow stewpan with a wineglassful of sherry, a teacupful of broth, an onion, a carrot, and a turnip sliced, two bay leaves, a blade of mace, a sprig of parsley and of thyme, two slices of lemon, and a little seasoning; stew the fish gently for twenty minutes; dish them; strain the sauce, thicken it with flour and butter, pour it over the fish, and serve.

MULLIGATAWNY SOUP. — Cut four pounds of breast of veal into pieces, about two inches by one; put the trimmings into a stewpan with two quarts of water, adding twelve corns of black pepper, and the same of allspice; when the liquor boils, skim it clear, and let it boil for an hour and a half, then strain it off; while it is boiling, fry the pieces of veal with four onions in butter, until they are brown; this done, put the broth to them, and set the mixture over the fire; when it boils, skim it thoroughly; let it simmer for half an hour, then mix two tablespoonfuls of curry, and the same of flour, with a little cold water and a teaspoonful of salt; add these to the soup, and simmer it gently till the veal is quite tender, then dish and serve.

☞ Veal, 4lbs.; water, 2 quarts; pepper-corns, 12; allspice, 12 corns; onions, 4; butter, sufficient; curry, 2 tablespoonfuls; flour, 2 tablespoonfuls; salt, 1 teaspoonful.

MULLIGATAWNY SOUP, OF VEGETABLES.—Dissolve, in a large stewpan, or thick iron-saucepan, a quarter of a pound of butter, and when it is on the point of browning, throw in four large onions shred, three pounds weight of young vegetable marrow, cut in large dice, and cleared from the skin and seeds, four large cucumbers pared, split, and likewise freed from their seeds, and from three to six large acid apples, according to taste; stew these over a gentle fire until they are tolerably tender, shaking the pan often. Then strew lightly over, and mix well amongst them, three tablespoonfuls of curry powder, and one tablespoonful of salt; then let the vegetables stew for half an hour longer; this done, pour on to the vegetables gradually, sufficient boiling water to just cover them, and when they are almost reduced to a pulp, press the whole through a hair sieve with a wooden spoon, and beat it in a clean stewpan, with as much additional liquid as will make two quarts with that which was first added. Give any flavouring required, whether of salt, cayenne, or acid, and serve the soup very hot.

☞ Butter, ½lb.; vegetable marrow, 3lbs.; onions, 4; cucumbers, 4; apples, from 3 to 6; curry-powder, 3 tablespoonfuls; salt, 1 tablespoonful; water, 2 quarts; seasoning, as required.

MUMPS.—A painful glandular affection of the principal salivary organ of the mouth, the *parotid gland*, which is indicated by a swelling in the throat under the jaw, either on one side of the neck, or extending across to the throat, and is at first circumscribed and moveable; it in a day or two becomes hard and diffused, attended with great inconvenience in speaking, and some difficulty and pain in both mastication and swallowing. Though seldom accompanied with fever, or constitutional disturbance, it not unfrequently produces slight headache, and is more or less attended with enlargement of the neighbouring glands of the jaw and ear. The disease generally lasts from four to six days, though the subsidence of the swelling generally begins to be conspicuous at the former date. The *treatment* is remarkably simple; a warm bran poultice kept constantly over the swelling, and the exhibition of one or two compound rhubarb pills—or, if a child, a mild aperient of grey powder and scammony; or a wineglassful of senna and manna tea—is all that is, with rare exceptions, required; for, as the swelling is harmless and temporary, it is seldom that any stimulant application is necessary, or even proper. A peculiarity, and a beneficial one, however, is observable in this disease upon its subsidence, which, though it may appear as if the annoyance would be general and of long continuance, is however a beneficial remedy, and has been always found to act favourably for the patient—this is a sympathetic swelling of the gland of the breast, in females, and in the inguinal region, in males, upon the disappearance of the mumps; but as neither requires any special treatment, the knowledge of the fact is only necessary to guard against any needless alarm. When, however, as in scrofulous habits, the swelling of the mumps continues for some time, and remains at the end of a week hard and undiminished, it should be gently rubbed with camphorated oil night and morning, and again covered with the poultice; and in such cases an extra dose of the aperient pills, powder, or draught given. A few applications of the camphor will cause absorption and effect a cure, in those cases where such extra treatment is deemed necessary.

MURRAIN.—A contagious disease amongst cattle, principally caused by a hot dry season, or rather by a general putrefaction of the air, which begets an inflammation of the blood and a swelling in the throat, which, in many instances, soon proves mortal. The symptoms are, a hanging down and swelling of the head, abundance of gum in the eyes, rattling in the throat, a short breath, feeble pulse, palpitation of the heart, tenderness of the spine, a staggering motion, and shining tongue. The treatment of this disease must be governed by surrounding circumstances. The early stage of murrain is one of fever, and the means of cure should correspond with this—bleeding; physic should be cautiously, yet not timorously, resorted to; small doses of purgative medicine, with more of the aromatic than is generally added, will be serviceable, effecting th.

present purpose, and not hastening or increasing the debility which generally threatens. But if the bowels are sufficiently active, or diarrhœa is imminent, and at the same time symptoms of fever are apparent, no purgatives should be given, and the sedatives must be mingled with some vegetable tonics. In combating the pustular and sloughing gangrenous stage, the chloride of lime will be the best external application; while a little of it administered with the other medicines internally, may possibly lessen the tendency to general decomposition. The external application of it should be confined to the ulcerated parts alone, but it should be plentifully sprinkled over and about the beast; and the infected animal should be immediately removed from the sound ones.

MUSHROOM, CULTURE OF.—The culture of the mushroom is the most singular and curious of any of the processes in gardening. In other cases we either sow or plant something material, but in this instance we commit nothing to the earth of a vegetative tendency that is visible to the naked eye. It would appear that animal manure is necessary to the spawn of mushrooms; and thus the droppings of horses are found to produce mushrooms more abundantly and with greater certainty than the droppings of any other animal. The active principle in the growth of mushrooms is the spawn; this is a white fibrous substance, running like broken threads in such material as is fitted to nourish it. These threads produce, when planted, tubercles in the manner of potatoes. The process of culture ordinarily adopted is as follows:—About the end of September, a quantity of horse droppings which have accumulated from the adjacent stable, should be collected and thrown together in a heap to ferment and acquire heat; and as this heat generally proves too violent at first, it should, previously to making the bed, be reduced to a proper temperature by frequently turning it in the course of a fortnight or three weeks; which time it will most likely require for all the parts to receive an equable state of fermentation. During the above time, should it be showery weather, the heap will require some sort of temporary protection by covering it with litter, as too much wet would soon deaden its fermenting quality. The like caution should be attended to in making the bed, and after finishing it. As soon as it is observed that the fiery heat and rank steam of the dung are gone off, a dry and sheltered spot of ground should be chosen, on which to make a bed. The place being determined on, a space should be marked out five feet broad, and the length (running north and south) should be according to the quantity of the mushrooms likely to be required. If for a moderate family, a bed twelve or fourteen feet long will be found (provided it takes well) to produce a good supply of mushrooms for some months. On the space marked for making the bed, a trench should be thrown out about six inches deep; the mould may be regularly laid at the side, and if good, it will do for earthing the bed hereafter; otherwise, if brought from a distance, that of a more loamy than a sandy nature will be best. Either in the trench, or upon the surface, there should be laid about four inches of good dung, not too short, for forming the bottom of the bed; then lay on the prepared dung a few inches thick regularly over the surface, beating it as regularly down with the fork; continue thus, gradually drawing in the sides to the height of five feet, until it narrows to the top like the ridge of a house. In that state it may remain for ten days or a fortnight, during which time the heat should be examined towards the middle of the bed, by thrusting some small sharp sticks down in three or four places; and when found of a gentle heat, the bed may be spawned, for which purpose the spawn bricks should be broken regularly into pieces about an inch and a half or two inches square, beginning within six inches of the bottom of the bed, and in lines about eight inches apart; the same distance will also do for the pieces of spawn, which, in a dung ridge, are best put in by one hand, raising the dung up a few inches, whilst with the other the spawn can be laid in and covered at the same time. After spawning the bed, if it is found in that regular state of heat before mentioned, it may be earthed. After the surface is levelled with the back of a spade, there should be laid on two inches of mould—that out of the trench, if dry and good, will do; otherwse, if to be brought and a choice made, that of a kindly loam is to be preferred. After having been laid on, it is to be beaten closely together, and when the whole is finished, the bed must be covered about a foot thick with good oat-straw, over which should be laid mats, for the double purpose of keeping the bed dry and of securing the covering from being blown off. In the course of two or three days, the bed should be examined; and if it is considered that the heat is likely to increase, the covering must be diminished for a few days, which is better than taking it entirely off. In about a month or five weeks, mushrooms will most likely make their appearance, and in the course of forty-eight hours afterwards, they will have grown to a sufficient size for use. Mushrooms are sometimes grown in the same bed with melons and cucumbers. The spawn is inserted in the mould and on the hills of the beds, as soon as the burning heat is passed. In September or October, when the bines of the plants decay, the bed is carefully cleaned, the glasses put on and kept close, and when the earth becomes dry, water is frequently but moderately given, as well as every mild shower admitted when necessary. A gentle heat is thus caused, and the produce is often extraordinarily abundant, frequently two bushels, from a frame ten feet by six feet, and mushrooms have been produced two pounds in weight. Mushrooms may also be grown in a cellar or other vaulted place, neither fire nor water being necessary. In gathering mushrooms, the covering being carefully turned off, only such are to be taken as are half an inch or more in dia-

meter before they become flat, but are compact and firm. Each mushroom is detached by a gentle twist completely to the root; a knife must never be employed, for the stumps left in the ground decay, and become the nursery of maggots, which are liable to infect the succeeding crop.

MUSHROOM ESSENCE.—Select either flap or button mushrooms, and sprinkle salt over them; three hours afterwards wash them; next day strain off the liquor that will flow from them, put it into a stewpan, and boil it till it is reduced one-half. This essence will not keep long, and should be used, therefore, as soon after it is made as possible.

MUSHROOM FORCEMEAT. — Cut closely off the stems of some small, just-opened mushrooms, peel them, and take out the fur. Dissolve an ounce and a half of fresh butter in a saucepan, throw the mushrooms into it with a little cayenne and a slight sprinkling of mace, and stew them softly, keeping them well shaken for six or seven minutes, then turn them into a dish, spread them over it, and raise one end, that the liquid may drain from them. When they are quite cold, mince, and then mix them with four ounces of bread-crumbs finely grated, an ounce and a half of butter, and part of that in which they were stewed. Should the forcemeat appear too moist to admit of the whole, strew in a saltspoonful of salt, a third as much of cayenne, and about the same quantity of mace and nutmeg, with a teaspoonful of grated lemon-peel. Mix the whole thoroughly with the unbeaten yolk of one egg, and use the forcemeat poached in small balls for soup, or fried and served in the dish with roast fowls, or round minced veal; or to fill boiled fowls, partridges, and turkeys.

☞ Mushrooms, peeled and trimmed, 4ozs.; butter, 1½oz.; mace and cayenne, slight sprinkling; bread-crumbs, 4ozs.; butter, 1½oz. (with part of that used in the stewing); salt, 1 saltspoonful; cayenne, mace, nutmeg, ½ of saltspoonful each; lemon-rind grated, 1 teaspoonful; egg, 1 yolk.

MUSHROOM KETCHUP.—Take fresh-gathered mushrooms, with full large-grown flaps, put a layer of these at the bottom of a deep earthen pan, and sprinkle them with salt, then another layer of mushrooms, another sprinkling of salt, and so on alternately. Let them remain for two or three hours, by which time the salt will have penetrated the mushrooms, and rendered them easy to break. Pound them in a mortar, or mash them well with your hands, and let them remain for a couple of days, stirring them up and mashing them thoroughly each day. Then transfer them into a stone jar, and to each quart add an ounce and a half of whole black pepper, and half an ounce of allspice; stop the jar very close, and set it in a stewpan of boiling water, and keep it boiling for two hours. Take out the jar, and strain the contents through a hair sieve (without squeezing the mushrooms) into a clean stewpan, let it boil very gently for half an hour, then allow it to become cool, and bottle it. Be particular in corking the bottles closely, and afterwards seal them. Keep them in a dry and cool place. Examine the ketchup from time to time, by placing a strong light behind the neck of the bottle, and if any pellicle appears about it, boil it up again with a few peppercorns.

MUSHROOM POWDER.—Wash half a peck of large mushrooms clean from all dirt and grit; and scrape out the fur: put them into a stewpan over the fire without water, with two large onions, half an ounce of cloves, a quarter of an ounce of mace, and a dessertspoonful of white pepper, all in powder; simmer and shake the whole till all the liquor be dried up, but be careful that the mushrooms do not burn. Lay them on tins or sieves, in a slow oven, till they are dry enough to be reduced to powder; do this in a mortar, then put the powder into small bottles, closely tied and corked, and keep them in a dry place.

☞ Mushrooms, ½ peck; onions, 2; cloves, ½oz.; mace, ½oz.; pepper, 1 dessertspoonful.

MUSHROOM SAUCE. — Pick and peel half a pint of small mushrooms, wash them very clean, and put them into a saucepan with half a pint of veal gravy or milk, a little pepper and salt, and an ounce of butter rubbed with a tablespoonful of flour; stir them together, and set them over a gentle fire to stew slowly till tender; skim and strain it, then serve.

☞ Mushrooms (small), ½ pint; veal gravy or milk, ½ pint; pepper and salt, sufficient; butter, 1oz.; flour, 1 tablespoonful.

MUSHROOM TOAST. — Cut the stems from a quart of small, just-opened mushrooms, peel them, and take out the gills. Dissolve two ounces and a half of fresh butter in a stewpan, put in the mushrooms, strew over them a quarter of a teaspoonful of powdered mace mixed with a little cayenne, and let them stew over a gentle fire for twelve or fifteen minutes, stirring them frequently during the time; then add a dessertspoonful of flour, and shake the pan round until the contents are slightly browned. Pour in, by slow degrees, half a pint of gravy, or of good beef broth; and when the mushrooms have stewed gently in this for two minutes, throw in a little salt, add a squeeze of lemon-juice, and pour them on to a crust cut about an inch and a quarter thick, from the under part of a moderate-sized loaf, and fried in good butter to a light brown, after having been first slightly hollowed in the inside.

☞ Mushrooms, 1 quart; butter, 2½ozs.; mace mixed with cayenne, ½ teaspoonful; flour, 1 dessertspoonful; gravy or broth, ½ pint; salt, lemon-juice, crust of bread.

MUSHROOMS BROILED.—Select the largest-sized mushrooms, make a gridiron hot over a clear fire, and rub the bars with suet to prevent the mushrooms sticking; place them on the gridiron with their stalks upwards; sprinkle them lightly with salt and freely with pepper; serve them on a hot dish with a little cold butter under and over them.

MUSHROOMS BUTTERED.—Take the stems of the mushrooms only, rub them with a little salt to clean them, and rinse them in salt water; after which, dry them with a cloth, and have ready about two ounces of fresh butter for every pint of stems; put the butter into a stewpan over a slow fire, and let it remain until it begins to brown; then throw in the stems, and keep the pan on the fire for a few minutes until they become tender, continuing to shake them all the time, to prevent them from burning, and the butter from becoming oiled; pile them in a small dish, and serve them in their own gravy.

MUSHROOMS DRIED. — Peel small, some freshly-gathered flaps of mushrooms, cut off the stems, and scrape out the whole of the fur, then arrange the mushrooms singly on tins or dishes, and dry them as gradually as possible in a moderately-heated oven; put them into tin canisters and store them in a dry place.

MUSHROOMS PICKLED.—Select for this purpose the smallest buttons of the wild meadow mushrooms, in preference to those which are artificially raised, and let them be as freshly gathered as possible. Cut the stems off quite close, and clean them with a bit of new flannel slightly moistened and dipped into fine salt; throw them as they are done into plenty of spring water, mixed with a tablespoonful of salt, but drain them from it quickly afterwards, and lay them into a soft cloth to dry. For each quart of the mushrooms thus prepared, take nearly a quart of white wine vinegar, and add to it a teaspoonful of salt, half an ounce of whole white pepper, an ounce of ginger, slightly bruised, the fourth of a saltspoonful of cayenne, tied in a piece of muslin, and two large blades of mace; to these may be added half a small nutmeg, shred. When the pickle boils, throw the mushrooms in, and boil them in it over a clear fire, moderately fast, for eight or ten minutes. As soon as they are tolerably tender, put them at once into small stone jars, or into warm wide-necked bottles, and divide the spice equally amongst them. As soon as they are perfectly cold, secure them from the air with large corks, or tie skins and paper over them. They should be stored in a dry place, and guarded from severe frost.

☞ Mushroom buttons, 2 quarts; white wine vinegar, 2 quarts; salt, 1 tablespoonful; white peppercorns, 1 ounce; cayenne, ½ of saltspoonful; whole ginger, 2 ounces; nutmeg, 1 (small).

MUSHROOMS POTTED.—Select small flaps or buttons, wipe them with great nicety as in the preceding receipt. Stew them till they are perfectly tender, in butter, in the proportion of two ounces to every pint of mushrooms; add spice and pepper; when they are done, turn them into a large dish, spread them over one end of it, and raise it, so that they may be well drained from the butter. As soon as they are quite cold, press them very closely into small potting-pans; pour lukewarm clarified butter thickly over them, and store them in a cool, dry place.

MUSHROOMS PRESERVED. — Wash large buttons, lay them on sieves with the stalks upwards; sprinkle salt over them, to extract the water. When they are drained, put them into a pot, and set them in a cool oven for an hour, then take them out carefully, and lay them by to cool and drain; boil the liquor which comes out of them with a blade or two of mace, until half is boiled away. Put the mushrooms into a clean dry jar, and when the liquor is cold cover the mushrooms in the jar with it, and pour boiling suet over it; tie the jar well down with bladder, and store it in a dry closet.

MUSHROOMS STEWED. — Select button mushrooms, cut off the ends of the stalks, pare them neatly, and put them into a basin of water with the juice of a lemon as they are done. When all are prepared, take them from the water with the hands, and put them into a stewpan with a little fresh butter, lemon-juice, white pepper, and salt. Cover the pan close, and let the contents stew gently for twenty minutes or half an hour; then thicken the butter with a dessertspoonful of flour, and add gradually sufficient cream. Season to taste, adding a little pounded mace or grated nutmeg. Let the whole stew gently until the mushrooms are tender; skim off every particle of butter from the surface, and serve.

MUSHROOMS, TO DISTINGUISH. — As there are poisonous kinds of mushrooms nearly resembling that which is edible, a minute description of the latter will not be without its use. The stem of the edible mushroom is short, solid, and white, marked a little below the cup with a prominent ring,

the remains of the curtain which covers the gills in their early stage. The cup is at first white, regularly convex, and a little turned in at the edge. As it advances in growth, the surface becomes brown, scaly, and flattened. The flesh is white, firm, and solid; the gills are loose, reaching to the stem on all sides, but not touching it. When young, these are of a pinky red, but change to a hind colour about the same time that the cup alters its form, and the upper surface also changes colour. The latter circumstances distinguish it in this stage from the dark-gilled toadstool. False mushrooms have a warty cap, or else fragments of membrane adhering to the upper surface, they are also heavy, and emerge

from a species of bag; they grow in tufts or clusters in woods, on the stumps of trees, &c., whereas the true mushrooms grow in pastures. False mushrooms have an astringent, styptic, and disagreeable taste. When cut they turn blue; they are moist on the surface, and generally of a rose or orange colour. When there is still a doubt as to the nature of the mushroom gathered, sprinkle a little salt on the spongy parts or gills. If they turn yellow, they are poisonous; if black, they are wholesome. The annexed illustrations will serve to bring the forms of the true and the false mushroom more distinctly before the eye. No. 1 is the true mushroom; No. 2 the false mushroom.

MUSK.—An animal secretion of strong odour; it is generally used in perfumery in the form of a tincture, which is made simply by infusing the musk in spirits of wine, and at the end of nine days filtering the infusion. Musk of good quality retains its odour longer than any other perfume; and on that account it is employed as a mixture with other perfumes to render them more durable.

MUSLIN.—A material used in summer for wearing apparel, and also applied to domestic purposes. In washing muslins soap should not be used; it may be first washed in plain water, and then boiled in rice water.

MUSSEL.—A genus of molluscous animals inhabiting the sea. Although mussels commonly afford a supply of wholesome food, they sometimes, especially in spring, acquire very poisonous properties, by which persons are suddenly attacked with flatulence and a distension of the stomach, which presses upon the surrounding parts, and for a time impedes the progress of digestion. The most effectual remedy, where the symptoms are severe, is the use of the stomach-pump, to remove the exciting cause of the disease; when this cannot be applied, or the symptoms are not sufficiently aggravated for its application, an emetic should be taken; and in order to afford effectual relief, a liniment composed of a quart of warm water, two tablespoonfuls of salt, and half an ounce of camphorated spirits of wine should be used.

MUSSELS BOILED. — Having washed them clean, put them into a dry saucepan; when they are sufficiently opened by the heat, remove a portion of the shells and half of the natural liquor; then put them into a saucepan with a little butter and chopped parsley, and let them remain no longer over the fire than is necessary to heat them through; they may then be served, and should be eaten with vinegar or lemon-juice.

MUSSELS PICKLED.—Boil the mussels with a little salt; remove the shells and save the liquor; add about a third of vinegar to the liquor, and boil up with cayenne, white pepper, and a blade of mace; let this get cold, and then add the mussels.

MUSTARD AND CRESS.—This is used as a small salad, and from the bitter quality of the mustard, is a good stomachic. It is sown early in the spring, in a sheltered border in rows, and will be ready for cutting in a very few days. It may also be grown upon flannel moistened with water, and placed by the fireside.

MUSTARD, CULTURE OF. — This plant succeeds best in a fine rich mouldy loam. In early spring and late in autumn the situation should be sheltered; and during the height of summer, shaded from the meridian sun. Sowing for salading may be performed throughout the year. From the beginning of November to the same period of March, in a gentle hot-bed or in the corner of a stove. From the close of February to the close of April, it may be sown in the open ground, on a warm, sheltered border; and from thence to the middle of September in a shady one. The earth which covers the seed should be very fine; and the seed cannot be sown too thickly. Water must be given in dry weather, as a due supply of moisture is the chief inducement to a quick vegetation. The sowings are to be performed once or twice in a fortnight, according to the demand. To obtain seed, sow thinly. When the seedlings have attained four leaves, thin them to eight or nine inches apart. If dry weather occurs at the time of flowering, water may be applied with great advantage to their roots. The plants flower in June and are fit for cutting when their pods are brown. They must be thoroughly dried before threshing and storing. There are two species of mustard in cultivation in the field, the white and the black. It is an exhausting crop, but profitable when the soil answers, and especially in breaking up rich loamy lands, as it comes off earlier, and allows time for preparing the soil for wheat. In breaking up very rich grass lands, three or four crops are sometimes taken in succession. It cannot, however, be considered as a good general crop for the farmer, as it yields little or no manure.

MUSTARD FOOTBATH. — Fill a foot-bath with water sufficiently warm to be agreeable, but not hotter. Stir in four ounces of mustard, keep the feet and legs in the bath for half an hour, adding warm water from time to time, so as to keep up the original temperature; then get into bed. This is an excellent remedy in recent or confirmed colds, and will afford great relief from rheumatic and other pains.

MUSTARD LOTION.—Mix two ounces of mustard with half a pint of spirits of wine, and two drachms of camphor; let this mixture stand for two or three days carefully corked in a bottle; then strain it off, and keep it closely bottled for use. This lotion is excellent for sprains, rheumatism, and other painful affections.

MUSTARD PLASTER.—This is one of the safest, and frequently the most efficacious remedy in the practice of domestic medicine. For all sudden and acute pains, especially of the chest and the abdomen, this remedy may, in nearly every instance, be resorted to without fear of any evil consequences; and even where it does not effect any permanent benefit, it never fails to afford

temporary ease and alleviation during the interval that the medical attendant is being sent for. In making the mustard plaster, good fresh mustard should be used, mixed with water, as for the table, and spread on calico or paper. The usual length of time a mustard plaster can be borne is from twenty minutes to half an hour. When the plaster is applied, a piece of thin gauze or muslin should be interposed between it and the skin; for by this precaution, the potency of the plaster is not diminished, and all irritation of the skin is avoided.

MUSTARD POULTICE. — This remedy is somewhat similar to the preceding. Cut a thick slice of bread from a loaf, put it into a basin, and pour boiling water over it: when it is thoroughly soaked, strain the water off, lay the bread upon the linen which is to receive it, and spread the ready-made mustard thickly upon it; apply it with gauze or muslin, and suffer it to remain as long as it can be borne.

MUSTARD, PROPERTIES AND USES OF. —When used in moderation as a stimulating condiment, mustard is wholesome; but taken to excess, it is highly irritating and injurious. As a *medical agent*, the chief use of mustard is as a counter-irritant in acute pains of the body or limbs, when its effect is often marked and beneficial; and, besides alleviating the pain, it has also the tendency of inducing sleep. As an internal remedy, mustard is a safe and effectual emetic, in doses of one, two, or three teaspoonfuls in a teacupful or tumbler of water. There is scarcely any article of domestic use that is more extensively adulterated than mustard, and its employment, both as a condiment and a medicinal agent, renders it important that this article should be bought of the most reliable dealer.

MUSTARD TARTAR.—Rub four ounces of the best mustard very smooth, with a teaspoonful of salt, and wet it by degrees with strong horseradish vinegar, a dessert-spoonful of chili vinegar, and one or two of tarragon vinegar where its flavour is not disliked. Boil a quarter of a pint of vinegar, and pour it boiling upon an ounce of scraped horseradish; leave these standing for two or three days, and then pour the vinegar on to the mixture previously mentioned. This makes an extremely pungent condiment, and as such is highly esteemed by many.

MUSTARD, TO MIX.—To eight teaspoonfuls of mustard, put one teaspoonful of salt, and nine of water; mix them well together, then add six spoonfuls more of water, and well mix the whole by rubbing it round the side of the cup, or other vessel, till it is free from lumps, and of a perfectly smooth consistency.

MUSTARD WHEY.—Boil four drachms of the bruised seeds of mustard in a pint of milk; then strain and separate the curd; a fourth part should be taken three times a day.

MUTTON, BREAST OF, COLLARED.—Remove the skin and bone from a breast of mutton, and tie the meat round with tape, roast it before a gentle fire, put a pint of water and two ounces of butter into the dripping-pan, and with this baste the meat while it is roasting. Serve with a rich sauce.

MUTTON, BREAST OF, GRILLED.—Parboil a breast of mutton; score it, pepper and salt it well, rub it with the yolk of egg dipped in bread crumbs and chopped parsley; dress it in a Dutch oven, and serve with caper sauce.

MUTTON BROTH.—Boil the scrag end of mutton in three or four quarts of water, skim the liquor as soon as it boils, and put in a carrot and turnip, a crust of bread, an onion, a small bunch of herbs; let these stew; then put in the other part of the neck that it may be boiled tender. When done sufficiently, take out the meat, strain the broth, put the meat in again, with a few onions and a little chopped parsley; boil these for a quarter of an hour, and serve the broth and mutton, either together, or in a tureen, or the meat in a separate dish; do not send up the scrag unless particularly liked. The broth may be thickened at pleasure with bread crumbs or oatmeal. *When the broth is required in a hurry*, it may be made as follows: Take a bone or two of a neck or loin of mutton, remove the fat and skin, heat the remainder, cut it into small pieces, set it over the fire in a small tin saucepan, with three-quarters of a pint of water, put in a little thyme, parsley, and onion. Cover the saucepan, and let the contents boil very quickly; skim it thoroughly, and in half an hour it will be done.

MUTTON CHOPS, BROILED.—The chops for this purpose should be cut from the loin from half an inch to three-quarters in thickness. Put the gridiron over a bright clear fire, and when it is warmed lay on the chop; turn the chop continually, but without sticking a fork into it; in eight or ten minutes the chop will be sufficiently cooked, the best sign being when the lean feels hard and the fat is transparent. Serve immediately in a hot plate.

MUTTON CHOPS, STEWED.—Trim the fat entirely from the chops, just dip them into cold water, dredge them moderately with pepper, and plentifully on both sides with flour; put four tablespoonfuls of cold water into a thick iron saucepan, place the chops at the bottom in one flat layer, if it can be conveniently done, and set them over a very gentle fire; throw in a little salt when they begin to stew, and let them simmer as gently as possible, but without ceasing, from an hour and a quarter to an hour and a half. Turn the chops when they are half done, and if they do not yield sufficient moisture, add two or three tablespoonfuls of water or gravy; carefully skim off all fat, and serve them in their own gravy.

MUTTON CUTLETS.—Let a leg of mutton hang as long as it will keep, cut slices from it the crossway, season them with pepper and salt, strew chopped shalots and parsley over them, flour them and put them into a stewpan with a little butter; set them over a brisk fire, and they will be dressed in a quarter of an hour or twenty minutes; put to them half a pint of stock

gravy, a little cayenne, some ketchup, more flour if the sauce be not thick enough; let it simmer a few minutes, then serve.

MUTTON, DIETETIC PROPERTIES OF.—This meat is very nutritious, and of easy digestion. When the stomach is very delicate, boiled mutton is the most suitable; but generally speaking, roast mutton is most nutritious, especially when cut out of the middle of a leg, moderately dressed. The hanging of mutton conduces to its tenderness, and in this condition it is rendered more easy of digestion. The southdown, and the Welsh mutton are the most highly esteemed kinds, on account of their tenderness and nutritive qualities.

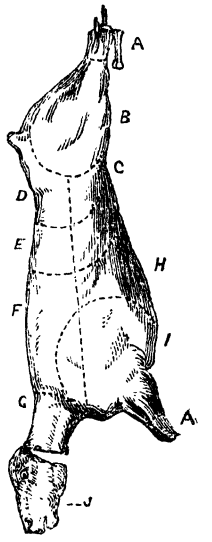
MUTTON HAM.—Select a leg of mutton, weighing about seven pounds, hang it for two days. Take six ounces of coarse brown sugar, an ounce of saltpetre, four ounces of bay salt, and three ounces of common salt. Mix them well together, and rub the mixture well into the ham, lay it in a tub with the skin downwards, and rub in the mixture every day for a fortnight; then hang the meat in wood smoke for a week. It will be found excellent cut into rashers and broiled.

MUTTON HARICOT.—Cut the neck or the loin of mutton into chops, fry them, flour them, put them into a stewpan with three pints of stock gravy, a carrot and turnip sliced, an onion stuck with cloves, and a seasoning of pepper and salt; let the chops stew till quite tender, which will be in about three hours. Take out the chops, strain the sauce, put into it carrots and turnips, previously boiled and cut into squares; simmer these for a minute or two in the sauce, lay the chops on a dish, and pour the sauce over them.

MUTTON HASHED.—Take three pints of stock gravy, seasoned with a large onion cut into rings, and a little pepper and salt; let this boil until the onion is done; then add a little thickening, put in the meat, and let it simmer for ten minutes. Toast a round of bread, cut it into diamond shape, and place it round the dish; pour in the hash, and serve. *To hash mutton, venison fashion*, proceed as follows:—Boil three pints of stock gravy in a saucepan, then add a gill of port wine, a seasoning of cayenne pepper and salt, a little flour to thicken, and a small portion of butter. Cut the meat into slices, put it into the saucepan, and let it simmer for four or five minutes; make a light puff paste, roll it out, cut into diamond shape, and fry in boiling fat; dish the hash with the sippets placed round it, and serve with currant jelly.

MUTTON, HAUNCH OF.—Let the haunch hang as long as it will keep good; then cut off the shank and trim the flap or underpart; set the joint before a brisk fire, keeping it near the fire for the first ten minutes, and afterwards at a more moderate distance until it is done; before taking it up, dredge it with a little flour, and put it closer to the fire to froth it up, then dish; pour a pint of boiling water over the meat, to which add a little colouring and ketchup.

MUTTON, JOINTS OF.—The names of the various joints of mutton may be easily ascertained by the aid of the annexed illustration, and its accompanying letters, as follows:—A, the shank; B, the leg; C, the flap; D, the chump loin; these constitute collectively the haunch: E, the chop loin; F, the best end of the neck; G, the scrag; H, the breast; I, the shoulder; J, the head. Of these joints it may be observed, that the haunch is considered the most delicate; the leg the most profitable; the shoulder the coarsest; the breast most fit for stewing; and the neck and scrag for broth.



MUTTON, KEBOBBED.—Cut a loin of mutton into steaks; remove the fat and skin, mix a small nutmeg grated with a little salt and pepper, bread crumbs, and herbs; dip the steaks into the yolks of eggs, and sprinkle the above mixture over them; then place the steaks together as they were before they were cut asunder, tie them, and fasten them on a small spit; roast them at a quick fire, set a dish under, and baste them with a piece of butter mixed with the gravy that comes from the meat. When sufficiently done, lay the meat on a dish with half a pint of good gravy, previously prepared, with two tablespoonfuls of ketchup, and a teaspoonful of flour.

MUTTON, LEG OF, BOILED.—Previously to boiling, soak the meat for two hours in cold water, then put it into the saucepan with just sufficient water to cover it, and let it boil gently, allowing a quarter of an hour to each pound of meat; and if the leg be a large one, a few minutes extra. When nearly ready, remove the saucepan to the side of the fire, keep it well covered, and let the meat remain in for ten or fifteen minutes. Serve with caper sauce.

MUTTON, LEG OF, BRAISED.—Select a very small leg of mutton, cut off the knuckle and trim it neatly; half roast the leg, then put it in a stewpan with the trimmings, the knuckle-bone broken, a few slices of fat bacon, an onion stuck with cloves, and a bunch of sweet herbs. Shake

the stewpan over the fire until there is gravy enough from the meat to stew the mutton, and be careful to turn it in the braise; when very tender, take it up, skim the fat from the gravy, strain it, and boil it quickly, until it is reduced to a glaze, turn it over the meat, and serve.

MUTTON, LEG OF, ROASTED.—A leg of mutton intended for roasting should be kept longer than for boiling. Remove the thick skin very carefully, trim off the piece of flank which adheres to the fat, and flatten the fat with a chopper, cut off the knuckle, and nick the cramp-bone; put a little salt and water into the dripping-pan to baste the meat with at first, and afterwards use only its own gravy. It should be roasted slowly, and at some distance from the fire, being placed closer for the last twenty or thirty minutes to give it colour. After it is dished, sprinkle a little fine salt lightly over it, and pour two or three tablespoonfuls of boiling water over it. A part of a leg of mutton may be advantageously roasted for a small family as follows:—Cut the knuckle into a good-sized joint, and keep it for boiling; cover the other portion of the leg with a coarse paste, in order to keep in the gravy; roast it in the ordinary way. Or, if the skin be raised gently from the outside of the leg to about six or seven inches wide, two or three good slices may be cut off for steaks, and the skin fastened down over the remainder with skewers.

MUTTON, LEG OF, WITH OYSTERS.—Select some choice oysters, parboil them, and remove the beards and horny parts; add to them chopped parsley, minced onion, and sweet herbs, and the yolks of three hard-boiled eggs. Mix all together, and cut five or six holes in the fleshy part of a leg of mutton, and put in the mixture. It may then be either boiled or braised.

MUTTON, LOIN OF, ROASTED.—Pare off the superfluous fat from the meat, and set it by for melting down. When thus reduced in size, roast it in the usual way, taking care to preserve the fat from being burned, even in the slightest degree.

MUTTON, LOIN OF, VENISON FASHION.—Skin and bone a loin of mutton, and lay it into a stewpan or braising pan, with a pint of water, a large onion stuck with cloves, half a pint of port wine, and a tablespoonful of vinegar; when it boils, add a small bunch of thyme and parsley, and a seasoning of pepper and salt; let it stew for three hours, turning it frequently. Make some gravy of the bones, and add it at intervals to the mutton when required.

MUTTON, MINCED.—Mince cold leg of mutton very finely, free it from the skin and fat, and warm it up with sufficient gravy, a little ketchup, and a seasoning of pepper and salt.

MUTTON, NECK OF, TO DRESS.—This joint may be either boiled or roasted, in the ordinary manner; but the following method affords an excellent dish:—Boil the neck very gently, until it is nearly done; cover it with bread crumbs, minced sweet herbs, and yolk of egg, and set it before the fire in a Dutch oven. When sufficiently done, serve.

MUTTON PIE.—Select either the loin, or the best end of the neck of mutton; if the former, take away the fat, and trim neatly; cut the meat into chops, season them with pepper and salt, and lay them in a pie-dish, with a little water, and two or three tablespoonfuls of ketchup; add chopped onion and potatoes (if approved); cover with paste, and bake it for two hours; when done, raise the crust with a knife, pour out all the gravy, let it stand, and skim it clean; add, if required, some more seasoning; boil it up, and pour it into the pie.

MUTTON PUDDING.—Cut slices from an underdone leg of mutton, with kidneys sufficient to form alternate layers, mixed with some minced onions. Then proceed in the same manner as for beefsteak pudding.

MUTTON, SADDLE OF, ROAST.—This joint is formed of the two loins. It should hang for two or three days before it is cooked, to render it tender. Cut out the kernel, and rub the part close round the tail with salt. Take out the fat and the kidneys from the inside. Roast it in a cradle-spit; when nearly done, sprinkle it with salt, dredge it with flour, and send it to table finely frothed. Another method of roasting this joint is as follows:—Remove the skin from the tail without taking it quite off, or breaking it; mince together some lean ham, green onions, parsley, thyme, and sweet herbs, seasoned with allspice, pepper, and salt; strew this mixture over the meat where the skin has been taken off; lay the skin over it neatly, and tie over all a sheet of buttered paper; roast the joint, and when it is nearly done, remove the paper, strew bread crumbs over the joint, and when the meat has become delicately browned, serve with rich gravy.

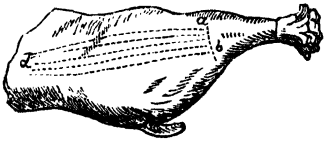
MUTTON SAUSAGES.—Take a pound of mutton, either undressed, or that which has been underdone; mince it very small, and season it with pepper, salt, and mace. Chop half a pound of beef suet, two anchovies, a dozen oysters, a quarter of a pound of grated bread, and a boiled onion: mix the whole with the oyster liquor, and two eggs well beaten; pound the whole in a mortar, fill the skins, and fry the sausages.

MUTTON, SHOULDER OF, BOILED.—Parboil a shoulder of mutton, put it into a stewpan, with two quarts of the liquor that it was boiled in, a quarter of a pound of rice, two tablespoonfuls of ketchup, with a little beaten mace; let it stew until the rice is tender, then take up the mutton, and keep it hot; add to the rice a pint of milk, and a piece of butter rolled in flour: stir it well, and let it boil for a few minutes; lay the mutton in the dish, pour the rice over it, and serve.

MUTTON, SHOULDER OF, ROAST.—Select a shoulder of mutton that is not too fat, roast it, allowing ten minutes to each pound of meat, and serve with onion sauce.

MUTTON STEWED.—Put into a broad stewpan or saucepan a flat layer of mutton chops, freed entirely from the fat, and from the greater portion of the bone; season with pepper, and dredge lightly with flour; on these put a layer of turnips, half an inch thick and cut into squares, then some carrots of the same thickness, with a seasoning of pepper and salt; next, another layer of mutton, then plenty of vegetables, and as much weak broth or cold water as will barely cover the whole; let them boil slowly, and then just simmer for two or three hours, according to quantity.

MUTTON, TO CARVE.—*The Haunch.*—This joint, which consists of the leg, is carved as follows:—Have the joint placed lengthwise before you, the knuckle being the furthest point. Cut from *a* to *b*, taking

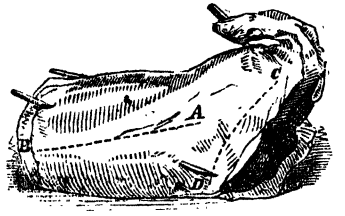


care not to allow the gravy to escape; then cut from *a* to *d*. The knife should slope in making the first cut, and then the whole of the gravy will be received into the well.

The Leg.—This joint, whether roast or boiled, is dished as it lies in the engraving; slice the meat rather thick than thin, in the

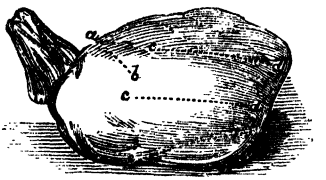
direction of the line extending from *a* to *b*; the fat will be found in the direction *c d*. Those who like their meat well done should be served from the knuckle end; and those who prefer it not so well dressed, may be helped from the thicker portion of the leg.

The Loin.—This joint is easily carved, as the bones are divided at the joints. Begin at the narrow end, and take off the chops; slices of meat may be obtained between the bones, when the joints are cut through.



The Saddle.—Cut from A to B, keep the knife sloping, but do not let the slices be too thick. This is the prime cut. If it be required lean, cut from C to D; if fat, from D to B. The fillet, which some prefer, is to be found underneath.

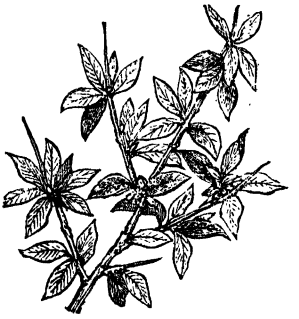
The Shoulder.—Commence by cutting from the outer edge, direct to the bone in the line *a b*, and carve as many slices from that part as the joint will afford; then, if more be required, draw the knife on either side of



the ridge of the bladebone, in the direction *c c d d*. The fat must be carved in the line *e f*. Some eaters have a preference for the juicy, but rather coarsely grained, flesh on the under side of the shoulder, which must be turned for it to be carved.

MUTTON, TO CHOOSE.—Mutton is considered in its prime at *five* years old; but as this is rather difficult to find, the nearer it approaches that age the primer it will be. Young mutton will, if squeezed with the fingers, feel tender; if old, it will remain wrinkled; the fat will also be clammy and fibrous. In ram mutton the grain is close, of a deep red colour, and the fat spongy; in ewe mutton, the flesh is paler than in the wether, and has a closer grain. Short-shanked mutton is considered the best.

MYRRH.—A gum resin brought from the Levant and the East Indies, and used in medicines. A *gargle* is made as follows: add six drachms of tincture of myrrh to seven ounces of infusion of linseed, and then



add two drachms of diluted sulphuric acid. The myrrh tree grows in Arabia and Abyssinia. There is also a British myrrh, a hardy herbaceous plant, which may be propagated by seeds, dividing at the root and slips inserted in early spring in a shady place, and planted in common garden soil.

MYRTLE.—There are several varieties of the common myrtle—as, the broad-leaved, box-leaved, Italian, Portugal, orange-leaved,

rosemary-leaved. It is easy of culture in the greenhouse, or even in common apartments, and is readily propagated by slips. In warm sheltered borders it will also thrive in the open air, but requires protection in severe winters.

N.

NAILS, IN IRONMONGERY. — Every housekeeper should keep a constant supply of nails of various sizes, as they are frequently required for repairs, and other odd jobs; and by the timely driving in of a nail, further damage is arrested. In gardening, nails play an important part; those for training trees are best made of cast iron, being the cheapest, stoutest, and most enduring. Before using them, they should be heated almost to redness, and then thrown into cold linseed oil. When dry, they will acquire a varnish, which will preserve them from rust, and will also prevent the mortar of the wall sticking to them so corrosively as it does when the nails are not oiled. In drawing old nails from walls, they should be first driven in a little further, as by this means the mortar will not be so much disturbed in extracting them. Old nails may be renovated by being heated to redness, and then thrown into water: this removes the mortar from them; then they may again be heated, and put into oil, as before mentioned. The cast iron nails used by gardeners are known to the ironmongers as wall nails, and are described as 2½, 3, 4, and 5lb. nails, accordingly as 1000 of them are of those weights. Nails in most cases require to be driven only a very little way into the mortar, and walls will be thus preserved for many years. In all summer nailing of peach trees, roses, &c., the point only requires to be driven in, so that the nail may be easily withdrawn by the fingers. Crooked nails may be straightened, by placing them on a stone with the bent part uppermost, and beating them flat by gentle blows with a hammer.

NAILS, OF THE HANDS AND FEET.—The state in which *the nails of the hand* are kept, affords an unerring indication of delicacy and cleanliness, or the contrary. Whenever the hands are washed, the nail brush should be used, until the nails become perfectly clean. In wiping the hands, the flesh growing at the bottom part of the nail should be pushed back with a corner of the towel, so that its growth may not encroach upon the nail. The nails should be kept properly trimmed and cut, and this will not occupy many minutes in the course of the week. The proper way of cutting them is to clip the sides, and bring the top part to a rounded point. A person should be cautious, however, not to cut too close to the quick, and never to cut the scarf skin, or nail springs will be produced. Filing the nails is also a pernicious practice, and quite unnecessary, as a pair of nail scissors and a penknife can perform all that is required. When nail springs are detected, they should not be torn forcibly out, as a whitlow may thus be caused; the finger should frequently be soaked in hot water, and the nail spring gradually removed as it becomes loosened. The white spots seen on the nails are caused by blows and other injuries. There is no remedy for these defects, but as the nail grows they will disappear. The habit of biting the nails is one of the most offensive that can be imagined, and the effects produced very repulsive to the sight. When this is a trick of youth, the offender should be persistently punished until the bad habit is eradicated. With grown-up persons, a moment's consideration ought to be sufficient to produce a cure. The whiteness of the nails is considered a beauty. This is effected by brushing the nails with lemon-juice after they have been cleaned; then washing them with clean cold water, and finally wiping them dry. Where, however, the nails have been greatly neglected, the following remedy will render them white. Take of diluted sulphuric acid two drachms; tincture of myrrh, one drachm; spring water, four ounces; mix these well together. Cleanse the nails with white soap and water, then dip them in the wash, and afterwards wipe them dry. *The nails of the feet* require attention from time to time; they should be cut once a week at least. A most painful complaint in connection with the toe nail is where it grows into the flesh. When indications of this deformity present themselves, the nail should at once be attended to, and further growth arrested, by frequent soakings in warm water, and gentle applications of the scissors and knife. When, however, the growth increases, recourse should be had to surgical aid.

NANKEEN, TO WASH.—Put a large handful of salt into a vessel, with a gallon of cold water; immerse the nankeen, and let it remain for twenty-four hours; then wash it in hot lye without soap, and hang it up to dry without wringing it. Nankeen washed in this manner, will keep its colour for a long time.

NAPHTHA.—A spirituous and oleaginous substance. Coal naphtha, produced from coal tar by distillation, together with a spirit obtained from the distillation of dry wood, is sold as a burning fluid for lamps. The light is very brilliant but of a most unpleasant smell, and gives out an intense quantity of smoke. In order to burn naphtha, the wick of the lamp must be exposed to a free and strong current of air. In trimming the lamp, it should never be filled, but have sufficient space for the spirit to expand as it becomes warm.

NAPKIN, TABLE.—The napkins used at dinner and other repasts are not only useful, but serve to decorate a table. They are usually made of diaper, and where economy is studied, old tablecloths may be cut up for this purpose: they should be about twenty-eight inches broad, and thirty inches long. When napkins are placed on the table, they should be folded neatly and with taste. A variety of forms may be adopted; the French method, which is very easy, of folding the napkin like a fan, placing it in a glass, and spreading out the upper part, is picturesque. But the English method of folding the napkin in the form of a slipper and placing the bread inside, has the merit of being convenient as well as neat. For keeping the napkins in proper form, a napkin press will be found very convenient.

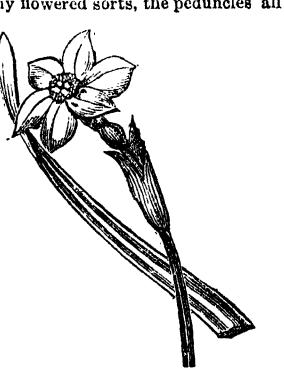
NAPLES CAKES.—Take seven ounces of blanched almonds sweet, and one ounce of bitter; pound them to a paste with a few drops of orange-flower water; then mix them thoroughly with a pound of flour and half a pound of butter; break this down quite small, then add half a pound of powdered sugar, on part of which the rind of a lemon has been rasped previously to its being crushed to powder. Make these into a paste with the yolks of four eggs. Roll the paste less than a quarter of an inch thick, and cut it into six or seven portions of equal size; lay these on lightly floured or buttered tins and bake them in a slow oven, until they are firm and crisp, and equally coloured of a pale brown. When they are cold, spread upon each a different kind of choice preserve, and pile the whole evenly into the form of an entire cake. The top may be decorated in any manner that the fancy suggests.

☞ Almonds sweet, 7ozs.; almonds bitter, 1oz.; flour, 1lb.; butter, ¼lb.; sugar, ¼lb.; lemon, 1 rind; eggs, 4 yolks; orange-flower water, sufficient; preserves, as needed.

NAPLES CHEESE.—Put ten pints of new milk into an iron pot, furnished with a cover, and capable of holding ten times the quantity. Use sufficient pressure to curdle it, and when curdled, place it over a quick fire, stirring it rapidly with a stick to prevent its burning, as also to separate the caseous matter from the dregs. The heat must be tried by the finger, and when it becomes too hot to be borne, take off the pot, plunge both hands gently in and take the cheese out, which is easily raised at once, and in a single piece. Place it in a pan having a raised edge, so that in drying, the paste may not be too thin; press the whey carefully off, and some time afterwards, press it and turn it again; on the following day, salt it moderately, and put it in a place having a cool, dry, and even temperature. As soon as the cheese is cool it is fit to eat, but is best when four or five months old.

NAPLES SOAP.—Put into a pipkin or a saucepan, half a pint of lye, strong enough to float an egg; add two ounces of lamb suet, and an ounce of olive oil; simmer them over a fire until they are of a thick consistence; then pour the mixture into a flat pan, cover it with glass, and expose it to the heat of the sun for six or seven weeks, stirring it once a day: the soap will then be formed, and may be perfumed with a few drops of oil of ambergris. Put the soap into small jars, and it will improve by keeping.

NARCISSUS.—The varieties of this plant are the common double, or jonquil, the two-coloured daffodil, the white and the polyanthus. The *tests of fine plants* of narcissus are: strong neat stems, regularity of form and disposition in the petals and nectaries, distinctness and clearness of colours, and in many flowered sorts, the peduncles all of



the same length, and coming into flower at once. *The propagation of this plant* is by seed, for obtaining new varieties, but most commonly by offsets from the bulbs. As these offsets seldom flower the first year, they should be planted in a bed by themselves, composed of light, loamy soil; and they should be put into the ground not later than the end of August or the beginning of September. The seeds collected from the choicest plants should be sown in flat pans, filled with fresh, light, sandy earth, about the beginning of August, or soon after the ripening of the seed. These pans should be in a shaded place, and only exposed to the

morning sun till October; after that time they may be exposed to the full sun, but protected from heavy rains and frosts until April. In June the leaves will have decayed, when some fresh earth is to be sifted over the surface of the pans. During the second winter the same treatment is to be pursued, and in the following summer, the roots are to be taken up and planted at three inches asunder, in raised, convex beds; in two years from this time, they are again to be moved and replanted at double the distance in mould with a little cow dung. In the fifth year after sowing, most of the bulbs will come into flower, and the remainder next year. The flowers frequently improve in beauty in the second and third years, so that no bulb should be finally discarded until it has had this trial. Those bulbs with a round base and full sound tops are the best. The most suitable soil is a fresh, light loam, with a little cow dung, and dug to the depth of three feet. An eastern aspect is to be preferred. Stirring the soil occasionally, and weeding and watering are all the requisites in their culture. In the winter the beds require the protection of tan or litter. The bulbs should not be taken up oftener than every third year; for if they are allowed to remain longer, the plant is weakened by the numerous offsets. These bulbs may be forced during winter in pots, or in water glasses, where they become beautiful and sweet-scented ornaments for apartments.

NARCOTICS.—Medicinal agents which diminish nervous excitement, alleviate pain, and procure sleep.—See CAMPHOR, HOPS, LAUDANUM, LETTUCE, OPIUM, &c.

NARD, OR SPIKENARD, a highly aromatic plant growing in the East Indies, the *nardostachys jatamansi* of Decandolle, and of the natural order *valerianaceæ*. The fruit

has a strong smell and an acrid taste. It has been celebrated from the remotest antiquity on account of the valuable perfume extracted from its roots. In the East it is largely used to scent oils and unguents, and also as a remedy in hysteria and epilepsy.

NASTURTIUM.—This plant is a native of Parma, where it is a hardy perennial. In this country, though it thrives well in the open air, it only lasts for one season, being unable to endure the cold in winter. The plant does not thrive in too rich a soil;

it may be sown in any situation, placing it near a wall or a tree, to which it may be attached, as it grows to the height of six or eight feet, and needs support. The seeds are employed as a pickle, and are used as a substitute for capers. The flower and under leaves are also eaten as salads.

NASTURTIUM PICKLE.—Select the seeds which are quite ripe and after the buds and flowers have gone off. Gather them upon a dry day, and let them lie spread about for a few days after they have been gathered; then put them into a jar, and pour boiling vinegar well spiced upon them; when cold, cover the jar. They will not be fit for use for six months.

NASTURTIUM VINEGAR.—Pick full-blown nasturtium flowers; fill a wide-mouthed bottle with them; add half a clove of garlic and a moderate-sized shalot chopped; pour in as much vinegar as the bottle will take; in two months' time rub the whole through a fine sieve; add a little cayenne pepper and salt; and keep closely corked for use.

NATURAL HISTORY.—Books: *Mrs. Lee's Familiar*, 3s. 6d.; *Natural History for Children*, 2s. 6d.; *Jesse Gleanings in*, 6s.; *Home Book of*, 1s.; *Introduction to*, 2s. 6d.; *Lexicon of Terms*, 2s. 6d.; *Notes on*, 2s. 6d.; *Birds and Beasts*, 4s.; *Creation*, 1s.; *The Scripture Natural History*, 2s. 6d.; *Young's two parts*, 1s.; *Natural History of Selbourne*, 5s.; *Review of*, 1s. 6d.; *Romance of*, 3s. 6d.; *Study of*, 3s. 6d.; *Synopsis of*, 7s.; *Tales in*, 1s. 6d.; *Tyas's Handbook*, 1s.;

Naturalist's Album, 2s. 6d.; *Christian*, 3s.; *New Entertaining*, 3s.; *Barlow's Field*, 3s.; *The Juvenile*, 6s. 6d.; *Leaves from the Note Book of a Naturalist*, 10s. 6d.; *Young's Book of Birds*, 3s. 6d.; *Young's Journal*, 4s.; *Maunder's*, 10s. 6d.; *Reason Why, Natural History*, 2s. 6d.

NATURALIZATION.—In England, the granting to an alien the same privileges (with certain exceptions), as if he had been a British born subject.—See ALIEN, DENIZATION.

NAUSEA is that unsettled state of the stomach which precedes sickness or vomiting. It may exist without sickness, but sickness is always preceded by nausea, except in some states of childhood, where, after eating a hearty meal, instantaneous vomiting sometimes occurs. Nausea—as it prostrates the powers, causes relaxation of the nervous and muscular fibre, and is a condition of the system favourable to the absorption of any particular substance—is a state the physician is often most anxious to produce, that one or the other, or all of these advantages, may be obtained. Thus, on reducing dislocations in strong muscular men, to enable the operator to overcome the contractile power of the antagonistic muscles. In the reduction of hernia, for the same cause, in part. In fevers, to check the action of the heart, and throw the system into a relaxation favourable for the speedy absorption of the medicines to be given; and in many other diseases the artificial nausea produced by small doses of tartar emetic or ipecacuanha, is of the highest importance. Nausea is, however, very often a most distressing symptom, and when not terminated by vomiting, very likely to produce considerable prostration, and sometimes serious exhaustion. It therefore becomes of the first consequence to check this painful disposition as soon as possible. To effect this desirable object, an emetic is often not only necessary, but the best remedy that can be given, as it not only removes the probable cause, but excites a healthier action in the coats of the stomach. The horizontal position on the back, or side, and a little dried carbonate of soda with ginger, taken in a wineglass of water, or a teaspoonful of Gregory's powder in the same manner, will often be found to afford relief, and especially so if followed up by one or two aperient pills. When these means, however, fail, and the nausea continues unabated, a small mustard plaster laid on the pit of the stomach, or a blister, the size of half-a-crown, applied to the same part will, almost in all cases, correct this most distressing sensation.

NAVARA CAKES.—Rub two pounds of butter into three pounds of flour, add a pound and a half of sugar, and mix the whole thoroughly together with eight eggs well beaten; divide the paste into small portions rather larger than walnuts, and bake on floured tins.

☞ Butter, 2lbs.; flour, 3lbs.; sugar, 1lb.; eggs, 8.

NAVIGATION. — Books: *Dibs's Laws*, 1s. 6d.; *Ricardos's Laws*, 7s. 6d.; *Epitome of Navigation*, 16s.; *Navigation Considered*, 8s. 6d.; *Lindsey's Treatise*, 7s.; *Norie's Practical*, 16s.; *Jeans's Rules and Examples*, 2s.

NECK, AFFECTIONS OF.—The ailments usually found in this part of the body are either inflammation or simple enlargement of the glands, generally the sympathetic consequence of cold; or suppuration, the result of a scrofulous habit of body; or again, of enlargement of the whole or part of the salivary gland, as in mumps, or of the thyroid gland, as in goître, wen, or bronchocele, as the Derbyshire neck is differently called: or finally, a kind of rheumatic inflammation attacking the muscles and tendons of the part, by which the head is drawn aside, and an affection called "wry-neck" is produced. Cold, frequent sneezing, or the sympathy excited along the neck by disease in one gland, will often produce a series of enlargements through the same chain of organs; in this case, should the swellings not subside with the cure of the first cause, all that will be necessary is the application of a warm poultice for a short time, and then gently rubbing the glands with sweet oil, lard, camphorated oil, or opodeldoc, care being taken not to rub too hard, or persevere too long; such a means once or twice adopted will, in most cases, effect a remedy. The most severe affection of the neck, however, is the scrofulous enlargement of the glands, either below the lower jaw, in front of the neck, or some of the smaller glands that run from the ear to the shoulder. This condition is always known—for it may exist without any constitutional or other symptoms—by the indolence of the disease, and the time the glands remain enlarged before coming to maturity or suppuration. These tumours, occasionally only one, at other times two or three, exist at once, will continue soft, moveable, and free from all pain or discoloration for many weeks, perhaps months, till an accidental blow, or some extra excitement, causes them to become firm, hard, immoveable, and in time discoloured over their most protruding part, the skin becoming gradually purple; they now proceed slowly towards suppuration, and usually burst by two or three small openings, discharging a thin ichorous exudation, which continues for some time, till most of the tissue involved in the suppuration has been expelled, when the apertures heal with a puckered scar. Generally the subsidence of one suppuration is the beginning of another, and in this manner for years a succession of tumours are continued till, all the glands having been affected in turn, the disease stops, perhaps, to commence on the opposite side.

The *treatment* of this disease will be found, with an ample description of its symptoms, under the head of SCROFULA. With regard to the tumours themselves, they should, when once a person is assured of their nature, be continuously poulticed for some hours; and while internal remedies are given to affect the system, such an ointment as the following should be rubbed into the glands twice a day to endeavour to excite absorption. When, however, this desirable end cannot

be effected, the poultices must be resumed, suppuration encouraged, and as soon as the tumour points, the abscess should be opened, by making a small straight incision with a lancet, poulticing the part for a few days, and then stimulating it to heal by a weak lotion of sulphate of copper or blue stone. *Ointment.* Take of

Powdered camphor	20 grains.
Hydriodate of potass	30 grains.
Iodine	3 grains.
Mercurial ointment	2 drachms.
Simple ointment	6 drachms.

Mix. A small quantity to be rubbed on the tumour night and morning. The wry neck, as has already been observed, is the consequence of a spasmodic contraction of the most superficial muscle of the neck, and when severe produces frightful distortion, by pulling the head and mouth out of their natural position. It has hitherto only been cured by dividing the fibres of the contracted muscle.—See GOITRE, MUMPS, &c.

NECKLACE. — An ornament worn by females round the neck. It is made of various materials, diamonds, pearls, coral, &c. In so conspicuous an ornament, its effectiveness greatly depends upon contrast in colour; it will thus be found that pearls will harmonize best with a dark complexion, and coral with a fair one. Persons who have long thin necks do not look well in necklaces, and they should, therefore, not be worn. *Neaklets* have recently come into vogue, made of gold, and with a locket or some other ornament attached, and these are so constructed as to be worn round the wrist as a bracelet as well as a necklet. In purchasing necklaces, it ought to be observed that the clasp fastens securely, defects of this kind frequently existing, and as by the motion of the body in dancing or walking, the necklace is very much shaken, it is apt to be lost, unless securely fastened. The wearing paste for diamonds, mosaic gold for genuine gold, and other substitutions, is a hazardous experiment in the necklace, for as they are very conspicuous, and are worn at times when persons may leisurely scrutinize them, the detection of the social fraud is almost certain.

NECK TIE.—An article of male attire recently introduced in lieu of the more cumbrous cravat and stock. They are very simply adjusted, and may be purchased ready made up with a fastening behind which obviates the necessity of tying and untying. In the selection of neck ties all showy patterns and glaring colours should be discarded; the neater the design, the more gentlemanly will it appear; and a transgression of this rule is a sure sign of vulgarity, and want of taste. With some persons the front part of the tie has a tendency to slip round to the side, this may be avoided by fastening the tie to the collar of the shirt with a small black pin, at the back of the neck, beneath the waistcoat, where it is not seen.

NECTAR.—A beverage made as follows:—Take half a pound of raisins, and chop them small, add a pound of powdered sugar, two lemons sliced, and the peel of one. Put these ingredients into an earthen vessel with two gallons of boiling water, which has been boiled for half an hour. Let the whole stand for three or four days, stirring it twice a day; then strain it, and in a fortnight it will be ready for use.

☞ Raisins, ½lb.; sugar, 1lb.; lemons, 2, peel of 1; water, 2 gallons.

NECTARINE.—See PEACH.

NEEDLE, FOR BAITING, is an instrument used by anglers, it is made of brass or iron, about six to ten inches long, with a spring eye at one end and pointed at the other; its use is to pass through the body, or just beneath the skin of a fish bait, and by attaching the hook, length of gut, or gimp, to the eye of the needle, and drawing tight, the hooks are brought into their desired position.

NEEDLE, FOR SEWING.—These are made of various qualities and prices. It is always cheaper to buy the best, and is a saving of time as well as expense. In purchasing needles, regard should be had to the eyes, which should be perfectly drilled, and to the points, which should be filed off, so as to pierce the material without difficulty. Needles should always be kept in a needle-case, which prevents them rusting, and keeps them from being lost. Much time is wasted by sempstresses throwing down their needle when they are interrupted in their work, and making long search for it on their return. On every such occasion, there should be a systematic plan of sticking the needle in a certain place, and in a conspicuous position, so that it may be recovered on the instant. The threading of a needle is facilitated by holding the eye of it before some object of a white colour. Short needles make more expedition in plain work than long ones.

NEEDLEWORK. — Books: *Miss Lambert's Art of*, 9s. 6d.; *Decorative Needlework*, 1s. 6d.; *Needlework Instructor*, 1s. 6d.; *Handbook of Needlework*, 6s. 6d.; *Mrs. Owen's Illuminator*, 9s.; *Mee's Manual*, 4s. 6d.; *Ornamental Needlework*, 4s.; *Plain Needlework*, 2d.; *Mrs. Warren's Treasures*, 7s. 6d.; *Art of Needlework*, 7s. 6d.

NEGUS. — When this is made for any number, take a bottle of wine, half a pound of powdered loaf sugar, and a lemon sliced; pour three pints of boiling water upon this mixture, and grate in nutmeg to taste. Sometimes persons prefer to mix the negus for themselves; in such cases it is better to use only half the quantity of water, poured boiling hot upon the wine already sweetened and flavoured; adding also a large and very thinly-pared rind of Seville orange, gives it a very superior flavour, without any portion of the acid.

NEROLI.—The essential oil of the orange flower. Three qualities are drawn off in distillation; the best quality is of a pale amber colour, and has a delicate fragrance; the inferior qualities are darker, and have an empyreumatic smell. Only the finest quality

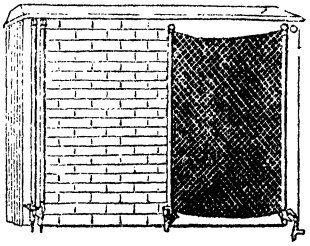
should be used in perfumes. Neroli is not unfrequently used medicinally, for the correction of flatulence, in doses of from two to four drops taken in water.

NERVES, AFFECTIONS OF. — By this term is more properly to be understood that peculiar state of physical irritability, the consequence of a languid or debilitated constitution, when the system is thrown into a state of extreme agitation and alarm by any abrupt sounds, exciting intelligence, and, as is sometimes the case, even from changes in the atmosphere. This was at one time supposed to be an affected disease, a fashionable ailment, the consequence of *ennui* and idleness; but there can be no doubt that persons are occasionally met with who are so peculiarly constituted, and whose organization is altogether so singular and irritable, that without any positive affectation, a state of excessive nervous susceptibility, amounting to a disease, does in reality exist. In this sense alone is to be understood a term that is very much abused; persons in their ignorance attributing to the nerves vices, faults, and diseases with which this much maligned system of our sensation has nothing whatever to do. With the exception of that highly sensitive state of mind and body to which we have alluded, and which requires change of air, tonics, chalybeate waters, and a system of **moral calisthenics** for its cure, all other forms of really nervous affections must be looked for under neuralgia, or some special disease of a nerve, or part of a nerve.

NET.—A device for catching fish or birds. Although the making of the net is not very difficult, still it is scarcely worth the time and money expended, when a similar implement may be bought ready-made for almost the same money as the materials alone cost. In choosing a net, examine it closely, to see if the knots are properly fastened, the meshes regular, and the whole form level and even. Any defect in these particulars frequently renders the net useless. — See BIRD-CATCHING, FISHING-NET, &c.

NETTING.—Books: *Mee's Manual*, 5s. 6d.; *Miss Watts's Selections*, 1s.; *Ladies' Book*, 2s. 6d.; *Handbook*, 1s.; *Gaugain's Ladies' Assistant*, 16s.; *Every's Art of*, 2s.

NETTING SCREEN. — A contrivance made use of in horticulture to protect wall-fruit. It consists of two deal poles, on which is nailed a common fishing-net previously dipped in a tanner's bark-pit, to prevent its being mildewed when rolled up wet. At the top, the ends of the pole fit into double iron loops, projecting a few inches from the wall immediately under the coping; and at the bottom they are fixed, by a hole at the end of each pole, upon a forked iron coupling, which projects about fourteen inches from the wall, thereby giving the screen a sufficient inclination to clear the branches. When it is wished to uncover the trees, one of the poles is disengaged and rolled back to the side of the other, where it is fastened as before. The most violent winds have no injurious effect upon coverings of this kind; a wall is very expeditiously covered and uncovered; and there is no danger of damaging the blossoms on using them; they occupy very little space when rolled up; are not liable to be



out of order, and will last for a long time. From the facility with which this screen is put up, it may be beneficially used in the season when fruit ripens, to secure a succession, by retarding the crop of any particular tree. The lower ends of the poles are advantageously maintained in their places, by means of a small iron spring-key attached to the coupling by a small chain. Canvas, oil-cloth, or gauze screens, may be similarly formed and fixed.

NETTLE.—A plant growing wild in the hedges and fields in England. It is believed that this plant is capable of exercising a beneficial influence on the blood, when gathered at the proper age and boiled. In March and April they are young and tender, and should be cut before they show any flowers, as after this they are strong in flavour and stringy in texture.

NETTLE BEER.—Boil two quarts of the sprouts of nettles in a gallon of water; strain the liquor, and add half a pound of sugar with a teaspoonful of ginger; when nearly cold, ferment with yeast, and bottle it securely while in a state of effervescence. It will be ready for use in a few days.

☞ Nettle sprouts, 2 quarts; water, 1 gallon; sugar, ½lb.; ginger, 1 teaspoonful.

NETTLE STING.—The pain and smarting caused by the sting of a nettle may be cured by rubbing the part with the leaves of rosemary, mint, or sage.

NEURALGIA.—A disease of the nerves, so called from a pain in the nerve. It is a form of nervous affection, that may either arise of itself, or be the result of some other constitutional disturbance. Neuralgia may either attack the root of the nerve, or where it rises from the brain, or spinal marrow, attend its whole course, or only manifest itself in its branches, or even at the final termination of its smallest filament. According to the part affected, the disease has obtained different names. When the course of the nerve is affected, as in the hip or leg, it is called sciatica, when the extremity is affected, if in the teeth, it is called tooth-ache, and when the twigs and branches of the face are involved, tic-douloureux. The pain attending all neuralgic affections, is of the most acute and agonising description, being sharp,

sudden, and plunging; coming on in a moment, and after a paroxysm of intense suffering, abating as abruptly as it commenced; and so erratic and uncertain are its attacks, that it will sometimes be induced by the most trivial motion, action, or lightest contact, while, not unfrequently, a blow or hard pressure has no effect on the part. The twitching, or tic, that attends neuralgia so frequently, is always more marked where there are many small muscles in the neighbourhood, an aching numbness being left in the part for some time after the subsidence of the more acute pain. Neuralgia, as well as attacking the root, course, and extremities of a nerve, occasionally shows itself in the organ to which the nerve ultimately distributes itself, as in the heart, in *angina pectoris*, the breasts of females, and other organs. Though the subject of neuralgia has been deeply investigated, no satisfactory hypothesis has yet been come to, to account for the origin of the disease; and whether it depends upon a morbid state of the nerve, inflammation of the neurilemma, or sheath of the nerve, from pressure or some unhealthy condition of the nervous centres, is still an undecided question. The treatment of this most agonising disease must depend, as far as it can be ascertained, upon the supposed cause. When it is symptomatic, the treatment is much easier and more simple, and must be regulated by that cause, the first endeavour being to remove the primary disease, and after brace the system by chalybeate, tonics, wine, bark, and exercise. When idiopathic, however, the most opposite treatments have occasionally been successful, and sometimes all modes of cure have failed; and when physician and patient have both been exhausted with fruitless efforts, the malady has subsided of itself. As a general rule, however, the constitutional tonic and anodyne system, with counter-irritation, has been found the most successful practice; the three modes enjoined very frequently effecting what neither the tonic, the sedative, or the local irritation alone could achieve.

The safest mode of procedure in facial neuralgia, is to take an aperient pill, and the best for this purpose is the compound assafœtida, to be followed every four hours by a pill containing two grains of quinine for twenty-four hours; and during the second day, twenty grains of carbonate of iron in a little water, at the same periods, for the same time. Should the pain be unabated on the third day, either a couple of leeches are to be applied as near the seat of pain as possible, or a mustard and flour poultice, kept on for half an hour, with a glass of wine every four hours, and twenty to thirty drops of laudanum at bed-time, in conjunction with one or two assafœtida pills. Should these remedies fail of effect, the conjoined systems may then be adopted, and the following mixture and powders given as directed. Take of

Carbonate of ammonia .	25 grains,
Dover's powder . .	40 grains,
Camphor water . .	6 ounces,
Spirits of ether . .	1 drachm.

Mix. Two tablespoonfuls every four hours. Take of

Carbonate of iron .	2 drachms
Quinine . . .	12 grains,
Dry carbonate of soda	20 grains.

Mix, and divide into six powders, one to be taken in jelly or water an hour after each dose of the mixture. At the same time, apply a small blister behind the ear or to the part affected. In some constitutions, it is necessary to resort to extreme doses, both of sedatives and stimulants, before any mitigation of the tormenting pain can be effected; and then it is necessary to give opium, rather in regard to the effect desired than with any reference to its conventional dose, and administer wine out of goblets, rather than in glasses. Such cases are unfortunately by no means rare, but the remedies are such that no suffering should induce a patient to adopt them on his own responsibility, and unsanctioned by a medical man.

Electricity and galvanism have been so often employed for empirical purposes, and many, only partially informed of their real efficacy, are prejudiced against their use as health-restoring agents it has therefore been thought advisable to give the medical routine of cure before pointing out a safe, easy, and very admirable remedial agent in the electro-galvanic chain, a small portable battery, that can be worn on any part of the body, and which, by keeping up a constant galvanic wave through the affected nerve, acts as a sedative, by equalising the nervous current, and often affording relief where all other means have failed to effect a moment's cessation of pain. The electro-galvanic chains, manufactured and invented by Pulvermacher, may be applied in any stage or in any kind of neuralgic pain, always with safety and relief, and in many cases with permanent cure. See PARALYSIS, and *Dictionary of Useful Knowledge*, article MEDICAL GALVANISM.

NEWFOUNDLAND DOG.—This animal is one of the most noble of the canine species. He is remarkable for faithful attachment to his master; for great strength, sagacity, and perseverance; for good temper, patience, and quiet fondness to all who belong to the household, as well as for being a fear-

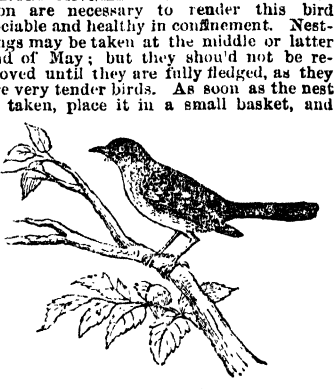
less protector of whatever is consigned to his charge. In the water he is of as much service as on land, he is no contemptible assistant to the aquatic sportsman; and he is frequently instrumental in saving human life when threatened with a watery grave.

NEW YEAR'S DAY.—The anniversary of the first day of the new year, which in England is observed as a sort of holiday, parties and other entertainments being given to celebrate the event. The custom of seeing the old year out and the new one in, is observed while the clock is striking the hour of twelve on the last night of the old year, and this event is hailed in a variety of ways, according to the sentiments and habits of the persons engaged in the celebration. The etiquette observable on New Year's Day is to wish every friend that is met with "a happy new year." It is also customary to make presents of a suitable nature, known as New Year's Gifts.

NIGHT DRESS.—Upon retiring to rest the whole of the apparel worn during the day should be taken off and exchanged for a dress suitable for sleeping in. This dress should be made loose and long, and the strings, buttons, &c., should be so placed that when they are fastened they do not cause any pressure of the neck, wrist, &c. The material of which the night dress is made should be cotton, and that worn in winter should be of a stouter fabric than the one used in summer. The night dress should be changed every week, and before it is put on care should be taken that it is thoroughly aired. The night cap is sometimes included as part of the night dress; generally speaking, this is a useless and unhealthy covering, as it generates too great an amount of heat about the head. Some persons, owing to use and habit, cannot leave off their night cap without catching a severe cold, and in such cases, it is obviously better to adopt it than not.

NIGHT LIGHT.—Many persons cannot sleep without a light in their chamber, and in cases of sickness it is frequently essential that there should always be a light burning. For this purpose a rushlight is frequently set up; but an improvement on these has been recently introduced in the shape of night-lights, which are made and sold by several manufacturers. These night-lights are merely very short pieces of stearic acid or stearine with a fine wick, and are burnt either by means of a glass in which they are dropped, and which serves to hold the material when melted, or by enclosing them in a thin roll of paper or wood-shaving; in which latter case, they require to be placed in a shallow vessel of water, about a quarter or half an inch deep in that fluid, so as to prevent all danger of the envelope catching fire. The advantage of these lights is that they have no disagreeable smell, and give a steady and certain light for many hours. A small camphine night-light is sold, which is a very useful addition to the bed-chamber, and an exceedingly cheap mode of keeping up a nocturnal glimmer sufficient for all ordinary purposes. This little lamp is merely a common reservoir, with a simple tube containing a common cotton wick; this is invested with a hollow cone of metal, to the inside of which the air is admitted, and which may be raised or covered upon the flame at pleasure. It burns very steadily, and gives a light sufficient for the purpose at the cost of a farthing for nine or ten hours. Persons should endeavour to sleep without lights in their bed-chamber if they possibly can, for, independent of the danger attending the practice, it is very unwholesome, as the flame consumes the oxygen, and thus deprives the sleeping person of a gas which is very essential to health.

NIGHTINGALE.—Great care and attention are necessary to render this bird sociable and healthy in confinement. Nestlings may be taken at the middle or latter end of May; but they shou'd not be removed until they are fully fledged, as they are very tender birds. As soon as the nest is taken, place it in a small basket, and



cover it up warm. Begin to feed the young birds on small caterpillars, mealworms, or fresh ants' eggs, mixed with a small portion of white bread, grated and moistened. When they are able to feed themselves, put them singly into nightingale cages with a little dry straw or moss at the bottom; and a few days afterwards, place a pan of water in the cages for the birds to wash in. On first placing them in the cage, it is necessary to cover two or three sides of it from the light, as the bird is so much alarmed when exposed at all sides that it soon ends its life by dashing itself against the bars. The situation of the cage must depend on the disposition of the bird, which can only be discovered by shifting him to various parts of the room, till by his cheerfulness and singing, you find you have selected the right place. *The best food* of this bird is in summer, ants' eggs, to which are daily added two or three mealworms. When ants' eggs cannot be procured fresh, roasted ox-heart or lean beef and carrot, must be grated and mixed with dried ants' eggs. The best and cheapest food in autumn, is very ripe elderberries, dried, and mixed with ants' eggs. The cage must be supplied with fresh water every day, both for drinking and bathing. *The health of the nightingale* suffers most during the period of moulting. Its stomach at that time becomes out of order, which is indicated by the bird resting his head beneath his wing for some hours, with his eyes half

closed and his feathers ruffled up. When these symptoms are observed, give the bird ants' eggs, together with a spider or two, and steep some saffron in his water till it is tinged a deep orange colour. The bird is also liable to cramp, and other diseases arising from damp, cold, and want of proper attention to cleanliness; and in autumn he frequently becomes fat and husky, and refuses his food. In both cases, let him have two or three spiders per day. When his fat is reduced, keep him very warm, and put saffron in his water. Sometimes the nightingale is afflicted with atrophy, or wasting, and soon becomes thin and worn. When this is the case, give him a fig, chopped very small among his meat, and make him swallow a house-spider. A rusty nail should be put in his water, which will act as a tonic. After having been two or three days in confinement, he is liable to diseased feet. To heal them, they must be frequently soaked in warm water, and the loose skin and scales when sufficiently softened, tenderly removed. If they have become very sore, bathe them in warm water, dry them, and anoint them with fresh butter. *The hedge nightingale may be distinguished* by being marked with white, especially about the throat. The female is smaller, duller in colour, and has a greenish hue on the back; she is not so erect as the male, her eyes are smaller and less lively, and her throat is not so white.

NIGHTMARE.—This well-known and terrible visitation to sleeping persons, is in most cases the result of a person's own imprudence. The explanation of the nightmare is this: as the functions of the body are performed more slowly during our sleeping than our waking hours, a full meal or supper, taken immediately before going to bed, imposes a load on the stomach which it is not in a condition to digest, and the unpleasant consequence of oppressive and harrowing dreams is almost certain to ensue. When the sleeper lies upon his back, the heart pressing, while pulsating, on the lungs, gives rise to a sense of intolerable oppression on the chest, which seems to bear down upon the whole body, so that in this painful state not a muscle will obey the impulse of the will, and every effort to move appears to be altogether unavailing. To escape this attack, therefore, it is obvious that a hearty meal should not be taken just before going to bed, and if one is taken in the evening at all, rest should not be sought until such time as the food has gone through the more difficult part of digestion.

NIGHTSHADE.—The *garden nightshade* is an annual plant common in this country, and grows about rubbish and dunghills. The flower is very like that of the common potatoe. The stalk is about a foot in height, the leaves are alternate, irregularly ovate, waved in the margins, and covered with soft down. The fruit is a round, two-celled berry, of a black colour when ripe, and contains several kidney-shaped yellow seeds. The smell of the plant is faint and disagreeable. It has very little taste, but it possesses narcotic qualities, and even its odour is said to cause sleep. The berries are equally poisonous with the leaves. The

woody nightshade is also a common plant, which grows in hedges and moist situations. The stalk is tender, climbing, covered with bark of an ash colour, and rises to six or seven feet in height. The leaves are long, oval, and pointed; those near the top are spear-shaped. The flowers are purple-coloured, with long yellow anthers. The fruit is an oblong reddish berry, containing many flat yellow seeds. The roots and stalks, on being chewed, first cause a sensation of bitterness, which is soon followed by a considerable degree of sweetness. The berries act powerfully on the stomach and bowels, exciting both vomiting and purging. As the nature of these berries is so very deleterious, and as they are very common in hedges, and may be easily mistaken by children for red currants, which they somewhat resemble, the greatest care should be taken to point out their danger.

NITRE.—A valuable medicine, which acts in a variety of ways, and principally in cooling and purifying the blood. It is used externally as a detergent, when dissolved in water, and as a lotion to inflamed and painful rheumatic joints. It is given internally in doses of from ten grains to a drachm, or even two drachms. As a topical application it is beneficial in sore throat, a few grains being allowed to dissolve in the mouth. In the feverishness that attends a cold, from seven to ten grains of purified nitre, in a glass of water, may be taken two or three times a day with safety and advantage.

NITROGEN.—A gas which enters largely into the composition of the air. It is not combustible; it enters extensively into combination; it is an abundant element in animal matter; and its existence in such a large quantity is a chief distinction between the constitution of animal and vegetable life.—See *Dictionary of Useful Knowledge*, article NITROGEN.

NORFOLK CAKE.—Take three-quarters of a pound of butter, three pounds and a half of flour, and a quarter of a pint of yeast. Melt the butter with water, knead well till stiff, and bake on buttered paper for twenty minutes.

☞ Butter, ¾lb.; flour, 3½lb.; yeast, ¼ pint.

NORFOLK DUMP'LINGS. — Take a pound of dough from a baking of very light white bread, and divide it into six equal parts; mould these into dumplings, drop them into a pan of fast boiling water, and boil them quickly for a quarter of an hour. Send them to table the instant they are dished, with some sauce or raspberry vinegar. They should not be cut, but torn apart with a couple of forks.

NOSE, AFFECTIONS OF THE.—The membrane that lines the whole alimentary canal from the lips and mouth downwards, has special peculiarities in particular places, according to the function it has there to perform: in the nostrils, as the external seat of smell, it is beautifully and remarkably adapted for its purpose; yet, though being so incessantly in active operation, it is, perhaps, the least affected part of the body. With the rest of the lining membrane of the mouth it suffers from cold, or in affections of the stomach, discharging a thin fluid in cases of catarrh, and showing a dry, red, and irritable surface when the bowels and stomach are affected, hence the involuntary picking of children when they have worms; but of itself, besides a thickening of its coats from different causes, and thereby blunting the perception of smell, and obstructing the reverberance of articulation, and the occasional formation of that extraordinary zoophyte, the polypus, high up in the nostril, this part of the frame has no other disease appertaining to it. For the first, an occasional errhine, as a pinch of snuff, or the smallest atom of the white of hellebore powder, imbibed in the same way, with a course of aperient medicine, is all that is generally needed; though cases may occur in which leeches and a lotion may be demanded, but they are, however, very rare. The extraction, by surgical means, of the polypus, as no local or constitutional treatment has any effect on its growth, renders any further account here of this disease unnecessary, and the mode of procedure will be found under its proper head. The external parts of the nose are, however, more frequently affected than the internal, the cuticle over the cartilage being subject to warts, inflammation, small painful pimples and abscesses, and to cancer. The warts are easily removed by a daily application of caustic or blue stone; the inflammations, by a cold lotion of sugar of lead and water; and the pimples and abscesses, by the same means assisted with cooling purgatives. For the more formidable disease of cancer, surgical aid must be obtained, as the treatment, in unskilful hands, might be attended with risk.

There is a condition of the nose, usually, but not always justly, attributed to persons of dissipated habits, in which that feature becomes enlarged, of a red or purple colour, and covered with unseemly blotches, pimples, and bright-coloured excrescences, distending the organ sometimes to an enormous size. Though this disfigurement, undoubtedly, frequently marks the drunkard, it is more properly an indication of diseased liver than a characteristic of dissipation, and is more usually found in its worst form in persons of temperate, than intemperate habits. As this disease is in general a local symptom of a constitutional derangement, the remedies to cure it must more properly be applied to the system rather than the part. For this purpose a course of the Plummer's pill, alternated with blue pill, and a decoction of dulcamara, and dandelion in water, two ounces of each, boiled from four to three pints, and a wineglassful taken every four hours, and a pill twice a day, must be continued for some days, or even weeks; at the same time the nose should be enveloped in a poultice made of scraped Solomon's seal, damped with vinegar, laid next the skin; and being put on at bedtime, should be allowed to remain all night.—See BLEEDING, HÆMORRHAGE, &c.

NOTICE TO QUIT.—When either a landlord or a tenant intends to terminate a tenancy, the way to proceed is by a *written* notice to quit, which is drawn up in the two following forms:—

From a tenant to his landlord.—Sir, I hereby give you notice, that on or before the day of next, I shall quit and deliver up possession of the house and premises I now hold of you, situate at in the parish of in the county of

Dated this day of 18 .

Witness, G. C. L. O.

To Mr. R. A.

From a landlord to his tenant.—Sir, I hereby give you notice to quit the house and appurtenances which you now hold of me, situate at No. , on or before next.

Dated , 18 .

Signed, R. A. (Landlord).

To Mr. L. O.

The legal term of notice is six months, to expire on the same day of the year on which the tenancy commenced. When the rent is payable weekly or monthly, the notice will be good if given for the week or month, provided care be taken that it expires upon the day of the week or month of the beginning of the tenancy. If a tenant holds over after receiving a sufficient notice in writing to quit, he becomes liable to pay double the yearly value; if he holds over after having himself given even verbal notice, he is liable to pay double rent. There is no necessity for notice to be given before twelve o'clock in the day, any hour at which reasonable access can be gained will be sufficient.—See LANDLORD AND TENANT; LEASE; LODGERS, &c.

NOUGAT.—An article of confectionery, composed as follows:—Blanch a pound of sweet almonds, and having sliced them lengthwise, let them lie in the sun for a short time, until they become slightly discoloured, then dissolve in an iron stewpan, slightly buttered, three-quarters of a pound

of sugar, without water, stirring constantly and when the sugar has melted and begins to change colour, throw in the almonds, which are to be previously made thoroughly hot in another vessel, over the fire, taking care not to burn them: mix them well with the sugar, and as they mix range them round the sides of the stewpan, leaving about the same thickness at the bottom as at the sides; leave the saucepan to cool, and turn out the mixture upon a plate; having done this, press the contents well together in the form of a thick cake, and wrap them up in writing paper. It should be kept in a tin case. Nougat is served at dessert, or eaten at any time, as other sweetmeats.

NOUN.—In grammar, a part of speech which signifies the names of persons, places, and things. The name of everything that we can touch, see, hear, taste, or smell, is a noun. Proper nouns are distinguished from common nouns in expressing the names of persons, places, &c.; and as such are always written with a capital initial, as Robert Smith, Manchester, the Thames, the Isle of Wight, &c.

NOVELS.—Works of fiction, the incidents and characters in which are supposed to be based upon and drawn from real life. The most highly esteemed of this class of literature are those written by Walter Scott, Fenimore Cooper, Captain Marryat, Miss Austen, Miss Porter, Bulwer Lytton, Mrs. Trollope, G. P. R. James, Mrs. Gore, Charles Lever, Anthony Trollope, Mrs. Marsh, Miss Muloch, and Miss Kavanagh, &c.

Although this class of reading is well adapted to pass away an idle hour, readers, especially young ones, should guard against imbibing too great a desire for novel reading; by such an indulgence the mind becomes imbued with false sentiment, and rendered unfit to cope with the every-day business of life. In short, a novel is a book which should only be taken up when every duty is performed, and when the reader has become well-grounded in the higher and more useful departments of literature.

NOVEMBER, GARDENING FOR. — *Kitchen garden: Artichokes*, complete beds. *Asparagus*, cut down and dress beds with litter or dung. *Beans*, sow. *Brocoli*, take up and lay flat in dry ground. *Carrots*, take up and store away from frost. *Cauliflower*, seedlings, protect by hoops and mats. *Celery*, earth up as high as possible. *Colewort*, plant. *Endive*, protect. *French beans*, prolong fruiting. *Leeks*, sow. *Parsley*, protect with fronds of fern. *Parsnips*, take up, trim off crowns and fibres, and store in sand or charcoal. *Peas*, sow. *Perennial herbs*, propagate. *Potatoes*, take up as wanted. *Radishes*, sow short-topped in a warm border. *Rhubarb*, plant.

General remarks. — During this month dig, trench, manure vacant ground, and execute all other routine work. Weed seedling crops. Destroy insects, and particularly snails. Protect the root cellar from frost if it sets in severely; and keep out the water from above and below. Turn over the edible roots which are stored, and pick out decaying bulbs. Examine seeds and separate those that are worthless from the better sort.

Flower garden.—Anemones, plant during the first fortnight. *Asters*, protect from frost and rain. *Auriculas*, change upper soil, and remove decayed leaves. *Border-flowers*, dried roots of, plant. *Dahlias*, take up tubers and protect from frost. *Daisies*, plant. *Hyacinths*, plant during the first fortnight. *Marvel of Peru*, take up roots and protect from frost. *Mignonette* (potted), remove indoors. *Polyanthus-Narcissus*, plant in the early part of the month. *Ranunculuses*, plant in the first fortnight. *Shrubs*, plant for forcing, prune, and keep in form to encourage flowering. *Sweet peas*, sow for an early crop. *Tulips*, plant during first fortnight.

General remarks.—This is a busy month in the flower-garden. Transplant triennials at the beginning of the month, if the weather be fine. Protect tender roots by litter, leaves, tan, ashes, or landing-up; trees, by mats or straw covered with mats or nets. Take care of seedlings. Collect earths, composts, and manures; and in general finish digging among herbaceous flowers by the middle of the month. In cutting straggling plants, choose a dry day, and obliterate foot-prints with a fork. Clear off all dead and decaying leaves and stems. Reduce the patches of perennial flowers. Fill up vacancies. Repair edges, and give the garden a general brushing over, laying all as neatly for the winter as possible. Some of the operations directed to be done in this month may be executed sooner or later, as the weather or convenience allows.

NOVEMBER, THINGS IN SEASON. — *Fish*—Barbel, brill, turbot, carp, cockles, cod, crabs, dace, dory, eels, gudgeon, gurnets, haddocks, hake, halibut, herrings, ling, lobsters, mussels, oysters, perch, pike, plaice, prawns, salmon, shrimps, skate, smelts, soles, sprats, tench, thornback, turbot, whiting.

Fruit.—Almonds; apples: golden pippin, Holland pippin, Kentish pippin, nonpareil, winter pearmain, Wheeler's russet; bullaces, chestnuts, hazel-nuts, grapes, medlars. Pears: Bergamot, Charmontelle, Colmar, Cresan, Spanish, bon chrétien; walnuts.

Meat.—Beef, house-lamb, mutton, pork, veal, doe-venison.

Poultry and game. — Chickens, dotterel, ducks, fowls, geese, grouse, hares, larks, moor-game, partridges, pheasants, pigeons, rabbits, snipes, teal, turkeys, wheat-ears, widgeon, wild ducks, woodcocks.

Vegetables. — Jerusalem artichoke, chard beets, borecole; cabbages, cardoons, carrots, celery, chervil, coleworts, endive, herbs of all sorts, leeks, lettuces, onions, parsnips, potatoes, salad, savoys, shalots, spinach (winter), tomatoes, turnips.

NOYEAU. — Blanch and pound two pounds of bitter almonds, and put them into a gallon of pale brandy, with two pounds of white sugar candy, a nutmeg grated, and half an ounce of mace. Stir it about well every day for twelve days, then leave it for six weeks, when it may

be bottled, but must be kept some months before it is ready for use.

☞ Almonds (bitter), 2lbs.; brandy (pale), 1 gallon; sugar candy, 2lbs.; nutmeg, 1; mace, ½oz.

NUISANCE.—This term signifies generally anything that does hurt, inconvenience, or damage to the property or person of another. Nuisances are of two kinds, public and private, and either affect a community or an individual. The remedy for a private nuisance is by action on the case for damages, and for a public nuisance by indictment. It must be done without riot, if at all. Every continuance of a nuisance is a fresh nuisance, and a separate action will lie.

NUMBNESS. - This may proceed from temporary loss of nervous action, as long-continued pressure in one direction, or standing in water or on a damp spot, and is generally counteracted by warmth, friction, or the hot bath. Friction with the hand is often sufficient, but when more energetic means are required, turpentine and oil, with or without mustard, will answer the end aimed at. When the numbness is attended with loss of motion, paralysis is to be feared. —See FROSTBITE, MORTIFICATION, PARALYSIS.

NURSE, FOR CHILDREN.—For this office there are two kinds of nurses, the wet nurse and the dry nurse. *The wet nurse* acts as a substitute for the mother, or aids her when there is a deficiency in the maternal supply of milk. When a wet nurse is required, the selection should be left to the medical attendant. The following are deemed sure characteristics of a good nurse:—She should be between twenty-five and thirty years of age, strong in constitution, full-chested, of sanguine lymphatic temperament, brown-haired, with perfect and white teeth, and full red lips. The milk drawn into a spoon should be white, with a slight bluish tint, its taste saccharine, and its consistence not too thick. In addition to the physical qualifications of a wet nurse, her mental capacity and moral deportment should also be regarded. Her temper and disposition have much to do with the healthy nurture of the child, for it is well known that mental emotions are apt to affect the milk, and so act upon its properties as to render it pernicious to the child. Temperance in eating and drinking, is another important qualification; the latter especially, for when a nurse is addicted to an immoderate use of stimulants, the greatest injury is likely to be inflicted on the suckling infant. The offices of a wet nurse should be made available only where a positive necessity exists: the suckling of a child is the natural office of the mother, and while it does not injure the parent is calculated to be of the greatest benefit to the infant. It should also be borne in mind, that the child will naturally place its affections where it receives its sustenance, and will love the nurse in preference to the mother; and although this may in time wear off, the estrangement while it lasts causes great pain to a mother's heart. *The dry nurse* is a person who brings up a child by hand when the mother is incapable of suckling her child, and a wet nurse cannot be substituted. As the person thus selected is generally removed out of the mother's reach, great care should be exercised in making the selection. A sensible, kind, and patient person, who possesses some knowledge of the natures and habits of children is indispensable; and the person most likely to possess these qualities, is one who has had children of her own. When parents thus intrust their children into the hands of a dry nurse, it would be well if they paid them a visit from time to time, quietly and unexpectedly; for it is sometimes the case, that children thus situated are neglected, save at such times when a visit from the parents or friends is expected.

NURSE, FOR THE SICK.—In cases of illness, the patient's recovery depends almost as much upon the nurse as upon the medical treatment; and it is absolutely necessary that some one should be in attendance on the sick, to carry out the directions of the doctor, and to administer to the numerous wants of the patient. The person chosen for this office, should be neither too young nor too old, and few are fit to occupy such a post under thirty years of age, or to retain it beyond sixty. As a matter of course, a nurse should enjoy good health and possess the strength and stature necessary for lifting and moving the patient. Activity, order, and cleanliness are indispensable A cheerful temper and an obliging disposition, it is almost needless to mention. All bad habits, such as snuffing, smoking, and immoderate drinking, are to be decried; also unusual and irritating noises, as coughing, sniffing, humming, &c. A nurse ought to be a light sleeper, awake to the slightest call or movement, and no snorer; she should also be quick and yet light in her movements, and able to perform all her offices without noise or bustle. It is frequently necessary that a nurse should be able to exercise considerable influence over the invalid, and to accomplish this she must be firm without being rough, and determined without exhibiting anger. Good judgment on the part of the nurse is of great consequence; thus, in conversing with the person under her care, she should avoid all topics of a gloomy and repulsive nature; and having studied the whims and prejudices of the invalid, endeavour to interest and amuse, by discoursing upon congenial topics. A nurse ought to be able to read perfectly, so that she may administer the medicine, and follow other written directions without error. This qualification will also render the nurse an agreeable companion, as she may read to the patient when he is unable to do so himself. Even the dress of the nurse should be studied, she should not attire herself in habiliments either of too sombre or too gaudy a character, a light-coloured and neat apparel will be most grateful to the eye. Nurses are entitled to a certain amount of consideration from those who employ them. Their confinement in the sick chamber should be relieved

for an hour or two during the day, so that they may have an opportunity of taking air and exercise, both for their own sake and that of the patient. They should also be treated with kindness and respect by the various members of the family, and be made to feel that their offices are rather those of a friend than a menial.

NURSERY, FOR CHILDREN.—It will always be found better, both for the children and the family generally, that a room in the house should be set apart for the sole use of the younger members. The aspect of this room should be south-eastern, or as near that as possible, so that the fullest amount of sun, light, and air may be admitted into the apartment. The room should be situated at the top part of the house, this being not only the most healthy but the most convenient for domestic arrangements generally. The apartment should be large and lofty, and sparely furnished, so that the children will be less likely to hurt themselves when falling or running about. In fine weather the windows should be opened, and this should also be done on quitting the apartment for a time. The outsides of the windows should be guarded by strong iron bars, closely fixed, to prevent the possibility of a child falling through. The utmost cleanliness should be observed, the room being kept well scrubbed and swept, and every article in it thoroughly dusted. Certain rules should be laid down to promote the moral and physical welfare of the children; and every mother should pay a daily visit to the nursery, in order to assure herself that these rules and regulations are being carried out.

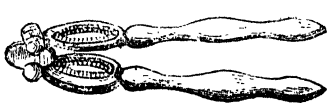
NURSERY, IN HORTICULTURE.—A reserve garden, or portion of a garden, devoted to the rearing of trees, shrubs, and hardy plants, during their early stages of growth, before they are destined for the fruit or pleasure ground. Nursery culture embraces every part of gardening. The essential part is the art of propagation; even grafting, budding, and layering require to be carefully, skilfully, and expeditiously performed, and the future progress of the scion, bud, or shoot carefully watched. Next to propagating, rearing requires attention, and especially transplanting and pruning. In a nursery for fruit trees, the following rules should be observed. That the soil should not be better than that in which the trees are to be planted out. That the soil ought to be neither too wet nor too dry, but of a medium nature—though, of the two extremes, dryness is to be preferred. The ground must be enclosed in such a manner that neither cattle nor vermin can come in, and so as to exclude especially hares and rabbits. The ground, after being enclosed, should be carefully trenched about two feet deep in August, and when trenching, the ground should be cleansed of the roots of all noxious weeds. The season arrived for planting, level down the trench, about the beginning of October, and then lay out the ground into quarters, and prepare the beds, in which the seeds or stones of the fruit may be sown. Transplant the stocks in the second year; draw a line across the ground, and open a number of trenches exactly straight; then take the stocks out of the seed beds, in doing which the ground should be raised with a spade, in order to preserve the roots as entire as possible; prune off the very small fibres, and if there be any that have a tendency to root directly downwards, such roots should be shortened. Then plant them in the trenches, if they are designed for standards, in rows, three feet and a half or four feet from each other, and a foot and a half distant in the rows; but if for dwarfs, three feet row from row, and one foot in the row, will be a sufficient distance. These plants should not be headed or pruned at top. If the winter should prove very cold, lay some mould on the surface of the ground near the roots of the plants, taking care not to let it lie too thick near the stems of the plants, and to remove it as soon as the frost is over. In the summer season destroy the weeds, and dig up the ground every spring between the rows.

NURSERY GOVERNESS.—The person selected for this post should not be too young, or her authority will be in all probability disputed by the children placed in her charge. The accomplishments essential for the post will differ according to the social position of the family, and the peculiar views of the parents. Generally speaking, they comprise the rudiments of a plain education, and music, French, and drawing. In teaching children, however, much depends on the temper and disposition of the instructor. A person with moderate acquirements, and possessing a winning manner, will be able to impart a great deal more to her pupil, than a governess who, however highly accomplished, is stern and austere in her mode of teaching. It would be well, therefore, for a nursery governess first to secure the affection of her young charges, and then, by the same line of conduct, to guide them through their studies, as though it were a pastime rather than a task. Her temper will be frequently sorely tried, but she should remember that children are naturally wayward and capricious, and she should humour rather than vex them. The disobedience or the good conduct of a child may be regulated by a mere word or look. A certain measure of periodical arrangement can scarcely be introduced too early; even at the age of three, the infant may be initiated into a methodical distribution of time: thus, the breakfast, the morning walk, the mid-day sleep, the dinner, the evening ablutions, and, finally, the prayers, should each have their allotted hour, and that hour be observed with strict punctuality. In addition to the usual hours of instruction, the principle of imparting knowledge should be carried out in ordinary conversations. It may begin with the morning walk: and with very young children this is the best opportunity for conversational instruction. Every object may be made subservient to the purpose. In the country, the names and description of trees, flowers, or shrubs; the qualities

and use of cattle, or agricultural implements, the occupation of field labourers, the nature of farming, the conversion of corn into bread, &c. In town, the use of shops, the nature of buying and selling, the variety of trades, the utility of carts, drays, and carriages of all kinds, with numerous other objects which are constantly meeting the eye.

NURSERY MAID.—The proper selection of a person for this situation is of great importance to the moral and physical training of a child. A nursery maid should have a natural fondness for children; she should be lively enough to amuse them, yet sedate enough to check herself and them from exceeding the bounds of prudence and propriety. Firmness on all important points should be united with good nature. There must also exist a vigorous state of health, and yet a lively sympathy with the ailments of the young. The age at which a nursery maid should be selected is difficult to assign. Young women are possessed of a flow of animal spirits, best in keeping with the playfulness of the child; but they are frequently wanting in steadiness. A more elderly person, on the other hand, is apt to be somewhat too staid in her demeanour, and with settled habits that cannot brook being disturbed by the pranks of the child. When these opposite qualities are found to blend in one and the same person, there should the choice be made.

NUTCRACKERS. An invention at once simple and useful in this direction, is shown in the accompanying engraving. The old style of nutcracker is at best an awkward



contrivance, and uncertain in its operation, sometimes scarcely breaking the shell at all, and at others crushing the whole nut to pieces. In the nutcracker here shown, instead of the flat plates, there are oval hollows, with toothed borders. The nut drops into this hollow, and the shell is cracked without injury to the kernel. It also takes an instantaneous hold of the nut, however large or small, and with a gentle pressure of the hand, effectually cracks it without the slightest possibility of the nut escaping.

NUTMEG.—Nutmegs are of two kinds, the *myristica* and the *pyrrhosa*. The nutmeg is tonic, stimulant, and anti-spasmodic, and is frequently given in cases of indigestion and flatulence. In cookery, pastry, &c., it is more particularly used as a spice, on account of its fragrancy and agreeable taste. The preparations of it in medicine are various, namely, infusions, tinctures, confections, &c.; and as a distilled water, as a vehicle for the administration of other medicines. The essential oil is used as a perfume, and also as an external application in cases of rheumatism.

The economical use of nutmegs is well worth knowing; if a person begin to grate a nutmeg at the *stalk* end, it will prove hollow throughout; whereas the same nutmeg, grated from the other end, would have proved sound and solid to the last. This circumstance may be thus accounted for. The centre of a nutmeg consists of a number of fibres issuing from the stalk, and its continuation through the centre of the fruit; the extremities of which fibres, though closely surrounded and pressed by the fruit, do not adhere to it. When the stalk is grated away, those fibres, having lost their hold, gradually drop out, and the nutmeg appears hollow: as more of the stalk is grated away, other fibres drop out in succession, and the hollow continues through the whole nut. By beginning at the other end, the fibres above mentioned are grated off at their core end with the surrounding fruit, and therefore do not drop out or cause a hole.

NUTMEG ESSENCE.—Dissolve an ounce of the essential oil of nutmeg in a pint of rectified spirits. In confectionery and culinary preparations, this is an invaluable essence, although somewhat expensive.

NUTS, DIETETIC PROPERTIES OF.—All kinds of nuts are extremely difficult of digestion, and at the time that they are usually eaten, namely, immediately after dinner, they are especially injurious. Persons with delicate stomachs or any affection of the chest, should scrupulously avoid eating nuts at any time; and when they are partaken of, they should be eaten with a little salt, which assists their digestion.

NUX VOMICA.—A tree indigenous to the East Indies. The seeds afford the substance known as nux vomica. This may be classed among the most powerful of vege-

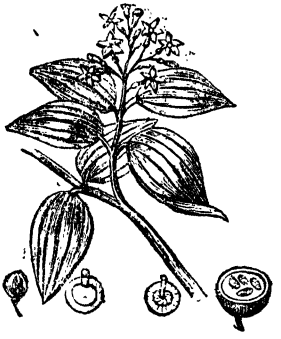


table narcotics. To man and most animals it proves a virulent poison. Administered to dogs, cats, rats, rabbits, and several kinds of birds, it produces death in a very short time.

O.

OAK.—This is the most valuable of all the timber trees grown in Great Britain. All the species are readily raised from their acorns, sown as they drop from the tree, or collected, dried, and kept packed in sand in a dry place until the following March. For raising the seeds in the nursery, a good fresh loamy soil is selected. Having prepared the beds, the acorns, which should be carefully selected and taken from the finest trees, are to be sown about three inches apart and covered over with soil. This operation is best performed in February, although some prefer the autumnal months. In about six weeks the plants will appear above ground, and in these beds they may remain for two years, without any further care than keeping them free from weeds. The ground, when they are to be planted out, must be prepared by deep trenching or ploughing several times. The plants are then pulled up, the tap root cut off, and a sufficient hole being made with a spade, successively placed into the fresh earth, in rows four feet apart. In raising oaks from the seed, the ground is to be prepared in the same manner, and marked out into lines or spaces. The acorns are then deposited about ten inches apart in a hole made with a dibble, and covered up. In all cases of planting, shelter and warmth are essentially necessary; and when the aspect is unfriendly, the plantation should be skirted to a sufficient density with Scotch firs, mixing some of them also in the body of the wood. In this manner an exposed situation may be made to produce excellent timber; and when the trees are grown to a size sufficient for their own protection, the firs in the centre should be removed, otherwise they will injure the young oaks. On the judicious thinning and clearing of young wood depends much of the planter's success and profit. In default of acorns, most of the foreign sorts may be grafted on the common kinds. The young plants are transplanted twice or thrice in the nursery, and when four or five years from the acorn, may be removed to their "final stations." Most species of oak will grow in a deep clayey loam; but a good gravelly loam upon a subsoil of blue ferruginous clay, produces the finest timber in the shortest time; they will grow in any soil not marshy, not attaining, however, any considerable size in a poor sandy soil or at a considerable elevation. Particular varieties are kept up by grafting. The common British oak, flowers in the spring; generally beginning to open about the first or second week in April; about the third week the leaves begin to appear, at which time the flowers are in full bloom; and about the beginning of May, the leaves will be quite out, and remain until the autumnal frosts come on. When the oak grows alone it is moderately low, and its branches spreading. In this case the timber is also said to be more compact and stronger, and the crooked arms or branches better suited for shipbuilding. The wood of the oak, though full of minute pores, forming to appearance a spongy net-work, is yet of great strength and durability. For general purposes, the oak is useful at every age, and more durable when of small diameter than that of any other of the hard woods. The value of the bark of young trees for tanning is greater than that of such as are old.

OAK WOOD, IMITATIVE.—A colour which imparts to wood the appearance of oak is compounded as follows:—The basis consists of three-fourths of ceruse, and a fourth of ochre de rue, umber earth, and yellow de Berri, the last three ingredients being employed in proportions which lead to the required tint; a colour will thus be formed equally proper for distemper, varnish, and oil.

OAKUM.—The substance with which old ropes are reduced when they are untwisted, loosened, and drawn asunder. It is principally used in caulking the seams, tree-nails, and bends of a ship, for stopping or preventing leaks.

OAR.—A long piece of timber, flat at one end and round or square at the other, used to make a vessel advance upon the water. —See ROWING.

OAT.—This is a very useful grain, and more peculiarly adapted for northern climates than either wheat, rye, or barley. The varieties of oats are numerous, the most commonly cultivated are the long black oat (*fig.* 1), and the white oat (*fig.* 2).

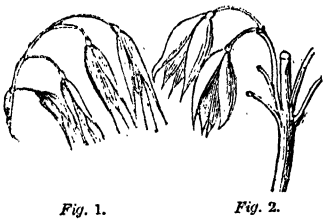
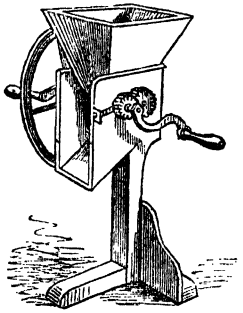


Fig. 1. *Fig.* 2.

The soil for oats may be any kind whatever, from the stiffest clays to moss or bog, provided it be laid sufficiently dry. The most tenacious clays and meagre gravels and sands will produce a crop of oats, if ploughed at a proper season and the seed judiciously

sown and covered. The preparation of the soil for oats is less than for any other grain. It is almost always the first crop on newly broken-up lands, and as it prospers best on a soil not too finely pulverized, it is commonly sown on one earth. In regular rotations, oats are generally sown after grass; sometimes upon land not rich enough for wheat, that has been previously summer-fallowed, or had carried turnips; after barley, and rarely after wheat, unless cross-cropping from particular circumstances become a necessary evil. One ploughing is generally given to the grass lands, usually in the month of January, so that the benefit of frost may be gained, and the land sufficiently mellowed for receiving the harrow. The best oats, both in quantity and quality, are those which succeed grass. *The climate for oats* should be cool and moist; when dry and warm, the panicles are so dried and contracted that they cease to convey sufficient nourishment to the ears, which thus become unproductive. *The season for sowing oats* is from the last week in February to the end of April. About the middle of March is most generally preferred. The seed should be plump, fresh, and free from the seeds of weeds. The quantity of seed, where oats are sown broad-cast, is usually from four to six bushels to the acre. *The mode of sowing* is almost universally broad-cast; but where they are sown after turnips, or on other well pulverized soils, the row-culture is sometimes adopted. *The after-culture* depends on the mode of sowing, but seldom consists of more than weeding before the flower-stalks begin to shoot up. *In harvesting oats in England*, they are generally cut down with a scythe, and carried loose to the barn or stack. Oats are ready for reaping when the grain becomes hard and the straw yellowish. They should generally be cut before they are dead ripe, to prevent the shedding of the grain, and to increase the value of the straw as fodder. *The diseases of the oat* are few; sometimes it is found attacked by the smut; but the more common injury sustained by oats is in the form of wire worms, or larvæ of insects which generally abound in lands newly broken up from turf. One of the most certain modes of avoiding these is, by not ploughing the ground, especially if old turf, till immediately before sowing. By this means the insect is turned down, and before it can work its way to the surface, the corn is beyond its reach. *The produce of oats* differs materially according to the soil, climate, and the fitness of the particular variety for the land. The highest quantity, soil and climate being favourable, may be estimated at seventy bushels, and the lowest quantity, twenty bushels per acre: the average being about four quarters.

OAT CRUSHER.—As a general principle for economizing horse-corn, and as an especial aid to old animals and quick feeders, the oat crusher, by which the grain is reduced to a coarse meal, is a necessary adjunct to a stable. This implement may be obtained at various prices, according to size and capacity; its mode of operation is self-explanatory. It is estimated that by the employment of this machine, horses generally may be kept at one-half the ordinary



cost, from the simple reason, that when the corn is eaten whole, a large quantity of it is undigested, and is therefore quite useless as a means of nourishment.

OATMEAL CAKES.—Put a pound of oatmeal in a basin or bowl, take a pint of boiling water, with half an ounce of salt butter or lard melted in it to make the cakes crisp. Pour this boiling over the meal, stirring it as quickly as possible into a dough, and then turning it out upon a baking-board, upon which it is to be rolled until it is as thin as will allow it to hold together, when it is to be stamped into the shape of small round cakes. These are to be first placed on a girdle to make them firm, and afterwards toasted before the fire alternately on each side till they are quite dry and crisp. *To make unfermented cakes.*—Soak a pound of oatmeal for ten or twelve hours in a pint of sour buttermilk. Then rub a quarter of an ounce of carbonate of soda and a little salt into a pound of flour, and mix it with the oatmeal. Roll it out to any thickness required, and bake it in a moderate oven.

☞ Oatmeal, 1lb.; water, 1 pint; butter or lard, ½oz. *Unfermented cakes*—Oatmeal, 1lb.; buttermilk, 1 pint; carbonate of soda, ½oz.; salt, sufficient; flour, 1lb.

OATMEAL CAUDLE.—Mix together a quart of new ale, a pint of stale beer, and a quart of water; add half a pint of fine oatmeal, six cloves, two blades of mace, half a teaspoonful of nutmeg, and half a teaspoonful of allspice. Set this mixture over a slow fire in a saucepan, and let it boil for half an hour, stirring it well all the time; then strain it through a coarse sieve, add half a pound of sugar, and the rind of half a lemon. Pour into a pan, cover close, and warm before serving.

☞ Ale, 1 quart; beer (stale), 1 pint; water, 1 quart; oatmeal, ½ pint; cloves, 6; mace, 2 blades; nutmeg, ¼ teaspoonful; allspice, ¼ teaspoonful; sugar, ½lb.; lemon-peel, ½ of 1.

OATMEAL, DIETETIC PROPERTIES OF.—As an article of human food, oatmeal is

not adapted for general consumption, it is deficient in some of the properties which characterize wheaten flour, and is thereby rendered difficult of digestion, except with the most robust. This unwholesome quality, however, may be rectified to a great extent by mixing with the oatmeal an equal portion of Canadian flour.

OATMEAL GRUEL.—This may be either made from the meal itself, or from the prepared grits. In the former case, mix the quantity of oatmeal that is to be used with a little milk or water in a basin; continue mixing it until it is perfectly smooth, then turn it into the saucepan, adding more water or milk until it is reduced to the consistence desired, then boil it and keep stirring until it is done. To make the gruel from the prepared grits, mix up a teaspoonful of meal with a little cold water, and then stir boiling water into this, after which it requires boiling for a quarter of an hour, and should then be strained and mixed with an equal quantity of milk.

In cases of sickness, oatmeal gruel forms a nutritive and light diet. It is essential, however, that it should be very thin, for when thick it is too heating and stimulating an aliment; a little spirits or wine may be added when considered necessary, and it may be sweetened with sugar and acidulated with lemon-juice. In no case, however, should butter be added.

OATMEAL PORRIDGE.—This is a favourite preparation for breakfast and other meals in Scotland and the North of England. It is made as follows:—Put as much water as will make the quantity of porridge required into a saucepan, let it boil, then take a handful of meal in the left hand, and drop it gently into the water while stirring the meal and water quickly round with the right; continue doing this until the mixture is of the consistence of thick gruel, add salt to taste, then let it boil for ten minutes, add a little more boiling water, and boil for five minutes more until it becomes quite smooth; turn into a dish, and serve it with milk.

OATMEAL PUDDING.—Soak four ounces of brown bread and two ounces of oatmeal in a pint of boiling milk; when cold, stir in two eggs, well beaten, and a little nutmeg and sugar; pour the mixture into a buttered basin, and boil it for an hour.

☞ Brown bread, 4ozs.; oatmeal, 2ozs; milk, 1 pint; eggs, 2; nutmeg and sugar to taste.

OATS, FOR HORSES.—Oats form the corn food for horses, and are the best general addition to hay. In wet weather, however, they are scarcely sufficiently stimulating, and require the aid of beans for that purpose. The usual proportion is a quartern of oats with half a quartern of beans. Before the oats are given to the horses they should be sifted, and the stones taken out. Oats are liable to become musty, and may be preserved by the following simple method:—Have fixed on the loft above the stable, a vessel resembling the hopper of a mill, and let the grain fall into a square pipe about four inches diagonal, communicating with a cupboard set into a wall, but with its end so near the bottom that there shall never be above a desirable quantity in the cupboard at a time, which being taken away, another supply succeeds; by this continual motion the oats are kept sweet, which, when laid up otherwise in large quantities, and suffered to lie idle, would turn musty.

OCHRE.—An earthy substance with which some metallic oxide is mixed, commonly of a yellow, brown, or red colour. The colour of such specimens as are dark may be rendered a brighter red by calcination. The ferruginous ochres which are most common, appear to have been produced by the decomposition of the martial pyrites, which consist of sulphur and iron.

OCTOBER, GARDENING FOR. — *Kitchen garden.—Asparagus*, cut down and dress the beds with litter. *Beet*, transplant. *Cabbage*, transplant in close rows or in beds, to remain till spring. *Cauliflowers*, transplant in the last week, to receive the protection of frames. *Endive*, transplant in warm borders. *Horseradish* of two summers' growth, take up. *Jerusalem artichokes*, take up. *Lettuce*, sow in the first week. *Mazagan beans*, sow in the last week. *Parsley*, protect on the approach of frost. *Parsnips*, transplant. *Peas* for frames, sow. *Potatoes*, take up. *Radishes*, sow in the first week. *Savoys*, transplant.

General remarks. — During this month trench, drain, and manure. Earth up and stir the surface, only in fine dry weather. Hoe, rake, thin, weed, and dress off all beds of winter crops. As crops are cleared, dig and prepare the vacant ground. Protect all newly risen annuals, and recently deposited seeds. Propagate the alliaceous tribe and culinary perennials. Destroy insects. See that the root-cellar is perfectly dry, and that abundance of sand is laid over the roots. Attend to the putting away of seeds in the store-room, and deposit them securely from vermin.

Flower garden.—Anemones, plant in properly prepared beds. *Auriculas*, protect from heavy rains by mats. *Carnations*, shield from frost by matting. *Crocuses*, prepare pots of suitable earth for. *Dahlias*, stake firm against the wind. *Daisies*, propagate by dividing the roots. *Fuchsias*, protect from winter by a framework of seeds and a layer of peat earth and sand. *Hyacinths*, put into water-glasses. *Jessamine*, plant out last year's layers and cuttings. *Jonquils*, put into water-glasses. *Larkspurs*, sow in pots for the following spring. *Laurels*, plant out last year's layers and cuttings. *Mignonette*, put into boxes and pots under cover. *Narcissus*, put into water-glasses. *Pansies*, sow in pots to come in early next spring. *Pinks*, bed out. *Roses*, pot; prune and well stake the standard sorts. *Tulips*, plant seedlings and offsets, but not the main crop.

General remarks.—Prepare composts. Stir the ground only in dry weather. If the season has been very dry, flower-borders may be dug over about the end of the month. Attend to neatness, and remove all the evidences of decay as fast as they appear.

sow annuals in pits, for prolongation in cold frames and pots, and some of the hardier sorts in warm borders, to come in early next spring, if the weather should prove mild. Transplant biennials and perennials in the nursery to stand till spring. Remove strong plants to where they are finally to remain. Begin at the end of the month to remove Georgina roots to be dried in an open shed, and then carried to the store-room. About the end of the month prepare a heap of light and fresh sandy loam, and a sufficient number of proper-sized pots, for the reception of as many bulbs and tubers as may be required for early and late forcing. Dig the clumps or pots intended for the hardiest sorts of bulbs and tubers, which now require to be put in. Rosaries may be pruned and regulated, laying down the long, short, and straggling branches.

OCTOBER, THINGS IN SEASON. — *Fish:* Barbel, brill, carp, cockles, cod, conger-eels, crabs, dace, dory, eels, gudgeon, haddocks, hake, halibut, herrings, lobsters, mussels, oysters, perch, pike, prawns, salmon-trout, shrimps, smelt, soles, tench, thornback, turbot, whitings.

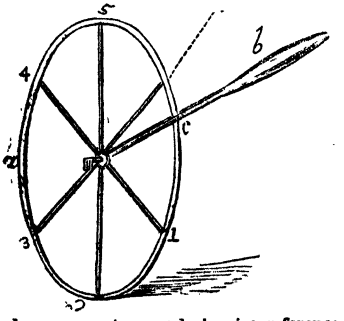
Fruit.—Almonds, apples: pearmain, golden pippin, golden rennet, royal russet; bullaces, black and white, damsons, figs, filberts, hazel-nuts, grapes, medlars, peaches, pears, quinces, walnuts.

Meat.—Beef, mutton, pork, veal, venison (doe).

Poultry and Game. — Chickens, dotterel, ducks, fowls, green-geese, grouse, hares, larks, moorgame, partridges, pheasants, pigeons, rabbits, snipe, teal, turkeys, wheat-ears, widgeon, wild-ducks, wild-pigeons, woodcocks.

Vegetables.—Artichokes, broccoli, cabbages, cauliflowers, celery, colewort, peas, potatoes, radishes, salad, savoys, skirrets, shalots, spinach, tomatoes, truffles, turnips.

ODOMETER.—An instrument designed for measuring roads on the following principle:—The wheel, (*a*), is made of light iron,



and measures two yards in circumference, being divided by six spokes into feet. One spoke must be painted white. The handle is divided at *c*, like a fork, and embraces each end of the axis by its elasticity. Through the axis is a hole into which the end of the way-wiser fits, and is held fast by a nut. The way-wiser is an index with a face somewhat like a clock, upon which are marked certain figures, which assist in indicating the number of revolutions performed by the wheel. The advantages of this instrument are obvious; any person by merely walking from one end to the other of any road, hedge, wall, ditch, &c., with the odometer, which is not more troublesome than a walking-stick, may arrive at the exact extent more correctly than by a measuring chain.

OIL.—See HAIR OIL, MACASSAR OIL, OLIVE OIL, &c.

OIL-CLOTH.—A material made on the same principle as floor-cloth, but on much lighter and thinner canvas, covered with a fine oil paint and a more delicate pattern; it is chiefly used for table covers, mats, &c. A piece of oil-cloth, about twenty inches long, is a useful appendage to a common sitting-room. Kept in the closet, it can be available at any time to place jars upon, &c., and thus prevent the table or cloth from becoming marked or soiled. For directions for cleaning oil-cloth, see FLOOR-CLOTH.

OILED PAPER.—Brush sheets of paper over with boiled oil, and suspend them on a line until dry. The paper will then be fit for use to tie over pots, jars, &c.

OIL, FOR LIGHTING. —The oil used for giving light, acts upon a uniform principle; namely, by feeding the wick in which it is immersed, as fast as combustion goes on. For the purposes of lighting, various kinds of oils are used, which have special advantages to recommend them; of these, colza oil, which is extracted from seed by pressure, is the most generally used, as it is free from the dirt and unpleasant odour which usually accompany fish oils, hitherto employed for lighting; cocoa-nut oil, and palm oil, are also extensively used, and possess similar advantages. As a general rule, the best lamp-oil is that which is clear and nearly colourless, like water. None but the winter-strained oil should be used in cold weather. Thick, dark-coloured oil burns badly, and it is in vain to try to use it. If the consumption of oil is moderate, it should be purchased in small quantities, as it spoils by keeping; and frequently when it has been kept for several months, it will not light at all. When such is found to be the case, the best plan is to empty it all out, clean the can, and fill it with a fresh supply. Oil should be kept free from all exposure to atmospheric air, as it is apt to absorb considerable quantities of oxygen. *To purify common lamp-oil*, begin by beating the oil well with a stick, and continue beating; add at four separate times, for twenty-five gallons of oil, a pound and a half of sulphuric acid; a quarter of an hour afterwards add half a pound of tartaric acid, in powder, and three pounds of quick-lime; continue to beat this liquid for about twenty minutes, then add six quarts of water, and stir well for five minutes. Four days afterwards, draw off the oil from the water, and

filter it, if it should be necessary, through a hair-bag containing a rather thick bed of animal charcoal. *To economise oil*, dissolve, in a glass of water, as much salt as will fully saturate the water; steep the wick in this, and afterwards dry it; pour into the water an equal quantity of oil, and then put the mixture into a bottle, and well shake it, in order to incorporate it thoroughly; trim the lamp with this mixture, and with the prepared wick. By this method not only will the oil last longer, but all smoke will be avoided.

OIL PAINTINGS, TO CLEAN.—Mix an ounce of spirits of turpentine with an ounce of spirits of wine; with this mixture, wash the paintings gently with cotton wool, then wash them with turpentine alone; if there are any stains which this will not remove, the paintings should be washed with an infusion of kali; when dry, put on a thin varnish, composed of two ounces of mastic dissolved in six ounces of turpentine; at the end of a few days, add another coat of varnish, such as is sold by the colour makers for oil paintings may be added.

OIL PAINTINGS, TO VARNISH.—According to the number of pictures to be varnished, take the whites of an equal number of eggs, and the same number of pieces of sugar-candy, the size of a hazel-nut; dissolve, and mix with a teaspoonful of brandy; beat the whites of the eggs to a froth, and let it settle; put the clear liquid to the brandy and sugar, mix them well together, and varnish the pictures with it.

OILSKIN.—Oil is applied to various materials to render them waterproof. If a stout coat or wrapper be wanted, let the material be strong unbleached or brown calico. If a light garment is preferred, make use of brown holland. Soak the article in hot water, and hang it to dry; then boil ten ounces of India-rubber in a quart of raw linseed oil, until dissolved; this will require about three hours' boiling; when cold, mix with the oil so prepared about half a pint of any colour which may be preferred, and of the same consistency as that used for painting wood. With a paint-brush lay a thin coat over the outside of the wrapper, brushing it well into the seams. Hang it to dry in a fair current of air, but sheltered from a powerful sun. When thoroughly dry, give it another coat; dry as before, and then give a third and last coat. The article, when well dried, will be fit for use.

OINTMENT.—A greasy or unctuous preparation, about the consistence of firm butter. The ointments most likely to be useful for domestic practice will be found under their several heads.—See ELDER FLOWER, SPERMACETI, SULPHUR, ZINC, &c.

OLIO.—A dish prepared as follows:—Boil three heads of small close cabbages, together with carrots, turnips, potatoes, and small onions; drain them from the water, and cut them into pieces. Mix all together with two handfuls of spinach-leaves, two ounces of butter, three tablespoonfuls of cream, and a little salt and pepper; put the whole into a stewpan, cover it closely, and stew for two hours; then stir in a piece of butter rolled in flour, and when quite done, serve.

OLIVE, CULTURE OF.—The olive is a low, branchy evergreen tree, rising from twenty to thirty feet, with stiff, narrow, bluish-green leaves. The olive may be propagated by seeds, cuttings, layers, suckers, and inoculation. In England, as a green-

house plant, it is raised from cuttings; but where it is intended to grow a few trees in the forcing department, for the sake of their fruit, a few strong plants should be procured from Genoa, which will produce fruit in three or four years; the trees should be planted as standards in an area, or training on a wall. If a house is not devoted to this fruit, one might be appropriated for it and the pomegranate, giving each its respective soil, and recollecting that the olive will not bear a very high degree of heat. The olive will grow luxuriantly in a strong, clayey, richly manured soil, but will not be so prolific as in a dry, calcareous, sandy, or rocky situation, which ought to be imitated in some degree in the composition prepared for the area or border of the olive-house. In pruning, the object is to have a regular distribution of wood of the former year, from the axils of the leaves of which the flowers spring out. When shoots of three or more years are shortened for this purpose, they do not produce blossoms; but wood of the preceding or current year may be shortened, and the shoots proceeding from them will produce blossoms in due course.

OLIVE OIL.—An oil procured from the fruit of the olive. The oil from Provence enjoys a higher reputation than any other, on account of its being prepared with greater care. This oil is used for a variety of purposes; for salads, for preserving fish, and occasionally as a medicinal agent. *To purify olive oil*, turn it into a crock or bottle, and pour in a quantity of pure water; shake the bottle vigorously, and let it stand for two hours. The mucilaginous matter, which is the cause of rancidity, will be separated

from the oil, and remain in the water. The oil may then be decanted and bottled for use.

OLIVE, PREPARATION OF.—Olives are prepared by steeping them in an alkaline lessive, to extract a part of their bitterness; they are next washed in pure water, to which an aromatic, as fennel, &c., is sometimes added. In this form, olives are served at table for the purpose of exciting the palate, and giving a relish to wine; in taste they are rather bitter, and it requires some habit to eat them with pleasure.

OLIVE SAUCE. — Remove the stones from some fine French or Italian olives by paring the fruit close to them, round and round in the form of a corkscrew: they will then resume their original shape when done. Weigh six ounces thus prepared, throw them into boiling water, let them blanch for five minutes; then drain and throw them into cold water, and leave them in it for an hour; drain them well, and stew them gently for twenty minutes in a pint of rich brown gravy; add the juice of half a lemon, and serve the sauce very hot. It may be served with ham and poultry.

☞ Olives, 6oz.; gravy, 1 pint; lemon-juice, ½ of 1.

OMELETTE.—A culinary preparation of French origin, somewhat resembling a pancake or fritter. As omelettes are quickly and easily made, and afford an agreeable addition to a repast, the following general observations respecting them will be found worthy of notice:—The pan used for frying should be quite small, for if the omelette be composed of four or five eggs only, and then put into a large pan, it will necessarily spread over it and be thin; the only partial remedy, when the pan is not of the proper size, is, to raise the handle of it high, and to keep the opposite end close down upon the fire, which will confine the eggs into a smaller space. No gravy should be poured into the dish with the omelette, for if it be properly done it will require none. Should the slight rawness, which is sometimes found in the middle of the inside, when the omelette is made the French way, be objected to, a heated shovel or a salamander may be held over it for an instant before it is folded on the dish. Omelettes may be made in a variety of ways as follows:—*Ordinary Omelette.*—Beat the yolks and whites of four eggs together, with a tablespoonful of milk and a little salt and pepper; put two ounces of butter into a frying-pan, and let it remain until it begins to brown; then pour in the batter, and leave it undisturbed for a minute; turn up the edges of the omelette gently from the bottom of the pan with a fork; shake it to prevent it burning at the bottom, and fry it till of a light brown. It will not take more than five minutes frying. *Sweet Omelette.*—This is nothing more than the ordinary omelette, upon which powdered sugar is put before it is turned; when it is turned, powder the outside also with white sugar, and press upon it a red hot iron; the iron should be about half an inch square, and pressed in streaks from one end to the other. *Friar's Omelette.*—Boil a dozen apples, as for sauce; stir in a quarter of a pound of butter, and a quarter of a pound of powdered loaf sugar; when cold, add four eggs, well beaten; put it into a baking dish thickly strewed over with crumbs of bread, so as to adhere to the bottom and sides; then put in the apple mixture; strew crumbs of bread over the top; when baked, turn it out, and grate loaf sugar over it. *Omelette Soufflée.*—Put into a stewpan an ounce of butter; when melted, add two tablespoonfuls of flour; stir them well over the fire so that the flour be thoroughly done, but not coloured; add by degrees a wineglassful of boiling cream, and four times the quantity of boiling milk; work it quite smooth, take it off the fire, add four yolks of eggs, sugar to taste, a few grains of salt, and a tablespoonful of orange-flower water; whip up strongly the whites of eight eggs, mix them lightly in the batter, put the whole into a soufflé dish, and bake for an hour. *Omelette with fine herbs.*—After having well beaten up any number of eggs required, and mixed them with a little salt, and a sprinkling of fine herbs, throw the whole into a frying-pan in which a little butter has been previously melted; when fried sufficiently brown, turn the omelette over on the dish in which it is to be served.

OMNIBUS, DIRECTIONS FOR RIDING IN.—Omnibuses, like all other vehicles, always keep to the left-hand side of the road; persons wishing to hail one, should bear this in mind, or they will have a difficulty in making themselves seen by the conductor or driver, and will be compelled to cross the road. On getting into an omnibus, place your hand on the roof as you pass along, to steady yourself, or you will possibly fall upon somebody, and be thrown from one side to the other. It is a sort of tacit understanding that the passenger last arriving should make his way towards the end of the vehicle, and your endeavouring to take an intermediate seat would be resented as an act of aggression. When you have the choice of seats, do not take either the one nearest the driver, or that at the farthest end; in the former case your feet are likely to be trodden upon by the passengers as they come in and go out; and in the latter situation you have a difficulty in making the conductor understand when you wish to alight, and a still greater difficulty in getting out. If, on entering an omnibus you have in your hand a stick or umbrella, turn the ferrule downwards, lest you should thrust it into any person's eye. Have the exact amount of your fare ready in your hand to give the conductor on being set down; or if you require change, settle with the conductor previous to arriving at your destination. Do not linger on the steps when alighting; the least forward movement of the omnibus is almost certain to throw you into the road. Never attempt to alight while the omnibus is in rapid motion; in wishing to oblige the conductor or to show off your agility, you may break your neck. Do not be officiously polite in handing persons in and out of the vehicle, holding their parcels, &c.; this kind of conduct is

always practised by persons who ride in omnibuses for the purpose of plundering the passengers; therefore, by adopting their ways, you may be unwittingly suspected of being one of the gang. When you mount on or dismount from the top of an omnibus, do it calmly and leisurely, first with the left foot, then with the right, then with the left again, and so on; never displace one foot till the other is securely planted. When you are on the roof, or the box seat, hold on by the nearest rail; for if you do not do so, a sudden start of the horses, or a jerk over a rut, is liable to pitch you off into the road.

ONION, CULTURE OF.—For a crop of onions, the soil should be rich, light, deep, and well exposed to the sun; the situation should be open and well drained, and entirely free from trees; if the soil be poor, abundance of manure should be applied in the preceding autumn or winter. Sea-sand, particularly if the ground is at all tenacious, is advantageously employed; coal ashes, and especially soot, are applied with particular benefit. In digging over the ground, small spots only should be turned over at a time, that the texture may be well broken and pulverized. Just before sowing, work and enrich the bed to the depth of eighteen inches, and then beat it flat and firm with a spade. Sow the seed at any time in March, thus: scratch drills by the line just so deep as to be clearly discernible, and scatter the seeds along them about three or four in an inch. Sift fine sandy earth over the seeds, and pat the surface even. In about six weeks after sowing, the plants will be of sufficient size to allow the first thinning and small hoeing, by which they are to be set out about two inches apart. If this be performed in dry weather, it will keep the beds free from weeds for six weeks longer, when they must be hoed a second time, and thinned to four inches apart; and now, where they have failed, the vacancies may be filled up by transplanting there some of the plants thinned out. The best time for doing this is the evening, and water must be given for several successive nights. In transplanting, the root only is to be inserted, and no part of the stem buried. The plants will be much benefited by having liquid manure applied to them twice a week. After the lapse of another month, they must be thoroughly gone over for the last time, and the plants thinned to six inches asunder. After this, they require only an occasional stirring of the surface with a hoe. In order to prevent them running too much to blade, in the month of July, before the tips change to a yellow hue, the stems should be bent down flat upon the bed, which not only prevents the over-growth of the blade, but causes the bulbs to become much larger than they otherwise would. The bend should be made about two inches up the neck. *The gathering of the crop of onions* should not be delayed beyond the beginning or the middle of September; but then full ripeness may be known, by the withering of the foliage, by the shrinking of the necks, and by the ease with which they may be pulled up. As soon as these symptoms appear, the onions must be taken up, the bed being frequently looked over; for if the whole crop is waited for, the most forward individuals, especially in moist situations or seasons, are apt again to strike root. When taken up, the onions should be spread thinly on the ground, but if the weather be wet, they had better be removed to a gravel walk, or to a space purposely covered with sand or gravel, in the full sun. Turn them over once or twice a day until they are thoroughly dried, and then store them in a well-aired loft or other appropriate place. In the store-house, they must be laid as thinly as possible, and afterwards hung up in ropes, and examined at least once a month. *To string onions*, take in your hand, three or four by the tails; tie them tightly with a new strand of matting, or a length of pack-thread; place on, two or three more onions; wrap the thread once or twice round their tails; place more onions, which also wrap hard, and so on, until the string is a yard or more in length. *To save the seed*, select some of the largest, well-housed, sound, firm bulbs, either in October, the beginning of November, or in February. Prepare a bed for them, and draw drills three or four inches deep, either a single row or two or three rows together, a foot asunder; in which plant the onions, six inches, ten inches, or a foot apart, and earth in about three inches. In planting double or treble rows, allow a space of two feet between each bed of two or three rows, to admit of a passage, both to place stakes and horizontal lines for the support of the seed-stems, and to cut down weeds. The plants will shoot up in stalks two or three feet high, producing each a large head of seed, which will ripen in August or September. The ripening of the seeds will be known by the husks assuming a brownish hue; the heads must be then immediately cut, otherwise the receptacles will open and shed their contents. Being spread on cloths in the sun, they become perfectly dry, when the seed may be rubbed out, cleaned of the chaff, and after remaining another day or two, finally stored. In sowing, it is of the utmost consequence to employ seed of not more than one year old, otherwise not more than one in fifty will vegetate. The goodness of the seed may be easily ascertained by forcing a small portion of it in a hotbed, or in warm water, a day before it is employed; when, if fertile, a small white point will soon protrude itself. *The size of onions is greatly improved* by simply taking the bulbs from the ground, preserving them during winter, and planting them again in the following spring at equal distances.

ONION RAGOUT.—Procure a pint of very young onions, together with four large ones; peel the whole of them, and cut them very small; put some good dripping or butter into a stewpan, and when melted, add the onions, and fry them a little brown; sprinkle with flour and shake them round till thick. Add a quarter of a pint of gravy, a little pepper and salt, and a teaspoonful of mustard; stir all together, and when tolerably thick, pour into a dish, and garnish with fried bread crumbs.

ONION SAUCE, BROWN.—Peel and slice some onions into a quart stewpan with an ounce of butter; set it over a slow fire and turn the onion about till it is very lightly browned; then gradually stir in half an ounce of flour; add a little brown gravy and a little pepper and salt, and boil up for a few minutes; strain it through a hair sieve, and serve it very hot.

ONION SAUCE, WHITE.—Peel six large white onions, cut them in half, and lay them in a pan of spring water for a quarter of an hour, then let them boil for a quarter of an hour, and if it is desired to have the sauce very mild pour off the first water, and cover the onions with fresh boiling water; let them boil till they are tender, drain them well in a hair sieve, lay them on a chopping-board, and chop and bruise them; put them into a clean saucepan with some butter and flour, half a teaspoonful of salt, and a little cream or milk; stir the mixture till it boils; then rub it through a sieve, adding cream or milk to bring it to the consistence desired.

ONION SOUP.—Brown half a pound of butter with a little flour in a stewpan, taking care that it does not burn; when it ceases hissing, put in twelve large onions sliced, and fry them very gently until tender; pour to them, by degrees, two quarts of boiling water, shaking the pan well round as it is being poured in; add a crust of bread; let it boil gently for half an hour, season it with pepper and salt; crisp the top of a French roll before the fire; put it into a saucepan with some of the soup to soak it, then turn it into the tureen; let the liquid boil for some time after the onions are tender, as it will impart a richer flavour to the soup; strain it off, pour it upon the French roll, and serve.

ONION VINEGAR.—Infuse an ounce of onions in a pint of vinegar for a fortnight, and strain it off, when it is ready for use.

ONIONS BOILED. — After peeling the requisite number of onions, let them lie for a couple of hours in cold water; then put them over the fire in a saucepan in cold milk and water, boil them till tender, and serve with melted butter poured over them.

ONIONS FRIED.—Peel the onions and cut them in slices; fry them in lard, butter, or the fat from the stock or other meat which is being cooked; continue stirring them while they are frying until they are of a deep brown colour.

ONIONS PICKLED.—*To pickle young onions*, select the small round sort; peel them, and steep them in strong salt and water for four days, changing the water two or three times; wipe them perfectly dry, put them into milk which is scalding hot, and let them lie until the milk becomes cold; then drain them and dry each separately in a cloth; after which put them into jars; pour over them as much white wine vinegar which has been boiled with as much white pepper as will cover them completely; tie them over first with wet bladder and then with leather, and keep the jars in a dry place ready for use. Another method of pickling onions is to put them without peeling into cold water, and keep them on the fire until the water boils; then take off the outer skins, and steep the onions in salt and water, previously to adding the vinegar. *To pickle Spanish onions*, proceed as follows:—Peel the onions, cut a small round piece out of the bottom, and scoop out a little of the inside; then lay them in salt and water for three days, changing them twice a day; then drain them and stuff them; first put in flour of mustard-seed, then some ginger cut small, together with a little mace and some shalot; then add more mustard, and fill up with some scraped horse-radish; replace the bottom piece, tie it on close; make a strong pickle of white vinegar, mace, ginger, nutmeg, sliced horse-radish, and a little salt; put in the onions, and let them boil up two or three times. In doing this, care must be taken that they do not boil too much, for they will then lose their firmness and will not keep; put them with the pickles into jars; on the following morning boil up the pickle again and pour over them.

ONIONS, PROPERTIES AND USES OF.—This vegetable may be considered either as a condiment, or as an article of absolute nourishment. In its raw state, especially, the onion, by virtue of the volatile oil which it contains, is a powerful stimulant, but one only to be used with impunity and advantage by persons who have strong stomachs. By boiling, the onion is deprived of much of its pungent property, and becomes an agreeable, mild, and nutritious vegetable. It is unwholesome either fried or roasted, a portion of the volatile oil being retained and rendered very irritating to the stomach. The onion possesses diuretic properties. A roasted onion cut in half and the centre scooped out, is a frequent domestic remedy applied to boils to hasten their breaking.

ONIONS ROASTED.—Choose the largest onions for this purpose, and place them, with their skins on, in a slow oven, or in a Dutch oven before the fire. They require a very long time to cook. They are excellent alone with only salt and butter, or with roast potatoes.

ONIONS STEWED. — Strip the outer skins from four or five Spanish onions, and trim the ends, but without cutting into the vegetable; arrange them in a saucepan of sufficient size to contain them all in one layer; just cover them with good beef or veal gravy, and stew them very gently for a couple of hours: they should be tender all through, but should not be allowed to fall to pieces.

OPAL.—A precious stone of the quartz family. The value of the opal is regulated according to the amount of fire or lurid gleam which is seen reflected beneath its surface; those showing the most, being of the highest value, and those displaying the least, deteriorating accordingly; until when no fire at all is reflected, they become comparatively worthless.

OPERA GLASS.—In optics, an instrument so called from its use at operas, &c. The focus is adjusted by a screw fixed between the two tubes, which usually turns to the right to increase the distance, and to the left to decrease it.

OPHTHALMIA is an inflammatory action of the *adnata*, or white coat of the eye, in which the eyelids also very frequently participate. From the extreme delicacy of the organ, and the immense importance of vision to the comfort and happiness of life, no disease requires more immediate and careful attention than inflammation of the eyes. Ophthalmia usually commences with pain or oppression across the forehead, a dry, hot, and pricking sensation in the eye, giving the idea of dust or grains of sand between the lid and the ball. Upon examination, the white part of the organ appears marked with red lines, or bloodshot, with here and there dark purple spots, where the blood has been effused; the inside of the lids at the same time are extensively injected with blood, and swollen or puffy, especially the upper, which often overlaps and closes the eye; at the same time, from the pressure they exert, adding materially to the pain. The objection, or as it is called, intolerance to light that is experienced from the first, as the disease advances, becomes unbearable, and causes, if the light be injudiciously admitted, excessive discomfort and pain; concurrent with these symptoms, there is great heat, considerable pain in the eye, with great redness, and tenderness on the brow, cheek, and round the orbit. From the first, there is a constant exudation of tears, which, after some hours, assumes a more tenacious character, covering the ball with a film of stringy mucus, or what is called muco-purulent matter, completely obstructing all vision. As the day advances, all the symptoms become greatly aggravated, and at night have reached their intensity; the pain, heat, stiffness, throbbing, and intolerance of light being all greatly augmented. *Treatment.*—The first measures to adopt are, the insisting upon instant rest, seclusion and darkness; and if the patient is young and robust, he should be bled from the arm, to the extent of twelve ounces, performing the operation standing, and from a large opening, so as to produce sickness or fainting. The bleeding should be immediately followed by an active aperient, such as the subjoined powder, followed in two hours by a black draught, or half an ounce of Epsom salts in plenty of water. Take of

Compound jalap powder	40 grains.
Scammony powder . .	10 grains.
Calomel	6 grains.

Mix, and make a powder, to be taken in jelly, treacle, or some thick substance. Directly an action has been effected on the digestive organs, doses of the following mixture should be given every hour, to keep up a state of nausea, and subdue the action of the heart and arteries. Take of

Epsom salts	1 ounce.
Tartar emetic.	2 grains.
Camphor water	8 ounces.

Dissolve. Give two tablespoonfuls for the first dose, and one every hour afterwards, while awake. For the first day the eye or eyes should be frequently bathed with lukewarm water; and if at bed-time the pain is very distressing, the patient should be given either 25 drops of laudanum, 10 grains of Dover's powder, or 1½ grain of opium in a pill, to ensure sleep. If on the second day the symptoms continue unabated, the purgative powder is to be repeated, with the black draught or salts, the patient put into a hot bath for seven or ten minutes, a blister placed behind one or both ears, the nauseating mixture continued, and the eyes bathed every hour with the following lotion made slightly warm. Take of

Sugar of lead	30 grains.
Sulphate of zinc . . .	20 grains.
Water, one pint, or . .	20 ounces.

Dissolve, and make a lotion. When a shade is worn, it should be large, and made, by the interposition of two pieces of cork, to stand out from the forehead, so as to allow the heated air to pass off through the space thus left between the face and the shade. In conjunction with these remedies, the diet throughout must be of the simplest and least exciting kind, such as tea and toast, gruel, and barley water; and not till the inflammatory action has subsided must there be any return to solid food or animal indulgences. It is sometimes necessary, after severe ophthalmia, to keep the blisters open for a few days, and by the discharge created by these drains, divert the blood accumulated from the delicate and already injured organ of vision. On the whole, by keeping the patient in a darkened room, the employment of the means above described, and avoiding all excitement, most cases of ophthalmia may be brought to a successful termination.

When the inflammation, however, becomes chronic, or long standing, it is then necessary to stimulate the eye, either by cold astringent lotions, to produce a slight degree of smarting, or by dropping into the eye a few minims of the wine of opium every day.—See EYE.

OPIUM.—The milky juice dried of the seed vessels of the common garden poppy. Opium is procured by making oblique incisions about half-way through the external wall of the unripe poppy capsule or seed vessel, and allowing the milky juice to become partially dry, when it assumes a brown colour and tenacious consistence; at this stage the opium is generally gathered, by scraping it off the capsule with a stick or some other instrument, by which it is transferred to the receiving vessel; it is then further dried, and formed into the masses in which it is sold. Opium, when bought as imported, is apt to contain much impurity; the best condition, therefore, is the properly prepared powder, which must be kept in a well-closed bottle. The soothing and sedative property of opium is well known, but it should be rarely resorted to, except under medical advice, and with great caution.—See LAUDANUM.

OPODELDOC. — Dissolve an ounce of camphor in a small quantity of spirits of wine; and also dissolve two ounces of soft soap in a little water; put these into a

bottle, add half a drachm of rosemary, and the same of oil of thyme; shake them well together; add three-quarters of a pint of spirits of wine and a quarter of a pint of water; set it in a warm place, and shake it occasionally, for a few days. This is an excellent remedy for bruises, sprains, &c.

ORANGEADE.—A pleasant summer beverage made as follows:—Steep the rinds of six China and two Seville oranges in a quart of boiling water for about six hours. Then make a syrup of three pints of water and a pound of sugar, and add it to the above with the juice of twelve China and two Seville oranges. Stir the whole well together, and pass it through a jelly-bag. Should further sweetness and flavour be desired, orange-flower water and capillaire may be added; and according to taste lemon-juice.

☞ Oranges, rinds of 6 China and 2 Seville, juice of 12 China and 2 Seville; water, 1 quart; *syrup*, water, 3 pints; sugar, 1lb.

ORANGE BISCUITS.—Boil whole Seville oranges in two or three waters till most of the bitterness is gone; cut them and take out the pulp and juice; then beat the outside very fine in a mortar, and put to it an equal weight of double refined sugar, beaten and sifted. Mix it into a smooth paste, spread them on dishes, and set them before the fire; when half dry, cut the paste into any form desired, turn the other side uppermost and dry that; then remove them from the fire, and keep them in a box with layers of paper.

ORANGE BRANDY.—Take the rinds of three lemons and of eight Seville oranges peeled very thin, and three pounds of sugar candy, pounded. Steep the whole in a gallon of brandy for four days and nights, stirring it frequently, and run it through filtering paper to clear it.

☞ Lemon-rinds, 3; Seville orange rinds, 8; sugar-candy, 3lb.; brandy, 1 gallon.

ORANGE BUTTER.—Boil six eggs hard, beat them in a mortar with two ounces of fine sugar, three ounces of butter, and two ounces of blanched almonds beaten to a paste. Moisten with orange-flower water; and when all is mixed, rub it through a colander on a dish, and serve with sweet biscuits between.

☞ Eggs, 6; sugar, 2ozs.; butter, 3ozs.; almonds, 2ozs.; orange-flower water, sufficient.

ORANGE CHEESECAKES.—Beat half a pound of blanched almonds to a fine paste, with orange-flower water; add half a pound of refined sugar and a pound of butter, which must be carefully melted without oiling, and allowed to become cold before using it; then beat the yolks of ten eggs, and the whites of four; pound two candied oranges and a fresh one, with the bitterness boiled out, in a mortar till as tender as marmalade; beat the whole together, and put into patty-pans lined with puff paste.

☞ Almonds, ½lb.; orange-flower water, sufficient; sugar, ½lb.; butter, 1lb.; eggs, 10 yolks, 4 whites; oranges, 2 candied, 1 fresh; puff paste, sufficient.

ORANGE COMPOTE.—Let oranges to the number required, lie in water for four hours; then boil them until tender, cut them in halves, and take out all the insides; to every pound of peel well pounded, add a pound of sugar; then remove all the skins and seeds from the pulp, add its weight of sugar, and beat it well; then mix it with the peel, and beat it again in a mortar, and pot it for use. In a cool and dry place, this compote will keep good for several years.

ORANGE CREAM.—Boil the rind of a Seville orange very tender, beat it fine in a mortar; put to it a tablespoonful of the best brandy, the juice of a Seville orange, a quarter of a pound of loaf sugar, the yolks of four eggs; beat all together for ten minutes; then, by gentle degrees, pour in a pint of boiling cream or good milk, beat till cold, put into custard cups, set into a deep dish of boiling water, and let them stand till they become cold. Place at the top small strips of orange-peel, cut thin, or preserved chips.

☞ Orange, 1; brandy, 1 tablespoonful; sugar, ½lb.; eggs, 4 yolks; cream or milk, 1 pint; orange-peel strips, or preserved chips, sufficient.

ORANGE, CULTURE OF.—The methods adopted for cultivating the orange, apply equally to the citron, lemon, lime, shaddock, &c. All kinds will *propagate freely by cutting*, either of the young shoots, or of that riper in character. They are prepared in the usual way, and inserted in pots of sand; a close frame with a bottom heat of seventy-five degrees is necessary, and they must be plunged. *Layers* root with facility, but do not make such fine plants. *Grafting* is performed in various ways, dependent much on the size and character of the stock. Sometimes the young seedlings are grafted which were sown in early spring; these, by bottom heat and high culture, are rendered fit for this operation in four or five months. Other cultivators cut off the head of the stock, and crown-graft; others attach the graft to the growing shoot, as in ordinary whip-grafting. *When the trees are imported*, the following is the best mode of culture: Prepare a moderate hot-bed of tanner's bark, in length and breadth according to the number of trees to be forced; then put the trees upright in a tub of water, to about half the depth of the stem, leaving the head and the upper part of the stem out of water, the better to draw up and imbibe the moisture. In this situation they may remain for two or three days, according to their condition when received; then take them out and clean them well from dirt and other matters adhering to them, cutting off all broken or bruised roots, and all the small fibres which have become quite dried by being so long out of the earth, and scrub the stems with a hard hair-brush, cleaning them afterwards with a cloth; then cut off the branches about six inches from the stem, and having prepared a quantity of good fresh earth, mixed with cow-droppings, set the plants therein, observing that the pots are not too large; if they are just large enough to contain the roots, that will be sufficient at first planting.

Wrap the stems round with hay-bands from bottom to top, to prevent the sun from drying their bark; plunge the pots into the bark-bed, watering well to settle the earth to their roots, and shading them from the mid-day sun. Under favourable circumstances, they will have made strong shoots by the beginning of June; at which time, stop them to obtain lateral branches to furnish their heads, harden them to admit their removal into the open ground in July; house them about the end of September, and during winter water frequently, but moderately, guarding at the same time against frost. In the following spring, clean the stems and leaves of the plant, top-dress the earth, and enrich with rotten manure round the edges of the pots, taking care that it does not touch the stems of the plants. Remove to a sheltered situation in the open air by the end of May. As the trees advance, stop strong irregular shoots in the summer season, to force out lateral branches to fill the head, and render it regular in its growth, and free from weakness. The trees will require to be shifted and fresh potted every other year, in the month of April. In performing this operation, having drawn the trees out of the pots, cut off all the roots round the outside of the ball of earth, and take away all mouldy roots; then set the root of the tree into a large tub of water for about a quarter of an hour, then re-pot the trees and water them, letting them remain in the house till they have taken root. The orange-tree, kept in conservatories, generally requires fifteen months to ripen its fruit. In England they often remain three years in moderately strong plants without fruit. *In gathering for the table* in this country, the fruit should not be pulled with the hand, but carefully cut, with a few leaves attached, and, thus garnished, sent to the dessert. By allowing them to hang for two years, the trees will at all times have green and yellow fruit, which, in connection with their shining green leaves and fragrant blossoms, will form early in spring one of the most pleasing and picturesque of horticultural scenes.

ORANGE CUSTARD.—Strain the juice of twenty oranges, and sweeten it with pounded loaf sugar; stir it over the fire till hot; then remove it, and when nearly cold, add the yolks of twenty eggs, well beaten, a quart of cream or good milk, and a wineglassful of ratafia; put the whole into a saucepan, and stir it over a slow fire until it thickens; then pour it into cups or glasses, and serve when cool.

☞ Oranges, juice of 20; sugar, to sweeten; eggs, 20 yolks; cream or milk, 1 quart; ratafia, 1 wineglassful.

ORANGE ESSENCE.—Put into a stewpan six ounces of ham, a little nutmeg, a small bunch of sweet herbs, half the peel of an orange, a pint of plain veal jelly, and a pint and a half of consommé; reduce these one-half, and then add the juice of an orange, and strain the whole through a sieve. This essence is excellent with wild ducks and other wild fowl.

☞ Ham, 6ozs.; nutmeg, to season; herbs, a small bunch; orange-peel, ½ of 1, veal jelly, 1 pint; consommé, 1½ pint. range, juice of 1.

ORANGE-FLOWER BISCUITS.—Beat up eight eggs, and work them in with a pound of powdered loaf sugar, and a pound of flour finely sifted; put to this enough orange-flower water to impart a flavour; then add as much spring water as may be necessary to make the whole into a fine paste; dredge sugar on the top, and bake in square paper moulds; at the end of a quarter of an hour take the biscuits out of the oven, and powder them again with sugar.

☞ Eggs, 8; sugar, 1lb.; flour, 1lb.; orange-flower water, to flavour; water, sufficient.

ORANGE-FLOWER CAKE.—Form a mould of writing-paper, folded and plaited round in the shape of a dripping-pan, the edge being made about two inches deep. Put two pounds of loaf sugar into a stew-pan with a pint of water, and boil to a strong syrup as for marmalade; then put in half a pound of orange-flower leaves, and boil them till the sugar begins to crystallize, stirring quickly all the time with a wooden spoon. Have ready a little fine sugar, beaten up with the white of egg; put this into the sugar, stir it well together, and pour the mass into the paper mould.

☞ Sugar, 2lb.: water, 1 pint; orange-flower leaves, ½lb.; sugar, with white of egg, sufficient.

ORANGE-FLOWER WATER.—An essence made by the distillation of orange flowers. As these are neither sufficiently abundant in England, nor of the requisite richness for distillation, a very good substitute may be made by mixing a drachm of neroli with two ounces of spirits of wine, and adding a pint of filtered water. Orange-flower water is sometimes used as a cosmetic, but more frequently for flavouring creams, ices, and other articles of confectionery and pastry for the table.

ORANGE FRITTERS.—Select some fine large oranges, and cut them into slices; dip them into butter, fry them a pale brown, and let them be very dry. Serve them heaped high upon a folded napkin, with sugar strewn over them.

ORANGE JELLY.—Strain the juice from two dozen China oranges over the grated rind of one, and add the juice of four Seville oranges. Run the juice through a jelly-bag, and add sugar in the proportion of one pound to a pint of juice. Set it over the fire, and let it boil for twenty minutes; then boil a quarter of a pound of isinglass in half a pint of water, with the rind of a lemon, till the isinglass is dissolved; add a spoonful of this at a time to the juice as it boils, until the mixture is perceived to stiffen; then pour it into pots, which cover securely, and put by in a dry cool place.

ORANGE MARMALADE.—This preserve should be made at the end of March or the beginning of April, as Seville oranges are then in their best condition. Marmalade may be made in a variety of ways. The following is a selection of the choicest

receipts:—*Ordinary marmalade.*—Choose the largest Seville oranges, as they usually contain the greatest quantity of juice; select those with clear skins. Weigh the oranges, and weigh also an equal quantity of loaf sugar. Skin the oranges, dividing the skins into quarters, and put them into a preserving-pan; cover them well with water, and set them on the fire to boil; in the meantime, prepare the oranges; divide them into gores, then with a teaspoon scrape away all the pulp from the white skin; or, instead of skinning the oranges, cut a hole in them, and scoop out the pulp; remove all the pips. Have a large basin at hand, with some cold water in it, in which to throw the pips and skin—a pint is sufficient for a dozen oranges. Boil these in the water, and strain the glutinous matter which comes from them to the other parts. When the skins have boiled till they are sufficiently tender to admit of a fork piercing them easily, scrape away all the pith from the inside of them, lay them in folds, and cut them into thin slices of about an inch in length. Clarify the sugar, then throw the skins and pulp into it, stir the whole well, and let it boil for half an hour; then remove it from the fire, and when it becomes cool, put by in pots. *Scotch marmalade.*—Take some bitter oranges, and double their weight of sugar; cut the rind of the fruit into quarters and peel it off, and if the marmalade be not wanted very thick, take off some of the spongy white skin inside the rind. Cut the chips as thin as possible, and about half an inch long; divide the pulp into small portions, removing carefully the pips, which may be steeped in part of the water used for making the marmalade, and which must be in the proportion of a quart to a pound of fruit. Put the chips and the pulp into a deep earthen dish, and pour the water boiling over them; let them remain for twelve or fourteen hours, and then turn the whole into the preserving pan, and boil it until the chips are perfectly tender. When they are so, add by degrees the sugar (which should be previously pounded), and boil it until the whole of it becomes a jelly. The water in which the seeds have been steeped, and which must be taken from the quantity apportioned to the whole of the preserve, should be poured into a hair sieve, and the seeds well worked in it with the back of a spoon; a strong clear jelly will be obtained by this means, which must be washed off them by pouring their own liquor through the sieve in small portions over them. *Marmalade for puddings.*—Boil twelve Seville oranges till they are quite tender, changing the water two or three times; take out the seeds, pulp, and inner skin of the rind; beat the outer rind in a mortar to a fine paste, add to it the pulp and juice; to every pound of this, add two pounds of fine moist sugar; mix the whole well together; put it into a larger jar than will hold it, to admit of fermentation. It will thus keep for years, and ready to be used for puddings when other materials are scarce. *Mince marmalade.*—Prepare the oranges as in the foregoing receipts, and take an equal weight of powdered sugar; when the skins are perfectly tender, put them on a mincing board, and chop them very fine; strew the mince, pulp, sugar, and juice into the preserving pan, and boil the whole for three minutes exactly. Put into pots when cool. *Transparent marmalade.*—Select very pale Seville oranges, cut them into quarters, take out the pulp and put it into a basin, pick the skins and seeds out, put the peels into a little salt and water, let them stand all night, then boil them in a good quantity of spring water till they are tender; cut them into very thin slices, and add them to the pulp. To every pound of marmalade put a pound and a half of double refined sugar beaten fine. Boil gently for twenty minutes; if it is not then clear and transparent, boil it for five or six minutes longer, keep stirring it all the time, and take care that the slices are not broken; when it is cold, put it into jelly or sweetmeat glasses, and tie them down with brandy papers over them. This form of marmalade is the most inviting to sick and delicate persons; and it is also well adapted for serving with the dessert.

ORANGE-PEEL, CANDIED.—Cut oranges lengthwise, remove all the pulp and inside skin, and put the peel into strong salt and water, in which allow it to remain for five or six days; then take out the peels, and boil them in spring water until they are soft, and afterwards place them in a sieve to drain; make a thin syrup with a pound of sugar-candy to a quart of water, boil the peels in this for half an hour, or until they appear clear; make a thick syrup with sugar and as much water as will melt it; put in the peels, and boil them over a slow fire until the syrup candies in the pan; then take them out, strew powdered sugar thickly over them, and dry them before the fire or in a cool oven. Set them by in a jar, closely pressed down and securely tied.

ORANGE POSSET. — Grate finely the crumb of a penny loaf, and put it to a pint of water with the peel of half a Seville orange grated. Boil all together till the mixture appears thick and clear; then take the juice of half a Seville orange, three ounces of sweet almonds, and one ounce of bitter; beat the whole up well with a tablespoonful of brandy; add sugar to taste and a pint of white wine; mix well, add the posset, and serve.

☞ Bread, penny loaf; water, 1 pint: orange, peel of ½, and juice of ½; almonds, sweet, 3ozs.; almonds, bitter, 1oz.; brandy, 1 tablespoonful; sugar, to taste; white wine, 1 pint.

ORANGE, PROPERTIES AND USES OF.—This fruit is, generally speaking, a wholesome and refreshing one; but with some persons it is apt to disagree, and in such cases the juice only should be taken without any of the pulp; and where oranges cause a considerable degree of flatulency, they should never be eaten in an uncooked state. The juice of the orange is very refreshing, especially in cases of fever and other inflammatory complaints, and in such cases it may either be taken in its pure state or mixed

with water. Orange-peel, in addition to the variety of culinary purposes to which it is put, possesses medicinal properties; when dried and infused, it acts as a stimulant, stomachic, and tonic; and small pieces of the dried rind simply chewed at intervals, will have a similar effect.

ORANGE PUDDING.—Scald and dry four fine oranges, then grate off the outer rind, mix half of which with two ounces of flour, and rub in the same quantity of dripping, making the whole into a thin batter, with one egg and a teacupful of new milk; slice the oranges, having well stripped off the white skins; lay them in the bottom of a small baking dish; strew over each layer a tablespoonful of pounded sugar and a portion of the grated peel, till your oranges are all used; pour the batter over them, and bake in rather a slow oven from half to three-quarters of an hour.

☞ Oranges, 4; flour, 2ozs.; dripping, 2ozs.; egg, 1; milk, 1 teacupful; sugar, sufficient.

ORANGE PUNCH.—Dissolve three-quarters of a pound of sugar in a little water, add the juice of two lemons, and pour two quarts of boiling water upon it; then add a glass of calf's-foot jelly; mix together a bottle of brandy, a bottle of rum, and a bottle of orange wine; add to it the juice just made, and serve it either hot or cold. If bottled and placed in a cool cellar, it will keep for any length of time. When desired, the flavour may be heightened by the addition of a little curaçoa or maraschino.

☞ Sugar, ½lb.; water, sufficient; lemons, juice of 2; boiling water, 2 quarts; calf's-foot jelly, 1 glassful; brandy, rum, orange wine, 1 bottle each.

ORANGE RATAFIA.—Put nine oranges in their natural state into two quarts of brandy, with some cinnamon and coriander seed; let them infuse for two months, then strain off the liquor and bottle it.

ORANGE SYRUP.—Select the largest, deepest coloured, and roughest oranges that can be obtained; grate off the rind, and throw the fruit into water; let them remain in this for twelve hours, then put them into a cloth and boil them; when tender, cut them into quarters, and, after taking out the pulp, throw them into cold water; make a thin syrup, clear the fruit in it; after which enrich the syrup, adding the pulp; make it very thick, and pour it over the oranges; put into jars.

ORANGE TART.—Press, pulp, and boil till tender, two Seville oranges; add twice their weight of sugar, and beat both together to a paste; then add the juice and pulp of the fruit, together with a piece of fresh butter of the size of a walnut; beat all well together; line a very shallow dish with a light puff paste, and lay the orange mixture into it. Bake in a moderate oven.

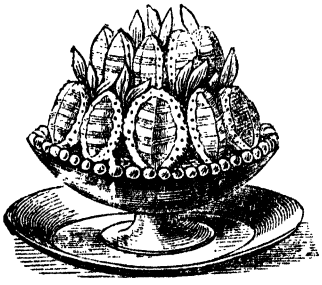
ORANGE WINE.—For ten gallons, take a hundred Seville oranges, peel them very thin; press out the juice, and put it with thirty pounds of loaf sugar into a cask; place the peels into a deep pan, large enough to allow of a gallon of cold water being poured over them; this done, let it stand till the next day, then pour the water over the sugar and juice which are already in the cask; cover the peel again with water, adding it to the contents of the cask on the following day, and continue to do this until the cask becomes full. Stir the mixture well every day for two or three weeks, by which time it will be in full fermentation, and will continue so for many months; after this draw the liquor off, and after removing the lees, and cleaning out the cask with a dry cloth, dissolve half an ounce of isinglass in a little of the wine; stir this well in, and bung the cask closely until the autumn. It may then be bottled.

☞ Seville oranges, 100; sugar, 30lbs.; water, sufficient; isinglass, ½oz.

ORANGES CANDIED.—Peel the number of oranges required, removing as much as possible of the white part; divide the fruit, and boil it in strong syrup for half an hour; let it stand till cold, and repeat the operation of boiling three or four times, until the syrup has become exceedingly thick; then take out the oranges, powder them with fine sugar, and put them in a cool oven to dry.

ORANGES IN BRANDY.—Blanch the oranges for a few minutes to cause them to swell, then put them into cold water; drain them, and pour over them some clarified sugar, and let them stand for some hours; then boil them again in the syrup, and let them stand until they are cold; repeat this three or four times, after which put the oranges into wide-mouthed bottles, with brandy sufficient to cover them; cork the bottles securely down, and set them by in a dry cool place. This will be found a very elegant addition to dessert in the winter season.

ORANGES WITH JELLY.—An elegant and fanciful dish for the supper table or the dessert, prepared as follows:—Take some very fine China oranges, and with the point of a small knife cut out from the top of each



a round piece about the size of a shilling; then with the small end of a teaspoon or eggspoon separate the fruit from the rind, taking care not to break the latter. Throw the rinds into old water, and make jelly of

the juice, which must be well pressed from the pulp, and strained as clean as possible. Colour one half a fine rose colour with prepared cochineal, and leave the other half very pale; when the juice is nearly cold, drain and wipe the rinds, and fill them with alternate stripes of the two jellies; when they are perfectly cold, cut them into quarters, and dispose them tastefully in a dish with a few light branches of myrtle between, somewhat after the manner of the accompanying engraving. Calf's feet, or any other variety of jelly, or different blancmanges may be used at choice to fill the rinds.

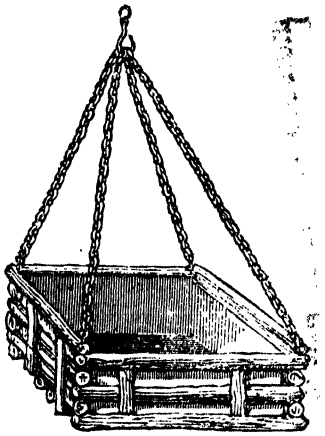
ORCHARD.—A plantation devoted to the hardier fruit trees. It is a common appendage to the kitchen-garden when that department is small, or does not contain an adequate number of fruit trees to supply the contemplated demand of the family. Sometimes the orchard adjoins the garden, and forms a part of the slip; at other times, it forms a detached, and perhaps distinct enclosure. Sometimes the same object is effected by mixing fruit trees in the plantations near the garden and house. *The form* of the orchard is a matter of very little consequence. *The size* will be regulated by the quantity of produce desired. *The arrangement* is very simple, being almost always quincunx, the distances between the plants being greater or less according to the sorts made choice of. With respect to *situation and aspect*, a very low damp situation should be avoided as much as the nature of the locality will admit; for in very wet soils no fruit trees will prosper nor the fruit be fine; but a moderately low situation, free from copious wet, may be more eligible than elevated ground, as being less exposed to tempestuous winds; though a situation having a gentle declivity is very desirable, especially if its aspect inclines towards the east, south-east, or south, all of which are preferable to a westerly aspect; but a north aspect is the worst of all for an orchard, unless particularly compensated by the peculiar temperament or good quality of the soil. Any *soil* will do for an orchard which produces good crops of corn, grass, or garden vegetables; a loamy soil is to be preferred, though any of a good quality, neither too light and dry, nor wet, heavy, and stubborn, but of a moderately soft and pliant nature, will be found to answer the end. Shingly and gravelly soils disagree very much with fruit trees, unless there be loam intermixed. They will succeed much better on a chalk bottom. The trees will not, however, thrive long, even in the best soil, if stagnant water rest in the subsoil; therefore, it is necessary, in the first place, to dig test-holes, to the depth of four feet at least; and if water stand in them, drains must be formed so as to carry off such subsoil water, and likewise, if possible, intercept its source. *The sorts of fruits best adapted for orchards* are apple, pear, plum, cherry, quince, medlar, mulberry, service trees, filberts, and berberries, as also walnuts and chestnuts; the latter two trees being well adapted for sheltering the others from high winds, and should therefore be planted in the boundaries of the orchard, a little closer than ordinary for that purpose. *The sorts of plants* made choice of are invariably standards and half-standards, and commonly such as are not more than one or two years from the graft. *The distances at which the trees should be planted from each other* is from thirty to forty feet, more or less, according to the quality of the soil, taking as a medium thirty-six feet. In a poor soil and a bleak exposure, where the trees may not be expected to grow very freely, thirty feet are sufficient; whereas in good soil and a sheltered situation, forty feet may not be too much. But it would be advisable, in the first instance, to plant four trees for one that is intended ultimately to remain, planting the proper kinds at the above distances first, and then temporary plants between them each way, which temporary plants should be of the free-growing sorts, which begin to produce fruit soon after planting; these must give place to the principal trees as they advance in growth, by being gradually pruned away, and at last stubbed up entirely. If orchard trees be planted among shrubbery, &c., they may be placed at any distance, exceeding forty feet, that may be thought proper; but they should not be planted nearer, otherwise they will confine the shrubs too closely. In this case it will not be necessary to plant temporary trees, as the principals will be nursed by the shrubs. In bleak situations, if forest and other hardy trees be planted among the fruit trees, it may not be necessary to plant so many, or even any, temporary fruit trees; or these may chiefly consist of the hardier sorts, which produce fruit the soonest. When the trees are planted, they should be properly staked and protected. A firm stake should be set to each high standard, newly planted, twist a part of a haybund round the tree to prevent it from falling, and with the remainder tie it securely to the stake. If the orchard be not completely fenced, every care should be taken to guard the plants from hares, by properly bushing them round with thorns. In order to keep the plants moist and healthy, a small basin or hollow should be made round the stem of each tree, a foot or a foot and a half in diameter, and two or three inches deep, according to the extent of the roots. Fill this basin with littery dung, to the depth of five or six inches, over which sprinkle a little earth, just enough to keep it from being blown about. This both nourishes the young fibres, and keeps the ground about them moist in hot weather, if wetted once a week. To protect the roots of autumn-planted trees from the frost of the succeeding winter, and from drought in the summer, lay mould about the stem to the distance of two feet round and six inches in thickness; or substitute a thin layer of turf in summer. If the spring which succeeds planting prove dry, dig up some turf and lay it round the stems of young trees with the grassy side downwards; this will keep the ground moist and save a great deal of watering: if the trees have taken well, this need not be repeated

as they will be out of danger after the first year. The turf should be laid as far as the roots of the trees extend; and when it is rotted, it should be forked in, and will be of great service to the trees. Clothing the stems of standard trees by an envelope of moss, or short grass, or litter wound round with shreds of matting, is of great service the first year after planting, to keep the bark moist, and thereby aid the ascent and circulation of the sap. This operation should be performed at or soon after planting, and the clothing may be left on till by decay it drops off of itself. Newly planted orchards must be attended to in respect to watering, which should be repeated the oftener as the season advances, till the trees strike into the soil. If planting is performed early in the autumn, while the weather is yet hot and dry, a little water may be given to assist the roots to strike; but they ought not to be soaked with water, nor need watering be repeated. At planting late in spring, should the ground be dry, give a moderate watering; which, repeat about once a fortnight during the hot months. Supposing the plantation to have been made in winter, should a dry spring follow, a few waterings may be necessary until the plants strike. *The best season* for planting an orchard is the autumn, as soon as the trees have ripened their wood and dropped their leaves. When autumn planting is impracticable, the next best season is the beginning of February, or as early as circumstances will admit.

ORCHID.—A perennial herbaceous plant, of which there exists an extensive and beautiful family, conspicuous, however, for ornament rather than use. The habits of these singular plants vary exceedingly, and to attempt to follow nature in their culture would require three distinct structures. Generally speaking, the grouping of those together which will bear a uniform treat-

ment, will be ordinarily successful. The majority will prosper under ordinary stove treatment, enjoying a free ventilation; and some will succeed very well in a warm greenhouse. One important feature in the culture of these pla. ts is the use of peaty materials, when for orchids which most affect the air —they must be built high above the pot

level: they can scarcely be too high. The atmosphere thus more easily penetrates the vegetable mass, and it is consequently always in a mellow and pervious condition. Thus managed, three-fourths of the orchids will take to the fibrous peat, and will then be in a position to require less nursing. A considerable number of species are grown in baskets, because the flower-stems are pendent, and, consequently, naturally require a position to allow the flowers to grow down. Indeed, some send the flower-stems perpendicularly down through the soil or compost. If these are grown in pots, the flower-stems wind down into the soil, and there perish. By growing them in baskets, this evil is prevented, and every cluster of flowers arrives at perfection. The baskets should be of dimentions suitable to the size of the plants



—small ones requiring only small baskets, middling ones the middle size, and large ones in proportion. The best way to basket the plants is as follows:—Have the peat or compost prepared; cover the bottom of the basket with a thin layer of moss; which will prevent the peat from dropping through the openings between the rods forming the bottom. Then place a portion of peat upon the moss. In the next place, prepare the plant, by taking it out of the old basket or pot: and do this very carefully, without injuring the roots. Examine the bulbs and leaves, and free them thoroughly from dust and insects. Prune away all dead roots, and then the plant will be in a fit state for removal. Place it in the middle of the basket, and fill in all round it with the new compost. Set the basket on the floor, and, with the syringe held pretty close to the peat, give it a liberal watering, forcing the water out of the syringe rather strongly; this will make the compost firm, so that future waterings will not wash it off the basket on to the floor or plants beneath. Various materials and forms have been use

for the baskets. Common iron wire should not be adopted; copper wire is much better. Earthenware is sometimes used, but the great weight is objectionable. The best baskets are those made of wooden rods; rough-barked maple or hazel rods will be found the most suitable for this purpose. The way to make these baskets is simple enough. First, the rods are sawn into proper lengths, and the ends pared smooth with a knife; then small holes are bored through each, one at either end. After a certain number of rods are cut and pared, they are taken to a small, red, clear fire; and the sharp end of one of the instruments used for boring the holes is put into it about one inch. As soon as that is red hot, another is put in, the heated one drawn out and thrust into the rod very near the end, and held there as long as it continues to burn its way without much pressure. If too much force is used, the wood will be apt to split. As soon, therefore, as the instrument ceases to burn its way through, it is replaced in the fire, and the other, which will be by this time red hot, is employed in the same manner; the operation is thus performed till the hole is burned completely through. After as many rods are bored as may be wanted at one time, they must then be put together; the articles necessary for this are some copper wire and a few flat-headed copper nails. Each basket will require four lengths of wire, in proportion to the size of the basket they are intended for. They should be long enough to meet at least eight inches closer the top of the smaller-sized baskets, and from a foot to eighteen inches above the larger ones. At the end of each piece of wire, a loop should be made sufficiently large to draw through the holes; then lay the first two rods, and upon them, for the smallest basket, lay three others; nail these three to the two outside rods, turn this over, and underneath it put two other rods, to form the other two sides of the basket; then draw the four pieces of wire through the holes at each corner, the looped end being underneath. Continue to lay a pair of rods alternately, drawing the wire through each, till the basket is of the required depth. The smallest size, three rods deep; the two next four deep, and so on. When that is done make four small pointed pegs, and drive them into each hole at the four corners. This will fasten the rods in their places, and prevent them from starting upwards; then draw the wires together at the top, twisting each pair one over the other, and fasten them with a piece of fine wire. The basket will then be complete and ready for use.

ORGEAT.—A beverage procured from almonds, and thus prepared:—Take a pound and a quarter of bitter almonds, and half a pound of sweet almonds, which have been previously blanched; nine pounds of loaf sugar, six pints of water, and the rinds of three lemons; pound the almonds in a mortar with the sugar, and add the water by degrees; then put the mixture on the fire with the lemon-peel: after one boil, pour off the syrup and press the almonds, to extract the milk; add this to the syrup, and strain the whole through a fine sieve; when cold, stir in six drops of neroli, and bottle the mixture. The orgeat is used mixed with cold water according to taste.

☞ Almonds, bitter, 1½lb.; almonds, sweet, ½lb; sugar, 9lb.; water, 6 pints; lemons, 3 rinds; neroli, 6 drops.

ORNAMENT, HOUSE.—The decoration of the interior of a house adds materially to its pleasantness, and if carried out with taste, cannot fail to possess a charm even to the most indifferent. This does not depend upon the abundance or costliness of the ornaments chosen, so much as their suitability or arrangement. In fact, an apartment crowded with ornaments without any use or meaning, savours of vulgarity, and may be interpreted as a wish to astound the beholder instead of pleasing or interesting him. Therefore, the tables, mantelpiece, &c., instead of being overloaded with a confused crowd of shells, statuettes, wax flowers, artificial fruit, porcelain jars, and glass lustres, should be sparingly decorated with a selection of the above-named objects, gracefully grouped. Prints, paintings, and drawings are subject to the same rule, namely, excellence rather than profusion. A recent article of ornamentation has been carried to a somewhat ludicrous extent in crochet-work; and apartments sometimes appear positively forbidding, by reason of the crochet anti-macassars, crochet cushions, crochet mats, &c., and various other objects after the same device. With regard to ornamentation generally, it is best regulated by its obvious purpose, which is to relieve the eye, not offend it.—See DRAWING-ROOM, FURNITURE, &c.

ORNAMENT, PERSONAL.—The employment of ornaments for the person should be in a very slight degree, no person having any pretensions to the rank of lady or gentleman wearing a profusion of them. Any offence against this rule is an evidence not only of the bad taste, but the mental inferiority of the wearer. One simple rule affords a safe standard of personal decoration: those who possess personal advantages need no adventitious display to enhance them, whilst those who are cast in an ordinary mould, render their personal appearance more ordinary still, by the very contrast between the ornaments and the wearer. Age has also something to do with the matter, it is sometimes excusable for the young to have recourse to ornamentation; but when persons of mature years decorate themselves to excess, it is a truly pitiable sight. Whatever the articles, therefore, whether jewels, chains, flowers, ribbons, or embroidery, they should only be made available in a slight degree, and rendered subservient to the general attire rather than independent of it.—See APPAREL, JEWELLERY, &c.

ORPHAN ASYLUMS.—There are a number of these charitable institutions established in various parts of England, the chief of which are in and near the metropolis, and known as the London Orphan Asylum, The Infant Orphan Asylum, The

British Orphan Asylum, The Orphan Working School, and various others. Admission into these schools is ordinarily obtained by votes, a list of the subscribers who are entitled to vote being printed and published, and is to be had at the several offices connected with the school. The objects of such institutions are to feed, clothe, and educate children who have lost one parent or both, until they arrive at the age of fourteen or fifteen, when the governors of the school succeed in placing them in some situation where they will continue to have their wants supplied to them until such time as they are able to provide for themselves. It will thus be seen that when a child enters a school of this description, he is at once provided for for life; and if he exercises common industry and energy, and is upright and moral in his conduct, he will not only succeed in attaining to an excellent social position, but in many cases achieve even an independency.

ORRIS ROOT.—A plant, native of Italy, and now generally reared by florists as an ornament in the garden. The orris root sold in shops is imported from Leghorn. The root in its recent state is entirely acrid; and when chewed excites a pungent heat in the mouth, which continues several hours. On drying, this acrimony is almost wholly lost, the taste is slightly bitter, and the smell agreeable, resembling violets. Orris root is frequently used for the purpose of disguising unpleasant breath, but as the effect is only partial, and the odour occasioned is apt to awaken suspicion, this employment of the root is very questionable.

OSIER.—A native plant of most parts of Europe, and growing spontaneously in fenny places. When allowed, it becomes a small tree, but is generally cut down for basket work. The osier grows very rapidly, and is used only for the coarser basket-work, unless when split into pieces. On the banks of large rivers, osier beds may be planted with great advantage; and the osier will also thrive in dry situations, if the soil be good. Cuttings of osiers take root very readily, and it is not of much consequence which end of them be put into the ground. They are of great use in giving consistency to banks and embankments, which are in danger of being washed away.

OSSIFICATION. — This word literally means the formation of bone, or the process by which what is cartilage in very young infants is gradually solidified, and changed from a state of flexible gristle into compact, rigid bone; all bone in its normal state being cartilage. Ossification is also a term employed in surgery to denote a diseased action that has taken place in certain tissues, by the deposition of bony layers, where naturally no such deposit should take place. The parts where this unnatural change takes place are very different; sometimes it is in the soft yielding texture of the arteries, and chiefly in the great artery—the aorta—where it rises from the heart; at others, in the stomach, either at its opening from the throat or the lower opening into the small intestines, and sometimes in the valves of the heart. Ossification is a disease of whose existence we can only surmise, having no knowledge of it but by its effect, and that is generally a fatal one, leading to aneurism and sudden death; as from the brittle state the part ossified assumes, it is rendered, upon any sudden exertion, very liable to break, when, if in the heart or large artery, the sudden effusion of blood destroys life immediately.

OSTRICH FEATHERS, TO CLEAN.—Cut four ounces of white soap into small pieces and dissolve them in four pints of water, rather hot, in a large basin; make the solution into a lather by beating it with birch rods or wires. Immerse the feathers, and rub them well with the hands for five or six minutes. Then rub any stained parts with a piece of cap-paper, shake them, wipe them gently with a cloth, and set them to dry.

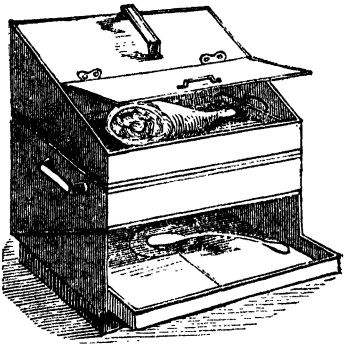
OTTER.—An aquatic quadruped, which is able to swim and dive with great readiness, and with peculiar grace and ease of movement. This animal is a great enemy to fish, and the depredations it frequently makes are such as to render the destruction of the animal necessary; to accomplish this, proceed as follows:—Go along the stream; look for the deepest holes, where the fish are sure to fly when pursued. Look about narrowly and you will see the tracks where the otter comes out of the water up the bank; and often you will find a small tuft of grass greener than the rest; open this and you will find the dung of the otter, full of scales and bones of fish. Having found out a favourite landing-place of the otter, make a run, slanting from the water up the bank, with a trapping-paddle; dig out a place exactly the form of the trap; set the trap slanting, so that the otter should not tread on the spring; cover it over with fine mould level with the ground. When done, go back as far as you can, and with your hand throw water on the place where the trap is set and all around, to take away the scent of your hand and the fresh mould. Have a chain to the trap three yards long, fastened to the bank by a strong peg, which chain you must also cover. Your trap should be larger and stronger than the usual rabbit trap. When you find you have caught an otter, draw up your chain out of the water, and on seeing the otter's nose appear above the surface, give him a blow across the nose with a stick, which will despatch him. The otter may be domesticated, though, from its ferocious disposition, this is a task of much difficulty. In order to do it effectually, so that the animal may catch fish, or assist in fishing, they should be procured as young as possible, and be first fed with small fish and water. Then bread and milk is to be alternated with the fish, and the proportion of the former gradually increased till they are led to live entirely on bread and milk. They are then taught to fetch and carry, as dogs are trained, and when they are brought to do this well, a leathern fish stuffed with wool is employed as the object to be fetched; they are afterwards exercised with a dead fish,

and chastised if they attempt to tear or mangle it. Finally, they are sent into the water after living fish. Otters generally bring forth their young under hollow banks or a bed of rushes, flags, or such weeds as the place affords in greatest quantities.

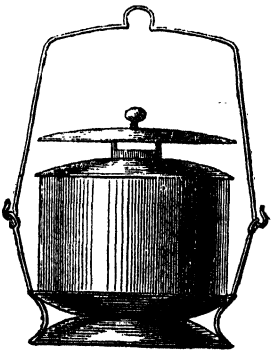
OUTFIT.—A term used collectively to denote the supply of wearing apparel, domestic utensils, culinary apparatus, and other essentials for persons proceeding on a long voyage. When a person contemplates taking this step, and is not acquainted with the precise quality and number of articles that he should take with him, his best plan is to place himself in the hands of a respectable outfitter, who will supply him with everything requisite, without burdening him with articles that are not necessary.

OUTLAWRY.—The being put out of the pale of the law, or out of the sovereign's protection. It is a punishment inflicted for a contempt, in refusing to be amenable to the process of the higher courts. By outlawry in civil actions, a person forfeits the protection of the law; so that he is not only incapable of suing for redress of injuries, but may be imprisoned, and forfeits all his goods and chattels, and the profits of his land, his personal chattels immediately upon the outlawry, and his chattels real, and the profits of his lands when found by inquisition.

OVEN.—The culinary apparatus employed in baking. For baking bread, a brick oven, heated with wood is far superior to any other; in iron ovens the bread becomes hardened and browned long before the heat has sufficiently penetrated to the centre of the dough. A brick oven should be well heated with faggot wood, or with a faggot and two or three solid logs, and after it is cleared the door should be closely shut for quite half an hour before the baking commences; the heat will then be well sustained for a succession of bread, pies, cakes, and small pastry. The ordinary oven attached to grates is well-known, it is a mere chamber of iron, with flues conveying the heated products of the fire round it. A damper cuts off or admits these, and in many grates the cook is enabled by raking the hot coals into a chamber provided for the purpose, to increase the heat very considerably. For baking, all the steam is purposely confined; but when these ovens are used for roasting, certain ventilators are opened, and then cause a current of air, which takes off in some measure the peculiarly rank flavour generally accompanying this kind of cookery. When the oven is being made use of, the door of it should not be continually opened and shut, as these incessant variations of the temperature materially interfere with the process of baking. In London and many large towns, the oven is but comparatively little made use of, the housewife preferring in the majority of cases the expense and inconvenience of sending to the baker, instead of making her own oven available; this frequently arises from the imaginary difficulty of heating the oven, or the trouble which the cooking of the dish entails; but with a little management neither of these evils need exist. The American oven may be used with advantage for small joints, &c., in lieu of the more cumbersome and unwieldy roasting apparatus. They also answer admirably for delicate sweet puddings and for cakes, with the advantage of requiring but a very moderate fire. One of the objections to the American oven which has hitherto existed, has been the inability to baste the meat, and the consequent waste of dripping, which, owing to the reflective power exercised upon it, was so burned and dried up, as to render what remained useless. To remedy this evil, an improvement has been introduced, as seen in the annexed engraving,



by which all the dripping and nutritious quality of the meat is carried into a dripping pan, placed in such a position, that the meat can be thence basted without removing the oven from the fire, or interfering in any way with the progress of the cooking. A baking



apparatus has been recently introduced, called the "revolving oven." This is suspended in the front of an ordinary fire, and by means of a bottle-jack, and a piece of string or worsted, will bake bread, cakes, pies,

&c., in a perfectly equal manner, without depriving the room of the heat and comfort of the fire. By an ordinary fire, in any room in the house, it will bake a four pound loaf in an hour and twenty minutes. It also bakes cakes and pastry remarkably well, and all the care it requires is to give it an occasional look now and then, to see that it keeps turning.—See BAKING, DUTCH OVEN, &c.

OXALIC ACID.—One of the vegetable acids possessing poisonous properties. It is generally met with in the form of small white crystals. The appearance of these crystals, somewhat resembling Epsom salts, has occasioned many cases of accidental poisoning. The symptoms produced by poisoning by oxalic acid vary considerably. When a large dose has been swallowed, the chief effect is complete prostration of the system, accompanied with stupor, in which the patient often dies, half an hour after taking the poison. The rapidity with which death sometimes ensues after a poisonous dose of oxalic acid has been swallowed, renders it almost impossible to procure medical aid in time. It is therefore highly desirable that prompt measures should be adopted by those around. Oxalic acid forms, with lime, magnesia, &c., insoluble and less hurtful compounds. Chalk or whiting mixed with water, and administered freely is the best possible antidote; and when neither of these are attainable, a portion of old mortar rubbed with milk and water will act as a substitute. It must be understood that these remedies are of a temporary nature and adapted to emergencies; while they are being applied, the assistance of a medical man should be sought for.

OXEN.—See CATTLE; COW, &c.

OXEN-TAMING.—Servants in attendance upon cattle are frequently attacked, and if not killed, are seriously injured by them. A plan for the prevention of such occurrences is suggested in the Journal of the Agricultural Society, which has been

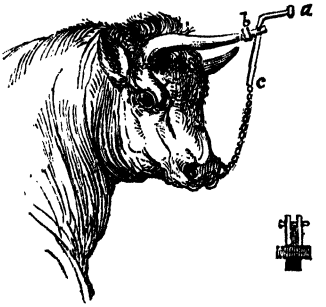


Fig. 1.

attended with perfect success. It is simple, inexpensive, costing about five shillings, and causes no annoyance to the animal when he does not try to use his horns. In the engraving, fig. 1, *b*, is a cap screwed on to the end of the bull's horn; *a c*, is an iron rod hanging on a pivot in the cap, a chain from it leads to a ring in the bull's nose. The end of the rod *a c*, at *a*, fig. 1, ought to be in a line from the root of the horn to the end of it; so that in attempting to touch anything with his horn, the point *a* comes in contact with it, when of course the rod *a c* takes the position of one of the lines in fig. 2, *d e* or *g h*, and punishes the bull by forcing up his nose.

Fig. 2.

The practical farmer who invented this plan, states that he turned a three year old savage bull with a cow that was bulling, and also turned a yearling bull with them; in a few minutes the young bull, who had not on the cheek, found that he was the master, and punished the old one very severely; shortly afterwards the cheek was dispensed with. He never again attacked any one, although when purchased, he had tossed several persons, and had been sold as incurably vicious.

OX CHEEK, BAKED.—Cleanse with the greatest nicety, a fresh ox-cheek, by washing, scraping it lightly with a knife, and soaking out the blood; then put it into plenty of warm water, and boil it gently for an hour. Throw in a large teaspoonful of salt, and carefully remove all the scum as it rises to the surface. Let the ox-cheek cool after it is lifted out, and then take away the bones, working the knife close to them, to avoid piercing the skin. When the cheek has become quite cold, put into it a good roll of forcemeat; then skewer or bind up the cheek securely, and bake it in a moderate oven for about an hour and a quarter to an hour and a half. It should be baked until it is perfectly tender quite through. Drain it thoroughly from fat, dish it, withdraw the skewers or unbind it gently, and send it to table, with good brown gravy, a cut lemon, and cayenne pepper.

OX CHEEK SOUP.—Boil the ox cheek in water just enough to cover it for two hours and a half, then take it out, and cut off all the meat into squares, having in the meantime prepared a soup as directed for ox tail; then add the square pieces of meat, and serve.—See OX TAIL SOUP.

OX CHEEK STEWED.—Clean the head thoroughly, then soak it for some hours in cold water, put it into a stewpan, and let it simmer gently until it is quite tender; take out the bones, and tie the meat up in a cloth, put a weight upon it, and let it stand till next day; make a forcemeat of any white meat, and boil six eggs hard, cut the cheek into slices, put some at the bottom of a dish, then a layer of forcemeat, followed by a layer of sliced egg, another of meat, and so on until the dish is full; season the whole with pepper and salt, and pour in as much gravy as the dish will hold; either stew it in the usual way, or cover it with a coarse paste, and bake it in a slow oven, removing the paste previously to its being served.

OX FEET JELLY.—To three ox feet made into very stiff stock, allow two pounds and a half of brown sugar, the juice of six lemons, a pint and a half of table-beer, seven eggs, a quarter of an ounce of isinglass, and a gill of vinegar. Boil all these ingredients together for a quarter of an hour, take the pan off the fire, and let it stand before the fire for five minutes, then strain the contents through a jelly-bag, and the jelly will be perfect.

☞ Ox feet, 3; sugar, 2½lbs.; lemons, juice of 6; table-beer, 1½ pints; eggs, 7; isinglass, ½oz.; vinegar, 1 gill.

OX GALL.—A preparation for cleaning carpets, removing stains, &c., made as follows:—Boil together a pint of ox gall and two ounces of powdered alum; add two ounces of salt, let the liquor settle, add ten drops of essence of lemon, pour it into a bottle, and cork it tightly for use.

☞ Ox gall, 1 pint; alum, 2ozs.; salt, 2ozs.; essence of lemon, 10 drops.

OX KIDNEY.—This part of the animal being coarse and innutritious, will scarcely repay the trouble of dressing it alone; its best use is as an auxiliary to rump-steak pudding.

OX TAIL SOUP.—Cut six large onions into slices; put them into a stewpan, with half a pound of beef dripping, brown them over the fire, then add two carrots, sliced thin, a bunch of savoury herbs, a small quantity of allspice and whole pepper, slightly bruised; stew these ingredients together for an hour, put half a pound of flour in the oven to dry, and take care that it does not burn; add this with a quart of stock to the herbs, and mix all well together. Have ready two gallons of stock boiling in a separate pot, into which put the herbs, &c., and boil the whole for an hour; strain it through a hair sieve, put in the ox tails, and serve. The ox tails should be allowed to simmer in water for three hours previous to being put into the soup.

OX TAIL STEWED.—Cut two or three ox tails into pieces, lay them in a stewpan, with a piece of butter and a large onion, and fry them till they are brown; peel and boil two dozen button onions in about three pints of water for fifteen or twenty minutes; set them by, and pour the liquor they were boiled in upon the tails, adding sufficient boiling water to cover them; put in two carrots, three or four turnips, cut into slices, the carrots to be put in twenty minutes before the turnips. Stew them carefully, not too fast or too much. When they are tender, pass the gravy through a sieve; skim off the fat with great care while the tails are stewing. Keep the meat and vegetables hot before the fire. Thicken the gravy, by putting an ounce of butter into a stewpan; when melted, stir in as much flour as will stiffen it. Pour the gravy in by degrees, stirring it till it boils; strain it through a sieve into a stewpan, and let it simmer gently till the meat and vegetables are dished. Arrange the tails round the dish, and then place the vegetables in the centre; pour the gravy over, and add, according to taste, minced gherkins or capers. Pour boiling water over the onions to warm them, and put them round the dish last of all.

OX TONGUE BOILED.—If the tongue has been dried and smoked, it should be laid for two or three hours into cold water, and as much longer into tepid water, before it is dressed. But if it is taken fresh from the pickle, it will require no soaking unless it should have remained in much beyond the usual time, or have been cured with more than an ordinary proportion of salt. To boil it, put it into cold water, and set it over a slow fire for an hour or two before allowing it to come to a boil; then set it aside, and keep it simmering for from three and a half to four hours, according to its size: it may be probed by a skewer, to ascertain if it be sufficiently done. Then take it from the pot, trim the root, glaze it, and before serving surround the root with a paper frill, and insert a flower or two on the top, over the windpipe. The appearance and flavour of the tongue may be considerably improved by rubbing it over, when peeled, with yolk of egg, on which crumbs of bread and finely minced sweet herbs may be strewed; afterwards, slightly basting it with butter, and browning it with a salamander.

OX TONGUE CURED.—This process may be ordinarily performed as directed for beef and ham. For such, however, as prefer it highly and richly flavoured, the following method may be adopted:—Rub over the tongue a handful of fine salt, and let it drain until the following day; then, supposing it to weigh from seven to eight pounds, mix thoroughly an ounce of saltpetre, two ounces of coarse brown sugar, and half an ounce of black pepper; when the tongue has been well rubbed with these, add three ounces of bruised juniper berries; and after the tongue has lain for two days, add eight ounces of bay-salt dried and pounded; at the end of three days more, pour on it half a pound of treacle, and let it remain in the pickle for a fortnight after this; then hang it up to drain, envelope it in brown paper, and send it to be smoked over a wood fire for two or three weeks. Should the peculiar flavour of the juniper berries prevail too much or be disapproved,

they may be in part or wholly omitted; and if treacle is disliked, six ounces of sugar may be used in lieu of it.—See BEEF SALTED, BEEF SMOKED, HAM TO CURE, &c.

OX TONGUE. DRESSED TO EAT COLD.—Season the tongue with common salt, saltpetre, brown sugar, pepper, cloves, mace and allspice in fine powder, for a fortnight; then take away the pickle, put the tongue into a pan, and lay some butter on it; cover it with brown crust, and bake it slowly till so tender that a straw will pierce it from one end to the other; put it into a tin mould and press it well, laying in as much fat as possible.

OX TONGUE POTTED.—Boil till tender, an unsmoked tongue of good flavour, and on the following day cut from it the quantity desired for potting. Trim off the skin and rind, weigh the meat, mince it very small, then pound it quite fine with a quarter of a pound of butter to each pound of tongue, a small teaspoonful of mace, half a teaspoonful of nutmeg and cloves, and a seasoning of cayenne. A few ounces of any well roasted meat mixed with the tongue, will give it a firmness in which it is apt to be deficient.

OX TONGUE ROAST.—Select a fine large fresh tongue, scald it, and peel off the skin; cut it off at the root and trim it neatly; stick a few cloves in it here and there, and put it in a cradle-spit; sprinkle it with salt, and baste it well with butter. Serve it with a sauce made as follows:—Put into a stewpan half a pint of port wine, with about half the quantity of well-seasoned gravy; reduce it to one half; then stir in a large piece of butter, and a tablespoonful of flour; add a squeeze of lemon; place the tongue in a dish, and serve hot with the sauce poured round.

OXFORD DUMPLINGS.—Take two ounces of grated bread, a quarter of a pound of shred suet, a quarter of a pound of currants, two tablespoonfuls of flour, a lemon-peel grated, and sugar to sweeten. Mix these ingredients with two eggs and a little milk, divide into five dumplings, and fry them a fine yellow brown. Serve with sweet sauce.

☞ Bread, 2oz.; suet, ¼lb.; currants, ¼lb.; flour, 2 tablespoonfuls; lemon-peel, 1; sugar, to sweeten; eggs, 2; milk, sufficient.

OXYGEN.—A gas which constitutes one of the elementary bodies, and of the utmost importance to vitality. Oxygen gas in mechanical mixture with nitrogen, constitutes the air of the atmosphere which surrounds our globe, and on its presence in due proportion, depends the continuance of animal existence, the phenomena of combustion, &c.—See *Dictionary of Useful Knowledge*: article OXYGEN.

OYSTER CURRY.—The following receipt for this dish may be greatly modified, both in quantity and ingredients. Open a hundred large oysters into a basin, carefully preserving every drop of their liquor. Put a lump of fresh butter into a large stewpan, and when it boils add a good-sized onion cut into thin slices, let this fry until it is of a rich brown colour, then a piece more butter and two or three tablespoonfuls of curry powder. When these ingredients are well mixed over the fire with a wooden spoon, add gradually, either hot water or broth from the stock-pot; cover the stewpan and let the whole boil up. Meanwhile, grate fine a small cocoa-nut, and put it into the stewpan with a sour apple chopped. Let the whole simmer over the fire until the apple is dissolved, and the cocoa-nut become tender; then add a cupful of strong thickening made of flour and water, and a seasoning of salt. Let this boil up for five minutes. Have ready a vegetable marrow, cut into small pieces, and sufficiently boiled to require little or no further cooking. Put this in with a tomato or two. Then place in the stewpan the oysters with their liquor, and the milk of the cocoa-nut if it be perfectly sweet; stir them well with the former ingredients. Let the curry stew gently for a few minutes, then stir in the strained juice of half a lemon. Stir the curry from time to time with a wooden spoon, and as soon as the oysters are sufficiently done serve them up with their liquor, and with a corresponding dish of rice on the opposite side of the table.

OYSTER FORCEMEAT.—Strain a dozen native oysters from their liquor, mince them, and add a quarter of a pound of finely-grated bread crumbs, an ounce and a half of butter broken very small, a dessertspoonful of minced parsley, and the rind of half a lemon grated; season with a little mace, cayenne, and salt, and mix the whole well together; then bind the ingredients together with the yolk of an egg unbeaten, and a little of the oyster liquor.

☞ Oysters, 1 doz.; bread crumbs, ¼lb.; butter, 1½oz.; parsley, 1 dessertspoonful; lemon rind, ½ of 1; mace, cayenne, salt, to season; yolk of egg, and oyster liquor, sufficient.

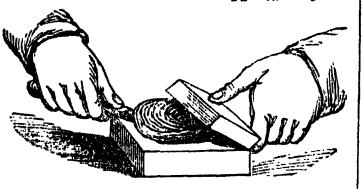
OYSTER FRITTERS.—Remove the beards from the oysters, dip them into a thick batter, made wet with egg, and fry them till they are of a light brown.

OYSTER KETCHUP.—Open a hundred oysters and preserve all the liquor; add to them a pound of anchovies, three pints of white wine, and a lemon sliced with half the peel, let these boil gently for half an hour, then strain it through muslin; add to it a quarter of an ounce each of cloves and nutmeg, let it boil for a quarter of an hour, then add two ounces of shalots. This ketchup imparts an exquisite flavour to white gravies and sauces, as those for minced veal, boiled fowl, &c.

☞ Oysters, 100; anchovies, 1lb.; white wine, 3 pints; lemon, fruit of 1, peel of ½ of 1; cloves, ½oz.; nutmeg, ½oz; shalots, 2oz.

OYSTER KNIFE-GUARD.—An ingenious yet simple contrivance, by which the hand, and especially the thumb, is protected from any possible damage which the knife used in opening oysters might cause. Two flat pieces of wood are fastened together at one end by a strip of leather, as shown in the illustration; in the lower and larger piece

a cavity is made for the reception of the oyster, which is firmly grasped between the upper and lower portions of the guard, and in the event of the knife slipping, its point



is received by the former. The importance of such an invention to amateur oyster openers needs not to be pointed out.

OYSTER PATTIES.—Put fine puff-paste into small patty-pans and cover them with paste, with a bit of bread in each; bake them, and by the time they are done have ready the following, to fill them with on taking out the bread:—Take off the beards of the oysters, cut the other parts into small bits, put them into a small tosser with a little nutmeg, a very little white pepper and salt, a shred of lemon-peel cut exceedingly small, a very little cream, and a small portion of the oyster liquor. Simmer this for a few minutes, then fill the patty-pans and serve.

OYSTER PICKLE.—Open the oysters very carefully and remove every particle of shell adhering to the fish; put the oysters into a little water, wash them in it, and strain the liquor; boil it with a little vinegar, whole pepper, salt, and mace, till it tastes of the spices; then put in the oysters. If they are large they must boil for eight minutes, if small, not so long. Put them into pickle jars, and when the liquor is cold, pour it upon the oysters. To four dozen oysters put six spoonfuls of water and four of very good vinegar, tie the jars securely down with bladder.

OYSTER PIE.—On opening the oysters, separate them from the liquor and strain it; remove the beards, and parboil the fish. Parboil also sweetbreads, and cutting them into slices, lay them and the oyster in layers alternately; season very lightly with salt, pepper, and mace, then add half a teacupful of oyster liquor and the same of real gravy. Bake the whole in a slow oven, and before serving, add a teacupful of cream, a little more oyster liquor, and half a pint of white gravy, all warmed but not boiled.

OYSTER POWDER.—Open the oysters carefully, so as not to cut them, except in dividing the gristle which attaches the shells. Put them into a mortar, and when as many are collected as can be conveniently pounded at one time, add salt in the proportion of two drachms to a dozen oysters. Pound them and rub them through the back of a hair sieve, and put them into the mortar again with as much flour as will convert them into a paste; roll this paste out several times, and lastly flour it, roll it out the thickness of a half-crown, and cut it into pieces about an inch square, lay them in a Dutch oven to dry gently without being burnt; turn them every half hour, and when they begin to dry, crumble them. Pound them, sift them, and put them into dry bottles, which afterwards cork and seal. To make half a pint of sauce, put an ounce of butter into a stewpan, three drachms of oyster powder, and six tablespoonfuls of milk, set it on a slow fire, stir it till it boils, and season with salt.

OYSTER RAGOUT.—Put three dozen of oysters with their liquor into a saucepan, as soon as they have boiled take them off, and let them drain nearly dry; then put them into another saucepan with or without herbs, according to taste, and a little butter, adding also half a pint of milk; keep them for a few minutes simmering, and a minute before they are taken off the fire, add about two ounces of butter, and a seasoning of pepper and salt.

OYSTER ROLLS.—Take about a quart of the largest and finest oysters that can be procured, stew them in their own liquor, with some pepper, a very little mace, and some green onion chopped fine, thicken them with a little butter, and a dust of flour when nearly done. Take two French rolls, cut a piece off the top, and scoop out the greater part of the crumb, fill the vacancy with the oysters and the liquor, and set them near the fire on a chafing-dish filled with hot coals; as the liquor soaks in fill them with more, until they are thoroughly done.

OYSTER SAUCE.—This may be prepared in a variety of ways:—1. Scald the oysters in their own liquor, beard them, strain the liquor and let it settle; melt a piece of fresh butter, add flour sufficient to thicken the quantity of sauce, let it fry a little, pour in the liquor of the oysters and sufficient cream to render it of the required thickness, season with salt and cayenne, and put in the oysters. 2. At the moment they are wanted for use open three dozen oysters, strain and save the liquor, rinse them separately in it, put them into a very clean saucepan, strain the liquor again and pour it on them, beat them slowly, and simmer them for one or two minutes, without allowing them to boil. Lift them out and beard them, add to the liquor three ounces of butter smoothly mixed with a large dessertspoonful of flour, stir these without ceasing until they boil, and are perfectly mixed; then add to them gradually a quarter of a pint of new milk, and continue the stirring until the sauce boils again; add a little salt should it be needed, and a small quantity of cayenne, put in the oysters, and place the saucepan by the side of the fire until the whole is thoroughly hot and begins to simmer, then turn the sauce into a well-heated tureen, and send it to table immediately. 3. Prepare two dozen oysters as in the preceding receipt, add their strained liquor to a quarter of a pint of thick melted butter made with milk, or with half milk and half water, stir the whole until it boils, put in the oysters, and when they are quite heated through, send the sauce to table without delay. 4. The following is best adapted to be served with rump steak or roast turkey. As the butter destroys the

savouriness of the meat, the oysters instead of being stewed in white sauce, should be dressed in strong beef gravy, along with a good portion of ketchup, either stewed for a few minutes very gently or put into an uncovered dish with the gravy, and placed before the fire in a Dutch oven to brown.

OYSTER SAUSAGES.—Beard, rinse well in their strained liquor, and mince, but not finely, three dozen and a half of plump oysters, and mix them with ten ounces of grated bread crumbs, and ten ounces of beef suet chopped extremely small, add a saltspoonful of salt, and one of pepper, a teaspoonful of pounded mace, and the third of a nutmeg grated, moisten the whole with two eggs unbeaten. Mix these ingredients together thoroughly, and set the mixture in a cool place for two or three hours, make the mass into the form of sausages, flour them, and fry them in butter to a fine light brown.

☞ Oysters, 3½ doz.; bread crumbs, 10oz.; beef suet, 10oz.; salt, 1 saltspoonful; pepper, 1 saltspoonful; mace, 1 teaspoonful; nutmeg, ½ of 1; eggs, 2.

OYSTER SOUP.—Put the liquor of ten dozen large oysters into a stewpan with a quart of new milk, and the same quantity of water, season with pepper and salt, and thicken with half a pound of fresh butter and flour, let this boil for a few minutes, after which set it to cool, then beard the oysters, add them to the liquid, and let them boil for two minutes at the utmost, a little nutmeg may be added if the flavour is approved.

☞ Oysters, 10 doz.; milk, 1 quart; water, 1 quart; pepper and salt, to season; butter, ¼lb.; flour, to thicken.

OYSTERS BAKED.—Chop oysters fine, and pound them in a mortar with bread crumbs dipped in cream, a little parsley and cloves, an anchovy, or a portion of one according to the number of oysters, fresh butter, salt, and pepper. When well pounded add white of egg beaten up, in the proportion of one egg to two dozen oysters, and having mixed all well together put into scallop shells and bake in an oven until nearly brown.

OYSTERS BOILED.—Open the shells of the oysters and clean and drain them into boiling water, then drop the oysters into a saucepan of boiling water, and boil them gently for three or four minutes. Serve in the shells with a little cold butter, vinegar, and pepper.

OYSTERS BROILED.—Take them from the shells, beard them, and put them with their liquor into scollop tins with a little pepper and butter. Put the shells upon a gridiron over a good fire, and serve them when plump and quite hot. Squeeze a little lemon-juice over them as they come from the fire. To be had to perfection, they should be cooked in the room in which they are eaten.

OYSTERS, DIETETIC PROPERTIES OF.—Few articles of food are more nourishing and digestible than the oyster when eaten raw or slightly cooked; with some persons, however, oysters even in a raw state disagree; in this case, each oyster should be dipped, before it is eaten, in a sauce composed of vinegar, pepper, and shalots or mild onions, chopped fine. Oysters should be eaten the moment they are opened, for if not eaten when absolutely alive their flavour and spirit are lost. When too many oysters have been incautiously eaten, and are felt lying cold and heavy on the stomach, an infallible remedy will be found in hot milk, of which half a pint may be drunk, and it will quickly dissolve the oysters into a bland creamy jelly. Weak and consumptive persons should always take this after their meal of oysters. The drinking of wine or spirits immediately after eating oysters is injudicious, and calculated to make the oysters disagree; the best beverage is porter or stout. Oysters are especially well adapted for supper, on account of their digestible properties; but in order to afford the greatest amount of nutriment they should be taken fasting.

OYSTERS FRIED.—Make a batter of flour, milk, and eggs; season it slightly with pepper and salt, dip the oysters into it, and fry them to a light brown. A little nutmeg should be added to the seasoning, and a few bread crumbs.

OYSTERS MARINADED.—Put the oysters into a saucepan for a few minutes, to blanch with their liquor; take them out, lay them on a linen cloth to drain for an hour; next place them for two or three hours in lemon-juice, or vinegar, pepper, and salt, with a little nutmeg; dip them in batter, and fry them.

OYSTERS ROASTED.—Place the oysters unopened between the bars of a fire or on a charcoal stove. In six or eight minutes they will be done.

OYSTERS SCALLOPED.—Select small plump oysters, open them carefully, and give them a scald in their own liquor, wash them in it free from grit, and beard them neatly. Butter the scallop-shells and shed some grated bread-crumbs over them; fill them with alternate layers of oysters, bread crumbs, and fresh butter cut into small bits; pour in the oyster liquor after it has been strained; put a thick, smooth layer of bread crumbs on the top, moisten them with clarified butter, place the shells in a Dutch oven before a clear fire; and turn them often until the tops are equally and lightly browned. Send them immediately to table.

OYSTERS STEWED.—Take a pint of small plump oysters, after having been carefully opened; wash them free from grit in their own strained liquor, lay them into a very clean stewpan or well-tinned saucepan, strain the liquor a second time, pour it on them, and heat them slowly in it. When they are just beginning to simmer, lift them out with a fish-slice or a bored wooden spoon, and take off the beards; add to the liquor a quarter of a pint of good cream, a seasoning of pounded mace and cayenne, and a little salt; when it boils, stir in an ounce and a half of fresh butter, smoothly mixed with a large teaspoonful of flour; continue to stir the sauce until these are perfectly blended with it, then put in the oysters, and let them remain by the side of

the fire until they are very hot; they require so little cooking that, if kept for four or five minutes nearly simmering, they will be ready for table, and they are quickly hardened by being allowed to boil, or by too much stewing. A little lemon-juice should be stirred quickly into the stew, just as it is taken from the fire.

☞ Oysters, 1 pint; cream, ½ pint; cayenne, mace, and salt, to season; butter, ½oz.; flour, 1 teaspoonful.

OYSTERS, TO CHOOSE.—If the oysters are fresh, the shell will be firmly closed; when the shells of oysters are opened, they are dead and unfit for food. The small oysters, as the Pyfleet, Colchester, and Milton, are the finest in flavour. Larger kinds, called rock oysters, are only fit for stewing and sauces. Oysters are considered not in season until the 4th of August, and remain good until about May. But it is commonly said that oysters are only fit to be eaten during those months which have an *r* in them, as September, October, November, December, January, February, March, and April.

OYSTERS, TO FEED AND PRESERVE.—To feed oysters, put them into water, and wash them with a birch-besom until quite clean; then cover them with cold water, in which salt has been dissolved, in the proportion of five ounces to the gallon; this should be regularly changed every twenty-four hours. By this method, oysters may be kept alive for eight or ten days, but will remain in perfect condition scarcely more than half that time. The Colchester or Pyfleet barrelled oysters, that are packed at the beds, are better without being put in water; they are carefully and lightly packed, and must not be disturbed till wanted for table; these in moderate weather will keep good for a week or ten days. To preserve the life of barrelled oysters, put a heavy weight on the top of the barrel, which must press on the surface of the oysters. This is to be effected by removing the first hoop, the staves will then spread and stand erect, make a wide opening for the head of the barrel to fall down closely on the remaining oysters, keeping them close together. When oysters are placed in water, they should lie with the flat shell uppermost; otherwise they will not be able to feed properly.

P.

PACKING.—The art of packing things properly so that they may not be broken, bruised, or otherwise damaged, is one worth knowing and easily learned. Generally speaking, miscellaneous articles should be packed in their receptacles as tightly as possible, to prevent their slipping about, and any vacancies or crevices should be stuffed with straw or waste paper, so as to accomplish this end; when the box or other receptacle is not quite full, it should also be filled up with straw or waste paper, so as to prevent the contents jolting up and down. When a person is about to pack he should proceed deliberately, as packing hastily is never successful. He should have all the articles which are to be packed spread out upon the floor by the side of package, so that appropriate places may be found for each article. In nailing down boxes, care should be taken neither to drive the points of the nails into the contents of the box, nor to leave them obtruding on the outside so as to tear people's clothes and flesh. The heaviest articles should be laid at the bottom, and the lightest at the top. All fragile articles should be packed by themselves. Bottles and other vessels containing liquids should also be packed by themselves, the mouths of the vessels properly secured, and the vessels set upright. Fish, meat, and poultry should be packed so that the air may have access to them. In packing vegetables, the great art is to preserve them fresh, for which purpose they ought to be laid loose in a close box, or closely packed in hampers so as to exclude the air. Cabbage, lettuce, &c., if pulled up by the roots and as it were re-planted in a box of sand, with a wicker-work cover, may be sent a journey of two or three weeks without injury. Celery, turnips, &c., may be packed in sand; potatoes and other roots loose; legumes, and other summer crops, generally in moss, fern, or dried turfy peat. In packing boxes of fruit which are to contain, for instance, melons, currants, pears, peaches, nectarines, plums, and grapes, obtain a box made of three-inch deal and well-secured with iron clasps at each corner: first put a layer of fine dry moss in the bottom of the box, then pack in the melons in rows, making the rows light by stuffing moss into the interstices; when a layer of these is completed, place a thin layer of moss and grass over them, and then pack the pears in the same manner and proceed with the peaches, nectarines, and plums, and lastly the grapes, filling up the box with moss, that the lid may shut down tightly and prevent friction among the fruit. The melons should be wrapped in soft paper, and the pears, peaches, nectarines, plums, and grapes first wrapped up in vine leaves and then in paper. The moss and grass should always be returned in the boxes, which, with a little addition, will serve the whole season, being well-shaken up and aired after each journey, and then kept sweet and clean. When moss is difficult to obtain, cotton may be substituted. As the fruit is packed it should be carefully examined, any that is found to be bruised should be set on one side, otherwise it is apt to contaminate the whole. For packing plants, especially when intended to travel long distances, the contrivance known as Ward's plant case is the best that has been yet discovered; it consists of a wooden box six or eight inches deep, and a glazed frame with a ridged roof, so contrived that light may be admitted freely to all parts of the growing plants. The glazed frames should be well painted and puttied some time before they are required for use, in order that when they are put together, they may be suffi-

ciently tight to retain all the moisture that is within the case, and to restrain all moisture from without. Especial care should be taken that the soil used be that in which the plants usually grow, and that all superfluous moisture be drained from it. Another point deserving of attention is to associate plants of equal or approximating rapidity of growth. A packing-box for florists' flowers, as seen in the engraving, may be formed of

boards of any convenient size, and two round pieces of wood, *a*, *b*, nailed to the lid to keep the pot in its place. In unpacking, there is no difficulty, as the round pieces come up with the lid.

PADLOCK.—A lock frequently employed for fastening gates, wickets, cellar doors, &c. As these locks may be easily tampered with, none but the patent ones should be used, which are not only impossible to pick, but which, by refusing to answer to the proper key without it is turned in a contrary direction, gives at once an indication that some other key has been introduced, and therefore furnishes a clue to dishonesty. It is possible, however, in ordinary cases to remove the staple to which the lock is attached, and replace it without giving rise to any suspicion; to prevent this, the staple should form part of a plate iron, so contrived and fixed that it is impossible to withdraw it. Padlocks are frequently lost, thereby leaving places in a temporarily unprotected state, and causing much loss of time, from mere carelessness in throwing the lock down anywhere when it is taken off; the obvious plan, therefore, is always to place the lock in some especial spot, so that when it is wanted again it may be found immediately.

PAGE, DUTIES OF.—A juvenile male servant, whose duties chiefly consist in performing light miscellaneous offices about the house, opening the door, going on errands, walking behind his mistress, waiting at table, &c. For this service, youths possessed of good figures and pleasing looks are usually selected, and they are expected to have an amount of intelligence and readiness to fit them for their multifarious duties. A certain amount of education is also essential for youths who are destined to fill this post. They should be able to read and write; and as they are often brought in contact with their superiors, they should be grounded sufficiently in the grammatical rules of the language, to enable them to deliver messages, and answer questions correctly and coherently. A page in a good family has an excellent situation, and if he behave himself, he is almost sure of promotion; thus, as he grows up, he is promoted through the various grades of service, until he arrives at the comparatively easy and remunerative one of butler, bailiff, or even steward.

PAIL.—A well-known utensil in frequent requisition in domestic and rural economy. The American pail is an improved kind recently introduced, and is lighter and of less awkward construction than the old-fashioned sort. Pails should be seasoned immediately after they are bought and before they are used, by which means they will last longer. When they are done with, they should be turned bottom upwards, and placed in the back kitchen or an outhouse. Leaving water to stand in them for any length of time proves very destructive. Many accidents have occurred through pails being left carelessly standing on stairs; to avoid such catastrophes, when a servant is thus engaged with a pail, and is called away, if only for a few minutes, she should first of all place the pail in the corner of the nearest landing, where there is no possibility of any one running against it. Pails are very roughly used by many persons letting them strike the stones heavily; this wears them out very fast, and may easily be avoided by moving them from place to place more carefully.

PAIN.—The sensation whereby we are made aware of some derangement of the system, and which may be situated in any part of the body. The effect which pain has, depends materially upon the temperament of the person, some subjects being extremely sensitive and unable to bear the slightest pain without murmuring, whilst others are altogether as callous, and do not complain under the greatest suffering. Many pains only last for a few hours or moments, and leave as suddenly as they came, or are alleviated by some simple remedy. When, however, pain makes its presence felt for some days in succession, it is a pretty sure sign that some derangement exists, which requires the aid of medical treatment. Although it is easier to give advice to persons who are suffering pain than it is to take it, yet there cannot be a doubt that the pangs of the body may be considerably assuaged by employing the mind in some occupation which calls it off from the contemplation of the bodily ailments which for the want of some other employment it is sure to indulge in.

PAINT.—A composition used for coating wood, stones, and metal with, for the purpose of protecting them against the effects of the atmosphere, and the ravages of time. The composition of paint is varied, according to the purpose to which it is put. *White house-paint* may be made as follows:—Two quarts of skim-milk, eight ounces of fresh slaked lime, six ounces of linseed oil, two

ounces of white Burgundy pitch, three pounds of Spanish white. The lime must be slaked in water, exposed to the air, mixed in about one-fourth of the milk; the oil in which the pitch is previously dissolved must be added gradually, then the rest of the milk, and afterwards the Spanish white. This quantity is sufficient for twenty-seven square yards, and the expense will not exceed a shilling. To make *a cheap paint impervious to the weather*:—Dissolve eight pounds of glue in boiling water, and with this slake a bushel of quicklime until it becomes of the usual consistence of paint. Lay on three coats of this mixture with a painter's brush, taking care that each coat is dry before it is succeeded by another; over the third dust sand or grey-stone dust from a dredger. By mixing ochre with the wash, any colour desired may be obtained. It may be made green by mixing common blue and yellow ochre, and applying them hot. For a *green paint for garden stands, &c.*:—Mix a quantity of mineral green and white lead, ground in turpentine, with a small portion of turpentine varnish for the first coat; for the second, put as much varnish in the colour as will produce a good gloss. To obtain a *substitute for oil-paint*:—Pour a gallon of boiling water upon a pound of quicklime and two ounces of sugar of lead. When the lime has become completely slaked, the mixture is to be stirred, and it is then fit for use. If required thicker, less water must be used. Colouring ingredients may be added at will. This composition is about one-twelfth less in cost than that of oil-paint, and possesses almost equal efficacy and beauty. When exposed to the weather, it requires one coat or foil to protect it.

PAINT, TO CLEAN. — When painted wainscot or other woodwork requires cleaning, soft soap and fuller's earth, with warm water and a flannel, will be the best things to use. This work should be performed by proceeding from the top downwards, and the water should be prevented from running on the clean parts as much as possible, or marks will be made which will appear after the whole is finished. One person should dry with a soft linen rag as fast as another person has scoured off the dirt and washed away the soap. When paint is soiled in parts only, and does not require a general cleaning, dip a sponge or a piece of flannel into soda and water, wash it off quickly, and dry immediately, or the soda will eat off the colour. When paint simply requires to have the dust removed from it, a cloth should not be used, but, after blowing off the loose particles with a pair of bellows, a little long-haired brush should complete the operation. With care, paint will look well for a long time, if guarded from the influence of the sun.

PAINT, TO REMOVE FROM CLOTH, &c.—After paint has once dried, it is extremely difficult to remove. Directly it comes in contact with the clothes, wipe off as much as you can, then apply to it repeatedly spirits of turpentine or spirits of wine, rubbed with a soft rag or a flannel. Ether will also efface it, if applied immediately.

PAINT, TO REMOVE THE SMELL OF.—The smell of paint, besides being very disagreeable, is liable to produce headache, sickness, &c., and sometimes occasion even more serious maladies. To remove the smell of paint from rooms, &c., both of the following methods will be found efficacious:—Place a vessel filled with lighted charcoal in the middle of the room, and throw on it two or three handfuls of juniper-berries, close the windows, chimney, and the door; twenty-four hours afterwards the room may be opened, when it will be found that the sickly unpleasant smell is entirely gone. The smoke of the juniper-berry possesses the advantage of leaving uninjured the tapestry, curtains, and other furniture of the room. Or, fill three or four new tubs with about eight gallons of water, and an ounce of vitriolic acid, and place them in the newly-painted room, near the wainscot; the water will absorb and retain the effluvia from the paint in three days, but the water should be renewed each day during that time.—

PAINTED GLASS, TO PRESERVE.—As painted glass is generally protected by grating, it cannot be cleaned on the outside; in consequence of which, long continued damp produces a diminutive moss or lichen, which absolutely decomposes the substance of the glass. This evil would be in a great measure prevented by removing the grating annually, and carefully wiping away the mouldy moss when it begins to appear. It is remarkable that this disease prevails in some situations more than others. Painted glass has been known to remain in a dry situation for centuries uninjured, but on being removed into a moist and foggy atmosphere has lost almost all its beauty in twenty or thirty years.

PAINTING HOUSES, BEST SEASON FOR.—The outsides of houses should be painted during autumn or winter. Hot weather injures the paint by drying in the oil too quickly, and causing the paint to come off easily. But when the paint is laid on during cold weather, it hardens in drying, and is firmly set. The painting of the interior of houses should be regulated by the convenience of the occupants. If possible, they should endeavour to escape the annoyance by going out of town; but if that is not practicable, the painting should be done, at such a season as will allow them to be a good deal out of doors, so as to escape the unpleasant consequences as much as possible. It is hardly necessary to say that while the painting is proceeding, the furniture of the rooms should be carefully covered up. Birds, rabbits, and other domestic pets should also be removed from its influence, as, in many instances, the smell to these animals is sufficient to occasion disease, and even death. If the interior of a house is properly painted in the first instance, it will last for very many years, and obviate the necessity of repainting during a moderately long tenancy. When, therefore, a person takes a house, he should turn his attention to this particular matter, and if the paint is imperfectly or

thinly laid on, insist on having it properly done, as one of the conditions of his entering upon occupation.

PAINTING PICTURES.—The first lesson in this art may be taken easily and cheaply. Take a piece of oilcloth or a millboard, a yard square. Paint it twice in drab or lead colour, then rub it with pumice, and wash it. Afterwards practise with the maulstick, a palette, and three or four brushes in white and black. The white may be whiting in milk, and the black lamp-black in beer. A sponge and water will remove one subject, and make way for others, till freedom of hand is attained.

PALING.—A fence made of wood, for protecting gardens, fields, and other enclosures. This kind of fence is better adapted for temporary purposes than for permanent use, for of whatever wood they are made, or however substantially they may be executed, their decay commences the instant they are erected, owing to that part of it which is let into the ground, being rotted by moisture. This decay may, however, be retarded in its course, by adopting certain measures for the preservation of the wood. For this purpose, it will be found an excellent plan to burn or char that part of the paling intended to be set into the earth, as this process hardens the wood and renders it impervious to moisture. Another means of preventing decay is to paint the whole of the wood, or otherwise fill the pores with oil, in such a manner as to prevent the entrance of moisture. Another very good remedy is the pyroligneous acid from gas-works, which, if the points of the standards that are to be driven into the earth are dipped into it while the liquor is boiling hot, will preserve them from the injurious effects of moisture for a very long time. Previously to the dipping, the palings should be properly sharpened, and that part which is to enter the ground, moderately charred. Common tar, melted pitch, or gas liquor, may also be successfully employed for the purpose of defending the extremities of the upright parts of paling from moisture; linseed and train oils may also be used with success. The wood should be completely dry before it is dipped in any of these preparations; for if they are either made of green wood or have imbibed much moisture, or, after being dipped are exposed either to the heat of the sun or a severe frost, the moisture will become so much expanded, as to burst through and bring off the paint or other coating. The simple nailed paling consists of upright posts, driven or set into the earth at certain distances, and crossed in three, or four, or more places, with pieces of wood in a horizontal direction. The jointed horizontal paling consists of massy square poles, driven or set into the earth at regular distances, through which mortices or openings are cut for the reception of the extremities of the horizontal pieces which traverse them. The upright lath paling is made by driving or setting a number of strong poles into the earth at regular distances, and crossing these at the top and bottom with horizontal pieces of equal strength; upon these last are nailed, at from six to twelve inches distance, a number of square pieces of sawn wood.—See FENCE, HURDLE, &c.

PALLIASSE.—A kind of mattress which is placed next to the laths of the bedstead, and serves to form a firm foundation for the bed itself. Palliasses require little care, save an occasional beating to free them from dust, and exposing them to the air to sweeten them.

PALM OIL.—This is yielded by the fruit of a species of cocoa-nut, and is brought into this country as a substance of the consistence of butter. It is used as an external application for similar purposes as the olive and other oils.

PALSY.—See PARALYSIS.

PAN.—A well-known utensil, generally made of brown ware. The best kind of pans are those which are glazed on the inside, and have neither knots nor other inequalities on their surface.

PANADA.—A food suitable for children and aged persons, and others who are unable to masticate and digest more substantial fare. Put some crumb of new bread into a saucepan, with a little water, and boil it until it becomes a thick pap; add water and a little salt, as the bread absorbs the water which was first put in; when it has boiled for a short time, stir in quickly the yolks of two or three eggs previously beaten up Milk panada is made by boiling the bread with very little water, and adding new milk and sugar when the bread has boiled; the milk should not quite boil. Nutmeg, cinnamon, lemon-peel, &c., may be added to the water panada, and a little white wine and sugar may be put to it before serving.

PANCAKE.—Pancakes may be made in various ways, according to the following receipts:—*Common pancake.*—Make a light batter of three spoonfuls of flour, three eggs well beaten, and half a pint of milk, some of which, with the eggs, is to be mixed with the flour; to the other part put a quarter of a pound of melted butter. Then mix altogether, and put into a fryingpan in a very thin layer. Fry with lard or dripping; but do not put any butter into the pan after the first frying, as they will give out enough, and afterwards to keep up the supply. Sugar and lemon should be served to eat with them. *Rich pancakes.*—To six tablespoonfuls of flour, add twelve eggs well beaten, half a pint of white wine, half a pound of melted butter, nearly cold, half a pound of powdered loaf sugar, a little grated nutmeg, a quart of cream, and a wineglassful of ratafia; mix the whole well; beat the batter for some time, and pour very thin into the fryingpan. When served, strew over with white pounded sugar. *Dutch pancakes.*—Mix a pound of flour with half a pound of sugar and a tablespoonful of powdered cinnamon; make the whole into a paste with ten eggs and a gill of white wine, when well mixed roll it out, and fry it, in the ordinary way. *French pancakes.*—Beat in separate basins the yolks and whites of ten eggs, mix with the yolks six tablespoonfuls of pounded white sugar, the same quantity of flour, a pint and a half of milk, the juice of a lemon, and half the peel grated,

with a little orange-flower water; add the whites of the eggs the last thing; fry to a good colour, and serve with grated sugar. *German pancakes.*—To the whites of six and the yolks of twelve fresh eggs, add, by degrees, three-quarters of a pound of powdered white sugar, a quart of good milk lukewarm, half a pound of melted butter, almost cold, a little good yeast, and a wineglassful of brandy; mix these ingredients well together, and stir in as much flour as will bring it to a thick batter; let it stand covered by the side of the fire for half an hour; then roll it out thin, cut it into square or oblong pieces, cover them with preserve or marmalade, double them, and after they have stood again for twenty minutes, fry them of a good colour in boiling lard. When served, sift sugar over them. *Madras pancakes.*—To six eggs well beaten, add six tablespoonfuls of boiled rice, sugar to taste, a little pounded cinnamon, a little orange-flower water; mix all well together, and fry in butter to a good colour. When served, divide it into quarters, and strew over with pounded loaf sugar. *New England pancakes.*—Mix a pint of cream, five spoonfuls of fine flour, seven yolks and four whites of eggs, and a very little salt; fry them very thin in fresh butter, and between each strew cinnamon and sugar. *Polonaise pancakes.*—Mix eight eggs with a pint and a half of cream or milk, and flour, two ounces of fresh melted butter, seasoned with grated nutmeg, raspings of lemon-peel, sugar to sweeten, and a little salt, and ten ounces of flour. Put into the frying-pan a little butter or lard, and when the batter is poured in, sprinkle it with currants, and powder it with sugar, when serving. *Apple pancakes.*—Mix two spoonfuls of flour in a gill of milk; when smooth add eight eggs, some pounded cinnamon, grated lemon-peel, two ounces of currants, and six middling-size apples peeled and chopped: mix all well together; melt some butter in a frying-pan; when hot, pour the whole mass in, and fry on both sides, served with pounded cinnamon and sugar.

☞ *Common pancakes.*—Flour, 3 tablespoonfuls; eggs, 3; milk, ½ pint; butter, ½lb. *Rich pancakes.*—Flour, 6 tablespoonfuls; eggs, 12; white wine, ½ pint; butter, ½lb.; sugar, ½lb.; nutmeg, to flavour; cream, 1 quart; ratafia, 1 wineglassful. *Dutch pancakes.*—Flour, 1lb.; sugar, ½lb.; cinnamon, 1 tablespoonful; eggs, 10; white wine, 1 gill. *French pancakes.*—Eggs, 10; sugar, 6 tablespoonfuls; flour, 6 tablespoonfuls; milk, 1½ pint; lemon, juice of 1, peel of ½ of 1; orange-flower water, to flavour. *German pancakes.*—Eggs, 6 whites, 12 yolks; sugar, ½lb.; milk, 1 quart; butter, ½lb.; yeast, sufficient; brandy, 1 wineglassful. *Madras pancakes.*—Eggs, 6; rice, 6 tablespoonfuls; sugar, to sweeten; cinnamon, to flavour; orange-flower water, to flavour. *New England pancakes.*—Cream, 1 pint; flour, 5 tablespoonfuls; eggs, 7 yolks, 4 whites; salt, sufficient. *Polonaise pancakes.*—Eggs, 8; cream, 1½ pint; butter, 2oz.; nutmeg and lemon-peel, to flavour; sugar, to sweeten; salt, sufficient; flour, 10oz. *Apple pancakes.*—Flour, 2 tablespoonfuls; milk, 1 gill; eggs, 8; cinnamon and lemon-peel, to flavour; currants, 2oz.; apples, 6.

PANSY OR HEARTSEASE.—There are at least a hundred cultivated varieties of this favourite flower. The prevailing colours are purple and violet, each with many shades. They are in flower from the beginning of June till July. The midsummer heat interrupts their blooming for some time; but after the middle of August they commence again, and continue with a regular succession of varied and beautiful flowers, till checked by winter frosts. The finest pansies should have large round petals; the flower forming nearly a circle, one inch and

a quarter in diameter. The colours should be brilliant, distinct, and permanent; the eye rather small, and not deeply pencilled, and the stigma filling the open part of it. The flower-stalk should be strong and erect. Few flowers require more careful culture than pansies. They succeed best in a moderately light rich soil; a large portion of cow-dung mixed with the upper nine inches of soil will, in general, suit them; but the dung must be well decomposed into mould; in the absence of this, dung from an old hotbed will answer. The situation of the plants should be one sheltered from cutting winds, as these are very destructive, often injuring, and even killing, the plants close to the soil, by twisting them about. The situation should be open to the free circulation of the air, and exposed to the morning sun, but protected from the full influence of the mid-day sun, which injures the colour of the blooms. The plants should be placed together in beds prepared for the purpose. The situation should be cool and moist, but thoroughly drained; for, although the pansy requires considerable moisture during the blooming season, and through the summer months, yet it is very impatient of superabundant moisture, and the plants will never prosper when the soil becomes in any degree sodden. The propagation of pansies is by cuttings or seed. The seeds may be sown early in spring, under hand-glasses, or in a common frame; and the plants may be first pricked out under glass, and afterwards transplanted into

beds in the open garden, or put into pots. The young side shoots are to be preferred for cuttings, as the old hollow stems seldom strike freely, and do not grow so strong for spring blooming. Take off a sufficient number of these side shoots in August, or in the beginning of September, and for autumn blooming in April or May; these insert either under hand-glasses, or in pots placed in a cool frame in some good light compost, mixed with a liberal quantity of silver sand, taking care to keep them moderately moist, and shading them from the hot sun. The cuttings should be continually taken off or struck, and all those which are not planted out in beds by August, or the first week in September, should be potted in sixty-sized pots and kept in frames through the winter. In those pots they will grow all the winter and blossom early, but they must not be permitted to feel the frosts, because, being in a growing state, they cannot resist it so well. Any cuttings will strike at almost any time, but the small side-shoots taken when an inch and a half long, will root very freely under a common hand-glass. When it is desired to produce single flowers of a large size, much may be done by thinning the buds before they open; first, however, securing a likely flower into which the strength of a shoot is to be directed. Although such attention is required to produce these in perfection, there is no difficulty when the plants have plenty of pure air. Seed should be saved from only the best and most perfect blooms on a plant, and the rest should be removed, to allow all the strength to be concentrated in the chosen pods. When they turn yellow, they should be gathered, and they may be sown at any time, if they are sown in pans and protected. The disease to which the pansy is most subject, is a withering away suddenly, as if struck by something at the root. This disease has neither an ascertained cause, nor a certain remedy. Old plants are much more subject to it than young ones, and it appears to be most prevalent during hot and dry seasons. When a plant is thus struck, which is indicated by a withering of the foliage, if it be a rare and choice kind, immediately take all the cuts you can obtain, and strike them, as almost invariably the old plants die. Strong stimulating manures appear to favour this disease, and, as a preventive, the soil should be kept frequently stirred.

PAPER.—This well-known substance is made of various qualities, according to the uses for which it is to be employed. For packing parcels, brown paper is the best, being able to withstand wet and rough usage better than others. For writing, the cream-laid paper is most suitable, having a smooth surface over which the pen glides with ease and freedom. Coarse brown paper, denominated ironmonger's paper, is not only useful for heavy packages, but equally so for keeping silks, satins, laces, &c., in, as it preserves their colours. Printed paper is not fit to wrap up parcels in, as it not only discolours the articles it encloses, but also soils the gloves and the hands, it is also equally unfit for having food placed within it, as sandwiches frequently are, the food becoming impregnated with the materials of which the printing-ink is composed. Economy of paper is to be recommended, as it is always useful; and a very good plan is, whenever a parcel is secured, to smooth out and fold up the papers, and lay them by in some place, where they may be readily found when wanted.

PAPER, TO REMOVE STAINS AND SPOTS FROM.—The clear solution of chloride of lime, diluted with twice its bulk of water, will effectually and expeditiously remove stains from prints and printed paper. First, soak the paper in clear water till it lies smooth; then remove it into a dish, large enough to hold it flat, filled with the solution diluted as above; the stains will disappear in a few minutes; after that, again soak the paper in clear water, to free it from the chloride of lime, and then dry it between sheets of blotting-paper. *To take writing-ink out of paper*, apply to it a camel's hair brush dipped in solution of tin, two drachms; water four drachms. After the writing has disappeared, the paper should be passed through water, then dried. *To extract grease spots from paper.* Gently warm the greased or spotted part of the paper, and then press upon it pieces of blotting-paper, one after another, so as to absorb as much of the grease as possible. Have ready some fine clear essential oil of turpentine, heated almost to a boiling state, slightly warm the greased part of the paper with a soft clean brush, and wet both sides of the spot with the heated turpentine. By repeating this application, the grease will be extracted. Lastly, with another brush, dipped in rectified spirits of wine, go over the place, and the grease will entirely disappear, without the paper being discoloured.

PAPER-HANGING, PROCESS OF.—This is very easily performed, and when undertaken by one of the members of the establishment, saves a great deal of expense and annoyance. The wall should be first prepared by rubbing it all over with pumice-stone, until all traces of former colouring or paper have disappeared. Next, wash the wall with size, made of an ounce of glue to a gallon of water, and when this is dry, the wall will be ready for the paper. This must be cut into lengths according to the different parts of the room; one edge of the plain strip must be cut off close to the pattern, and the other left half an inch wide. In all cases, the paper should be pasted some ten minutes or so before it is hung, as in that period it has time to stretch as much as it will do; and if applied without this precaution, it is sure to appear blistered when dry; with crimson and other delicately coloured papers, a lining paper is first applied. Begin by placing the close cut edge of the paper at one side of the window, stick it securely to meet the ceiling, let it hang straight, then press it down lightly and regularly with a clean cloth. The close cut edge of the next length will cover the half inch left on the first one, and so make a neat form; in this manner the operation is to be performed all round the room, and

finished at the other side of the window. No wall should be papered when it is possible to avoid it, until it has been plastered more than a year.

PAPER-HANGINGS, CHOICE OF.—The aspect, size, and general appearance of an apartment, is materially influenced by the paper on its walls; and the choice may be judiciously regulated by the following general rules:—Avoid paper having a variety of colours, or a large showy figure, as no furniture can appear to advantage with such. Large figured paper diminishes the extent of a large room, and makes a small one appear smaller. Choose nothing that appears extravagant or unnatural. Have regard to the uses of an apartment; the drawing-room should be light and cheerful, the parlour warm and comfortable, without being gloomy or sombre; bed-rooms, cool and quiet with neat small patterns. It is also worth while to consider the decorations of the wall; gilt frames show best on a dark ground, and dark frames, such as oak or gutta-percha, on a light ground. As regards colour, pale tints will be generally found the best. Rooms hung with scarlet, are rich but dismal and oppressive, they require also to be illuminated more, and at an earlier hour in the evening than lighter colours.

PAPER-HANGINGS, TO CLEAN.—Cut into eight half-quarters, a quartern loaf, two days old; it must not be either newer or staler. Blow off all the dust from the paper by means of a pair of bellows; take one of the pieces of bread, commence at the top part of the room, and holding the crust of the bread in the hand, wipe lightly downward with the crumb, about half a yard at each stroke, till the upper portion of the paper is completely cleaned all round. Then go round again, with the like sweeping stroke downwards; always commence each successive course a little higher than the upper stroke had extended, till the lower part be finished. This operation, if carefully performed, will make every old paper look almost equal to new. Great caution must be used not to rub the paper hard, nor to attempt cleaning it the cross or horizontal way. The soiled part of the bread must be each time cut away, and the pieces removed as soon as it may become necessary.

PAPIER MACHE.—A substance made of cuttings of paper, boiled in water, and beaten in a mortar till the mass is reduced to a kind of paste; and then boiled with a solution of gum-arabic or of size, to give tenacity to the paste. When dry, it is covered with a mixture of size and lamp-black, and afterwards varnished. Several articles of domestic use are made of this material, as trays, &c., being thus sufficiently strong for the purpose for which they are employed, and considerably lighter than similar articles made of wood or metal. *In cleaning papier maché articles*, they should be washed with a sponge and cold water without soap, dredged with flour while damp, and polished with a flannel.

PARALYSIS, OR PALSY.—A loss of voluntary motion, with or without an accompanying loss of sensation, and is either general or partial; that is, affecting the entire system or confined to a part, and is either caused by compression on the brain or spinal marrow, impaired nervous energy, exposure to intense cold, violent exercise, strong mental emotion, the presence of tumours, pressing on the origin of the nerves, from rheumatism, and sometimes from poisons, both vegetable and mineral, though that from lead is by far the most frequent. Paralysis, though it often occurs from simple debility, in persons of advanced age, more generally follows an attack of partial or complete apoplexy, and very frequently is the result of accidents. The symptoms of paralysis, when it comes on without any assignable primary disease, are loss of motion, in one or several parts, preceded by coldness, a creeping, pricking sensation, followed by a numbness that ultimately terminates in total torpidity, and incapacity of motion; sometimes the sensation or feeling of the part is gradually and concurrently impaired, till all feeling is lost with the deprivation of motion; at other times there is no defect in the sentient power, or else the loss of sensation is slight. These symptoms are attended with a sensation of languor or weariness, depression of spirits, weight and pain in the head, disinclination to all exertion, loss of memory, torpidity, sleepiness, vertigo, and coma; while the pulse is slow and soft, or quick, small and feeble. The only disease palsy can be confounded with is apoplexy, and from this it is known by the absence of the stertorous breathing, and the loss of sensation and motion being permanent; while in apoplexy, they are only temporary. The prognosis is unfavourable, when the parts paralysed become emaciated, and are withered and dry; on the other hand, the prognostic is favourable, when warmth, or pain, or itching, or a sense of pricking returns to the part. Though any portion of the body may be affected, the disease is more fatal when it attacks the upper extremities than the lower, and still more so, when the left side is the seat of the disease than the right. General paralysis may come on suddenly or by degrees, when from the former, it is the result of accidents to the brain or spinal marrow, or effusion of blood, as in apoplexy; when the latter, it commences at the toes or fingers, and creeps gradually over the body, numbing the parts over which it travels. The first consideration in the treatment of paralysis is, to remove the causes that obviously induced the paralysis, and restore sensation and motion to the part or parts affected; that is, if the attack is sudden and attended with heat and a full pulse, and the patient is of a plethoric habit, bleeding from the jugular vein or arm, strong cathartic medicines, blisters, hot water to the feet, and cold applications to the head, constitute the system of depletion that may, as for apoplexy, be necessary to adopt. When, however, paralysis attacks persons advanced in

life, of a thin, spare, or debilitated constitution, the treatment must be directly the opposite of that course just referred to in cases of a plethoric habit and congestion. In the former case, counter-irritation by mustard plasters, rubifacients, and irritating embrocations must be used externally, while stimulants, permanent and diffusible, are to be given internally. Of these the most serviceable are ammonia, ether, camphor, and brandy. When the head is perfectly free from all chance of congestion, and the action of the heart is low and regular, strychnine may be employed as an external remedy, and with very great probability of success; but though medical men give it in gradually increasing doses, from the sixth of a grain upwards, as an internal remedy, in the form of pills, no non-professional person should so venture to employ it. About half a grain put on the centre of a blister, and applied near the source of the nerves most implicated; the use is both safe, and, as we have said, beneficial, for it produces heat, twitchings, spasmodic contractions of the limb, and a disease like the disease it is meant to cure, ending, after a subsidence of the symptoms, in a restoration of health to the part. The constitutional treatment consists, in the palsy or debility of age, in a steady course of wine and quinine, steel, and the occasional employment of ammonia, ether, and brandy, given in camphor water as a vehicle, and the judicious adoption of one or more of the following external therapeutic agents. Stimulating embrocations, such as hartshorn and oil, opodeldoc and hartshorn, camphorated oil with turpentine, or oil of amber, turpentine, and sweet oil. The flesh-brush, or friction with a towel, or flour and mustard blisters in the direction of the nerves. Urtication, or stinging the part with nettles. Warm and salt water baths, with friction in the water, shampooing, and the medicinal use of the mineral waters of Bath. Besides these remedies, there is one agent that was long regarded as a mere secondary adjunct; extensive practice, and the appliances of art to its use, have justly advanced to a foremost rank as a curative agent, in all cases of loss of nervous power, or preternatural nervous action. This remedial power is electricity or galvanism, an agent that the cumbrous nature of the necessary apparatus long rendered inoperative for general benefit; but by the admirable and beautifully constructed portable batteries, invented by Pulvermacher, one of the greates* desiderata of the profession has been achieved; and, by means of one of his hydro-electric chains, or small electro-galvanic batteries, any affection of the nervous system, whether local, as in tic-douloureux, or its worst general form of palsy, may be treated without trouble or inconvenience. Independent of these their negative advantages, these medicinal batteries possess the further and greater recommendation of being applied with facility and comfort, directly over or around the seat or the course of the nerve, in whatever part of the body the disease may be seated, or the erratic nature of the pain extends. The powerful and specific influence of electricity on the nervous system has long been a familiar fact in medicine, but the great difficulty, and that which acted almost as a prohibition to its use, was the knowledge how to moderate the potency of so powerful an agent, and maintain its influence for a sufficient length of time in one direction—obstacles, now entirely overcome by this invention, which, according to the nature of the disease, and the strength of the current of electricity required, can be maintained of the same exact power for an indefinite time; the subtle stream passing in the same direction along the nerve, till the chain or battery is removed from the body. These little instruments can be worn on all parts of the body without observation. According as the paralysis is general or local, and whether it attacks the upper or lower extremities, the right or the left side of the body, the nerves of the face, or those of any other part or member, must depend the strength and size of the battery worn; or whether it is suspended down the back, and retained in contact with the spinal column, or lies longitudinally, spirally, or transversely, must depend upon the disease, its situation, and strength. But, in whichever way applied, it acts as a direct stimulant to the nervous centres in palsy, and as a sedative in acute neuralgia, by tranquillizing the undue action, and the excited extremity of the nerve, to a condition analogous to a state of health.

PARCELS, TO PACK.—There are few persons except shopmen and tradespeople who know how to pack a parcel neatly and securely, and yet the process is as simple as possible. Spread the sheet of paper flat upon the table, then place the articles upon it in the centre, commencing with some large article, and placing the smaller ones evenly upon it. When all are collected together, turn the side of the paper nearest you on the articles and lap over the side farthest from you, at the same time turning in the edge of this latter a quarter of an inch or so, to prevent it being cut by the string. Place some weight upon these, such as a book, then having tied a knot in the end of the string, take the end in the left hand and the other portion in the right, and draw it underneath the right hand side of the parcel; then make a slip knot and pull the string tightly until it properly secures the opening in the paper; let the knot be exactly in the centre of the parcel, then pass the string under the left hand side of the parcel, and secure it as before, then turn the ends of the parcel neatly in, pass the string underneath, and finally fasten it at the point where the parcel was begun.

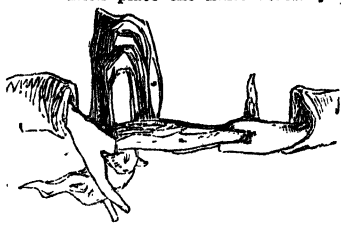
PARCHMENT GLUE.—Boil a pound of parchment in six quarts of water till the quantity be reduced to one quart, then strain off the dregs and boil it again, until it attains the consistence of glue. This will be found an efficient substitute for the ordinary glue and paste.

PAREGORIC ELIXIR.—An agreeable and effectual remedy for coughs and colds. Take a drachm of purified opium, a drachm of flowers of benjamin, a drachm of oil of aniseed, and two scruples of camphor. steep these constituents in a pint of brandy or proof spirit, let it stand for ten days, occasionally shaking it, then strain. Take a teaspoonful in half a pint of white wine, whey, or grnel the last thing at night.

PARENTS AND CHILDREN.—There are several laws relating to the position which parents and children hold towards each other. A parent may exercise full control over his children, he may lawfully correct them in a reasonable manner until they arrive at the age of twenty-one, when his legal power over them ceases. It is also supposed that a parent can exercise no legitimate control over a married daughter, above sixteen years of age, but on this point the law is not sufficiently clear. A parent may compel any or one of his children to contribute towards his support, in the event of his being in need and they in a position to afford relief. And if the children refuse, proceedings may be instituted against them, upon the parent becoming chargeable to the parish. A father is liable for the debts incurred by his son until he becomes of age, so far as *necessaries* only are concerned. In the event of any dispute or separation occurring between the parents of a child, the father has a right to the custody of his child however young, and to compel its delivery by writ of *habeas corpus*, but the Court of Chancery has the power to order the mother access to the child if within seven years of age, and for the delivery of it to her until that age, upon a proper case being shown for that purpose. A grandfather is compellable to contribute towards the maintenance of his grandchildren, whether the child's father be able to support him or not. A father is also compellable to contribute towards the support of his married daughter, even though her husband may be able to maintain her, provided it be shown either that the husband has deserted so as to make it impossible for her to obtain her maintenance from him, or that she has misconducted herself in such a manner as to relieve him from further liability to maintain her. On the other hand, a father is not legally liable for the support of his son's wife and children during any period that he (the son) is unable to contribute to their maintenance. Sons-in-law and daughters-in-law are not bound to support their mother-in-law. A step-father or step-mother is not bound to maintain step-children beyond the age of sixteen.

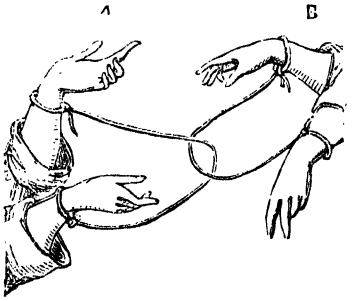
PARLOUR.—An apartment usually situated on the ground-floor, and set aside as the common room of the family. In it company may sit at all hours of the day, and every kind of repast be taken. Such an apartment should be fitted up and furnished more for comfort than appearance.

PARLOUR MAGIC.—Under this head are comprised a number of feats in legerdemain, and several optical illusions, which, if performed with skill, are excellently well adapted for in-door amusements. The following will be found some of the most practicable and entertaining:—*The Flying Groat.* Anoint the nail of the middle finger with a little wax. Then place a fourpenny piece in the palm of the hand, and exhibit it to the company, saying that you have but to command it and the coin will vanish. Close your hand, pressing the wax on the fourpenny piece, then rapidly open it, and the piece will adhere to the wax, and be concealed behind the finger when the hand is held up with the palm toward the company. *To take feathers out of an empty handkerchief.* Borrow half a dozen ostrich feathers, and having taken off your coat dispose them smoothly along your arm, with the stems towards your hand. Put on your coat again. Borrow a handkerchief from one of the company, and display it to show that it is quite empty. Throw it over your left arm, and with your right hand draw out one of the feathers from beneath your coat-sleeve; at the same time, give it a flourish in the air, to remove any appearance of its having been in a cramped position. Put the feather into a vase or insert it into a hole in the table, and again throw the empty handkerchief over your arm and repeat the trick. When all the feathers are displayed they will make a great show, and appear much too bulky to have been concealed in your sleeve. *The Knotted Thread.* Have a piece of thread about eight or ten inches long, twisted about the top of one of the fingers of the left hand, and upon this finger place a thimble, the better to conceal the thread. One end of the thread should be available to make a knot on. Thread a needle with a similar piece. The thread in the needle must have one of its ends drawn up close, and this must be concealed between the forefinger and the thumb; the other end should lie down by the side of the thread which is fastened under the thimble. These two will then appear the two threads belonging to the needle. You now make, with great parade, a double or treble knot—of course this is in the false end—and then commence to sew; sew away rapidly, and the knotted thread will appear to have been passed every time through the piece of cloth or cambric operated on. *Magical amputation.* Have a knife with a gap in the middle of the blade. This gap must be carefully concealed from the company with the forefinger of the right hand. Then place the knife across your

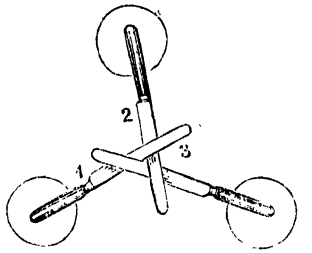


hand or nose, and they will appear to be half cut off. *The knot dissolved.* Tie an ordi-

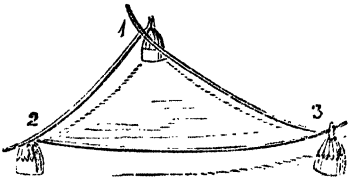
nary knot, single, not double, in a handkerchief, and give an end of it to one of the company to hold, telling him that he cannot pull the knot so tight but you will be able to dissolve it with a word. When he pulls, you utter a few mysterious words and slip the thumb of your left hand into the knot, as shown in the engraving. The handkerchief will then be pulled out straight, and the knot will disappear. *The wonderful filter.* Place before the company a vase full of ink. To assure the spectators that it really contains ink, dip a ladle into the vase and pour a portion of the ink upon a dish to be sent round for inspection. Then throw a handkerchief over the vase and instantly withdraw it, when the vase is found to contain pure water, in which a number of gold fish are swimming. The mystery is thus solved:—A lining of black silk is made to fit the interior of the vase with the greatest exactness. The water with which this is filled keeps the lining in its place. The ladle is made with a tubular handle, into which ink is poured. When dipped into the vase, the ink flows down the ladle into the bowl, and is poured out. In withdrawing the handkerchief the lining is also withdrawn, and all is complete. *The handcuffs unfastened.* Two persons tie their hands together with two pieces of string, as shown in the engraving, so that the strings cross. The problem is to free themselves without untying any of the knots. This will occasion a considerable deal of manœuvreing, and it will be probably some time before the right



method is discovered. It is performed as follows:—A gathers up the middle part of the string that binds him, and slips it under the noose on B's wrist. Through this noose, if B's hand is put, the handcuffed parties will be free. *The surprising wafers.* This delusion depends entirely on the rapid manner in which the knife employed in the trick is turned in the hand. On each side of an ivory paper-knife place, or allow one of the company to do so, three wafers. These should be all of the same size and colour. Exhibit the knife freely, to show that there are really three wafers on each side. Then desire some person to remove one of the wafers from one side of the blade, turn the knife twice, and there will appear to be only two wafers on each side. Have another wafer removed from the same side, and again turn the knife twice, there will now appear only one wafer on each side. Remove a third wafer, turn the knife rapidly twice, and the wafers will seem to have all disappeared. The secret is in turning the knife between the finger and thumb so dexterously, that two circuits are made where only one is suspected, and the side upon which the wafers remain being consequently kept always out of sight. *The self-supporting bridge.* Set three glass tumblers, or cups, or gallipots upon a table in the form of a triangle, as illustrated in the accompanying

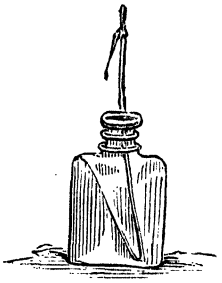


figure, and arrange them upon three knives. No. 1 thus rests upon No. 2, No. 2 upon No. 3, and No. 3 upon No. 1; and a bridge properly constructed will bear a considerable weight. *The tripod of pipes.* A similar trick to the preceding may be performed with three tobacco pipes. Procure three clean clay pipes, place the first of them bowl downwards, and let its stem be supported upon a second, placed similarly. The third

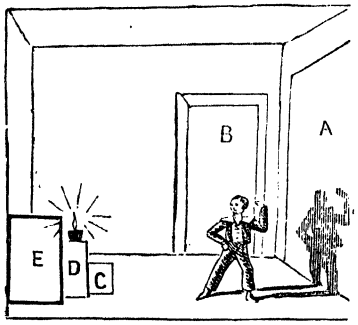


pipe is placed so as to complete the triangle, its bowl supporting the stem of No. 2, and its stem resting upon No. 1. This little tripod, notwithstanding the brittle materials of its structure, will sustain a very heavy weight. *To lift a bottle with a straw.* Procure a thick strong straw about three times the length of the bottle with which you intend to operate, bend the thick end of it into a sharp angle, and put this bent end into the bottle. When the doubled part has reached below the neck, it will open and form a hook.

You have then only to raise the bottle by the other end. Care must be taken that the



straw selected is not bruised or bent otherwise than as it is intended to be, or it will fail in raising the bottle. *Jumping up to the ceiling.* There is no delusion more mystifying than this when properly managed. A sheet is stretched across the folding-doors separating two apartments. All the lights must be removed from the room in which the spectators are, and the arrangement in the room which forms the stage for the actors in the puzzle must be as shown in the diagram.



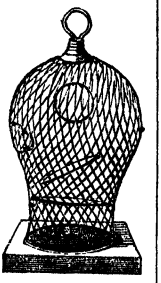
A represents the sheet fastened across between the apartments, B is a door by which the actors enter upon the scene, C is a stool placed in front of a second and higher one, D, upon which a powerful light is burning; behind D is E, a bench or table. The actor entering at B projects his shadow upon the sheet. At first, as he is close to the sheet the shadow will be only life-size, and it will depend upon the skill of the performer to make the shadow comical and diverting. But as he recedes from the sheet and approaches the light his shadow will increase in size, so that when close to the light it will assume gigantic proportions. The leap into the clouds is then easily effected. Stepping upon the stool C the performer springs over the light on to E, and to the spectators in

the darkened apartment he will appear to have jumped through the ceiling.

PARROT.—A very entertaining bird, which, if properly taught, will afford much amusement. Parrots thrive best when kept upon different kinds of grain, nuts, and seeds, varied with bread soaked in milk. Indian corn may be also occasionally substituted, being well boiled for three-quarters of an hour, when the water should be

drained off, and the corn given cold to the bird. Biscuit, and a small portion of loaf sugar, or thoroughly ripe fruit, may be added; but pastry and every kind of animal food must be scrupulously avoided. Clean gravel is always indispensable. The food is better if placed in glass or earthenware pans, which are more easily kept clean. Zinc boxes should never be used, as they are partially poisonous, and decidedly injurious; and tin boxes require much care to keep them thoroughly clean and dry. Parrots are peculiarly liable to inflammation, which sometimes arises from a sudden change in the weather, or from the bird having taken cold through being left uncovered during the night. When affected by it, the bird becomes dull and inactive, sleeping frequently in the morning, which is a certain indication of disease. The following will be found the most effectual remedy:—Mix a supply of whole grits well boiled with bread and milk, adding to this the

yolk of an egg boiled hard. About twice a week Indian corn may be substituted, and the juice of scalded rape-seed given for drink instead of water. Should this fail in effecting a cure, after a few days' trial, remove the food at night, placing in its stead a small quantity of magnesia dissolved in a tablespoonful of water. After the bird has partaken of this in the morning, it may be removed, and the above species of food continued as before. The parrot's cage should be commodious, strong, and comfortable. The perches should be thick in the middle, and conveniently placed for the bird to exercise without injuring himself. Beside the perches, there should be hung, quite clear of them, at the top of the cage, a ring or hook, freely moveable, upon which the bird can take exercise and roost at night. The cage shown in the engraving is one which will be found well adapted for this bird. It ought to be at least five feet in height, and three feet across the widest part.



PARSLEY AND BUTTER.—Wash some parsley very clean, and pick it carefully leaf by leaf; put a teaspoonful of salt into half a pint of boiling water, boil the parsley for about ten minutes, drain it in a sieve, mince it quite fine, and then bruise it to the pulp; put this into a sauce-boat, and mix with it, by degrees, about half a pint of good melted butter; this butter should be made without much flour, as the parsley will add to its thickness.

PARSLEY AND LIVER.—Wash the liver of a fowl or rabbit, and boil it for five minutes in five tablespoonfuls of water; chop it fine or pound it in a small quantity of the liquor it was boiled in, and rub it through a sieve; wash about one-third the bulk of parsley leaves, put them on to boil in a little boiling water, with a teaspoonful of salt in it; lay it on a hair sieve to drain, and mince it very fine, mix it with the liver, and put it into a quarter of a pint of melted butter, warm it up, but do not let it boil.

PARSLEY CRISPED.—Wash some sprigs of young parsley thoroughly, drain them from the water, and swing them in a clean cloth until they are quite dry; place them on a sheet of writing paper in a Dutch oven before a brisk fire, and keep them frequently turned until they are quite crisp; they will become so in from six to eight minutes. Parsley prepared in this manner forms a very delicate garnish for lamb chops, fish, &c.

PARSLEY, CULTURE OF.—There are several species of this plant in cultivation, but the preference is usually given to the sort called the curl-leaved. One sowing in spring will mostly furnish young leaves all the year; though, to answer a constant demand, it will be as well to make successive sowings from February to May. Sow moderately thick in narrow drills, barely a quarter of an inch deep, twelve inches apart if in a bed by itself, or in a single one round the edge of a bed, the soil being raked level, and the stones immediately above the seed gathered off. The plants will come up in three or four weeks, and when two or three inches high may be gathered all the summer, winter, and following spring. In early June, when they make a show for seed, the stems should be cut down close to the bottom, and again in September, if they have acquired a straggling rank growth; this will cause them to shoot afresh, and acquire a strong growth before the arrival of severe weather. On the approach of frost, if protection is afforded to the plants by means of haulm or reed panels, so supported as not to touch them, they will be preserved in a much better state for use in winter and spring. But a still more effectual plan is to take up some of the strongest and best curled plants in September, and plant them in pots, two or three plants in each, using a rich soil. If these be placed in a pit or greenhouse, and abundance of liquid manure given, they will be very productive throughout the winter. *To obtain seed*, allow some of the plants to run up in June; they should not, however, stand nearer than eighteen inches to each other. The seed ripens early in autumn, and when perfectly dry, may be beaten out and stored.

PARSLEY FRIED.—When parsley has been prepared, as for crisping, and is quite dry, put it into a pan of hot lard or butter, and fry it quickly; have a slice ready to take it out the instant it is crisp, and drain it on a cloth spread upon a sieve reversed, and placed before the fire.

PARSLEY PIE.—Pick carefully a sufficient quantity of parsley from the thick stalks, scald it in boiling water and place it in a cullender to drain; cut a portion of breast of veal into small pieces, and having seasoned them with pepper and salt, place them in a pie-dish, in alternate layers of meat and the scalded parsley, putting in each layer a slice or two of pickled pork; when the dish is full, cover it with a suet crust, and bake it in a slow oven; when done, lift the crust carefully, and pour into the dish a large teacupful of cream, in which the yolk of an egg has been beaten up.

PARSLEY, TO PRESERVE.—To preserve parsley through the winter, gather it in May, June, or July, take the fresh-gathered sprigs, pick and wash them clean, and set them over the fire in a stewpan half full of water; sprinkle a little salt in it; boil and skim it clean, and then put in the parsley; let it boil for two or three minutes, then take it out and lay it on a sieve before the fire, so that it may dry as quickly as possible. Put it by in a tin box and keep it in a dry place; when it is required for use, lay it in a basin, and cover it with warm water for a few minutes previous to being used.

PARSLEY, USES AND PROPERTIES OF.—In addition to parsley being used as a garnish and for sauces, it also serves as an excellent food for some animals. Rabbits are excessively fond of it, and it should always form a portion of the food given to these animals when kept in a state of confinement. This herb when used as a food for sheep imparts to their flesh a very agreeable flavour; it has also been found efficacious in curing the sheep-rot, and has been tried both in Hampshire and Berkshire with marked advantage. Another property in parsley is, that its leaves when chewed will take away offensive odours of the breath, such as when onions have been eaten, or spirits have been drunk.

PARSNIP.—Of this root there are many varieties, but one only is cultivated in England. The soil best suited for the parsnip is a rich, dry, sandy loam, and the deeper the better. Before sowing, the ground should be dug or trenched at least two spades deep, and the manure should be perfectly decomposed, or if recent, deposited at the bottom of the trench. The situation cannot be too open. Sow from the end of February to the beginning of April, but the earlier the better. Prepare beds not wider than five feet for the convenience of weeding, sow broadcast moderately thin, and rake the seed well into the ground; or sow in drills eighteen inches apart and half an inch deep. When the plants are from one inch to three inches high, in May or June, let them be thinned and cleared from weeds, either by hand or by small hoeing, thinning them from eight inches to twelve inches distance. Keep them afterwards clean from weeds till the leaves cover the ground, after which no further culture will be required. The roots will be pretty large by the end of September, and may be taken up as wanted, but they do not attain maturity till October, which is indicated by the decay of the leaves. The root will remain good for use till the April or May following. The quantity of seed required for a bed five feet by twenty feet, is half an ounce. The best seeds are to be procured from Guernsey or Jersey, where this root is grown to perfection. *To obtain seed*, some of the finest roots should be allowed to remain; or else, being taken up in February, planted in a situation open but sheltered from violent winds. If, of necessity, some of those are employed which have been preserved in sand, such should be selected as have not had their tops cut off very close. In dry weather, water plentifully twice a week. At the end of August the seed is usually ripe, the umbels may then be cut, and when thoroughly dried on cloths, the seed beaten out and stored. Seed should be never employed when more than a year old.

PARSNIP SOUP.—Take six or eight full-grown parsnips, scrape them clean and rasp them, add a few onions sliced, and if obtainable, a ripe tomato. While this is being done, the broth of any kind of fresh meat which has been got ready, should be heated and seasoned with a little mace and salt; put the vegetables into two quarts of the skimmed broth, cover the stewpan close, and let the contents simmer by the side of the fire for two or three hours, by which time the vegetables will have become tender enough to be pulped through a hair sieve: after this is done, boil the soup till it as smooth as a jelly, then serve.

PARSNIP WINE.—Take fifteen pounds of sliced parsnips, and boil them till quite soft in five gallons of water; drain the liquor thoroughly from them, run the pulp through a fine sieve, return the liquor into the boiler, and add three pounds of loaf sugar to every gallon; boil the whole for three-quarters of an hour; when tepid lay a toast covered with yeast in it, and cover it, keeping the cooler in a warm place; when it begins to ferment, put it into a cask, taking out the toast. It should not be racked till the autumn, nor bottled till six months afterwards.

PARSNIPS BOILED.—Scrape them and cut them in halves, and remove every speckle or blemish; put them into boiling water, and boil them from twenty minutes to an hour, according to their tenderness; they may be tried by thrusting a fork into them, and if that goes easily through, they are sufficiently done. As they require more or less time, according to their size, they should be matched as nearly as possible, so that all may be done at the same time. The water in which they are boiled should be well skimmed. Boiled parsnips are a favourite accompaniment to salt fish, and boiled pork and beef.

PARSNIPS, DIETETIC PROPERTIES OF.—The nutritious matter in parsnips is found by analysis to be ninety-nine parts in a thousand, of which nine parts are mucilage, and the remaining ninety are saccharine matter. It is a valuable culinary vegetable in soups and stews, and if well boiled is not difficult of digestion. As this vegetable has considerable heating properties, it should not be largely partaken of by persons of warm temperament.

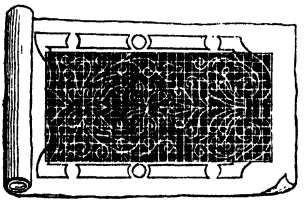
PARSNIPS FRICASSEED.—Scrape some parsnips and boil them in milk till they are soft; then cut them lengthwise into pieces two or three inches long; simmer them in a white sauce, made of six tablespoonfuls of broth, half a cupful of cream, a bit of butter, a little flour, mace, pepper, and salt.

PARSNIPS FRIED.—Boil the parsnips until they are half done, lift them out, and let them cool; slice them rather thickly, sprinkle them with salt and pepper, and fry them a pale brown in good butter. Serve them with roast meat, and dish them under it.

PARSNIPS MASHED.—Boil parsnips till tender, pare, and then mash them, and warm them in a stewpan with a little cream, a piece of butter, and a seasoning of pepper and salt. They may be thus prepared, either alone, or mixed with carrots, turnips, or potatoes; in any guise forming an agreeable and well-flavoured dish.

PARSNIPS, TO PRESERVE.—Dig up a portion of the roots in the beginning of November, when the leaves decay; cut the tops off close, and lay the roots in sand under cover, ready for use in hard frosty weather; the rest will keep good in the ground till they begin to shoot in the spring; then, in February or March, dig them up, cut the tops off, and thus preserved in sand, the roots will remain good till the end of April.

PARTERRE.—A portion of the garden set apart for the cultivation of flowers in picturesque forms and fanciful figures. The designs for these are most correctly transferred to ground as they are copied on paper, by covering the figure to be copied with squares formed by temporary lines intersecting each other at equal distances and at right angles, and by tracing on the ground similar squares, but much larger, according to a certain scale. Sometimes the figure is



drawn on paper in black, and the squares in red, while the squares on the ground are formed by stretching cords rubbed with chalk, which, by being struck on the ground (previously made perfectly smooth), leave white lines.

PARTIES, HINTS ON GIVING.—Parties are frequently given without any definite occasion, and with no set kind of entertainment: the *réunions* termed evening parties are of this nature. The refreshments furnished may consist of tea, coffee, lemonade and other effervescing beverages, fruit, cake, sandwiches, &c. There is no occasion for a sit-down meal, the refreshments being handed round by the servants, or by the male guests. The amusements may comprise singing, dancing, card-playing, acting charades, forfeits, and any other pastime which the ingenuity of the host and hostess can invent. The principle is, that the assembled guests are met together for the purpose of enjoying themselves, and administering to the enjoyment of others in any rational manner. At such times, therefore, as the mirth begins to flag, and conversation ceases, it is not out of place for any one to take the initiative in any pastime that is calculated to be generally acceptable. At the same time, the person giving the party should take care that the materials for amusement are ready at hand; and should, indeed, have mentally planned a programme of the evening's amusements, in order to prevent anything like dulness or inanity taking possession of the guests. Thus the givers of the entertainment will not fail to invite persons who can play and sing, and especially secure the services of one of those persons who by his accomplishments and sociable disposition is able to take the lead in every kind of pastime, and to come to the rescue whenever an awkward pause occurs. It is considered etiquette to appear at an evening party in full dress, unless under special circumstances, when a person must be guided by his taste and discernment. The cost attending giving an evening party is much less, and the pleasure far greater, than that incidental to any other entertainment. In England, miscellaneous evening parties do not often go off with spirit, partly on account of the eating and drinking being made subsidiary to other attractions, and partly on account of the shyness and absence of vivacity characterizing English people generally. It would be possible, however, for persons of congenial tastes and dispositions to form little coteries of their own, and project a series of evening parties, to be given first at the house of one and then of another. Nothing could be more delightful than such *réunions* as these, which would not only be productive of immediate enjoyment, but serve to bind still closer the ties of friendship and goodwill. They would also be of incalculable advantage to young persons of both sexes, not only in habituating them to the proper tone of society, but in affording them opportunities for forming friendships and matrimonial alliances.—See BALL ROOM, BREAKFASTS, DINNER, INVITATION, SUPPER, TEA, WEDDING CEREMONY, &c.

PARTNERSHIP.—A commercial relationship existing between two or more persons, for the conducting of certain transactions on principles of joint responsibility and mutual benefit. The terms upon which partnerships are entered upon are usually expressed in a deed drawn up for this purpose; and without such a deed, no person should associate himself permanently with another in the way of business. The terms upon which partnerships are established are necessarily varied, according to the nature and extent of the commercial transaction engaged in. One clause, however, is almost invariably inserted, and exercises a wholesome check for the benefit of all parties, namely, that neither of the parties shall on his individual responsibility engage in any speculations, accept bills, become surety, lend or borrow money, under certain penalties made and provided. Partnerships can be dissolved only by mutual consent, and must endure for the term agreed upon. One partner of the firm, therefore, cannot legally dismiss or get rid of another, unless assent be given. When partnerships are dissolved, a public notice is given in the *London Gazette*, the name of the retiring member or members of the firm being duly set forth. Without this notice, no dissolution of partnership is recognisable; and the person withdrawing himself in this informal manner still continues to be responsible as a member of the firm. As partnerships are very serious

and important engagements, no one should enter upon them without having duly weighed the matter himself, and having taken the advice of friends upon whom he can rely. The circumstances and position of the person he contemplates joining should be clearly inquired into, otherwise he may cement himself with a man who though ostensibly prosperous, is in reality in embarrassed circumstances. Nor is this all: integrity and moral principles should not be disregarded. And, lastly, compatibility of temper, congeniality of disposition, and coincidence of views, should be taken into account. From the neglect of this latter circumstance, many associations have been formed with the most melancholy results: continual disagreements leading to a systematic playing at cross purposes; and finally separating in disgust, with opportunities lost through variance, and a good business sacrificed to personal spleen.

PARTRIDGE.—Of this bird there are two kinds, the red and the gray, the latter being that which is common in the country; the plumage is of a brown and ash colour, elegantly mixed with black; the tail is short, and the figure more plump than symmetrical. Partridges pair about the third week in February; and sometimes

after being paired, if the weather be severe, they all gather together and form a covey, and are then said to pack. They begin to lay in six weeks after pairing. The female lays her eggs (from twelve to twenty) on the ground, scraping together a few bents and decayed leaves into any small hollow. The young birds begin to appear about the first ten days in June, and the earliest will take the wing towards the latter end of the month. In dry seasons they are most numerous. Corn-fields are the places which partridges most delight in, especially while the corn is growing, that being a safe retreat where they remain undisturbed. They frequent the same fields after the corn is cut down, and there feed on the dropped grains, finding a sufficient shelter under cover of the stubble. When the winter comes on, and the stubble-fields are either trodden down or ploughed up, they then retire to the upland meadows, where they lodge in high grass: they also sometimes resort to the low coppice woods, especially if they are contiguous to corn-fields. Partridge shooting commences by law on the 1st of September, when the birds are strong, and terminates on the 1st of February. In the course of September, the short flights of the coveys, in tolerably well preserved grounds, afford abundance of sport. In more open districts of country, where there is a wider range, partridge shooting requires more skill, and the aid of a steady pointer or setter. In shooting at a covey of partridges, select a bird on the outside, and fire at it alone; it is held as being unsportsmanlike to let fly indiscriminately at the centre of a group of birds.

PARTRIDGE BOILED.—Strip off the feathers, clean, and wash the birds well, cut off the heads, truss the legs like those of a boiled fowl, and, when ready, drop them into a large pan of boiling water; throw a little salt on them, and in a quarter of an hour they will be done. Serve them with mushroom or celery sauce and gravy.

PARTRIDGE BROILED. — Divide a young and well-kept partridge, and wipe it with a soft clean cloth inside and out, but do not wash it; broil it delicately over a very clear fire, sprinkling it with a little salt and cayenne; rub a little fresh butter over it the moment it is taken from the fire, and send it quickly to table, with a sauce made of a good slice of butter browned with flour, a little water, cayenne, salt, and mushroom ketchup poured over it.

PARTRIDGE, DIETETIC PROPERTIES OF.—The flesh of this bird is nutritious and easily digestible, and is very suitable for invalids; but this only applies to it when young, as, when old, it becomes tough, hard of digestion, and of a disagreeable flavour. Partridges should be hung some days before they are cooked, as they then become tender and high-flavoured.

PARTRIDGE PIE.—Pick, singe, and clean four partridges, cut off the legs at the mid-joint, season with pepper, salt, thyme, chopped parsley, and two mushrooms, of moderate size, chopped fine. Put the partridges at the bottom of the dish, and lay over them some veal cutlet and ham, cut into pieces about two inches square; add half a pint of good veal broth, cover with a puff paste, brush over with egg, and bake for an hour.

PARTRIDGE POTTED. — Clean the partridges thoroughly, and season them with mace, allspice, white pepper, and salt. Rub every part of the bird well; then lay the breast downwards in a pan, and pack the birds as closely as possible; put a great deal of butter on them, then cover the pan with a coarse flour paste, with a paper over it; tie it down securely, and bake. When cold, put the birds into pots, and cover them with butter.

PARTRIDGE PUDDING.—Skin a brace of well-kept partridges, and cut them down into joints; line a deep basin with suet crust, lay in the birds, which should be

rather highly seasoned with white pepper and cayenne, and moderately with salt; pour in water for the gravy, close the pudding carefully, and boil it for three hours to three hours and a half. When mushrooms are plentiful, put a layer of buttons or small flaps, cleaned as for pickling, alternately with a layer of partridge, in filling the pudding: the crust may be left untouched, and merely emptied of its contents, where it is objected to, or its place may be supplied with a richer one made of butter.

PARTRIDGE ROAST.—Let the bird hang as long as it can be kept without being offensive; pick it carefully, draw, and singe it; wipe the inside thoroughly with a clean cloth; truss it with the head turned under the wing, and the legs drawn close together, not crossed. Flour them when first laid to the fire, and baste them plentifully with butter. Serve them with bread sauce and good brown gravy.

PARTRIDGE SALMI.—Half roast the partridges, cut them up neatly, take off the skin; put the trimmings into a stewpan with a bit of butter and a tablespoonful of flour; stir the whole over the fire, then add a glass of white wine, and a little gravy or stock, some shalots, chopped parsley, thyme, bay-leaf, pepper, and salt; let it boil fast for half an hour, strain, skim, add the juice of a lemon, and make the partridge hot in the sauce.

PARTRIDGE SOUP.—Take a knuckle of veal, a piece of lean ham, three good-sized carrots, three large onions, two blades of mace, some white peppercorns, and five quarts of water; make this into a good stock, then add four partridges, stew them till they are quite tender, take the best parts off, beat them fine, and rub them through a sieve with a little of the stock; stew the bones in the stock, strain, and add the whole to the pounded meat; when served, season, adding some good cream, a spoonful of sugar, and a glass or two of port wine.

PARTRIDGE STEWED. — Truss the partridges with the wings over the back and the legs drawn in; cut a piece of pork or bacon in long strips, and put them into a stewpan, with a piece of butter the size of a walnut. Fry the bacon brown, and when quite done, put in the partridges, and keep turning them until they are very brown, taking care that the bacon should be as much in the breast as possible; then add a teacupful of gravy, and some trimmings of meat and vegetables. Have ready a large cabbage boiled; when well drained, slice it with butter, pepper, and salt; put it while warm with the gravy to the partridges, and let them stew gently for an hour, turning the birds frequently. Serve up the birds with the bacon underneath and the cabbage round them, squeezed dry, and the sauce well skimmed.

PARTRIDGE, TO CARVE.—Cut off slices from the breast, and then divide the bird in two. The wing is the prime part, especially the tip; the other choice parts are the breast and merrythought.

PARTRIDGES, TO CHOOSE.—If young, the bill is of a dark colour, and the legs yellowish; if new, the vent will be firm; if they are old, the bill will be white, and the legs blue; if stale, the vent will appear greenish, and the skin will peel when touched by the hand.

PASSION.—Indulgence in passion is frequently productive of serious and even fatal consequences, the brain and the heart being affected in a greater or less degree, and sometimes affected beyond the reach of recovery. Persons of an irritable disposition are apt to work themselves into a passion on the most trivial provocation, and when the dangers attendant on this course of conduct are considered, the necessity for controlling passion is self-evident.

PASSION FLOWER.—A flower taking its name from a fanciful idea that the appendages of the flower represent the passion of Christ when crucified. They are all

climbing plants, partly herbaceous and partly shrubby. There are many species, some are odoriferous, and others bear fruits which are edible, though not of very rich flavours. The common passion flower is the tallest and most woody of this family, the stem attaining almost the thickness of a man's arm, and giving out shoots to the length of fifteen feet in one season. The leaves are palinate and five-lobed, with smooth edges. The flowers are blue outside, and purple and white within. They have a faint odour and are very evanescent, continuing but for a day. The fruit is egg-shaped, and encloses a sweetish, disagreeable pulp, in the centre of which are seeds of a black colour. All the species will fruit in large pots, in hot-houses in this country. The roots are planted in a compost of very old tan and rich manure, in which they strike freely. They require only a temperate heat of about seventy degrees. As they grow, the very strong shoots should be cut off, as these do not bear so well as those which are less vigorous.

PASSOVER CAKE.—Make a stiff paste with biscuit powder, milk, and water; add a small piece of butter, the yolk of an egg, and a little white suga. Cut into pieces, mould with the hand, and bake in a brisk oven. To make it *without butter*, warm a quarter of a pint of water, flavoured with a little salt; mix four eggs with half a pound of Hebrew or "matso" flour, and a dessert-spoonful of powdered loaf sugar; mix with a teacupful of milk, and bake in a tin.

PASSPORT.—A document enabling a traveller in a foreign country to pass from one place to another without being detained or suspected. No passport is needed during peace by an Englishman travelling in any country in Europe, with the exception of Italy, Austria, and Turkey, and perhaps one or two other countries. When a passport is necessary it can be obtained by applying at the Foreign Office furnished with a letter in the following form, signed by a physician, clergyman, solicitor, barrister, magistrate, M.P., or banker:—

To Her Majesty's Secretary of State for Foreign Affairs.

My Lord,—I request that a Passport for travelling on the Continent (Austria or elsewhere) be granted to , accompanied by , all of whom I certify to be British subjects.

I have the honour to be, My Lord, &c.,

The price of a Foreign Office Passport is 2s.

PASTE, Adhesive.—This substance, which is so useful for many domestic purposes, may be made as follows: Stir two tablespoonfuls of flour into half a pint of cold water until all lumps are broken, then pour it into a pint of boiling water, stirring in the meantime; afterwards let it boil up once or twice and take it off. *Bookbinders' paste.*—Mix wheaten flour first in cold water, then boil it till it assumes a glutinous consistence; and mix a fourth, fifth, or sixth of the weight flour, of powdered alum, and if required stronger, a little pounded resin. *Superior paste.*—Mix flour and water, with a little brown sugar, and a very small quantity of corrosive sublimate in powder: boil it until sufficiently thick and smooth. The sugar will keep the paste flexible, and prevent it scaling off from smooth surfaces, and the corrosive sublimate will check its fermentation: a drop or two of oil of aniseed, lavender, or bergamot, will prevent the paste turning mouldy.

PASTE, for Tarts, Pies, &c.—Paste may be made of various qualities, according to the materials used and the contents of the dish. The following receipts will be found the best that can be followed in each instance:—*Plain paste for large pies, &c.*—Put a pound and a quarter of lard into a pint and a half of water or milk; set it over the fire, and when boiling, make it into a paste with seven pounds of flour; knead well with the hands, and when the paste is thoroughly worked together turn it to use. *Light paste.*—Mix with a pound of sifted flour six ounces of fresh, pure lard; make a smooth paste with cold water; press the buttermilk from ten ounces of butter, and form it into a ball by twisting it in a clean cloth. Roll out the paste, put the ball of butter in the middle, close it like an apple-dumpling, and roll it very lightly until it is less than an inch thick; fold the ends into the middle, dust a little flour over the board and paste-roller, and roll the paste thin a second time, then set it aside for three or four minutes in a very cool place; give it two more turns after it has again been left for a few minutes, roll it out twice more, folding it each time in three: it will then be fit for use. The sooner this paste is sent to the oven after it is made, the lighter it will be; if allowed to remain long before it is baked, it will be tough and heavy. *Rich paste for tarts.*—To six ounces of powdered lump sugar, add by degrees, ten ounces of fresh butter beaten to a cream, and to these add five eggs beaten very light, a little grated lemon-peel and some nutmeg; make it into the consistence of paste with some well-dried flour. *Plain short paste.*—Put two ounces of butter into two spoonfuls of water, and melt it in a saucepan. Take half a pound of flour and heat it in the oven; when hot, mix it with two ounces of cold butter with a knife, then pour the melted butter into the middle and stir it all together; roll it out once, put it over the fruit and bake it immediately. *Rich short paste.*—To half a pound of flour put seven ounces of butter, two ounces of finely sifted sugar, and the yolk of an egg beaten up with a tablespoonful of water. The butter, sugar, and flour to be well mixed before the fire, and the egg and the water added afterwards. *Crisp paste.*—Rub half a pound of butter into a pound and a half of flour; add three tablespoonfuls of powdered loaf sugar and the yolks of four eggs well beaten; work the whole well together with a wooden spoon, and roll it out very thin; bake it in a quick oven. Before serving, dust it with finely powdered sugar. *Cream paste.*—Stir a little fine salt into a pound of very dry flour, and mix gradually with it, sufficient, very thick sweet cream to form a smooth paste; roll in four ounces of butter and give the paste a couple of turns. Handle it as lightly as possible in making it, and send it to the oven as soon as it is ready; it may be used for fruit tarts, puffs, and other varieties of small pastry. *Family paste.*—Take two-thirds of wheaten flour, one-third of the flour of boiled potatoes, and some butter or dripping; bring the whole to a proper consistence with warm water, and a small quantity of yeast added when lightness is desired. *Suet paste.*—Chop a pound of fresh beef suet very fine, having first cleared it well from the skin; add this to a pound and a half of flour and a teaspoonful of salt; mix it well into a stiff paste, with cold water, beating it out with the rolling-pin three times. This paste answers well for any kind of boiled fruit pudding or meat pie, where it is to be eaten hot. *Paste for raised pies.*—Put two pounds and a half of flour on the paste-board; set over the fire in a saucepan three-quarters of a pint of water, and half a pound of good lard; when the water boils, make a hole in the middle of the flour, pour in the water

and lard by degrees, gently mixing the flour with it with a spoon, and when it is well mixed, knead it with the hands till it becomes stiff; dredge a little flour to prevent it sticking to the board: do not roll it with the rolling-pin, but with the hands, to about the thickness of a quart pot, cut it into six pieces, leaving a little for the covers; put one hand in the middle, and keep the other close on the outside till you have worked it either in an oval or a round shape, then use. *Flead paste.*—This takes its name from the inside fat of a pig, which, when fresh, makes much better paste than when subsequently converted into lard. Clear it quite free from skin, and slice it very thin into the flour, add sufficient salt to give flavour to the paste, and make the whole up smooth and firm with cold water; lay it on a clean dresser, and beat it forcibly with a rolling-pin, until the flead is blended perfectly with the flour. It may then be made into cakes or used for pies. *French paste.*—Sift two pounds and a quarter of fine dry flour, and break it into a pound of butter, work them well together with the fingers until they resemble fine crumbs of bread; then add a small teaspoonful of salt, and make the whole into a firm paste with the yolks of four eggs well beaten, mixed with half a pint of cold water, and strained; or for a somewhat richer crust of the same kind, take two pounds of flour, a pound of butter, the yolks of four eggs, half an ounce of salt, and less than half a pint of water, and work the whole well until the paste is perfectly smooth. *Paste for stringing tartlets.*—Mix with the hands a quarter of a pound of flour, an ounce of fresh butter, and a little cold water; rub it well between the board and the hand till it begins to string; cut it into small pieces, roll it out, and draw it into fine strings, lay them across the tartlets in any device fancied, and bake them immediately. *Croquant paste for covering preserves.*—Dissolve a drachm of sugar into as much cold water as will make four ounces of flour into a paste; knead and beat it as smooth as possible. Roll it to the size of the croquant form, and about a quarter of an inch thick. Rub the form with beef-suet, and lay it on the paste, and press it so closely as to cut the pattern completely through. Then lay it on a tin to bake. With a bunch of white feathers, glaze over the paste with the white of egg beaten, and sift fine sugar on it. Bake it in a slow oven, and gently remove the paste from the tin while yet warm, and lay it over the fruit which it is to cover. The same cover will serve many times if kept in a dry place.

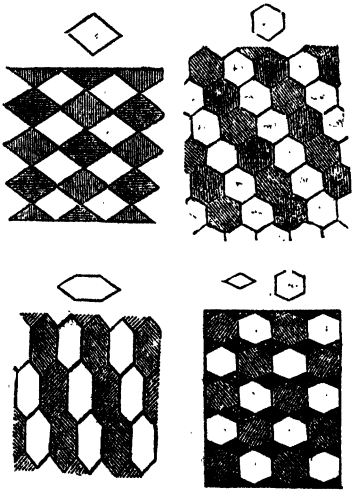
PASTILLE.—A preparation which when ignited produces fumes of sufficient pungency and odour to overcome any unpleasant smells that may exist. There are various modes of making pastilles. The following are approved recipes:—1. Take sixteen parts of powdered gum benzoin, four parts of balsam of tolu and powdered sandal-wood, forty-eight parts of lindén charcoal, one part of tragacanth and true laudanum, two parts of powdered saltpetre and gum arabic, and twelve parts of cinnamon water; beat into the consistence of thick paste, make into the shape of cones, and dry in the air. 2. Eight drachms of cascarilla bark, four drachms of gum benzoin, two drachms of yellow sanders, two drachms of storax, two drachms of olibanum, six ounces of charcoal, one drachm and a half of nitre; reduce the substances to powder, mix into paste with a sufficient quantity of mucilage of tragacanth, and make into proper form. 3. Twelve ounces each of gum benzoin, olibanum, and storax; nine ounces of saltpetre, four pounds of charcoal, one pound of powder of pale roses, one ounce of essence of roses; mix with two ounces of gum tragacanth dissolved in a quart of rose water. 4. The same formula as the preceding may be varied by the substitution of pure orange-powder for the roses, and oil of neroli for the essence of roses. 5. By adding a few grains of camphor to the first recipe, a pastille suited to an invalid's chamber is prepared. If the scent of the above proves too powerful, increase the proportions of saltpetre and charcoal. Never use musk or civet in pastilles. These preparations should not be burned to excess, especially in the sick chamber, as they exhaust the pure air as well as correcting the impure, and besides, leave behind them a faint and suffocating smell long after their use is required.

PASTRY, DIETETIC PROPERTIES OF.—With most persons, and especially those who have weak digestion, pastry proves unwholesome; the richest kind of pastry is especially so, and lies in the stomach a heavy indigestible mass, for hours. The plainer kind of pastry is the least injurious, and even of this small quantities should be eaten. Invalids should scrupulously avoid pastry of any kind.

PASTRY, RULES FOR MAKING.—In making pastry, the greatest possible cleanliness should be observed. The slab, board, tins, moulds, cutters, &c., should be perfectly free from dust and dirt, and should only be used for the purposes for which they are intended. No part of the paste should be left adhering to the board or dish used in making. The best thing to make paste upon is a slab of marble or slate, which substances cause less waste, being cold and smooth. The coolest part of the house should be chosen for the operation; the hands should be previously washed in very hot water; and the less they come in contact with the paste, the better and lighter it will prove. The more expeditiously the fine kinds of paste are mixed and despatched to the oven, the better they will be. Also, much of their excellence depends upon the baking. They should have a sufficient degree of heat to raise them quickly, but not so fierce a one as to colour them too much before they are done, and still less to burn them. The oven door should remain closed after they are put in, and not removed until the paste is set. The butter should always be fresh and very good. Wash it in cold water before using it, and then make it up into hard lumps with the hands, squeezing the water well out. If the butter and the sugar are to be stirred together, always do

that before the eggs are beaten. For stirring them, nothing is so convenient as a round hard stick, about a foot and a half long, and somewhat flattened at one end. The eggs should not be beaten till all the other ingredients are ready, as they will fall very soon. If the whites and yolks are to be beaten separately, beat the whites first, as they will stand longer. Eggs should be beaten in a broad shallow pan, spreading wide at the top. Butter and sugar should be stirred in a deep pan with straight sides. Break every egg by itself in a saucer, before it is put into the pan, so that any bad ones may not be mixed with the others. Eggs are beaten most expeditiously with whisks. A small quantity of white of egg may be beaten with a knife, or a three-pronged fork. In mixing paste, the water should be added gradually, and the whole gently drawn together with the fingers, until sufficient has been added, when it should be lightly kneaded until it is as smooth as possible. When carelessly made, the surface is often left covered with small dry crumbs or lumps; or the water is poured in heedlessly in so large a proportion, that it becomes necessary to add more flour to render it workable in any way; and this ought to be particularly avoided when a certain weight of all the ingredients has been taken. The flour employed should be well dried in a plate in the oven, or before the fire.

PATCHWORK.—A kind of fancy needlework, which consists in forming variously coloured materials, as silk, satin, ribbon, &c., into any device fancied. The great recommendation of patchwork is, that instead of being a costly pursuit, it is, on the contrary, an economical one, as it admits of odds and ends of various materials being turned to use, and formed into picturesque articles of domestic furniture, which would otherwise be thrown away and wasted. It affords also an elegant pastime, which may be at any moment abandoned or resumed, according to the humour of the fabricator. In making patchwork, the materials should be cut into sections, of the shape of circles, squares, diamonds, lozenges, or any form desired; and the form chosen must be maintained throughout, otherwise the uniformity of the work will be destroyed. This will be more clearly understood by the aid of the accompanying engravings: in each figure the sectional piece being shown above, and the manner in which it is worked out being demonstrated beneath. The articles essential next to the chief material, are some stiff paper, old envelopes, backs of letters, brown paper, &c., to form the shapes: lastly, the design—shapes cut on tin—and the designs themselves. The materials should be arranged into shades and qualities. After having been cut to the required sizes, and the irregularities of the edges removed, they are ready for use. The pattern should be placed before the person, and the shades being selected, the several pieces arranged so as to form the design, and the edges then neatly sewed together; after which they must be either pressed or ironed, the papers removed, and the lining proceeded with. When silks and velvets are employed, it improves the effect to combine the two, taking the silk for the lighter and the velvet for the darker shades; or to have the silk for the lighter shades, and two velvets for the others, shaded to pattern. A very pretty effect is produced by combining holland and calico, silk and satin, silk or satin and velvet, and rough cloth and fine cloth. The various articles which may be manufactured are, quilts, in coloured and white calico; antimacassars in silks; ottomans, in silks and velvets, silks and cloth; table covers, in silks and cloth; cushions for chairs or couches, in silks; and mats, rugs, and carpets, in cloth.



PATENT.—A privilege for a limited term to enjoy the commercial profits of any useful invention. The law relating to patents is somewhat complicated and intricate, and the proceedings in connection with them tedious and harassing. It is always better to place the matter in the hands of a patent agent, who, on the payment of certain fees, will relieve the principal of all further trouble, and protect his interests. A patent usually secures to the inventor the privilege of being the only fabricator of his invention, and solely enjoying the profit of the same for a period of seven years, after which term the privilege is withdrawn, and any person may manufacture the hitherto patented article. This law acts as a protection to the patentee, and should any person infringe it, an injunction may be obtained in Chancery, by which the person breaking the law is interdicted from making or selling any more imitations of the protected article, and is further mulcted in a penalty as a compensation for the supposed loss sustained by the patentee.

PATERNOSTER line for angling is principally used for pike and perch fishing, although chub and trout will be occasionally caught whilst using it. It is made of either gimp or gut of from a yard to a yard and a half in length; at the bottom is a perforated bullet or pear-shaped lead, with a brass ring inserted, to which the line is to be attached; at six inches from the bottom a loop is made, a second a foot higher up, and again a third another foot further up the line; to each of these loops hooks are to be attached, tied on to four or five inches of either gut, hog's bristle, or gimp; the two former for perch fishing, and the latter for jack fishing. The use of a bristle is, that as it is stiffer and less affected by water than gut, it keeps the bait from getting entangled with the line by wrapping the hook length around it; gimp is used for jack fishing in preference to gut or bristle, because the jack is provided with sharp teeth, which frequently cut them. The hooks should be—for jack, Nos. 1 or 2; and for perch, Nos. 5 or 6. The baits to be used are—for perch, small gudgeon, minnows, and worms, and for jack, gudgeon, dace, chub, or roach. The paternoster is to be attached to the running line, and when baited ready for use should be dropped into holes between weeds, into eddies, or close to the stream falling from a wear or mill, letting the lead sink and keeping the line tight; and upon *feeling* a run, gently give line, and allow a minute before striking. This line can be used amongst weeds, because the lead at the bottom will retain the baits in the place chosen, whereas a live bait swimming about at will would be sure to get entangled amongst them.

PATTENS.—Articles made for the feet, to protect them from wet and damp. From their clumsiness, and the danger attending the wearing of them, they are now seldom worn, and are almost entirely superseded by the clog and golosh.

PATTERNS FOR DRESSES, &c.—Mix some lamp-black with sweet oil. With a piece of flannel, cover sheets of writing paper with the mixture; dab the paper with a bit of fine linen. When using, put the black side on another sheet of paper, and fasten the corners together with small pins. Lay on the back of the black paper the pattern to be drawn, and trace over it with the point of a steel drawing pencil; the black will then leave the impression of the pattern on the under sheet, on which it may be drawn with ink.

PATTIES.—See BEEF; CHICKEN; LOBSTER; OYSTER; VEAL, &c.

PATTY-PAN.—A tin shape or dish used to bake patties in, and made of various dimensions and designs, according to the use to which they are put. They should be always kept very clean and bright, and not employed for any other purpose than that for which they are intended.

PAVING.—In preparing for laying down pavements, the first thing to be attended to is the foundation. This must be made of strong and uniform materials, well rammed together, and accurately formed, to correspond with the figure of the superincumbent pavement. The kinds of stone used in paving are chiefly granite, whinstone or trap, Guernsey or other pebbles, or water-worn granite or trapstones. The size of the stones used in road paving is commonly from five to seven inches long, from four to six inches broad, and from six to eight inches deep. In laying down stones, each stone should lean broadly and fairly on its base; and the whole should be rammed repeatedly to make the joints close; the upper and lower sides of the stones should be as near each other as possible, but they should not touch each other laterally except near the top and bottom, leaving a hollow in the middle of their depth to receive gravel, which will serve to hold them together. This method of paving may be easily executed by common workmen, who may throw in gravel between the stones as they are laid down. It will be useful to cover newly-laid pavement with gravel, which will preserve the fresh pavement for some time from the irregular pressure of wheels till the whole is consolidated. The stones should be of equal hardness, or the soft ones will be worn down into hollows. In every species of paving, no stones should be left higher or lower than the rest: for a wheel descending from a higher stone will, by repeated blows, sink or break the lower stone upon which it falls. Great advantage will be found in filling up the joints with lime water, which finds its way into the gravel between and underneath the stones, and forms the whole into a solid concrete mass.

PAWNBROKER.—A person who receives goods by way of pawn or pledge, for the repayment of money lent thereon at a higher rate of interest than five per cent. per annum. The rates of interest, fixed by Act of Parliament, on goods or chattels placed in the hands of pawnbrokers, are as follows:—For every pledge not exceeding 2s. 6d., one halfpenny, for any term not exceeding one calendar month it shall remain in pawn, and the same for every month afterwards, including the current month in which such pledge is returned, though such month is not expired.

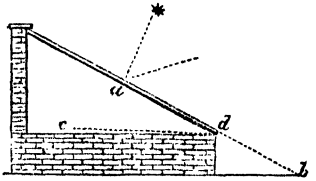
If 5s. shall have been lent			1d.
7s. 6d.	,,	,,	1½d.
10s.	,,	,,	2d.
12s. 6d.	,,	,,	2½d.
15s.	,,	,,	3d.
17s. 6d.	,,	,,	3½d.
20s.	,,	,,	4d.

So on in proportion for any sum not exceeding 40s. If exceeding 40s. and not exceeding 42s., 8d.; if 42s. and not exceeding £10, after the rate of 3d. for every 20s. by the calendar month, and so in proportion for every fractional sum. For any intermediate pledge between 2s. 6d. and 40s., the pawnbroker may take after the rate of 4d. for the loan of 20s. per month. Where the fraction of the sum to be paid is a farthing, the pawnbroker is bound to give a farthing in change for a halfpenny. Parties may redeem goods within seven days after the expiration of the first calendar month with-

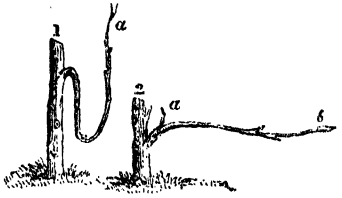
out paying interest for the extra seven days; or within fourteen days on paying for one month and a half; but parties redeeming *after* the expiration of the fourteen days must pay the second month; and the like regulations are observable in every subsequent month, when the parties apply to redeem. Pawns must be entered in a book, with a description of the goods, the money lent, the date, and the name and abode of the person pawning, and a duplicate entry, with the name and abode of the pawnbroker, shall be given on a note to the pawner. The duplicate is given gratis if the sum lent is under 5s., but if the money is above 5s. and under 10s. the pawnbroker may take a halfpenny; for 10s. and under 20s. one penny; 20s. and under £5, twopence; £5 or more, fourpence. Articles cannot be taken out of pawn without the production of the duplicate, the holder of which is assumed to be the owner. If a duplicate be lost or stolen, the pawnbroker is required to give a copy of it to the party representing himself as the owner of the articles pledged, with a blank form of affidavit, which must be filled up with a statement of the circumstances under which the original duplicate was lost, to the truth of which, deposition on oath must be made before a magistrate. For this second duplicate the pawnbroker is entitled to demand one halfpenny if the sum advanced does not exceed 5s.; from 5s. to 10s., one penny; and afterwards in the same proportion as for the original duplicate. The penalty against unlawfully pawning goods the property of others is between 20s. and £5, besides the full value of the goods pledged; and in default of payment, the offending party may be committed for three months' imprisonment and hard labour. Persons forging or counterfeiting duplicates, or not being able to give a good account of themselves on offering to pawn goods, are liable to imprisonment for any period not exceeding three months. The Act empowers police officers to search pawnbrokers' premises when suspected to contain unfinished goods illegally pledged, and goods unlawfully pawned must be restored to the owner by the pawnbroker. All pawned goods are forfeited, and may be sold, if not redeemed at the end of one year. When the sum lent is above 10s. and not exceeding £10, they must be sold by public auction, notice of such sale being twice given at least two days before the auction in a public newspaper; but on a notice in writing in the presence of a witness from the owner of the goods not to sell, three months further time shall be allowed beyond the year of redemption. Pictures, prints, books, bronzes, statues, busts, carvings in ivory and marble, cameos, intaglios, musical, mathematical, and philosophical instruments, and china, must be sold separate from other goods, on the first Monday in January, April, July, and October in every year. An account of sales of pledges above 10s. must be entered in a book kept by the pawnbroker; and if articles are sold for more than the sum for which they were pledged, with interest thereon, the owner is entitled to the overplus, if demanded within three years after the sale. Pawnbrokers' sale books are open to inspection on payment of a fee of one penny. The penalty on pawnbrokers selling goods before the proper time, or injuring or losing them, and not making compensation to the owner, according to the award of a magistrate, is £10. The Act prohibits pledges being taken from persons intoxicated or under twelve years of age (within the limits of the metropolitan police district, sixteen years of age). Pawnbrokers are prohibited from buying goods between the hours of 8 A.M. and 7 P.M.; or receiving pledges from Michaelmas day to Lady day, before 8 A.M. or after 8 P.M.; or for the other part of the year before 7 A.M. or after 9 P.M. excepting on Saturdays, and the evenings preceding Good Friday, Christmas Day, and every fast or thanksgiving day, when the hour is extended to 11 P.M. No mention is made in the Act as to the time of delivering pledges.

PEACH, CULTURE OF.—The peach and nectarine, although classed as two distinct fruits, owe their origin to one and the same parent, and the mode of cultivating them is identical. The selection of a proper soil is an important matter in the culture of the peach. A rich, mellow, somewhat adhesive loam, taken from near the surface of an old pasture, without the aid of artificial enrichment, together with what vegetable matter may exist on it, is the best for all moderately good climates. A light soil may be more advisable in a cold or damp locality. The mode of propagation is usually by budding. This is performed in July. Sometimes the old stock is planted against the wall in its permanent position and budded there, but generally they are budded in the nursery. The bud is introduced at about six inches from the ground. It remains dormant until the succeeding spring, when the head of the stick is cut off close above the bud, and the wound pared off particularly neat, in order that the returning sap may heal and skin it over. It is good practice to apply some white lead or a similar material, in order to exclude the air and moisture. During this summer the young bud will produce a shoot of some two or three feet in length, and this is headed back in the succeeding spring to about five or six eyes, thus leaving about five or six inches of the base of the shoot. The bud generally produces laterals during the first summer, especially towards the upper end; and the point where these commence branching generally indicates the point to which they are out back. In the summer following they will produce four or five shoots, which must be carefully trained and kept totally free from insects, and in the succeeding autumn the tree is fit for removal to a wall. There is no better stock for general peach-budding than the plum, a kind called the mussel being very generally used. The peach may be also raised from the stone. The stones may be either sown on heat, to expedite them, or otherwise. They should be cleansed and dried at the ripening period, and sown late in the autumn, care being taken to preserve them from the mice. The seedlings must be carefully

transplanted to the nursery immediately after one summer's growth, unless sowed to remain. Then pruning must be performed as with other sticks, and their subsequent culture is similar. The system of *forcing* the peach is one very frequently adopted. The best form for a peach-house is that constructed upon the principles shown in the engraving. As the lights to be removed to the required extent with facility must necessarily be short, the back wall of the house must scarcely extend nine feet in height, and this height raises the rafters sufficiently high to permit the tallest person to walk with perfect convenience under them. The lights are divided in the middle at the point *a*, the lower are made to slide down to *d*, and the upper to point *a*. The flue or hot-water pipe enters on the east or west end, as most convenient, and passes within six inches of the east and west wall, but not within less than two feet of the low front wall, and it returns in a parallel line through the middle of the house, in the



direction either east or west, and goes out at the point at which it entered. The house takes two rows of peach or nectarine trees, one of which is trained on trellises, with intervals between for the gardener to pass, parallel with the dotted line *c*. These trees must be planted between the flue of the front wall and the other row near the back wall, against which they are to be trained. Forcing in points is an excellent mode, and enables the peach to be thus grown in establishments where there is no regular peach-house. Pot a three-years-old tree in a twelve-inch pot, cutting it back to form buds; and shift every year until it has attained an eighteen-inch pot, a size which never need be exceeded. Let the soil be turfy, and mixed with decaying wood from the bottom of an old wood stock. The modes adopted for *training* peach trees are various. Experience proves that very fine fruit is seldom produced on very strong or on very weak branches, but generally on branches of a medium growth; therefore, to render a tree permanently fruitful, it is necessary to manage and train it in such a manner that all the sustenance furnished by the roots shall be appropriated to the production of branches of a proper and equal growth. The sap in all erect young trees, of which the peach is one, will flow into and through those channels that occupy the most vertical position next the root, and the strongest shoot will form at the point bud *a*, *fig.* 1. But if a branch be placed in a horizontal position, as in *fig.* 2, the strongest shoot will be produced in the most vertical bud nearest the base *a*, and the point-bud *b* will form the weakest shoot. *Protecting the blossom* is an important branch of peach culture. The tender leaves and young shoots require pro-



tection from late spring frosts, and also from the cold evaporating effects of an east wind. The most effective and at the same time the most economic protection for all fruit-trees on open walls, is a nine-inch wooden projecting portable coping, secured to permanent iron brackets, built in the walls close under the stone coping. When the season of spring protection is over, the boarding can be removed and placed under cover until again required. As soon as the fruit of the peach begins to change colour towards ripening, these wooden copings are again put on to keep the trees, and particularly the fruit, dry, and also to prevent its being driven off by the heavy rains of autumn, as well as to assist in ripening the wood. *Thinning the fruit* is a necessary precaution to attend to. As a general rule, one fruit on each bearing shoot, or two at the most, are all that should be left. By leaving too many the size of the fruit is diminished, and the tree becomes materially weakened.

PEACH FRITTERS. — Make a thick batter composed of six eggs well beaten, three-quarters of a pint of cream, a little yeast, a glass of white wine, half a glass of ratafia, and a little orange-flower water; add a little grated nutmeg, and as much flour as may be necessary; cut half a dozen peaches into thin pieces, mix with the batter, which must be then covered over, and set near the fire for three-quarters of an hour, drop the batter into boiling lard, and fry to a good colour. Strew sugar over them when served.

PEACH MARMALADE.—Peel and cut ripe peaches and put them into an iron saucepan, with three-quarters of a pound of sugar for every pound of fruit, taking care that they do not burn; stir them frequently, and when nearly done, take the kernels, which have been previously put aside and blanched, and add them to the marmalade; put the mixture into pots, covering the tops with white paper, dipped in brandy, and tying over with paper, or thin parchment.

PEACH RATAFIA.—Take four quarts of pale French brandy, two quarts of peach juice, and two pounds of powdered sugar; remove the kernels, put them into a cloth, and press them by a hand press; add the juice from the kernels to the above mixture, and when the whole has stood together for

five or six weeks, in a closely-covered jar, filter it off, and put it into bottles. If it be not convenient to press the kernels, put them in a bottle with some brandy separately, having first chopped them well up or bruised them, and when the ratafia is decanted, add the brandy in which the kernels have been steeped.

PEACHES PRESERVED.—Take some peaches which are nearly ripe, peel them, cut them in two, take out the kernels, and blanch them a little; boil them gently in syrup, and leave them in it till the next day; then take them out and let them drain; afterwards, boil the syrup thoroughly, put the fruit into it and let them simmer for a short time, after which put them into bottles. The quantity of syrup put into the bottles, should be about equal to the bulk of the fruit. If they are to be preserved in their green state, they must be peeled and the kernels taken out, preserving the form of the peach as much as possible. Blanch them over a moderate fire, in plain water; then take them out and put them into cold water; drain them, and boil them gently in syrup. After a little while remove them from the fire, and allow them to become cold; boil them again until the syrup becomes very thick, then bottle. To preserve them in brandy, wipe and pick the fruit, and have ready a fourth of the weight of fine powdered sugar. Put the fruit into an ice-pot which shuts quite close; throw the sugar over it, and then cover the fruit with brandy, between the top and the cover of the pot put a piece of double whity-brown paper. Set the pot in a saucepan of water till the brandy be quite hot, without boiling. Put the fruit into a jar, pour the brandy over it, and cover as in ordinary preserves.

PEA-FOWL.—In domesticating this bird, one male is usually kept with three or four hens. The female is extremely fastidious in selecting a spot to lay in, and generally leaves any artificial nest for the grass of some neighbouring coppice, when she lays under the branches of a shrub, in a well concealed situation. When the eggs of the pea-hen are gathered in sufficient numbers, whether from a natural or an artificial nest, it is a common practice to place them under an ordinary hen, which hatches them in thirty days, and makes an excellent step-mother to the young chicks. These are very tender at first, but they soon grow vigorous. Barley-meal paste, mixed with curd or cheese prepared from milk, alum, ant's eggs, meal-worms, and hard-boiled egg, are among the common articles of diet given to the young. The grown-up pea-fowl feeds on boiled barley or other common grains, and is a dangerous neighbour to corn-fields or gardens. On the other hand, they are voraciously fond of such creatures as frogs, lizards, and the like, and keep grounds clear of such annoyances. In moulting time it is requisite to be more careful of these fowls than at other times, and to give them good grain, with a little honey and fresh water.

PEA-FOWL, TO DRESS.—See GUINEA-FOWL.

PEAR, CULTURE OF.—The pear requires a good, naturally rich, loamy soil, not however enriched by artificial means, as that would only have the effect of producing a luxuriance of growth that would require much skill and labour to overcome. The pear is cultivated in a variety of forms, according to the hardiness or tenderness of the kind; and the sorts are chosen most suitable to the purposes for which they are intended. Grafting is the usual mode, and for this purpose two distinct kinds of stocks are used, the one called the free stock or wild seedlings, the other the quince. The first is the most proper for the orchard pear, as this produces much larger trees: the latter is best adapted in general for espaliers, walls, and pyramidal trees in gardens. In planting the pear on quince stocks, it is necessary that the stock should be covered up to its junction with the graft, and, if the soil is not extremely wet, the tree may be planted in the usual manner, so that the upper roots are on a level with the surface of the soil. But with pear trees on the quince it is necessary to form a mound of compost, above half-rotten manure and earth, mixed in equal quantities, which must cover the stock up to the junction of the graft to the letter *a* in the engraving; and this is made of rich compost in order to encourage it to emit roots into the surface soil, and to keep it from becoming hard and bark-bound. To make this emission of roots

more certain, the stem may be tongued, that is, the bark must be cut through upwards from the root, and a slip about one inch in length raised, as seen at *b b b b*. These pieces of bark must be kept open, by inserting a piece of broken flower-pot or slate. Several of these tongues may be made, and by the end of the first year after planting, every incision will have emitted roots; the stock, owing to its being kept continually moist, will swell and keep pace with the graft, and the tree will flourish and remain healthy. *Budding* is performed precisely as for other

fruits, and for the same purpose as grafting. By this course, however, one year or nearly so may be considered lost, in point of time. *Seed* is resorted to either to produce stocks or to raise new kinds. The seeds should be washed from the pulp when the fruit is fully ripe, dried and preserved as other seeds, and sown in February following. When it is wished to expedite the process, for the sake of gaining time, with fancy seedlings, the young plants may be sown and reared in a moderate bottom warmth, sowing in January or February, potting off the plants when up, and hardening them off by the beginning of June, when they may be planted out in a warm spot. The best way to prove such seedlings is to plant them on a good bearing old tree, on a quince stock if possible; they will thus fruit in half the time. During the growing period, the chief point is to keep down the watery spray, which is generally produced in abundance. Caution must be exercised in not doing this too early, or the embryo blossom buds may be driven into growth. The best practice is to commence by disbudding in the beginning of May. All gross foreright shoots are stripped away, and several of the more luxuriant shoots when too thick. In a few weeks the shoots begin to lengthen considerably, and their character as to fruitfulness is in some degree determinable. Very few of our pears bear on wood of the previous year, but a great many shoots plainly show betimes that their tendencies are towards fructification; such should be by all means encouraged. About Midsummer a selection may be made; most of those which look browner than the rest, and are shorter jointed, must be reserved; and much of the paler, longer-pointed, and more succulent-looking spray may be cut or pinched back, leaving about four inches at the base. Those reserved are tied down to the older branches, sometimes in a reverse position. In about a month from this operation, the points are pinched from nearly all the growing shoots; this should be done about the middle of August, and it has a tendency to cause the wood to become highly solidified, and thus induces fruitfulness. After this period, the only point is to pinch the extremities of all succulent spray which may arise. When the summer culture of the pear is properly attended to, but little is left for the winter primer. Nevertheless, there is still something to do; some shoots will have escaped the summer dresser, and many "snags" must be cut entirely away. Most of those which had been pinched back to three inches at Midsummer, or after, must be pruned entirely away. No stump or spur must be left, unless a blank space occur. These snags removed, the young shoots tied or nailed down must be examined, and the superfluous ones cut away. Those reserved must be tied down on the old stems, or nailed between them, and little more is necessary until the growing period returns. The conditions requisite for *storing* are a rather cool room, and one that is dry. The precise temperature is not quite certain, as it probably differs somewhat in different kinds. The safest would be from 55 to 60 degrees, not more than the latter. It is a common remark that the apple and pear bear well, and the reverse in alternate years. The cause of this, for the most part, is allowing the trees to exhaust themselves, by carrying more fruit in one season than they can well bring to full maturity. The trees become greatly weakened, and the extraordinary draught made by their roots upon the soil in which they grow extracts from it all, or nearly all, the food it contains suitable for their existence.

PEAR JELLY.—Peel and cut ripe pears into quarters, and boil them into a marmalade with water; then pass the marmalade through a sieve, so as to leave only the juice, and boil it with sugar in equal portions. When it has become sufficiently thick by boiling, put it into glasses and cover it.

PEAR MARMALADE.—Take ripe pears of good quality, and having peeled them, boil them until they are quite soft; press them through a sieve, and put the marmalade over the fire. When it becomes thick, moisten with syrup, and add powdered sugar in such proportion that the whole quantity of sugar employed may be equal to one pound for a pound of fruit. The sugar and fruit are to be made quite hot, and stirred frequently, taking care, however, never to pass the state of simmering. When it is thoroughly heated, and of a proper consistence, put it into pots in the usual way.

PEARS BAKED.—The pears employed for baking are those of a hard green kind. Wipe, but do not pare them; lay them on tin plates, and bake them in a slow oven. When soft enough to bear it, flatten them with a silver spoon; and when quite done, serve them in a dish with pounded sugar.

PEARS PRESERVED.—Take pears when not too ripe, and set them over the fire in a sufficient quantity of cold water, letting them simmer but not boil. When they are sufficiently softened to yield readily to the pressure of the finger, take them out, peel them carefully, prick them with a pin, and put them on again in fresh water, with the juice of a lemon; let them boil rapidly, and when they are sufficiently done, so that a pin will pass readily through them without the least resistance, take them out, and put them into cold water. In the meantime, have ready some hot thick syrup, and having well drained the pears, pour it over them. Let them stand for twenty-four hours, and then give them a gentle boil. Take them again out of the syrup, and dip them in cold water; after which, pour hot syrup upon them, and when they have stood three days, give them another boil; when cold, take them out, drain them, and put them into bottles; then thicken the syrup by a few boilings, and add an equal quantity of brandy. Filter the liquor through a bag, pour it over the fruit, and tie down the bottles.

PEARS STEWED.—Peel, and divide into halves or quarters, large pears, according to their size; throw them into water as the skin is taken off, before they are divided, to

prevent their turning black. Pack them round a block-tin stewpan, and sprinkle as much sugar over them as will make them moderately sweet; add lemon-peel, a clove or two, and some bruised allspice; just cover the fruit with water, and add a little red wine. Keep them closely covered, and stew them for three or four hours; when tender, take them out, and strain the liquor over them.

PEARL.—The most beautiful and costly pearls are obtained exclusively from the pearl oyster of the Indian seas. An inferior description of pearl is procured from a fresh-water shell-fish in the rivers of Ireland and Scotland.

PEARLASH.—A preparation produced from the ashes of burnt vegetables. It is employed in the laundry for the same purposes as soap. It is also very useful in softening hard water. It may be employed for scouring the rougher kind of woodwork, kitchen fixtures, &c., and also for cleaning the lids and insides of saucepans.

PEARL POWDER.—Take four ounces of the best magistery of bismuth, two ounces of starch powder; mix them well together, put them into a funnel-shaped glass, pour over them a pint and a half of proof spirit, and shake them well; let them remain a day or two. When the powder falls to the bottom, pour off the spirit, leaving it dry; then place the glass in the sun, to evaporate the moisture. Next, turn out the white mass, the soiled portions of which form the top, whilst the pure ingredients remain at the bottom. If there be any dirty particles, scrape them off, and again pulverize the remaining part of the cake, and pour more proof spirit over it. Proceed as before, and if there be any moisture remaining, place the cone on a large piece of smooth chalk, to absorb its moisture. Cover the whole with a bell glass, to preserve it from dust, and set it in the sun to dry and whiten. Next grind the mass with a muller on a marble slab, and keep the powder in a glass bottle, secured by a ground stopper.

PEAS BOILED.—Shell and wash them, then drain them in a cullender, and put them on in boiling water, with a tablespoonful of salt; boil till tender, and serve in a dish in which a piece of butter has been put. A bunch of mint is usually boiled with them. The saucepan should not be covered while peas are boiling; and immediately they are done they should be strained from the water, otherwise they will lose their colour.

PEAS, CULTURE OF.—Of this leguminous plant there are several varieties, but a great sameness about many of the early kinds. One good variety is all that is required in a small garden; and for one containing all the good qualities of the pea, the *Early Conqueror* is the best. The *Early Warwick*, *Prince Albert*, *Dancroft Rival*, and *Shilling's Grotto* are also all good well-known peas, where variety is required. One quart of an early variety of pea is quite sufficient for sowing a row of a hundred feet in length; half a pint less sown in the same distance of the blue varieties, and one pint of the large stalk kinds, are sufficient where the soil is rich, well pulverized, and pretty free from slugs. The *soil* in which this vegetable most luxuriates is a free, light, but rich loam, abounding in vegetable matter, but not manured with recent dung. The situation for crops, from June to August, should be exposed and open. The times of sowing are very various. To try for a crop as early as possible, sow of the sort preferred a small portion on a sheltered south border, or other favourable situation, at the close of October, or in the early part of November. Follow with another sowing in December, so that if the former be casually cut off, the latter may have a better chance to flourish; and if both survive the frost, they will succeed each other in maturity in May and June. At whatever season sowing is commenced, a better general rule cannot be adopted than to sow for a successional crop as soon as the peas of the preceding sowing are fairly above the surface. Sow in drills, or by the dibble in rows, at a distance proportionate to the height which the variety attains, as well as according to the season. Dwarfs at two feet for the early and late crops, but three feet for the main ones. Marrowfats at three and a half or four and a half feet; Knight's marrowfats, and other gigantic varieties, at six or eight feet. Peas not intended to be supported require the least room. At the early and late sowings the seed should be buried an inch deep, but for the main crops an inch and a half. The distances apart in the rows should be—of the dwarf, two in an inch; middle-size varieties, three in two inches: and the latter kinds an inch apart. The best mode is to sow in single rows, ranging north and south, and the sticks alternately on each side of the row. If the rows range east and west, put the sticks on the south side. When the summer sowings are made, if dry weather is prevalent, the seed should be soaked in water for two or three hours previous, and the drills well watered. When the plants have advanced to a height of two or three inches, they are to be hoed, and earth drawn around their stems. This should be done twice or thrice as they ascend, previous to the sticks being placed. Early crops should be protected during hard frosts, by dry straw, or other light litter, laid upon sticks or brushwood; but remove the covering as soon as the weather becomes mild. If in April, May, and the course of summer, continued dry weather occurs, watering will be necessary. All peas fruit better for sticking, and continue longer productive, especially the larger sorts. Stick the plants when from six to nine inches high, as soon as they begin to vine. Too much care cannot be taken when the pods are gathered, not to injure the stems: and if cut off with the scissors, the plants will produce one-fourth more than when roughly gathered from. The more regularly plants are gathered from, the longer they continue in production, as the later pods never attain maturity if the earlier ones are allowed to grow old before they are gathered. To obtain seed, leave some rows that are in production during July, or sow purposely in March: care must

be taken, however, that no two varieties are in blossom near each other at the same time. The plants intended for seed ought never to be gathered from. When in blossom, all plants which do not appear to belong to the variety among which they are growing, should be removed. They are fit for harvesting as soon as the pods become brownish and dry. When perfectly free from moisture, they should be beaten out, otherwise, if hot showery weather occurs, they will open and shed their seed. The *forcing of peas* commences in December, in the early part of which month they may be sown in a hot-bed, to remain, or thicken to transplant, during the succeeding month, into others for production. These may be repeated in January, and the planting takes place in February. It is also a common practice to sow in a warm border during October, and the plants being cultivated as a natural ground crop, are removed into a hot-bed during January. The hot-bed must be moderate, and earthed equally over the depth of six or eight inches with light fresh mould, not particularly rich. The seed must be buried an inch and a half deep. The frame, which is required to be two feet and a half high behind, and one and a half in front, ought to be put on three or four days before the crop is sown, that the steam and heat may abate. Seed may likewise be sown at the above times in pots or pans, and placed round the basis of the stove. At the close of September, also, some peas may be sown in pots, and sunk in the earth of any open compartment: when the frost commences, to be removed into the greenhouse. A border of fresh earth being made in the front of it early in December, the plants are removed into it in rows two feet asunder, or, still better, in pairs, with ten inches interval, and two feet and a half between each pair. These will come into production about the middle of March. In every instance, as stated above, the rows should be two feet, the seed or plants being set an inch asunder. The plants are ready for removing when an inch or two high. They must be shaded and gently watered until they have taken root. As much earth should be preserved about the roots at the time of removal as possible. Transplanted peas are most productive, and run the least to straw in the forcing frames. Air must be admitted as freely as circumstances permit: the same precautions being necessary for cucumbers. Water must be given at first sparingly, otherwise decay or super-luxuriance may be occasioned; but when they are in blossom, and during the succeeding stages of growth, it may be applied oftener and more abundantly, as is necessary for the settling and swelling of the fruit. The shading during hot days, and the covering at night, must also be particularly attended to. From three to five months elapse between the time of sowing and production, according to the fineness of the season, length of the days, &c. The temperature may be uniformly kept up throughout their growth, having fifty degrees for the minimum at night, and seventy for the maximum by day.

PEAS, DIETETIC PROPERTIES OF.—The amount of nutritive matter which peas contain, is far beyond what is found in any of the cereals, being as 44 or 50 to 100 of wheat flour. The nutritive effect, however, does not agree with this theoretical conclusion, partly from their deficiency in other wholesome constituents, partly from the difficulty with which they are digested, and the flatulence and constipation which they occasion, as well as from the acridity they are said to communicate to the blood.

PEAS PUDDING.—Take a pint of split peas and allow them to remain in water the whole night previous to their being used: then take them out and put them loosely into a cloth, so as to allow them to swell; boil them for four hours or until they are quite tender, then rub them through a cullender, so as to render them perfectly smooth; add to the pulp a lump of butter and some salt; after being well mixed, put the peas again into a cloth, tie tightly, and boil for about half an hour. This pudding is usually eaten with boiled pork or boiled beef.

PEAS SOUP.—There are various ways of making this well-known and agreeable soup. The following are among the most approved recipes:—1. Save the liquor of boiled pork or beef: if too salt, dilute it with water, or use fresh water only, adding the bones of roast beef, a ham or gammon bone, or an anchovy or two. Simmer these with some good whole or split peas; the smaller the quantity of water at first the better. Continue to simmer till the peas will pulp through a cullender; then set on the pulp to stew—with more of the liquor in which the peas were boiled—two carrots, a turnip, a leek, and a stick of chopped celery, till all are quite tender. When ready, put into a tureen some fried bread cut into dice, dried mint rubbed fine, pepper and salt, and pour in the soup. 2. Wash a quart of split peas, and put them into a cloth; when boiled tender, rub them through a sieve into six quarts of boiling stock; take six onions, two bay-leaves, an ounce of allspice, three sprays of thyme, or three of marjoram; put them all into a stewpan with an ounce of butter, until they are of a brown colour; put them into the stock, and boil for ten minutes; then strain it through a sieve, and let it boil ten minutes more; serve with mint, and with toast cut into squares. 3. Put into a pan six pounds of pork, well soaked and cut into eight pieces, pour six quarts of water over it; add a pound of split peas, a teaspoonful of sugar, half a teaspoonful of pepper, and four ounces of fresh vegetables; let these boil gently for two hours, or until the peas are tender. Strain through a sieve and serve. 4. Wash a quart of split peas, which put into a stewpan with half a pound of streaked bacon, two onions sliced, two pounds of veal or beef, cut into small pieces, together with a little parsley, thyme, and bay-leaf; add a gallon of water, with a little salt and sugar, place it upon the fire, and when boiling, stand it at the side until the peas are boiled to a pulp, and the water is reduced to one-

half; then take out the meat, put it upon a dish, to be eaten with the bacon, keeping it hot in the meantime, rub the soup through a hair sieve, put it into another stewpan, and when boiling, serve. 5. Put a pint of split peas into four quarts of water, with two ounces of butter, three pounds of beef, one pound of crushed bones, and a knuckle of ham, or half a pound of good bacon; add two carrots, three turnips, a head of celery, four onions, and a seasoning of salt and pepper; boil for about three hours; then crush the pulp from the peas, through a sieve, and serve it up, making of the meat a separate dish, if desired. 6. *Green peas soup.* Put two quarts of green peas into a stewpan with a quarter of a pound of butter, a quarter of a pound of lean ham cut into small dice, two onions sliced, and a few sprigs of parsley; add a quart of cold water, and rub all well together; then pour off the water, cover the stewpan close, and set it over a brisk fire, stirring the contents of the stewpan round occasionally; when very tender, add two tablespoonfuls of flour, which mix well; in mashing the peas against the sides of the stewpan, add two quarts of stock, a tablespoonful of sugar, and a seasoning of pepper and salt; boil all well together for five minutes, then rub it through a tammy or hair sieve; then put it into another stewpan with a pint of boiling milk; boil for five minutes, skim well, and pour it into a tureen: serve with toasted bread cut into squares.

PEAS STEWED.—Make a light broth and dress the peas in it for a few minutes, moistening them from time to time with hot water; then add salt and pepper, two or three onions, a little parsley and chopped lettuce; let them reduce gently, until the peas are thoroughly done; and before serving, thicken with the yolks of two or three eggs, taking care that the mixture does not boil after the eggs have been put in, lest it should turn.

PEAS, TO PRESERVE.—Gather the peas before sunrise, shell them immediately, and throw them into boiling water; when they have had one good boil, take them off; and when cold, spread them thinly over a wire sieve. Place the sieve for six hours over hot wood ashes, or over a very slow charcoal fire, so as to dry them gradually, and then put into bottles corking them carefully. In this way they will keep fresh till winter.

PEAS, WITH MILK AND SUGAR.—Put a quart of very young peas into water, with a piece of butter; boil them; then crush them with the hand, and let them drain in a cullender; then put them in a stewpan over a brisk fire, with a little salt, pepper, and sugar, and a small quantity of parsley; moisten from time to time with boiling water, taking care to shake them frequently; and when they are nearly dry, beat up the yolks of three eggs with some cream or good milk, and stir it well into the stewpan, until it has become sufficiently thick.

PEAT.—A collection of vegetable remains commonly accumulated in masses, either on the surface of the earth, or in strata at various depths. It contains elements for the formation of the richest manure, when substances are added to it to decompose the tannic acid, and hasten the decomposition of the vegetable matters, such as lime or marl. Peat has not been found, when used alone as manure, to possess any fertilizing qualities, as might be expected from its nature; but it has been advantageously employed as a mixture with compost. Such magazines of almost neglected matter as peat affords, might be advantageously employed by being transported to light sandy or gravelly soils, in which there is a great deficiency of vegetable matter. The ashes, also, form valuable stimulants, and assist in the germination of seeds on all, but more especially on strong clayey soils. Celery, potatoes, and carrots, are almost the only garden crops that seem to prefer an improved peaty soil. Fruit trees seldom succeed in such.—See MANURE.

PEN.—The steel pen is now almost universally employed for the purposes of writing. They may be procured at the lowest possible prices, and require little or no care. Leaving them embedded in shot when not in use, prevents them corroding.

PENCIL.—In this writing implement, as in the pen, many improvements have been latterly introduced. A species of pencil-case has been recently invented, with a peg moving in a spiral form, by which the lead is protruded or withdrawn readily; this is a great improvement on the old-fashioned pencil-case. The degree of hardness or softness which characterizes different sorts of drawing pencils, is denoted by certain distinguishing letters stamped into the wood of the pencil; thus H, hard, for ordinary architectural, geometrical, or latticed drawing; HH, harder, for the finer arts of these; HHH, hardest, for drawings upon wood; HB, hard and black, for ordinary sketches; B, black rather than hard, for shadows to the preceding; BB, very black, for the deepest shadows.

PENK.—See MINNOW.

PENKNIFE.—A knife so called for the use formerly assigned it of making and mending pens. It is now carried about the person, as a useful little implement to be employed for numerous offices, and is found of great use in many emergencies.

PEN WIPER.—A useful little implement employed for wiping the pen upon, after writing with and previous to putting it away. They may be made of the odds and ends of any materials, and designed in any fanciful form.

PENNY-ROYAL.—A well-known perennial plant that is found growing wild on marshy commons, and about the margins of small brooks. It is cultivated chiefly on account of its use in culinary and pharmaceutical preparations. It is a plant which grows best on a tenacious soil; even a clayey is more suitable than a light silicious one. It should be moderately fertile, entirely free from stagnant moisture, and consequently on a dry subsoil or one well drained. A border or other situation, which is sheltered from the mid-day sun, is always to be allotted to them, as in such they are most

vigorous and constant in production. The plant is propagated by parting the roots in February or March, September or October, and by slips or offsets at the same season.

PEPPER, USES AND PROPERTIES OF.—Peppers are of various kinds, but have nearly the same properties in modified degrees. Those used chiefly in Europe are the black and white pepper. Domestic pepper is one of the most wholesome and useful of spices. With persons in ordinary health, it has the effect of stimulating the stomach gently to the performance of its functions; and is peculiarly serviceable to persons who are of cold habit, or who suffer from a weak digestion. But in inflammatory habits, and where affections of the mucous membrane exist, its effects are highly injurious. As a medicine, it is often serviceable in nausea, vomiting, chronic diarrhœa, and ague.

PEPPERMINT CORDIAL.—To make five gallons of this cordial, take three and a quarter gallons of rectified spirit, three pounds of loaf sugar, a gill of spirit of wine, four pennyweights of oil of peppermint; fill up the cask with water until the quantity becomes five gallons; rouse it well, and set the cask on end.

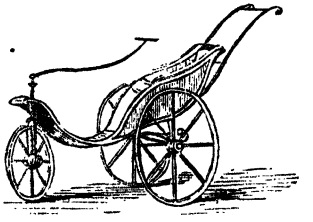
PEPPERMINT, CULTURE OF.—See MINT.

PEPPERMINT DROPS.—Pound and sift a quarter of a pound of double-refined sugar, and beat it with the whites of two eggs till perfectly smooth; add sixty drops of oil of peppermint, beat it well, drop it on white paper, and dry it at a distance from the fire.

PEPPERMINT LOZENGES.—Take two pounds of loaf sugar, two ounces of fine starch, and a few drops of essence of peppermint; mix these ingredients with gum tragacanth; form into drops, and bake.

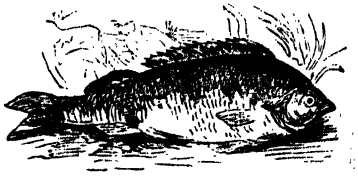
PEPPERMINT WATER.—Take of the herb of peppermint, dried, a pound and a half, and as much water as will prevent it from burning; after seething, distil off a gallon, and bottle for use.

PERAMBULATOR.—One of the most useful inventions of the day, and a great improvement on the clumsy four-wheeled vehicle in which children were formerly drawn. These carriages are made of a variety of forms, and at all sorts of prices;



sometimes, however, serious defects exist in their construction, and this should be attended to previous to purchasing. It is necessary that both the hind wheels, and that in front, should be attached by springs, or the jolting on rough roads will be too great for young children. If these springs are badly attached, they are constantly breaking; but by a slight improvement on the common construction, this is easily remedied. This contrivance consists in attaching the hind axle to the body by a leathern strap, so as to prevent a strain upon the spring, which the opposition of a large stone or other impediment frequently occasions. The adaptation to the cheapest kind of spring used is shown in the engraving. The propelling of the perambulator is extremely simple; the chief things to be attended to are to depress the handle slightly when going over rough roads, so as to raise the front wheel from the ground, and lessen the jolting motion; and to observe the same precaution when turning the vehicle, otherwise the front wheel will be soon worn out. The great advantage of the perambulator is, that it permits children to be out in the open air, and constantly on the move, without subjecting the nurse to any fatigue. It is as well, however, to lift the children out occasionally and allow them to exercise their limbs until they feel tired, when they can be placed in the perambulator again. In cold weather, this is especially necessary, as children being subjected to the exposure of the keen air in a state of inactivity, are liable to be attacked with cramp, rheumatism, and other painful affections. It is a common practice with nursemaids to wheel their young charges to a certain spot, and to leave them sitting in their perambulators by the hour together, so that they may be spared the trouble of looking after them, and enjoy their gossip uninterruptedly. Mothers should put a stop to this cruel practice by accompanying the children themselves as frequently as they can; or by making unexpected visits to the place where the children are usually taken.

PERCH.—A very handsome and daring fish, considered by many a great delicacy; it has two pectoral fins, the first longer than the second; its colour is sometimes a yellowish and sometimes a blackish green on the back and sides, according to the water it



inhabits, with transverse bands of black, belly white; its caudal, ventral, and anal fins are red, and its irides golden—"The golden-eyed perch, with fins of Tyrian dye." The perch is hog-backed, and the first dorsal fin is armed with strong sharp spikes, capable of being erected at will into a bristling *chevaux-de-frise*, thus serving as a defence against the attacks of the pike or trout, or even its larger brethren. Its size varies

from one inch to a foot or fifteen inches, and its weight from one ounce to four or five pounds, although fish of that weight are seldom met with. The perch spawns at the end of April or beginning of May, depositing it upon weeds, or the branches of trees or shrubs that have become immersed in the water; it does not come into condition again until July. The best time for fishing for perch is from September till February; it haunts the neighbourhood of weirs, heavy deep eddies, camp sheathings, beds of weeds with sharp streams near, and trees or bushes growing in or overhanging the water. The baits for perch are, small gudgeons, loach and minnows, red, marsh, brandling or lob worms, gentles, shrimps, caddis and straw-bait. The tackle should be fine but strong, as with a fish bait a trout or pike may frequently be hooked. Many fine perch are taken with the paternoster tackle while fishing for gudgeon, to the shoals of which, drawn together by raking the gravel, they are attracted. Perch, unlike fish of prey, are gregarious, and in the winter months, when the frosts and floods have destroyed and carried away the beds of weeds, congregate together in the pools and eddies, and are then to be angled for with greatest success from 10 to 4 o'clock, at the edge of the streams forming such eddies.

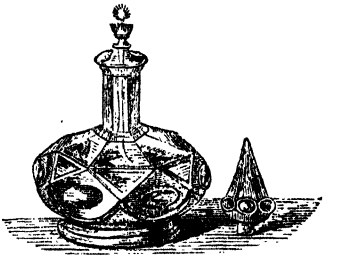
PERCH, TO DRESS.—See CARP.

PERCUSSION CAP.—An explosive agent in connection with fire-arms, used in place of the flint lock. The explosive power of a good percussion cap is not affected by immersion in cold water, even during several days; nor by exposure to a moist atmosphere for any length of time.

PERFORATOR.—An agricultural implement chiefly used as a substitute for the spade, in planting young tap-rooted trees in rough ground. In using it, one man em-

ploys the instrument, while another man or boy holds a bundle of plants. The man first inserts the instrument in the soil, folding it up for the reception of the plant; round which, when introduced, he inserts the iron several times, in order to loosen the soil about the roots; then treads down the turf, and the plant becomes as firmly set in the ground as if it had been long planted.

PERFUME LAMP.—Apartments may be greatly perfumed in the following manner. An ordinary spirit lamp is filled with Hungary water, or other scented spirit, and trimmed with a wick in the usual manner. Over the centre of the wick, and standing about the eighth of an inch above it, a small ball of spongy platinum is placed, maintained in its position by being fixed to a thin glass rod, which is inserted into the wick. Thus arranged, the lamp is to be lighted and allowed to burn till the platinum becomes red hot; the flame may then be blown out, nevertheless, the platinum continues to glow for an indefinite period. The



proximity of a red-hot ball to a material of the volatile quality of scented spirit diffused over the surface of a cotton wick, as a matter of course causes its rapid evaporation, and, as a consequence, the diffusion of odour.

PERIWINKLE.—A well-known small shell-fish, of little importance as an article of food, and of average wholesomeness when not eaten to excess; the horny excrescence which surmounts the head should be scrupulously avoided.

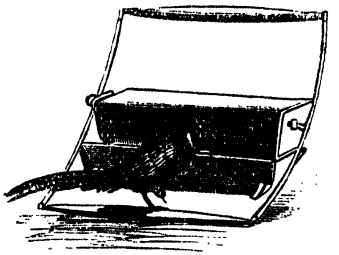
PERRY.—A beverage made from pears. The fruit used for this purpose should contain a large proportion of sugar, and be likewise astringent, or the liquor from it will be acetous when it ceases to be saccharine. In the making of perry, the pears are pressed and ground in precisely the same manner as apples are in the making of cider. The method of fermenting perry is nearly the same as that for cider; but the former does not afford the same indications as the latter by which the proper period of racking off may be known. The thick scum that collects on the surface of cider rarely appears in the juice of the pear, and during the time of the suspension of its fermentation, the excessive brightness of the former liquor is seldom seen in the latter: but when the fruit has been regularly ripe, its produce will generally become moderately clear and quiet, in a few days after it is made, and it should then be drawn off from its grosser lees. In the after-management of perry, the process is the same as that of cider; but it does not so well bear situations where it is much exposed to change of temperature. In the bottle it almost always retains its good qualities, and in that situation it is always advisable to put it, if it remain sound and perfect at the conclusion of the first succeeding summer.

PESTLE.—An implement used with the mortar sometimes with a beating or hammering action; but more generally it is used to grind or triturate, whilst firmly grasped. For simply mingling powders, a lighter hold by the forefinger and thumb is quite sufficient.

PETTICOAT.—An under-garment of female attire, made of various materials. They may be converted from dresses, when they are past duty in that capacity. Delicate females should never fail to wear a warm kind of petticoat during the inclement weather, in order that their limbs may not be visited with rheumatic and other affections, nor their general health injured.

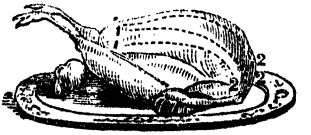
PEWTER, TO CLEAN.—Pewter articles should be washed in hot water with ashes or fine silver sand, and then polished with a cloth or leather; this process will restore pewter articles to their pristine brightness.

PHEASANT.—There is great difficulty in taming this bird, owing to its shyness; with great attention, however, they may be brought up with the common poultry, and regularly domesticated. They may be taught to come to the keeper's whistle, and feed from his hand. To fall in with the habits of this bird, a pheasant feeder, as seen in the engraving, might be placed in



some convenient but rather retired spot, which would not only keep them together but might attract any other stray pheasants also towards themselves, and breed with the party. When first hatched the pheasant should be fed with hard boiled eggs, crumbs of bread, and lettuce leaves, well mixed, with an addition of the eggs of meadow ants. At this tender age, two precautions are necessary, namely, never to allow them any drink, nor carry them abroad until the dew is entirely off; and that their food be given frequently and in small quantities, beginning at day-break, and always mixing it with ant's eggs: the place must be kept extremely clean, and they should be taken in before sunset. In the second month, nutriment more substantial may be given, such as eggs of the wood-ant, wheat, barley, ground beans, wood-lice, earwigs, and other small insects, to make a variety; and the intervals between the meals may be gradually prolonged. At this time they begin to be subject to vermin; place small heaps of dry earth or fine sand, by tumbling and rubbing in which they will soon rid themselves of the painful itching occasioned. Water must also now be given frequently, and always clean, or the pip may be contracted. The third month is attended with new diseases; the tail feathers then drop, and others appear. Eggs given moderately are efficacious in combating this trying complaint, and lessening the danger. The younglings may now be carried into the field, when the colony is to be dispersed: if white clover grows in it, the pheasant chicks will pick the seeds out of the heads, and it will wonderfully strengthen them: they must also at first be fed in the field with some favourite food, diminishing the quantity daily, and thus by degrees constraining them to provide for themselves.

PHEASANT, TO CARVE.—Fix the fork in the centre of the breast, twist it down in the direction 1—2; remove the leg by cutting



it in a sideway direction, then take off the wing, without interfering with the neck-bone. When the legs are taken off, cut slices from the breast. Separate the merrythought by passing the knife under it low, and the neck. The breast, wings, and merrythought are the favourite parts, particularly the former; the leg has a higher flavour.

PHEASANT, TO CHOOSE.—The cock bird is considered the choicest, except when the hen is with egg. If young its spurs are blunt and short, or round; if they are long and sharp, the bird is old. Examine the hen at the vent; if that is open and green, it is a sign she is stale; if she is with egg, it will be soft; if stale, the skin, when rubbed hard with the finger, will peel off.

PHEASANT, TO DRESS.—See PARTRIDGE.

PHOTOGRAPHY.—Books: *Snelling's Journal*, 18s.; *Hardwick's Chemistry*, 6s. 6d., *Palmer's Manipulation*, 1s. 6d.; *Bede's Pleasures*, 7s. 6d.; *Delamotte's Practice*, 4s. 6d.; *Cundall's Primer*, 1s.; *Hockin's Processes*, 6s.; *Hill's Researches*, 8s. 6d.; *Shaw's Studies*, 16s.; *Baxter's Treatise*, 1s.; *Wilson's Collodion Process*, 1s.; *Collins's Handbook*, 1s. 6d.; *Snelling's History and Practice*, 5s.; *Thornthwaite's Guide*, 3s. 6d.; *Bingham's Instructions*, 2s. 6d.; *Photography made Easy*, 1s. 6d.; *Hunt's Manual*, 6s.; *Whitlock's Manual*, 1s.; *Practical Manual*, 1s.; *Hogg's Manual*, 1s.; *Humphrey's System*, 9s.; *Hunt's Treatise*, 3s. 6d.; *Orr's Photographic Art*, 5s. 6d.; *Sutton's Handbook*, 2s. 6d.; *Delamotte's Oxymel Process*, 1s.: *Hart's Photography Simplified*, 1s. 6d.; *Cooke's Waxed Paper*, 2s.; *A B C*, 1s.; *Sutton's Dictionary*, 7s. 6d.

PHRENITIS, OR INFLAMMATION OF THE BRAIN.—This is a disease that never arises without some strong or well-defined cause, and this may be either external and accidental, or internal or symptomatic. Of the external causes the most frequent are, injuries applied directly to the head, a sun

stroke or exposing the uncovered head for a length of time to the heat of the sun, the sudden application of cold, or intense pain and nervous irritation consequent on scalds or burns. The internal causes are, a high degree of fever, long habits of intoxication, or inebriation occurring in a man of sober habits and excitable temperament, sudden and violent passions, such as rage; close and long continued study, the sudden suppression of discharges to which the system has become habituated; and sometimes from crude and poisonous substances taken into the stomach. The symptoms which characterize this dangerous disease are, a sense of fulness, amounting to distension in the head, hot flushed or red countenance, throbbing of the arteries on the temples, drumming noises in the ears, inflamed and eager look of the eyes, restlessness, loss of sleep, and a quick, full pulse. Sometimes these symptoms are attended with pains in various parts of the body, especially in the head, and tremors of the hands and feet. As the disease advances, the pain increases, the face assumes a square appearance, and the eyes and features a sharp fierceness particularly defiant; the patient talks loud and incessantly, is easily moved to rage, the eyes become very red, and a delirium follows, at times reaching to a state of frenzy. The face then becomes swollen, the eyes start, as if about to protrude, the breathing is hard and short; light, and the slightest noise violently affects him; and to his ungovernable fury is added a hard, sharp, and bounding condition of pulse. In inflammatory fever, the head is often violently affected, but this symptomatic state of mental derangement may always be defined from phrenitis, by the absence in that case of the *especial symptoms of the head*, which though they may occur, are secondary, and not as in inflammation of the brain, primary; the pulse, too, in the former, is strong, hard, and full from the first; whereas it only becomes so in the latter as the disease advances.

The *treatment* of phrenitis, till within a very short time, consisted in copious bleedings from the system by the lancet; from the temples by leeches, and the back of the neck by cupping; shaving the head, and the application either of a large blister, or applying bladders filled with ice, and by the employment of the most potent and rapid cathartic medicines; thus, by a general system of depletion, as rapidly as possible to reduce the action of the heart, and prostrate the patient by the exhaustion consequent on such violent drains opened from the system, thereby pulling down the physical powers from an excess of tension to a state of helpless relaxation. These violent and often criminal means have, however, now merged into a more rational practice, and though bleeding and blistering are often imperative, there is no necessity to carry them to such an extent, as by the means of opium and antimony, the same state of prostration can be obtained without the vital loss to the system, which is the result of excessive bleeding, and even in cases where opium cannot be employed, the substitution of digitalis will effect the same results. In the earlier stages, where the patient is very restless, the symptoms are urgent, and the constitution robust, it may be necessary to bleed to the amount of twelve or fourteen ounces; following up that measure by the pills and mixture prescribed below; at the same time keeping the patient in a dark, cool room, and avoiding all noise, or subjects likely to excite or disturb him. *Pills.* Take of

Compound extract of colocynth	15 grains
Calomel	12 grains
Croton oil	2 drops

Mix, and divide into three pills; one to be given every two hours till they act effectually. *Mixture.* Take of

Powdered nitre	20 grains
Tartar emetic	2 grains
Water	6 ounces

Dissolve, and add—

Tincture of digitalis . .	½ drachm

Mix, and give two tablespoonfuls every three hours. Concurrent with this treatment, the hair should be very much thinned, and the following lotion kept constantly on it, or else an ox bladder, half filled with powdered ice, applied to the head, and frequently renewed as it becomes warm. *Lotion.* Take of

Muriate of ammonia or sal ammoniac	½ ounce

Powder, and dissolve in a quart of cold water, and add

Powdered nitre	1 drachm
Sulphuric ether . . .	½ ounce

Mix; clothes well wetted with this lotion are to be kept constantly to the head. The feet at the same time should be kept hot, and when it is necessary to produce sleep, give twenty-five drops of Batty's solution of opium, or a pill composed of one grain of solid opium. Should the symptoms in the head continue unsubdued, a few leeches may be applied to the temples, or a blister laid on the neck from the nape of the neck to the shoulders.

PHRENOLOGY.—**Books:** *Combe's Treatise*, 15s.; *Hodgson's*, 5s. 6d.; *Slade's*, 7s. 6d.; *Sidney Smith's*, 5s. 6d.; *Roget's*, 12s.; *Fowler's Applied*, 1s.; *Catechism*, 1s.; *Christian*, 1s.; *Combe's Elements*, 3s. 6d.; *Sewell's Examination*, 3s.; *Tyas's Handbook*, 1s.; *Combe's Lectures*, 6s.; *Spurzheim's Outlines*, 2s. 6d.; *Philosophy*, 3s. 6d.; *Wilson's Statistics*, 5s.; *Science*, 1s.; *Thoughts on*, 3s.; *Bridge's*, 3s. 6d.

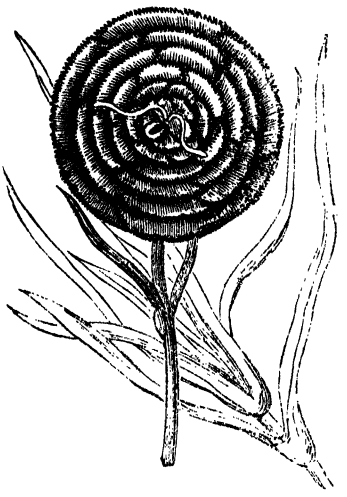
PIANOFORTE, CHOICE AND CARE OF.—In selecting a piano, care should be had in the first place, that it harmonizes externally with the remaining portion of the furniture in the midst of which it is to be placed. The size of the room, and the space where it

is to be lodged, must also be taken into consideration. It would be preposterous to force a very large piano into a small room, and it would be equally absurd to place a very small piano in a large and lofty apartment. When purchasing a piano, the object should not be to select the cheapest, but the best; sometimes they may be met with at a comparatively low price in sales by auction. To judge of the power and tone of the instrument requires some practical acquaintance with it, and where this is wanting, the intending purchaser should avail himself of the judgment of a more experienced person than himself. It is common to suppose that any kind of piano, however faulty, will do for learners; the truth being that where the instrument is imperfect the ear of the learner is liable to be deceived and abused; whilst the difficulties of practice are rendered more difficult still, and embarrass the novice instead of lending aid. The preservation of the piano demands that it should be placed in a position where it will not be subject to the action of either too great heat or cold, either of these acting prejudicially on the instrument. Pianos should be kept shut, to exclude dust and other particles, and should also be locked, to prevent their being injured by servants or children. Striking the keys with immoderate force is, as a matter of course, apt to break them, and besides, more noise is thereby produced than harmony. When a piano is to be left untouched for any length of time, it should be enveloped in a cloth or calico covering, to prevent it receiving injuries either external or internal. Pianos may be hired at so much per month, quarter, or year, either from the dealers or from music warehouses.

PICKLES, DIETETIC PROPERTIES OF.—Although pickles are very agreeable to the palate, and impart a relish to food, especially cold meats, they are very indigestible, and should be carefully shunned by dyspeptic subjects. The greater part of pickles purchased in shops is especially deleterious, as it is customary to mix copper with the preparation, in order to give the vegetables a bright green appearance; and this addition amounts to poison.

PICKLES MIXED.—Prepare a variety of vegetables, as cauliflower, cucumber, French beans, gherkins, &c., by cutting them in pieces and letting them lie in salt and water for two or three days; then make the pickle in the following manner:—Boil the quantity of vinegar required with peppercorns, mustard-seed, a small quantity of mace, a few cayenne pods, a little ginger, and half a pound of flour and mustard mixed smoothly in a basin, to be put in while boiling; place these altogether in a large stone jar.—See CABBAGE, CAULIFLOWER, CUCUMBER, GHERKINS, ONIONS, WALNUTS, &c.

PICOTEE.—This flower is of the same family as the carnation and the pink, and is to be cultivated in a similar manner. The annexed engraving is a diagram of a perfect picotee, and its character is as follows: The form, half a ball; the outline round; the petals imbricated, second row less than the first, the third less than the second, and so on to the crown; the petals thick and smooth;



edges free from serrature or notch; colours dense and distinct, white, pure; every petal to maintain the character of the flower.—See CARNATION, PINK.

PICTURE.—See PAINTINGS.

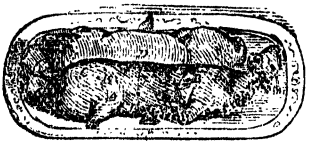
PICTURE-FRAMES, TO GILD.—The surface to be gilt must be carefully covered with a strong size, made by boiling down pieces of white leather or clippings of parchment, till they are reduced to a strong jelly. When this coating has dried, eight or ten more must be applied; the size being mixed with a small quantity of whiting. The last coat is composed of size and massicot, or sometimes yellow ochre. Let it dry thoroughly, and then damp the surface a little at a time with a moist sponge, and apply the gold leaf before this dries. It will immediately adhere, and when dry, those parts which are brilliant, are to be burnished with an agate or dog's-tooth burnisher.

PIES.—See APPLE, BEEFSTEAK, CHICKEN, EEL, GIBLET, HARE, LAMB, LOBSTER, MUTTON, PARTRIDGE, PIGEON, PORK, POTATO, RABBIT, RHUBARB, VEAL, &c.

PIG ROAST.—The young of the animal, known as the sucking pig, is made choice of for this dish. The hair of the animal should be removed by scalding. When this is done, remove the entrails, thoroughly clean the nostrils and ears, and wash the whole body in cold water. Cut off the feet at the first joint, loosening the skin, and leaving it on to turn neatly over. The pig must then be stuffed as follows:—Take half an ounce of mild sage, and two young onions parboiled; chop these very fine, add a cupful of grated bread crumbs, a quarter of a pound of good

butter, and a high seasoning of cayenne pepper, and salt. Sew the slit neatly up, set it down to roast before a brisk clear fire, and baste first with brine, then with the fresh butter or salad oil; when the crackling is thoroughly browned and crisp, the pig will be sufficiently done. A pig iron, or some ingenious substitute, must be placed in the centre of the grate, part of the time, to to prevent the middle regions of the animal from being scorched before the extremities are done. Serve with a sauce of clear beef or veal gravy, with a squeeze of lemon and, if approved, a little of the stuffing stirred in the same tureen.

PIG ROASTED, TO CARVE.—Before serving up this dish, the cook usually divides the body, and garnishes the dish with the jaws and the ears. Cut the side of the pig in two from D to E; then place the fork in at B;



cut from C to A, and round underneath the foreleg to C again, thereby taking the shoulder off. To remove the hind leg, follow the same directions as for the foreleg; then carve the remainder of the pig, as pointed out for the first cut; serve gravy and stuffing with each portion. The ribs are generally considered the finest parts, but some prefer the neck end, between the shoulders.

PIG'S CHEEK.—To prepare pig's cheek for boiling, cut off the snout and clean the head. Divide it, take out the eyes and the brains, sprinkle the head with salt, and let it drain for twenty-four hours. Salt it with common salt and saltpetre; and simmer it till it is tender.

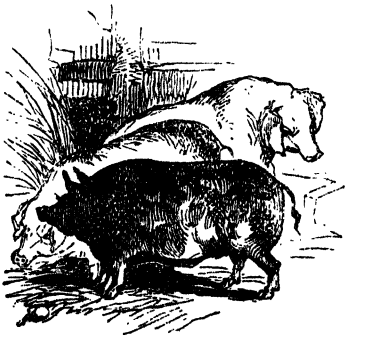
PIG'S FEET AND EARS.—Clean them carefully, soak them for some hours, and boil them till they are quite tender. Then take them out, and boil a little salt and vinegar with some of the liquor, and pour it over them when cold. When to be dressed, dry them, cut the feet in two, and slice the ears. Fry them and serve them with butter, mustard, and vinegar. They may be either fried in butter, or simply floured. *To fricassee them.* Cut the ears and flesh into neat pieces, and boil them in a little milk. Pour the liquor from them, and simmer in a little veal broth, with a bit of onion, mace, and lemon-peel. Before the dish is served up, add a little cream, butter, flour, and salt.

PIG'S FEET JELLY.—Clean the feet and ears very carefully, and soak them for some hours. Then boil them in a very small quantity of water till every bone can be taken out. Throw in half a handful of chopped sage, the same of parsley, and a seasoning of pepper, salt, and mace in fine powder. Simmer till the herbs are scalded, and then pour the whole into a mould, to remain till cold.

PIG'S HARSLET.—Wash and dry some liver, sweetbreads, and fat and lean pieces of pork, beating the latter with a rolling-pin, to make them tender. Season with pepper, salt, sage, and a little onion shred fine. When mixed, put all into a bladder, and sew it up securely with a needle and thread. Roast it on a hanging jack, or by a string. Serve with a sauce made of port wine and water, and just boiled up.

PIG'S HEAD COLLARED.—Scour the head and ears thoroughly, take off the hair, and remove the snout, the eyes, and the brain. Soak the head in water for one night, then drain it, salt it extremely well with common salt and saltpetre, and let it lie for five days. Boil it sufficiently to allow of the bones being taken out, then lay it on a dresser, turning the thick end of one side of the head towards the thin end of the other, to make the roll of equal size. Sprinkle it well with salt and white pepper, and roll it with the ears. The pig's feet may be also placed round the outside when boned, or the thin parts of two cow-heels if approved. Put the whole into a cloth, bind it with a broad tape, and boil it till quite tender. Place a heavy weight upon it, and do not remove the covering till the meat is cold.

PIGS, TO BREED AND REAR.—The breeds of pigs most esteemed in Great Britain are the Berkshire, Chinese, and Improved Essex. In purchasing pigs for fattening it is not always easy to procure the very best breeds; but some of the others may do very well. The sow should be at least ten months old before she is fit to



breed from: she goes with young a little more than four months, and has often two litters in a year, generally producing a numerous progeny, consisting of from eight to sixteen at a litter. The boar should be less in size than the sow, shorter and more compact in form, with a raised brawny neck, lively eye, small head, firm hard flesh, and his neck well furnished with bristles. Breeding within too close degrees of consanguinity, or as it is technically termed breeding in and in, is calculated to produce degeneracy in size, and also to impair the

fertility of the animal; it is therefore to be avoided. The proper seasons for producing litters are March and August; the young pig is exceedingly delicate, and the brood sow should not be allowed to farrow in winter. Another peril to the litter arises from the semi-carnivorous habits of the mother, which lead her to forget the dues of nature, and devour her own brood. She ought, therefore, to be well watched, and fed abundantly at such periods. The male, for the same reason, must be excluded altogether. Not unfrequently, moreover, the young are crushed to death by the mother, in consequence of their nestling unseen beneath the straw. To prevent this risk, a small quantity only of straw, dry and short, should be placed beneath them. If the object be to have sucking pigs for roasting, they should not be kept more than four or five weeks with the sow. If the young pigs are to be reared, it is of great importance to have them born at the two seasons of the year previously specified, in order that they may be weaned in temperate weather, and when there is an abundance of clover, vetches, mangold wurtzel, lettuce, &c. At six weeks old, the young ones of both sexes, not designed for breeding, should be incapacitated from propagating their kind; and at eight weeks they should be weaned with skim-milk and butter-milk. Young pigs thrive better, for a short time after weaning, on sweet than on sour milk; but when they are pretty well grown, acidulated milk seems more beneficial and palatable to them than sweet milk. Coarse pollard, or the refuse of corn, or some bruised or ground beans, should be given to them after weaning, with boiled or steamed potatoes, parsnips, or Swede turnips, with milk or kitchen wash. A pig may be fattened in about six weeks or two months. Young porkers are generally fattened between October and Christmas. A little salt sprinkled with their food will frequently make them relish it better. A great object ought to be, to feed pigs well from the commencement, the food then tells considerably; whereas, the cost and difficulty of bringing up lost condition, resulting from insufficient feeding, is very great. The piggery should be so situated as not to be offensive, and yet be easily supplied with food from the scullery and dairy. There should be a separate yard and sty for the weanlings; and for pigs in all stages of growth and condition, a clean, dry bed is indispensable. But if manure be a principal object, as it should be to the cottager more especially, the green food may be supplied to the pigs with most benefit in their confined yard, in order that their manure shall be incorporated with it. Litter abundantly supplied, will produce an amazing quantity of manure even from a single pig. The pigsty may be built of any convenient material, stone or brick is the best. It should be dry and warm; and for this purpose, the floor is best paved with large stones, and should be raised a little above the ground, and slope a little towards a channel conducting the wet into a drain leading to a cesspool or manure tank. The roof may be thatched with straw, reeds, heath, or any warm material. The sty should be divided into at least two compartments, a sleeping place, and an open courtyard, one leading into the other. The sleeping place should be about seven feet square; the outer court should be about ten feet square. The open court of the pig-sty should, if possible, lie towards the sun, as the inmates are very fond of basking in the sunshine. The feeding utensils placed in the court should consist of two strong troughs, which cannot be easily upset. These troughs should be frequently washed and scoured; and if pigs are fed together, the troughs should be barred, so that each animal has a limited space through which it introduces its head, otherwise, the strongest will overpower, and perhaps drive away altogether from the food, the weaker of the party. The bars also prevent the animals from putting their dirty feet into the trough, which otherwise they will generally do. Young pigs require a great deal of liberty, which unquestionably promotes their growth and healthiness; but unless in the farm-yard, about the barn door, pigs in actual process of fattening should be confined altogether, so that they may eat and sleep alternately, without any of those disturbing influences which would tend to disturb digestion. In making choice of a pig, the following points should be attended to:—Sufficient depth of carcass, and breadth of loins and breast; bones, small; and joints fine. The legs should be no longer than, when fully fat, would just prevent the animal's body from trailing on the ground. The feet should be firm and sound; and the toes lie well together, and press straightly on the ground; the claws, also, should be even, upright and healthy. The head should not carry heavy bone, nor be too flat on the forehead; neither should the snout be too elongated. The ear should be, while pendulous, inclining somewhat forward, and at the same time light and thin. Scantiness of hair is a characteristic which renders the animal a hazardous speculation; for under these circumstances, the remarkable susceptibility to cold which pigs evince, will be aggravated, and the animal rendered liable to disease. The walk and movements of the pig must also be regarded. If these be dull and heavy, ill-health is to be suspected, probably some concealed disorder, either about to break forth or actually existing; there cannot be a more unfavourable symptom than a hung-down slouching head, carried as though it were too heavy for the animal's shoulders. The diseases to which the pig is liable are, fever, leprosy, tumours, murrain, measles, foul skin, mange, crackings of the skin, staggers, swelling of the spleen, indigestion or surfeit, lethargy, quinsy, inflammation of the lungs, catarrh, and diarrhœa. A large proportion of these, are the direct result of uncleanliness and injudicious feeding. In cases of fever and other sudden ailments, bleeding, purgatives, and a spare diet are the most effectual means of cure. Bleeding may be performed by opening the veins

behind the ears, or by cutting off a portion of the ears and tail. Castor or linseed oil, Epsom salts, jalap, and flour of sulphur, are simple purgatives, and can be readily administered in a small mess of enticing food; and when given, should always be followed by a spare and liquid diet. For skin diseases, frequent scrubbings with soap and water, and unguents of tar and sulphur will be found most effectual. In the case of measles, one of the most common diseases to which pigs are liable—the following recipe is recommended:—Suffer the animal to fast, in the first instance, for twenty-four hours, and then administer a warm drink, containing a drachm of carbonate of soda, and an ounce of bole armenian; wash the animal, cleanse the sty, and change the bedding; give at every feeding, say thrice a day, thirty grains of flour of sulphur and ten of nitre. A frequent washing of the skin, though not usual, by removing the scurf and other defilements with which it is incrusted, will greatly tend to promote the health of the animal; and to aid cleanliness in this respect, every piggery should be provided with a rubbing-post, by means of which the animal may free himself of many impurities.

PIGEON BROILED. — Split the bird down the back, spread it open, season with pepper and salt, and broil over a quick clear fire. Serve with mushroom sauce.

PIGEON FRICASSEE.—Cut half a pound of pickled pork into thin slices, and put it in a small quantity of water on the fire for about half an hour; scald two or three large pigeons in boiling water, and cut them in halves; add the pork, with a bundle of parsley, thyme, shalots, and two cloves; soak them for a little while, then add water and whole pepper. When done, skim and sift the sauce, add to it three yolks of eggs and a little cream, and incorporate the whole over the fire, but do not let it boil. When done, add a small quantity of vinegar.

PIGEON PIE.—Rub the pigeons with pepper and salt inside and out; put in a bit of butter, and, if approved, some parsley chopped with the livers, and a little of the same seasoning. Lay a beefsteak at the bottom of a dish, and the birds on it; between every two a hard egg. Put a cupful of water in the dish; and if a thin slice or two of ham be added, it will greatly improve the flavour. When ham is cut for gravy or pies, the under part should be taken rather than the prime. Season the gizzards and two joints of the wings, and place them in the centre of the pie. Over them, in a hole made in the crust, insert the feet nicely cleaned, and leave them protruding, to indicate the contents of the pie.

PIGEON RAGOUT.—Make forcemeat sufficient to stuff four birds, chopping up the livers with the other ingredients. Brown the pigeons in the frying-pan, and then put them into a stewpan, with enough rich beef gravy to cover them; thicken this with flour, and pour in a teacupful of mushroom ketchup and a gill of port wine. If fresh mushrooms can be procured, add four or five to the stew: in this case omit the ketchup.

PIGEON ROAST.—Pick, clean, singe, and wash the bird well; truss it with the feet on, and put into them some pepper and salt. While roasting, baste them with butter. Just previous to serving, dredge them with flour, and froth them with butter Roast them for half an hour. Serve them with parsley and butter in the dish, or make a gravy of the giblets, and add some minced parsley with a seasoning of pepper and salt. Thicken with a little flour and butter; pour it with the giblets into the dish, and then put in the pigeons.

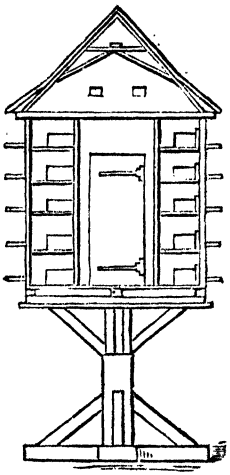
PIGEON SOUP.—Make a clear gravy stock of four pounds of lean beef, or scrag and shanks of mutton, two small turnips, a head of celery, two onions, and a gallon of water boiled down to three quarts. Put to this the gizzards, crops, and livers of four or five pigeons. Truss the birds as for boiling, and season them with pepper and salt. Dredge them with flour, and brown them in a frying-pan. Thicken the stock with butter kneaded in browned flour; strain it, and season it with white pepper, salt, and a little mace, and let the pigeons stew in it for half an hour, taking off the scum as it rises. Throw a few toasted sippets into the tureen before dishing the soup.

PIGEONS STEWED.—Wash and clean six pigeons, cut them into quarters, and put all their giblets with them into a stewpan, with a piece of butter, a bit of lemon-peel, two blades of mace, some chopped parsley, salt, and pepper. Cover the pan closely, and stew the contents till they are tender; thicken the same with the yolk of an egg beaten up with three tablespoonfuls of cream and a bit of butter dusted with flour; let them stew ten minutes longer before serving.

PIGEONS, TO CARVE.—Pigeons may be simply cut in two, either from one end to the other of the bird, or across.

PIGEONS, TO REAR AND BREED.—Pigeons are among the most useful and ornamental attractions of a rural dwelling; and in every case they afford great interest and amusement in a state of domestication. In purchasing pigeons, the following particulars should be borne in mind. The eyes of the younger pigeons are smaller, fainter, and less prominent than those of the old ones. The neck of the old birds is lengthened, strong, and hard: on the contrary, with the young ones, it is weaker and softer, while its extremity is sharper and less worn by the gathering of its food. An old pigeon has darker, harder, and stronger feet, with longer spurs than the younger ones, whose feet are soft, red, and tender. The brightness and brilliancy of the feathers of the neck affords also a criterion of the age of the pigeon. On the young pigeon, the brightness of the colour is scarcely perceptible from that of the plumage of its body, but as the bird advances in age, the feathers become as it were more matted, and a beautiful diversity of colour is exhibited, which adds greatly to the beauty of the bird. Particular attention should be paid to the number of feathers in the wings and tail. Every wing has at the end three long

feathers, called the flight feathers; then six immediately following, and gradually diminishing in length, then eight smaller feathers, which gradually increase in length, three of which are more prominent than the others, the centre one being particularly so. The tail consists of twelve feathers, six on the right, six on the left. A fantail pigeon ought to have thirty-six feathers in its tail; and no pigeon possessing a less number is considered a well-bred or a valuable bird. There are several varieties of the pigeon, but the most remarkable is the carrier; it is a large species of bird, and is trained to carry written communications and other missives to certain destinations. When the services of the bird are about to be put into requisition, it must be taken from the place to which it is destined to return, and be temporarily domiciled at the place from which the intelligence is to be conveyed. It is taken to that place hoodwinked, or in a covered basket. When the moment for employing the bird has arrived, the individual requiring its services writes a small billet upon thin paper, which is placed lengthwise under the wing, and fastened by a pin to one of the feathers, taking care that the pin does not incommode the bird, and also preventing the possibility of the paper being filled with air. On being released, the carrier ascends to a great height, takes one or two turns in the air, and then commences its onward flight. Pigeons are granivorous,



and will eat with relish wheat, barley, oats, canary and hemp seed, peas, beans, vetches, and tares. Small tick beans, sometimes called pigeon beans, are also a favourite food; the smallest beans only should be purchased. Hemp seed should be used sparingly, as it is a stimulating food. Fine fresh gravel should be strewed about the places of confinement of these birds, which they swallow to assist the digestion of their food. A supply of common salt is also necessary, to correct acidity. The pigeons should be provided with fresh water daily contained in earthenware fountain bottles, and placed within their reach. The food should be put into shallow boxes, and covered with a wire netting, so that the birds may eat without scattering and wasting their food, which they are apt to do if some such precaution be not taken. Many persons keep their pigeons between the garret and the roof of the dwelling-houses, with holes at which they go out and in; and this lodging, in lieu of a more suitable one, answers very well. But the more regular plan is to furnish the birds with a properly constructed house. The interior of this must be lined with nests or holes, subdivided either by stone, by boards, or each nest composed of a vase or vessel of earthenware placed on its side. Each cell should be twelve inches deep front to back, and sixteen inches broad; the entrance hole should not be opposite the centre of the cell, but on one side, so that the pigeons may build their nests a little out of sight. In front of each cell there should be a slip of wood to rest and coo upon; but as different pairs are incessantly quarrelling about the right of walking on these slips, and are apt to fight for the possession of certain cells, it is best to separate the slips by upright partitions. The house should be elevated on a wall facing the south-east, and otherwise placed at such a height as to be out of the reach of vermin and cats. The house should be painted white, as the pigeon is attracted by that colour. The common pigeon begins to breed at the age of nine months, and continues breeding every month. The female lays two eggs, and the young produced are ordinarily male and female. With common care one pair of pigeons will yield the breeder nine or ten pairs in the course of the year, and will continue doing this for four years. The diseases of pigeons are very often the result of careless management, exposure to cold and damp, and an improper supply of food. A variation of diet will frequently effect a beneficial change in the bird, and is always accessory to health. Cleanliness cannot be too much insisted on. The houses, boxes, or shelves should be thoroughly cleansed at least once a year, scraping and washing them well with strong yellow soap and warm water, and taking particular care that every part is dry before the occupants resume their dwellings. It is also indispensable to burn the nests after every brood, and to provide fresh nests occasionally for the old birds. If the birds be attacked with vermin, their feathers must be fumigated with tobacco smoke, repeating the process till the enemy are dislodged. When young pigeons are attacked by what are called the blacks or pigeon bugs, the dust of tobacco may be sprinkled over the young birds, and in the nest. The wet roop is the name given to a sort of cough which sometimes annoys the pigeon. The best remedy consists of three or four peppercorns,

given once in three days; a few sprigs of green rue, steeped in the water, will be an aid to the cure. The dry roop is a dry husky cough, which the birds often suffer from while moulting. Three or four cloves of garlic once a day will generally effect a cure. The canker is a disease arising from the birds pecking each other. The sore parts must be rubbed with a mixture of burnt alum and honey every day; or if this has no effect, add to it five grains of Roman vitriol dissolved in half a spoonful of white wine vinegar, and anoint as before. The fungous-like flesh round the eyes of the carrier and other pigeons, when torn, should be bathed with a solution of alum in water. If pigeons do not moult freely, it is a sure sign of bad health. They should in such cases be removed to a warm place, and have the tail feathers plucked out: hemp seed should also be given with their food, and a little clary or saffron mixed with their water.

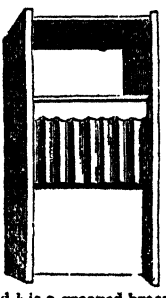
PIKE.—"Fell tyrant of the watery plains" changes its name from Jack on attaining the weight of three or four pounds. It is of an olive colour, with yellow spots on the upper part of the body, and white, with olive spots, or waves, or stripes, on the lower. Its mouth is profusely armed with sharp teeth, the very palate, tongue, and roof being covered by them. The pike is most frequently found in deeps and eddies, by the side of streams, and in rivers, lakes, meres, broads, locks, and ponds. It is fond of beds of reeds, rushes, flags, water-lilies, and other aquatic plants; shelving banks and roots of trees. The pike is best in season from October to March, which is likewise the proper period to fish for it. It spawns in March or April; but this operation of nature varies, according to the backwardness or forwardness of the season, and the temperature of the water. For this purpose it selects creeks or ditches communicating with rivers, or the quiet parts of still waters, depositing its spawn on such aquatic plants as the water it inhabits may happen to produce. Pike are caught by spinning or trolling, or with a live bait. The baits used are roach, dace, chub, gudgeon, bleak, loach, minnows, perch (with the back fin removed), rats, mice, water-fowl, frogs, &c. They will also in some parts take an artificial fly made to represent the dragon-fly. Strange tales are told of the voracity of the pike—a watch and appurtenances having been found in the gullet of one; another having seized the nose of a mule whilst drinking; another becoming suffocated by seizing and swallowing the head and neck of a swan. But a few years since a monster pike seized and dreadfully mutilated the arm of a boy playing at the edge of one of the ponds in Richmond Park. —Books: *Salter*; *Ephemera*; *Blaine*; *Hawker*.

PIKE, TO DRESS.—Have scaled and cleaned the fish without cutting open much of the breast, stuff them with a forcemeat made thus:—Beat yolks of eggs, a few oysters bearded and chopped, two boned anchovies, grated bread, minced parsley and a portion of shalot, a blade of mace pounded, pepper, allspice, and salt. Mix them in proper proportions, and having melted a good piece of butter in a stewpan, stir the whole of the ingredients in it over the fire, till of the consistence of a thick batter, adding some biscuit powder or flour if necessary. Fill the fish and sew up the slit. Bake them in a moderate oven, basting with plenty of butter, and sticking batter all over them. Serve with anchovy sauce.

PILAU.—A savoury dish, made as follows:—Stew some rice in stock, or with butter, and season it with white pepper, cayenne, mace, and cloves. Place two small boiled fowls, or a few dressed veal or mutton cutlets, in the centre of a large dish, in which a layer of rice is laid, and arrange some slices of broiled bacon around them. Cover with boiled rice, smooth and glaze the rice with egg, and set the dish before the fire or in the oven to brown. Garnish with divided yolks of hard-boiled eggs and fried onions, or use forcemeat balls.

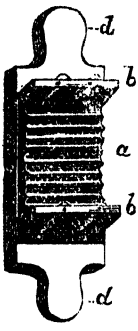
PILL.—A well-known form of medicine. The facility with which pills are made and administered, their comparatively little taste, their power of preserving their properties for a considerable length of time, and, lastly, their portability and inexpensiveness, have long rendered them the most frequently employed and the most popular form of medicine. The preparation of pills is not a process of much difficulty. The medicinals employed must be made into a consistent and moderately firm mass, sufficiently plastic to be rolled or moulded into any shape, without adhering to the fingers, knife, or slab, and yet sufficiently solid to retain the globular form when divided into pills. As a general rule, all the constituents of a pill which can be pulverized should be reduced to fine powder, before mixing them with the soft ingredients which enter into its composition; and these last, should next be gradually added, and the mixture triturated and beaten until the whole is a perfectly incorporated mass. It is then ready to be divided into pills. This is effected by rolling it on a slab, with a pill or bolus knife, into small pipes or cylinders, then dividing them into pieces of the requisite weight; and lastly, rolling them between the thumb and finger to give them a globular form. A little powdered liquorice-root or starch is commonly employed, to prevent the pills adhering to the fingers or to each other after they are made. A still more convenient mode of forming pills is by the aid of a single instrument called the "pill machine," as seen in the engraving. *Fig.* 1 is divided into three compartments:—*c* is a vacant space to receive the divided mass, which is to be rolled into pills, and *b* is a grooved brass plate which assists

Fig. 1.



in dividing the mass into pills; *a* is a box containing the powder for covering the pills, and to receive them as they are formed. *Fig.* 2 consists of a brass plate *a*, grooved to match the plate *b* in *fig.* 1, and bounded at both ends by moveable projecting plates *b b*, containing each two wheels under the ledge of the plate *b*, and a wooden bracket *c*, with two handles *d d*, to which this plate is affixed. In using this machine the pill mass is rolled into a cylindrical form on the front part of it, by means of *fig.* 2 inverted; the small roll is then laid on the cutting part of the instrument *fig.* 1 *b*, and divided by passing *fig.* 2 over it; the little wheels enabling the latter to run easily on the brass plate which forms the margin of the bed of the machine. The pills thus formed are then drawn forward on to the smooth bed on which the mass was first rolled, and receive a finishing turn or two with the smooth side of the cutter, by which they are rendered more nearly spherical. They are lastly thrown over into *fig.* 1 *c*, ready to be transferred to the pill-box. As pill-masses are liable to get hard and brittle by keeping, an excellent plan is to keep the dry ingredients powdered and mixed together in well-corked bottles or jars, when a portion may at any time be beaten up with syrup, conserve, soap, &c., according to the formula, and as wanted for use.

Fig. 2.



The subjoined prescriptions give three of the most useful recipes in which this form of administering medicine can be employed. 1. *Antibilious Pill.*—Take of

Compound colocynth pill	2 scruples
Calomel	1 scruple

Mix, and divide into twelve pills. Two may be taken for a dose, or one night and morning. In constitutions where calomel is inadmissible, the same amount of blue pill can be substituted for the more active calomel. 2. *Tonic pill.*—Take of

Quinine	12 grains
Rhubarb	10 grains
Ginger	10 grains
Extract of gentian, enough to make into a mass.	

Mix, and divide into twelve pills. One to be taken once, twice, or three times a day; according to the state of the patient. 3. *Dinner or digestive pill.*—Take of

Barbadoes aloes, and gum mastic, of each .	12 grains
Extract of camomile .	½ drachm,

or enough to make a mass, which divide into twelve pills, one to be taken an hour before dinner, or each meal if necessary. For those who with weak appetite are troubled with flatulence or heartburn, the following formula will be found most efficacious as a stomachic and dinner pill. Take of

Ginger	6 grains
Dried carbonate of soda	30 grains
Rhubarb and colombo, of each	6 grains
Extract of gentian, enough to make a mass	

Divide into twelve pills; one of which may be taken half an hour, or longer, before every meal.

PILLOW.—That portion of the bedding upon which the head reposes. For the purposes of health the pillow should be placed neither too high nor too low; the former position deprives the upper part of the body of its necessary circulation, and the latter allows too great a flow of blood to the head, which is in all cases injurious, but especially hazardous with persons of an apoplectic tendency.

PIMPLES.—See FACE, AFFECTIONS OF.

PIN. — A well-known instrument of domestic and personal utility. All persons, and especially females, should always carry a few pins about them to enable them to repair temporarily any damage done to their clothing. The practice of using pins in dressing children is to be condemned, as it frequently happens that one of these will prick a child and cause him much pain for hours, while he is not able to express the cause of it. Placing pins in the mouth is also a most dangerous custom, and for this absurd trick, by which a few minutes are perhaps saved, many persons have paid the forfeit of years of pain and ultimately death. In buying pins the very cheap kinds should be avoided, as they are generally imperfectly made and have no points, so that when they are called into use the loss of time and temper they occasion is of far more consequence than the difference of price between them and a higher priced pin.

PINCERS.—An instrument employed for drawing nails, &c. In gardening, a pair of pincers are used for pulling weeds, thistles, and other plants on hedges; they are formed of wood pointed with plate iron. They are also sometimes used for common weeding, to prevent stooping and treading on the beds and borders, but their chief use is to weed ponds, either reaching from the shores or from boats.

PINCUSHION.—A receptacle for pins, which may be made of any dimensions, and of a variety of materials; a handy little article of this kind is made of thick cardboard covered with silk, and being perfectly flat and of small dimensions may be carried about the person without inconvenience.

PIN MONEY.—A term applied to gifts of money by a husband to his wife for the purchase of apparel, ornaments for her person, or for her private expenditure. Such gifts may be made during marriage,

or, what is more usual, a sum of money for the purposes enumerated may be secured by the husband to his wife by settlement, or by articles executed before the marriage. Pin-money thus secured is not liable to the husband's debts; the wife is entitled in all cases to such money, and to her savings out of it and things bought with it. Several questions have arisen upon pin-money after the husband's death when arrears have been claimed by the wife; and it is the general rule that she can only claim arrears of one year's pin-money if she has been supported by the husband with necessaries during the time that such arrears have accumulated. If it is expressed in the deed of settlement that the pin-money is given for a particular purpose, as for the wife's apparel, and it is proved that the husband provided apparel for the wife, she has no claim after his death to any arrears of pin-money. If the husband leave a legacy to the wife equal to the arrears of pin-money or more, such legacy, according to the general rule as to the satisfaction of debts by the giving of legacies, will be considered as a payment of the arrears due at the time when the will was made. If a wife elope and live apart from her husband, she does not thereby forfeit her right to her pin-money, and she may recover it.—See ALIMONY, HUSBAND AND WIFE.

PINE APPLE.—The propagation of this fruit is occasionally by seed, which should be sown one or two inches apart, or one in each 60-sized pot, at the depth of about a quarter of an inch. After germination has taken place they ought to be fully exposed to the light, and their leaves protected. By the end of August the plants will have attained a fit state for transplanting, after which they should be heated like other young pine plants. In the third year they may be expected to produce fruit. The other modes of propagation are by gills (small secondary suckers produced at the base of the fruit), crowns which surmount every perfect fruit, suckers which arise from towards the middle of the stem of the plant. They are treated exactly as common suckers. One of the last methods of culture is to pot the young plants in a mixture of one-third loam, and two-thirds of half decayed leaves, in which they root very freely; they may then be plunged in frames on a stove, but not in too much bottom heat, as that will injure their roots. The pine-apple thrives best by keeping the house very warm and moist, and by giving air early in the morning, and shutting it up early in the afternoon. As soon as shut up give a gentle sprinkling of water all over the plants. When the plants increase in size and larger pots are required, add more loam to the soil in which they are potted, and keep the pots well drained with small potsherds in the bottom. In shifting them into larger pots care must be taken not to injure their roots. When they are put into the fruiting house, first turn the tan-bed all over to the bottom, adding a sufficient quantity of fresh tan, so as to give a strong heat; then set the plants upon the tan, but do not plunge them till the heat begins to decline. Where plenty of leaves can be had they need not be plunged at all, but as soon as the heat declines, fill up between the pots with them. Oak or chestnut leaves are the best; these cause the heat to arise as strongly as is required. When the heat again declines, add another quantity of leaves, and so on till the plants are half-buried, and water them frequently, but little at a time, and they will root in these leaves, and swell off their fruit to a great size; the suckers root also into the leaves, and grow to large plants before they are taken off; so that these plants produce their fruits, when potted off, much earlier than by any other means.

PINE TREE.—Of this tree there are upwards of fifty species. They are all deserving of culture, being very ornamental and beautiful in every stage of their growth. They will succeed on almost any kind of soil, but to bring the timber to its greatest state of perfection, a somewhat loamy surface soil and a cool subsoil are requisite. Young plants may be obtained by a variety of methods. All the species may be propagated by layers, by in-arching on nearly allied kinds, and by herbaceous grafting; many may also be increased by cuttings, but the speediest way is by seed. The seed should be sown on a finely-prepared rather sandy soil, in March or April. The seeds of the most common kinds are always sown on beds, and after being gently beaten down are covered with light soil. Their after-culture demands very little trouble or care, and depends upon the methods usually adopted with other trees.

PINE APPLE COMPOTE.—Peel a pine apple rather thickly, to leave no black spots upon it, make a syrup with half a pound of sugar, cut the pine apple into round slices a quarter of an inch in thickness, put them into the syrup, and boil them for ten minutes; remove them with a cullender spoon, reduce the syrup until it attains a somewhat thick consistence, and pour it over the pine apple; when cold it is ready to serve.

PINE APPLE CREAM.—Infuse slices of pine apple, or the rind only, in boiling cream, and proceed as is usual for other fruit creams.

PINE APPLE ICE.—Take eight ounces of preserved pine apple, four slices cut into small dice, a quart of cream, and the juice of three lemons. Pound or grate the pine apple, pass it through a sieve, mix, and freeze.

☞ Pine apple preserved, 8ozs.; pine apple fruit, 4 slices; cream, 1 quart; lemons, juice of 3.

PINE APPLE MARMALADE.—Take the largest, ripest, and most perfect pine apples imported; pare them, and cut out whatever blemishes are to be found. Weigh each pine apple, balancing the other scale with an equal weight of the best double-refined sugar, broken into large lumps. Grate the pine apples on a large dish, omitting the hard core which each fruit contains. Put the grated pine apple and sugar into a preserving pan, mixing them

thoroughly. Set it over a moderate and very clear fire, and boil and skim it well, stirring it after skimming. After the scum has ceased to appear, stir the marmalade frequently till it is done, which will generally be in an hour or an hour and a half from the time of boiling. But if it be not smooth, clear, and bright, in that time, continue boiling until it becomes so. Put it warm into tumblers or broad mouthed glass jars. Lay inside the top of each doubled white tissue-paper, cut exactly to fit, and press it down lightly with the finger round the edge so as to cover smoothly the surface of the marmalade; tie them down and set them in a cool dry place.

PINE APPLE SYRUP.—Boil in clarified syrup an equal quantity of fruit, cut into small squares. When sufficiently done, pour off the syrup from the fruit, transfer it to bottles, and set it by for use.

PINK.—This plant closely resembles the carnation and picotee, with the following exceptions. The lacing as it were of a pink is rough outside and inside, with a portion of white outside the lacing, as if a band of colour had been laid on; besides this, there is colour at the base of every petal, and about one-third of the distance along the petal, so that it forms an eye or centre of colour, which is peculiar to itself. The pink may be propagated and cultivated in every respect similar to the carnation. Pipings of it are best made at the end of May or early in June. By the middle of August pinks are all gone out of flower. The old plants are not of much use where choice flowers are desired, as they seldom produce the second year first-rate bloom, but for ornamenting borders they are valuable. Remove them out of the bed, trim off all dead flower-stems; and plant them in the borders of the garden rather deeper than they have been before. They will make fresh roots higher up the stems, and form close, compact bushes, producing the next season abundance of flowers. If it be intended to grow pinks again in the same bed, the soil ought to be taken out a foot deep, and renewed with fresh loam, and very rotten stable litter, in the proportion of three of the first to one of the latter, turning it over frequently to mix it thoroughly and sweeten it. This should be done by the third week in August. Raise the bed six inches above the soil around, and formed like a pitched roof. The compost should be at least a foot deep. Plant in rows the first week in September, and twelve inches apart each way. Shelter in winter, stir the soil frequently in the spring, and mulch with short well-decayed stubble early in June.

PINK SAUCER.—This is employed for imparting an artificial bloom to the cheeks, and may be prepared as follows:—Take eight ounces of dried safflower, previously washed in water, until it no longer gives out any colour, two ounces of subcarbonate of soda, and two gallons of water. Infuse, and afterwards strain it, add four pounds of French chalk, scraped fine with Dutch rushes, and precipitate the colour upon it, with citric or tartaric acid.

PIPE, SMOKING.—The advisability of smoking tobacco in any form has long been a vexed question. If, however, the practice be permitted, the smoking tobacco through a pipe is held to be less injurious than indulging in cigars. The quantity which may be ventured on without injury, has been limited by an eminent authority to two pipes per night. In smoking tobacco pipes, persons should be cautious not to use pipes which have already been smoked from by others, and when a new pipe is employed, the extremity of the stem should be slightly coated with sealing wax to prevent the new clay from causing injury to the mouth, which it otherwise would.

PIPE, WATER.—The pipes from which the supply of water is served do not very frequently get out of repair, they are, however, liable to become frozen in the winter, thereby stopping the supply, and occasioning great inconvenience and expense; one of the best methods to prevent the water freezing in the pipes is always to allow the water to drip from the tap, which causes a constant action in the body of water. When pipes are frozen, the best way to thaw them is to lay over them a quantity of litter from the stable or the dung-heap.

PIPES, FOR DRAINING.—These are best made of brick clay, and coated with glaze; the kind of pipes specially adapted for house draining are those of which the joints can be disposed with the nicest accuracy. The cost is slightly more expensive than ordinary piping, but the advantages secured more than counterbalance the increased outlay.

PIPKIN.—A domestic utensil used for boiling, simmering, infusing, &c. They are usually made of earthenware and glazed on the inside. For many processes the pipkin is preferable to the ordinary saucepan, the contents do not so easily burn, and the vessel admits of being cleansed more thoroughly.

PIQUET.—A game of cards played by two persons, with only thirty-two cards; all the deuces, threes, fours, fives, and sixes being set aside. In playing at this game, twelve cards are dealt to each player, and the rest laid on the table: when, if one of the players find he has not a court card in his hand, he has to declare that he has a *carte blanche*, and to tell how many cards he will lay out, and desire the other to discard, that he may show his game and satisfy his antagonist that the carte blanche is real; for which he reckons ten. In doing this, the eldest hand may take in three, four, or five, discarding as many of his own for them, after which the other may take in all the remainder if he please. After discarding, the eldest hand examines what suit he has most cards of; and, reckoning how many points he has in that suit, if the other has not so many in that or any other suit, he reckons one for every ten in that suit; he who thus reckons most is said to win the point. In thus reckoning the cards, every card counts for the number it bears, as ten for ten; each court card counts as ten, and the ace as eleven; the game is usually one hundred. The point being over, each

examines what sequences he has of the same suit. These several sequences are distinguished in dignity by the cards they commence from: thus, ace, king, and queen are styled tierce major; king, queen, and knave, tierce to a king; knave, ten, and nine, tierce to a knave; and the last tierce, quatre, or quinte prevails, so as to make all the others in that hand good, and to destroy all those in the other hand. The sequences arranged, the antagonists proceed to examine how many aces, kings, queens, knaves, and tens each holds; reckoning for every three of any sort, three; but he that with the same number of threes or fours has one that is higher than any the other has, makes his own good, and sets aside all his adversary's; excepting four of any sort, which is called a quatorze, which counts as fourteen. The game in hand being thus reckoned, the eldest proceeds to play, reckoning one for every card he plays above nine, while the other follows him in the suit; but unless a card be won by one above nine, except it be the last trick, nothing is reckoned for it. The cards being played out, he that has most tricks reckons ten for winning the cards; but if they have tricks alike, neither reckons anything. If one of them win all the tricks, instead of counting ten, which is his right for winning the cards, he reckons forty, and this is called capot. The deal being finished, each player sets up his game; they then proceed to deal as before, cutting afresh each time for the deal; if both parties are within a few points of being up, the carte blanche is the first that reckons, then the point, then the sequences, then the quatorzes, then the tierces, and then the tenth cards. He that can reckon thirty in hand by carte blanche, points, quintes, &c., without playing before the other has reckoned anything, reckons ninety for them, and this is called a repique; and if he reckons above thirty, he reckons so many above ninety. If he can make up thirty, part in hand and part in play, before the other has counted anything, he reckons for them sixty; and this is called a pique. The following are the general rules for playing the game:—1. Play by the stages of your game; that is, when you are backward in the game, or behind your adversary, play a pushing game, otherwise you ought to make twenty-seven points elder-hand, and thirteen points younger hand; and you should in every hand compare your game with your adversary's, and discard accordingly. 2. Discard in expectation of winning the cards; do not discard for a low quatorze, such as four queens, four knaves, or four tens, because in any of these cases the odds are three to one elder-hand, and seventeen to three younger-hand, that you do not succeed. 3. At the beginning of a party, play to make your game; if you have in your hand a tierce major, and the seven of any suit, together with tierce to a king, a queen, or a knave, discard one of them in preference to the seven. 4. If your adversary be considerably before you in the game, the consideration of winning the cards must be quite out of the question, you must therefore make a push for the game. 5. Gaining the point generally makes ten points difference; therefore, when you discard, endeavour to gain it, but do not risk losing the cards by so doing. 6. If you have six tricks with any winning card in your hand, never fail playing that card, unless in the course of the play you discover what cards your adversary has laid out; or unless by gaining the additional point you save the lurch or win the game. 7. If you are greatly advanced in the game, it is to your interest to let your adversary gain two points for your one as often as you can, especially if in the next deal you are to be elder-hand; but if, on the contrary, you are to be younger-hand, do not regard the losing two or three points for the gaining of one, because that point brings you within your show. 8. The younger-hand is to play upon the defensive; therefore, in order to make his thirteen points, he is to carry tierces, quatres, and especially strive for the point. 9. The elder or younger-hand should sometimes sink one of his points or a tierce, in hopes of winning the cards; but this must be done with judgment and caution. 10. The younger-hand having the cards equally dealt him, is not to take in any cards, if thereby he runs a risk of losing them, unless he is very backward in the game, and has then a scheme for a great game. 11. If the younger-hand has the probability of saving or winning the cards by a deep discard, as for example: suppose he should have the king, queen, and nine of a suit; or the king, knave, and nine of a suit; in this case he may discard either of those suits, with a moral certainty of not being attacked in them. 12. The younger-hand having three aces dealt him, it is generally his best play to throw out the fourth suit. 13. The younger-hand has generally to carry guards to his queen-suits, in order to make points and save the cards. 14. When the younger-hand observes that the elder-hand, by calling his point, has five cards which will make five tricks in play, and may have the ace and queen of another suit, he should throw away the guard to the king of the latter suit, especially if he have put out one from it, which will give him an even chance of saving the cards. 15. If the elder-hand is sure to make the cards equal, by playing them in any particular manner, and is advanced before his adversary in the game, he should not risk losing them, but if his adversary is greatly before him, it is better to risk losing the cards in expectation of winning them.

PLAICE.—A flat fish extremely abundant on our coasts. It is inferior to the sole, the flesh being less firm and not so white or well-flavoured. Like all ground fish they are very tenacious of life, and therefore, keep well.

PLAICE, TO DRESS.—Plaice may be either boiled or fried in the ordinary way; the following is also an excellent method of dressing it: sprinkle the fish with salt, and keep it for twenty-four hours. Then wash it and wipe it dry, smear it over with egg, and cover it with crumbs of bread. Boil

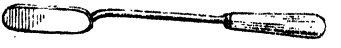
some lard or dripping with two tablespoonfuls of vinegar; lay in the fish and fry of a fine brown colour. Drain off the fat, serve the fish with fried parsley laid round, and anchovy sauce.

PLANTING.—See FLOWER GARDEN, KITCHEN GARDEN, ORCHARD: also APPLE, ASH, CEDAR, CHERRY, LIME, OAK, PEAR, PINE, PLUM, &c.

PLANTS, TO DRY AND PRESERVE.—As pressure is necessary for drying plants, the first thing requisite is to construct a press, which in this instance is made of two of the thickest milled boards, each twenty inches in length, and fourteen in width; also two leathern straps with buckles, and holes at intervals to allow for the varying bulk of the press; then procure two quires of course sugar paper, which can be procured at a grocer's. After having selected the most perfect specimens of flowers, with their stems, lower leaves, and roots when practicable, and having carefully observed that the plants be free from dew or moisture, lay every portion out delicately on one of the course sheets, being careful at the same time that one part of the specimen does not interfere with another; the leaf should be filled. Allow several sheets to intervene before another sheet is filled with specimens. If the flowers be delicate, their colours will be better preserved by placing blotting paper between the folds, to absorb moisture. The plants are now ready to be put into the press, the straps forming the pressure, which, however, must not be great at first. It is necessary to remove the plants every day, and dry the papers at the fire. When the specimens are quite dry, they should be taken from the press, and each plant separately sewed or fastened with gum on to half-sheets of foolscap. The sheets arranged according to their several orders should be kept in trays, boxes, or in a cabinet constructed for the purpose, in a dry room where they will be ready for future reference. In every case the plants ought to be thoroughly dried before they are finally assorted, if not they will soon become mouldy, lose their hues, and become a mere mass of useless refuse.

PLASTER OF PARIS, TO TAKE IMPRESSIONS FROM.—The plaster must be pulverized and sifted through very fine gauze. First rub over the medal, or engraved stone, very softly with oil, and having wiped it with cotton, surround the edge of it with a slip of thin lead. Mix the sifted plaster with water, and stir it gently to prevent it disengaging air-bubbles; then pour it over the object of which the impression is wanted, and suffer it to harden and dry. It is easily detached, and forms a mould strongly marked.

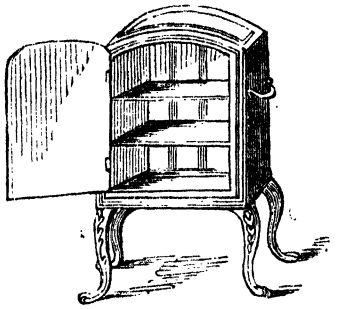
PLASTERS.—Compounds of adhesive tenacious substances. Plasters should not adhere to the hand when cold; they should be easily spread when heated, and should remain tenacious and pliant after they are spread, but should not be so soft as to run when heated by the skin. Plasters are very serviceable for delicately organized persons, or for those who are much exposed to the variations of temperature; when employed for the chest one should be placed on at the commencement of winter, and suffered to remain on until it peels off, when it should be clipped away by degrees, and when entirely removed, replaced by another. Plasters are usually composed of unctuous substances united to metallic oxides, or to powders, wax, or resin. They are usually formed whilst warm into half-pound rolls, about eight or nine inches long, and wrapped in paper. When required for use, a little is melted off the roll by means of a heated iron spatula, and spread upon leather, linen, or silk. In using the spatula the flat surface



is applied to the end of the roll, the melted substance being allowed to drop on the material on which it is to be spread. When a sufficient quantity has been melted, it is then to be spread evenly and thinly by means of the edge of the instrument. When spread plasters are warmed for application, the unspread side should always be held to the heat. When plasters are to be removed from the skin, they should always be warmed through with warm water. Plasters are preserved by enveloping the rolls with paper, to exclude the air as much as possible, and by keeping them in a cool situation. When kept for any length of time, they are apt to become hard and brittle, and to lose their colour. When this is the case, they should be re-melted by a gentle heat, and sufficient oil added to the mass to restore it to a proper consistence.

PLATE, TO CLEAN.—Articles of plate after being used should be washed in hot water, or if stained they should be boiled, and afterwards rinsed and dried before the process of cleaning is commenced. They should be very carefully handled, or they will receive deep scratches difficult to remove. The best plate-powder consists of dried and finely-sifted whiting or chalk. The greater part of the white sold in the shops is too coarse for the purpose, only the finest, therefore, should be employed. Brushes, hard and soft, sponge, and wash-leather, are requisite for cleaning plate; if the powder be mixed with spirits of wine laid on with a sponge, and rubbed off with wash-leather, all tarnish will be removed. Salt stains and marks from eggs are more difficult to remove. It is a good plan to boil a fine soft old cloth in water with some prepared chalk dissolved in it, and to dry the cloth and use it for polishing. The soft brush is for the same purpose, the hard brush being for chased work, edges, crests, &c., so that not a portion of dry powder may remain in them. Plate should in all cases be finished with a fine dry wash-leather. Plated articles should be carefully wiped dry after washing them, otherwise they will rust or canker at the edges, where the silver first wears off, and on this account also, they should be cleaned as seldom as possible.

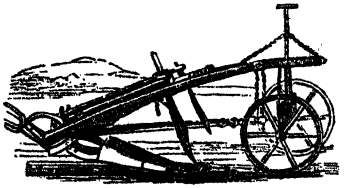
PLATE WARMER.—A useful apparatus for warming plates and dishes, either in the kitchen or the dining-room. Those used in the kitchen may be fitted up on the fire-screen on a small scale; these are made of wood lined with tin, and may have a door in the back to take out the plates and dishes. The kind of plate warmer, however, which



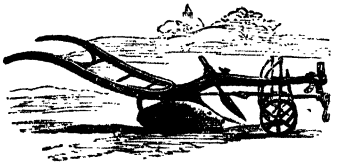
is most generally used is the one seen in the engraving, and which is both useful and ornamental.

PLEURISY. — Inflammation of the lining membrane of the chest, or the *pleura*, as it is called. This disease is so analogous to inflammation of the substance of the lungs, or pneumonia, as to be a matter of difficulty for medical men sometimes to detect the difference; and as the treatment is almost the same, the two diseases will be treated under one head: see PNEUMONIA. The only special peculiarity in pleurisy is, that being an inflammation of a serious membrane, the pain is more acute, and the pulse harder and sharper than in the corresponding disease of the substance of the lungs, where the pain is deeper, the breathing more oppressed and the pulse fuller and softer, than in pleurisy.

PLOUGH.—In this well-known agricultural implement, various improvements have been from time to time introduced. In Kent the turn-wrist plough is common, and is considered superior to all others for its particular purposes. It is intended for under-surface ploughing, so as to clear



the ground from grass and rubbish, as well as to loosen the soil. It is adapted for crossing the ridges; as well as for ploughing in a line with the common furrows, and it may be used so as to lay the stitches on lands rounding or flat, as desired. This implement lays the furrows all in the same direction from one side of the field to the other, and this is effected by the alteration of the wrist, which occupies to a considerable extent the place of the ordinary mould-board, laying over the seam in the same way. In Howard's Prize Plough the improvements consist in greater elegance of



design, more equal proportions, and the furrow-turners being made particularly tapering and regular in their curve, and formed upon exact geometrical principles; the furrow-slice is thus made to travel at a uniform rate, from its being first cut, until left in its final position, the power required to work the implement is considerably lessened, and the furrows are laid more evenly and in the best form to receive the seed, as well as working much cleaner upon land inclined to adhere or load to the breast or furrow-turner. The shares are fixed to lever necks of wrought-iron, made upon an improved principle, the raising or lowering of which gives the point greater or less "pitch," or inclination, as the share wears or as the state of the land may require. The superiority of this lever neck over others is its great simplicity, and its being tightened at the end instead of by a bolt through the side. When raised or lowered (which can be done instantly) it is secured in a series of grooves; the iron is thus brought into a state of tension, ensuring firmness as well as increasing strength. The centre pin upon which the lever works is a fixture to the neck, and takes its bearing close to the head or socket of the share, so that the top of the share is not raised above or below the point of the breast when moved into higher or lower grooves. The lever neck has another great advantage over any other, the accumulation of earth inside the plough, in most instances, renders the lever useless, as it cannot be moved without a great deal of trouble, but in this arrangement by simply taking off the end next the neck, it may be at once disconnected from the plough, and any obstacle preventing its free action removed. The axles of the wheels are upon a new principle, and are made so that no grit can enter, nor any oil or grease escape. The wheels, therefore, wear much longer, the axles require little or no repairing, and the friction is considerably reduced. The mode of fixing the wheels is also peculiar. The holdfasts, or clumps securing them, are made to slide

through a mortise formed in the beam, by which the width may be altered with greater facility, besides dispensing with the old sliding axle, which was an obstacle in deep ploughing, and objectionable on dirty land on account of the soil accumulating round it. The wheels, by the method now adopted, are brought opposite to each other, and the land-wheel may be expanded as well as the furrow-wheel.

PLOVER, TO DRESS.—This bird is roasted in the same way as the snipe and woodcock, without drawing, and are served on toast.

PLOVER'S EGGS.—Boil them for ten minutes, and serve them either hot or cold on a napkin.

PLUM CAKE.—This is such a favourite article in most families, and is made in so many different ways, that it will be necessary to give a variety of receipts in order that a selection may be made according to circumstances. 1. *A good common plum cake.*—Mix five ounces of butter in three pounds of fine dry flour, and five ounces of the best moist sugar. Add six ounces of currants, washed and dried, and a quarter of an ounce of pimento finely powdered. Put three tablespoonfuls of yeast into a pint of new milk warmed, and mix it with the foregoing into a light dough. 2. *A cake of a better sort.*—Mix thoroughly a quarter of a peck of fine flour well dried, with a pound of sifted loaf sugar, three pounds of currants washed and very dry, half a pound of raisins stoned and chopped, a quarter of an ounce of mace and cloves mixed, a nutmeg grated, the peel of a lemon cut as finely as possible, and half a pound of almonds blanched and beaten with orange-flower water. Melt two pounds of butter in a pint and a quarter of cream, but not too hot; add a pint of sweet wine, a glass of brandy, the whites and yolks of twelve eggs beaten apart, and half a pint of good yeast. Strain this liquid by degrees into dry ingredients, beating them together a full hour, then butter the pan, place the cake in, and bake it. 3. *A rich plum cake.*—Take three pounds of well-dried flour, three pounds of fresh butter, a pound and a half of fine sugar dried and sifted, five pounds of currants carefully cleaned and dried, twenty-four eggs, three grated nutmegs, a quarter of an ounce of pounded mace and cloves mixed, half a pound of almonds, a glass of sherry, and a pound of citron or orange-peel. Pound the almonds in rose-water, work up the butter to a thin cream, put in the sugar and stir it well, add the yolks of the eggs, the spices, the almonds, and the orange-peel. Beat the whites of the eggs to a froth, and put them into the batter as it rises. Keep working it, with the hand until the oven is ready, and the scorching subsided; put it into a hoop, but not full; two hours will bake it. 4. *Another rich plum cake.*—Take four pounds of flour well dried, mix with it a pound and a half of fine sugar powdered, a grated nutmeg, and an ounce of bruised mace. When these are well mixed, make a hole in the middle, and pour in the yolks of fifteen eggs, and the whites of seven, well beaten with a pint of yeast, four tablespoonfuls of orange-flower water, and a wineglassful of sherry. Then melt two pounds and a half of butter in a pint and a half of cream; and when it is milk-warm, pour it into the middle of the batter. Throw a little of the flour over the liquids, but do not mix the whole together till it is ready for the oven. Let it stand before the fire to raise for an hour, laying a cloth over it; then have ready six pounds of currants well washed, picked, and dried; a pound of citron and a pound of orange-peel sliced with a pound of blanched almonds, half cut in slices lengthwise, half finely powdered. Mix all thoroughly together, butter the tin well, and bake it for two hours and a half.

☞ 1. Butter, 5ozs.; flour, 3lbs.; sugar, 5ozs.; currants, 6ozs.; pimento, ½oz.; yeast, 3 tablespoonfuls; milk, 1 pint. 2. Flour, ¼ peck; sugar, 1lb.; currants, 3lbs.; raisins, ½lb.; mace and cloves (mixed), ½oz.; nutmeg, 1; lemon, peel of 1; almonds, ½lb.; butter, 2lbs.; cream, 1½ pint; sweet wine, 1 pint; brandy, 1 wineglassful; eggs, 12; yeast, ½ pint. 3. Flour, 3lbs.; butter, 3lbs.; sugar, 1½lb.; currants, 5lbs.; eggs, 24; nutmegs, 3; mace and cloves (mixed), ½oz.; almonds, ½lb.; sherry, 1 wineglassful; citron or orange-peel, 1lb.; rose water, sufficient. 4. Flour, 4lbs.; sugar, 1½lb.; nutmeg, 1; mace, 1oz.; eggs, 15 yolks, 7 whites; yeast, 1 pint; orange-flower water, 4 tablespoonfuls; sherry, 1 wineglassful; butter, 2½lbs.; cream, 1½ pint; currants, 6lbs.; citron, 1lb.; orange-peel, 1lb.; almonds, 1lb.

PLUM, CULTURE OF.—Most of the varieties of this fruit are propagated by grafting or budding on the muscle St. Julian, Magnum Bonum, or any free-growing plums, raised from seed or from suckers; but seedlings are preferable stocks for a permanent plantation. The common baking plums are generally propagated by suckers, without being either budded or grafted. Plum-grafting is performed either in February or March; budding in July or August. The soil most suitable to the plum is a middling one, neither too light nor too heavy; any mellow fertile garden or orchard ground will do, and where a soil is to be made, it is best composed of one-half fresh loam, one-fourth sharp sand, one-sixth road-stuff, and one-twelfth vegetable remains, or decomposed dung or animal matter. The plum is cultivated like other indigenous fruit trees; the hardier sorts, as standards; and the finer varieties against walls. The choice of plants should be confined to trees of not more than one year's growth from the bud; for if they are older they are very subject to canker; or, if they take well to the ground, commonly produce only two or three luxuriant branches. *The final planting* should be performed in autumn. *In training*, the horizontal mode is to be preferred, and it is necessary to observe, that the branches springing from the stem should be allowed to take their natural angle of divergence in the first instance. From this, the upper and stronger branches may be more quickly turned than the lower and weaker. Plums *may be forced* in pots or otherwise like other fruit trees. *When an early crop is desired*, plums are best

forced in large pots or tubs, as this method admits of their removal at pleasure into different degrees of temperature as occasion may require; but for a general crop to ripen by the end of May or beginning of June, it is preferable to have the trees planted in the forcing-house, and if they are intended to be forced in the first year, proper trees for the purpose, furnished with well-branching wood, should be selected and planted early in autumn, that they may establish themselves before the winter sets in.

PLUM JAM.—Cut some ripe plums to pieces, put them into a preserving pan, bruise them with a spoon, warm them over the fire till they are soft, and press them through a cullender. Boil the jam for an hour, stir it well, add six ounces of fine powdered sugar to every pound of jam, and take it off the fire to mix it. Then heat it ten minutes, put it into jars, and sift some fine sugar over it.

PLUM PUDDING.—This national dish is prepared in a variety of ways, the following being the best receipts:—1. Take a pound of fresh beef-suet, very finely minced, a pound of raisins stoned and chopped, a pound of currants cleaned and dried, a pound of flour, the grated peel of a lemon, half of a nutmeg, six well-beaten eggs, an ounce of candied orange-peel and half an ounce of candied lemon-peel minced, half a pound of brown sugar, a wineglassful of brandy and a teacupful of cream. Mix all the ingredients well with the flour. Boil the pudding in a cloth, put it into a copper of boiling water, and keep it boiling for seven hours. Before serving, strew grated loaf sugar over it. 2. A pound of raisins stoned, half a pound of currants well cleaned, a pound of fresh beef suet finely minced, five tablespoonfuls of grated bread, three tablespoonfuls of flour, two of brown sugar, one teaspoonful of pounded ginger, one of cinnamon and one of salt; six eggs well beaten, and a gill of rum, mix these thoroughly together the day before it is to be boiled. Boil it in a cloth or mould for four or five hours. 3. Take a pound of the best raisins stoned, and a pound of currants; chop very small a pound of fresh beef-suet, blanch and pound two ounces of sweet almonds and half an ounce of bitter ones; mix the whole well together with a pound of sifted flour, and the same weight of crumb of bread soaked in milk, squeeze it dry and stir with a spoon until reduced to a mash, before it is mixed with the flour. Cut into small pieces two ounces each of preserved citron, orange, and lemon-peel, and add a quarter of an ounce of mixed spice; but a quarter of a pound of moist sugar into a basin with eight eggs, well beaten; stir this with the pudding, and make it of a proper consistence with milk. Pour a gill of brandy over the fruit and spice, mixed together in a basin, and allow it to stand for three or four hours before the pudding is made, stirring occasionally. Tie it in a cloth, and boil it for five hours. 4. Take half a pound of grated bread, a quarter of a pound of finely-minced suet, a tablespoonful of flour, half a pound of currants, two ounces of brown sugar, and a wineglassful of brandy; mix all together with a sufficient quantity of milk to make it into a stiff batter; boil it in a cloth for four hours.

☞ 1. Suet, 1lb.; raisins, 1lb.; currants, 1lb.; flour, 1lb.; lemon, peel of 1; nutmeg, ½ of 1; eggs, 6; candied orange-peel, 1oz.; candied lemon-peel, ½oz.; sugar, ½lb.; brandy, 1 wineglassful; cream, 1 teacupful. 2. Raisins, 1lb.; currants, ½lb.; suet, 1lb.; bread grated, 5 tablespoonfuls; flour, 3 tablespoonfuls; sugar, 2 tablespoonfuls; ginger, 1 teaspoonful; cinnamon, 1 teaspoonful; salt, 1 teaspoonful; eggs, 6; rum, 1 gill. 3. Raisins, 1lb.; currants, 1lb.; suet, 1lb.; almonds, sweet, 2ozs., bitter, ½oz.; flour, 1lb.; bread crumb, 1lb.; milk, sufficient; citron, candied orange and lemon-peel, 2ozs. each; mixed spice, ½oz.; sugar, ½lb.; eggs, 8; brandy, 1 gill. 4. Bread, grated, ½lb.; suet, ½lb.; flour, 1 tablespoonful; currants, ½lb.; sugar, 2ozs.; brandy, 1 wineglassful.

PLUMS PRESERVED.—Select the sort called magnum bonum. Set them over a slow fire in spring water until they begin to peel, keeping them under the water; peel and put them into a jar with thin syrup, which must cover them, or otherwise they will be discoloured. The next day boil the syrup, then put in the plums and give them a gentle boil. Let them stand till cold, then repeat the process; turn them in the syrup until nearly cold. Take out the plums, strain the syrup, add more sugar, and skim it well; put in the plums, boil them till they are clear, then pot them, and cover them with paper.

PNEUMONIA.—This disease is an acute inflammation of the substance of the lungs, and so far different from Pleurisy, as that is the inflammation of the *bag* or *membrane* that contains the lungs, and lines at the same time the whole cavity of the chest. The symptoms that indicate inflammation of these organs, are pain in the chest, extending to the shoulders and back, and becoming more acute as the disease advances, a constant and anxious difficulty of breathing, augmented by a recumbent, and relieved, or less severe, when the body is placed in an erect position, attended with a sense of distension and fulness of the lungs, which nature attempts to relieve by a frequent and abortive cough; the face becomes tumid, and the lips livid; the pulse being quick, full, and round in pneumonia, and quick, hard, and sharp in pleurisy. The pain may be either under the breastbone or at either side, or in all places at once; there is much thirst, great anxiety, and a tongue either dry and rough, or moist and white. The other organs suffer sympathetically, such as the head and skin, when the former is the case, and there is much congestion, as indicated by throbbing in the temples, heat, and pain; the prognosis of the disease is unfavourable, as delirium may supervene, always a serious symptom. But as respects the skin, which is nothing more than an extended surface-lung, it always suffers to a greater or less degree in this disease; and as all affections of the skin reciprocally affect the lungs, the cuticle, in pneumonia, becomes dry, rough, and extremely sensitive to cold.

Inflammation of the lungs may exist without pain, as in the peripneumonia notha of old age; but in youth and adult periods, this is rare.

The *treatment* of this disease demands great judgment; that bleeding is often necessary, no one will deny who bears in mind the vital function of the organ; but it should not be carried too far, or if possible, be repeated. When the great object of the treatment is borne in mind, the mode of after-management will be more intelligible, viz., that the chief and foremost consideration is to relieve the overcharged lungs of the excess of blood accumulated in their vessels; which, by pressure on the nerves of the organ, causes not only the pain, and by obstructing the air passages, impedes respiration, inducing difficulty of breathing, but preventing the blood from circulating through the structure of the lungs. When it is remembered that the *skin is only another kind of lung*, and that in this disease it is cold, rough, and dry, indicating the absence of its natural blood, drawn off from the surface to flood the lungs; it will then easily be comprehended that a hot bath, by bringing back the circulation to the surface, must unload the lungs, and by equalizing the powers, afford immediate relief from pain, and the general amelioration of all the other oppressive symptoms. Very great is the benefit produced by the hot bath, in relieving the oppressed organ, and throwing the superabundance of blood on the skin, where it can in turn be got rid of in the form of perspiration, and by a sharp action on the bowels, as a purgative, be removed from the system before its accumulation in the cuticle could produce any hurtful consequences, or reciprocally re-act on the lungs. So great indeed is the benefit of the bath, that if the effect could be continued long enough, no other mode of treatment than a hot bath and a purgative would be needed to cure this dangerous disease. Still, it must be understood that this means is one of the first remedies to be adopted, and if immediately employed after bleeding, when that measure is rendered necessary by the urgency of the symptoms, two of the most important moves in the system of treatment will have been adopted. The bath should be used for five or seven minutes, and the temperature of the water kept, up to the last moment, to the same heat as when first used. The patient should be folded in a blanket undried and placed in bed, that perspiration may be induced; the subjoined pills, and a dose of the accompanying mixture, being given before he is left in repose. Take of

Extract of colocynth .	12 grains
Calomel	8 grains
Croton oil	1 drop

Make into a mass with extract of henbane, and divide into 4 pills, two of which are to be given for a dose, and repeated the following day if required. Take of

Powdered nitre	30 grains
Tartar emetic	4 grains

Dissolve in—

Camphor water . . .	5½ ounces
Laudanum	1 drachm
Syrup of saffron . . .	½ ounce

Mix, and give *two* tablespoonfuls after the pills, and *one* tablespoonful every two hours afterwards. The feet should be kept constantly hot; and if, after a few hours, the pain in the chest continues, from six to twelve leeches should be applied to the part over each lung; or a blister may be substituted for the leeches. The thirst is to be mitigated by effervescing draughts, made by dissolving twenty grains of the carbonate of potass in half a tumbler of water, and adding fifteen grains of powdered citric acid, or the same quantities of carbonate of soda and tartaric acid. In cases where the pain and inflammatory symptoms are strong, and the physical state of the patient too weak to admit of excessive depletion with safety, one of the following pills may be given every four hours in addition to the mixture and dose of purgative pills. Take of

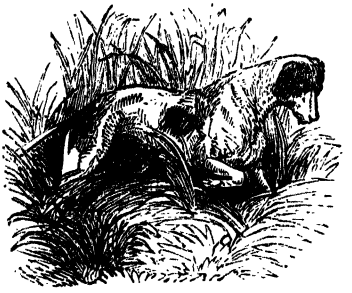
Calomel	12
Opium, powdered . . .	5 grains

Extract of henbane, enough to make into a mass, which is to be divided into six pills, which are to be discontinued as soon as the urgency of the symptoms is subdued. To recapitulate: the treatment of pneumonia should commence with bleeding to the extent of from twelve, fifteen, or twenty ounces, the hot bath, the purgative pills, and the saline fever mixture; in extreme cases, using in addition the calomel and opium pills, and leeches, or a blister on the chest; but in *all* cases allaying the thirst with cooling drinks and effervescing draughts. During the whole treatment the patient should be kept in bed, remarkably quiet, and on the thinnest and least exciting diet; the skin, as much as the lungs, being guarded against exposure to damp or cold; and as this disease is very prone to recur, every precaution must be taken during convalescence, not to let the patient be exposed to causes that might renew so serious a complaint.

POCKET.—A receptacle forming a portion of male and female attire, for keeping articles in safety. Pockets in which money and valuable articles are kept, should be so placed that they are difficult of being rifled. The pockets worn by females afford great facilities for robbery, and it would be a wise provision if every dress were made with a pocket near the waistband, so that it might be under the wearer's immediate control and protection.

POCKET BOOK.—A book in which bank-notes, cheques, bills, and valuable documents are usually kept. The best kind of pocket-book is one that is not too large, and may be easily introduced into a pocket made inside the breast of the coat or waistcoat. It is a good plan to write the name and address of the owner in the pocket-book itself, so that if it be lost and fall into the hands of honest persons it may be the more readily restored.

POINTER.—A species of dog evidently descended from the hound. It is more perfectly under the control of the sportsman than any other dog, but this degree of per-



fection is arrived at by dint of education and training, which process is comprised in the following rules:—The first lesson inculcated is that of passive obedience, and this enforced by the infliction of severity as lenient as the case will admit. The dog is taken into a garden or field, and a strong cord about eighteen or twenty yards long is tied to his collar. The sportsman calls the dog to him, looks earnestly at him, gently presses him to the ground, and several times will make him *down* immediately, and take him to the place where the birds rose. Chide him with "Steady!" "How dare you?" Use no whip, but scold him well, and be assured that he will be more cautious. If possible, kill on the next chance. The moment the bird is down, the dog will probably rush in and seize it. He must be met with the same rebuff, "Down charge!" If he do not obey, he must receive a stroke of the whip. The gun being again charged, the bird is sought for, and the dog is allowed to see it and play with it for a minute before it is put in the bag. He will become thoroughly fond of the sport, and his fondness will increase with each bird that is killed. At every time, however, whether he kills or misses, the sportsman should make the dog "Down charge!" and never allow him to rise until he has loaded. If a hare should be wounded, there will, occasionally, be considerable difficulty in preventing him from chasing her. He must be checked with "'Ware chase," and if he does not attend, the sportsman must wait patiently. He will by-and-by come slinking along with his tail between his legs, conscious of his fault. It is one, however, that admits of no pardon. He must be secured, and while the field echoes with the cry of "'Ware chase," he must be punished to a certain, but not to too great an extent. The castigation must be repeated as often as he offends; or, if there be much difficulty in breaking him of the habit, he must be got rid of. By attention to the rules here laid down, the person whose circumstances only permit him occasionally to shoot over his little demesne, may very readily educate his dog, without having recourse to keepers or professional breakers. Generally speaking, no dog is half so well broken as the one whose owner has taken the trouble of training him. The owner of any considerable property will naturally look to his keeper to furnish him with dogs on which he may depend, and he ought not to be disappointed; for those which belong to other persons, or are bought at the beginning of the season, will too often be found deficient. The scholar being thus prepared should be taken into the field, either alone or with a well-trained steady dog. When the old dog makes a point, the master calls out "Down!" or "Soho!" and holds up his hand and approaches steadily towards the birds: and if the young one runs in, or prepares to do so, as probably he will at first, he again raises his hand and calls out "Soho!" If the youngster pays no attention to this, the whip must be used, and in a short time he will be steady enough at the first intimation of the game. If he springs any birds without taking any notice of them, he should be dragged to the spot from which they rose, and, "Soho!" being cried, one or two sharp strokes with the whip should be inflicted. If he is too eager, he should be warned to "Take heed." If he he runs with his nose near the ground, he should be admonished to hold up, and if he still persists the muzzle-peg may be resorted to. The best plan to accustom dogs to the gun, is occasionally to fire off one while they are being fed. When the dog has grown tolerably steady, and is taught to come at the call, he should also learn to range and quarter his ground. Let some clear morning, and some place where the sportsman is likely to meet with game, be selected. Station him where the wind will blow in his face; wave your hand and cry "Heigh on, good dog!" Then let him go off to the right about seventy or eighty yards. After this, call him by another wave of the hand, and let him go the same distance to the left. Walk straight forward with your eye always upon him; then let him continue to cross from right to left, calling him in at the limit of each range. In doing this, the same ground should never be twice passed over. The sportsman watches every motion, and the dog is never trusted out of sight or allowed to break fence. When this lesson is tolerably learned, he may, on some good scenting morning early in the season, take the field, and perhaps find. Probably he will be too eager, and spring upon his game. A loud but not an angry voice says, "Down!" or "Down charge!" The dog does not know the meaning of this, and struggles to get up; but as often as he struggles, the cry of "Down charge!" is repeated, and the pressure is continued or increased. This is continued a longer or shorter time, until the dog, finding that no harm is meant, quietly submits. He is then permitted to rise; he is patted and caressed, and some food is given him! The command to rise is also given in the terms "Heigh up!" A little while afterwards the same process is repeated, and the dog struggles less, or

perhaps ceases to struggle altogether. The attachment of the dog should be gained by frequently feeding and caressing him, and giving occasional hours of liberty; but every now and then inculcating a lesson of obedience, teaching him that every gambol must be under the control of the master; frequently checking him in the midst of his gambols with the order of "Down charge!" patting him when he is promptly obedient; but scolding or moderately chastising him, when there is any reluctance to obey. The dog is then suffered ro run over the field, seemingly at his pleasure, when suddenly comes the warning "Down!" He perhaps will pay no attention to it, until he is seized by his master, forced on the ground, and is menaced with the order of "Down!" somewhat sternly uttered. After a while he is suffered again to get up. He soon forgets what has occurred, and gallops away with as much glee as ever. Again the "Down!" is heard, and again little or no attention is paid to it. His master once more lays hold of him and forces him on the ground, and perhaps inflicts a slight blow or two, and this process continues until the dog finds that he must obey the command of "Down charge!" The owner should now walk from the dog a little way backward with his hand lifted up. If the dog make the slightest motion, he must be sharply spoken to, and the order peremptorily enforced. He must then be taught to "Back," that is, to come behind his master when called. When he appears to understand all this, he is called by his master in a kindly tone, and patted and caressed.

POISONS.—Those substances which, when taken into the human body, or applied externally, always produce such an effect or disturbance in the animal economy, as to induce disease, or a chain of symptoms that if uncorrected would eventuate in serious mischief to the health of the body, or even induce death. Or, to simplify the explanation; a poison is any agent capable of producing a morbid, noxious, or dangerous effect upon anything endowed with life. All poisons are *common* or *relative:* by the first, is understood those substances which produce morbid, or dangerous symptoms on all conditions of animal life, on man as well as the brute, on the fish as well as the fowl. By *relative* poisons is understood those agents which are only poisonous to man, or some particular species of animals; thus aloes, which is a useful medicine to man, is a poison to dogs and wolves; and others which are deadly to the horse, form a nutritious food to the ox. As an instance of the *common* poisonous agent, affecting all animals in the same manner, may be advanced arsenic and corrosive sublimate. Agents or substances are poisonous only in regard to their dose, the part of the body they are applied to, and the subject on which they are applied.

To illustrate these facts, it is sufficient to say that both arsenic and corrosive sublimate are valuable medicines in certain modified doses, while in excess, they are deadly; secondly, a poison to the stomach may be innocuous to the lungs, or what would be fatal to the integrity of the system, applied to one part of the body, is harmless when administered to another; thus the carbonic acid gas which we imbibe with exhilarating satisfaction with our malt-liquor, soda water, and champagne, is a deadly poison if instead of going down the gullet, it should descend the windpipe, and enter the lungs. There are only *four* ways by which a poison can enter the system, and prove injurious or fatal to life; of these the most common is by the mouth into the stomach, by the air passages into the lungs, by absorption through the skin, either in its natural state, or from an abrasion or scratch; and lastly by the bowels, from an enema. But whichever way they enter the system, they only re-act upon it in *two* forms of action; that is, that they are either absorbed into the blood, and conveyed by the circulation to the part or parts affected, or they produce an immediate influence on the nerves of the part with which the poison first comes in contact; and by a sympathetic action affect the whole nervous system. Poisons may belong to either of the three kingdoms, the *animal, mineral,* and the *vegetable,* but as the symptoms produced are sometimes nearly the same, from whichever class or kingdom they may be derived, it has become the custom to arrange the several poisons according to the most characteristic effect they produce on the animal economy, and to divide them into the IRRITANT POISONS, the NARCOTIC POISONS, and the NARCOTIC-ACRID POISONS, thus embracing all deleterious substances under one or other of the above classes.

IRRITANT POISONS

Are those that excite inflammation in some part, or the whole of the alimentary canal.

- Nitric acid
- Muriatic acid
- Sulphuric acid
- Phosphorus
- Sulphur
- Chlorine
- Iodine
- Hydriodate of potass
- Bromine
- Oxalic acid
- The fixed alkalis
- Nitre
- Alkaline and earthy chlorides
- Lime
- Ammonia and its salts
- Alkaline sulphurets
- The compounds of arsenic
- Compounds of mercury
- Ditto of antimony
- Ditto of tin, zinc, silver, bismuth, and chrome
- Compounds of lead
- Ditto of copper
- Baryta
- Euphorbia
- Castor oil seeds
- Croton
- Bryony
- Colocynth
- Elaterium
- Ranunculus
- Anemone
- Clematis
- Mezereon
- Cuckoo-pint
- Gamboge
- Savin
- Cattha
- Poisonous fish
- Venomous serpents and insects
- Daffodil
- Jalap
- Cantharides
- Decayed animal matter
- Mechanical irritants.

NARCOTIC POISONS.

Are those poisons that produce an immediate

and continued disorder of the nervous system.

Opium	Hyoscyamus
Lactuca	Hydrocyanic acid, and all vegetables producing it, as bitter almonds, cherry laurel, peach, and mountain ash, carbonic oxide, and oxygen.
Solanum	
Nitric oxide gas	
Chlorine gas	
Ammoniacal gas	
Sulphuretted hydrogen	
Carbonic acid	
Cyanogen	

NARCOTIC-ACRID POISONS.

The poisons of this class produce a double action, that of a local irritation, and a secondary, or after effect on the nervous system.

Nightshade	Darnel grass
Hemlock	Alcohol
Tobacco	Ether
Water hemlock	Thorn-apple
Monkshood	Fool's-parsley
Squills	Hellebore, black
Ipecacuanha	Hellebore, white
Meadow saffron	Strychnia
Foxglove	False angustura
Nux vomica	Poisonous fungi
Camphor	Mouldy bread
Cocculus indicus	Seeds of the laburnum, and some empyreumatic oils
Upas	
Secale cornutum	

Though chemistry has of late years made great progress in the science of analysis, vegetable poisons are so soon eliminated from the body, as to leave hardly any trace for the chemist's tests to re-act upon, and the mineral poisons may be regarded as almost the only class on which science can operate with invariable certainty. The first duty of any one called to act in a case of poison, is to administer an antidote, of which there are supposed to be two; one, which given immediately, will chemically destroy the virulence of the poison; as in the case of a person who has swallowed a powerful acid, the exhibition of chalk will destroy the potency of the acid, by forming a new and harmless compound. And antidotes or drugs in many instances of a problematical effect, which are supposed to have the power of neutralizing the effect produced on the system, by the agency of the poison, and restoring the disorganised body to a pure and pristine health. Of this class of drugs once implicitly believed in, science has found few or any to bear the test of a rigid experience. To leave theory, and come at once to the practical, the first care of any one, when an individual has voluntarily, or by accident taken a poison, or any known or suspected deleterious substance, is to procure its instant evacuation from the system, by *vomiting*. In many cases either the drug itself, or the over-dose of it, excites this remedial step, and if so, the attendant should encourage the action of the stomach by all the means immediately procurable; or if that vomiting has not set in, to excite it at once, either by warm water in frequent draughts, or should that not be present, by a draught of mustard and water, or a few spoonfuls of common salt dissolved in water; or should neither of these be in readiness, and while water is heating, and medical aid, or other means is being sought, give copious draughts of cold water, and by the feathery part of a quill tickle the fauces, or with the handle of a spoon press down the root of the tongue; when the contents of the stomach must be ejected. This process may be repeated; and even without further means, the poison may in this way be ejected from the stomach. In cases where vegetable, or what are called narcotic, poisons have been taken, it is sometimes extremely difficult, if not impossible, to produce vomiting, though attempted with proper emetics; in all such, in fact in all vegetable poisons, the stomach pump becomes imperative, and the most valuable of agents, as it not only fills the stomach with water, but immediately after relieves it of that, and whatever poisonous matters it may hold in suspension or solution. This process of filling the stomach with tepid water, and again expelling it, must be continued till all apprehension that more poison remains, is removed from the mind of the operator. In cases of poisoning by narcotic and vegetable substances, to empty the stomach is the first, last, and most important duty, and till the chief agent, the stomach pump, can be procured, some of the means already advised should be adopted, but where more perfect remedies are at hand they should be employed; of such the best emetics for a vegetable poison are the minerals, especially the white vitriol or sulphate of zinc, twenty or thirty grains of which, dissolved in half a tumbler of warm water, will be found to act almost instantly. To rouse the energies after the ejection of the poison, electricity should, when possible, be applied; stimulants such as ammonia, hot coffee, or camphor administered; and, when necessary, aspersions of cold water, and the patient constantly kept moving. In other cases blisters or hot mustard plasters must be applied to the spine, thighs, feet, or stomach; according to the nature and potency of the poison. In irritant or corrosive poisons, concurrent with the vomiting, which when not induced by the poison itself, should be at once excited, agents to neutralize the virulence of the poison must be administered, and again repeated after each vomiting, to be in turn ejected, again taken, and again discharged. In all poisonings of this class, proceeding from the mineral acids or corrosive compounds, when proper emetics are at hand the vegetable, such as ipecacuanha, is the most efficacious, twenty or twenty-five grains of which, dissolved in warm water will be found an effective dose; while as a corrective to the corroding nature of the poison, draughts of tepid water, in which shavings of brown soap have been scraped must be drunk frequently, or half tumblers of water in which half a teaspoonful of soda, either the common or carbonate, or the same quantity of ordinary potass; frequent draughts of milk or mucilage, treacle, honey and water; or should none of these articles

be at hand, spoonfuls of chalk and water, and in still more extreme cases, when no other aid is at hand to relieve the burning agony induced by the poison, the plaster from the wall or ceiling should be broken down, and mixed in water, given to the patient to neutralize the activity of the poison. Such are the general means adopted to eject the poison from the system; special poisons, however, require particular and special notice.

ARSENIC, in addition to the vomiting, should be treated with the white of eggs mixed in water, and administered every ten minutes; or honey, treacle, sugar and water or milk.

OXALIC ACID.—New milk must be given in frequent draughts after each fit of vomiting, or chalk and water.

CORROSIVE SUBLIMATE AND VERDIGRIS are treated nearly in the same manner as arsenic; the chief antidotes being white of eggs, milk and sugar and water; though for verdigris, iron filings dissolved in vinegar, and mixed with mucilage, is generally preferred for this rarely employed poison.

NITRATE OF SILVER, or LUNAR CAUSTIC.—The best antidote, concurrent with the emetic, is common table salt, dissolved in water, and taken frequently. A teaspoonful of salt in a wineglass of water is to be given every half hour.

SULPHURIC, MURIATIC, or NITRIC ACID, or what are called the MINERAL ACIDS, require like oxalic acid, milk, but especially, magnesia, chalk, and soap or mucilage, but primarily magnesia.

HYDROCYANIC ACID, OR PRUSSIC ACID.—Where this drug is not immediately fatal, and has only been taken in moderate quantity, the only antidotes are powerful stimulants of brandy, ammonia, and ether; and as emetics are valueless in this poison, sudden effusions of cold water must be adopted with stimulants to the stomach.

In all cases of poisoning by vegetable matter, whether acrid or narcotic, the first duty is to encourage the sickness, if set in, by warm water, and where the power of the stomach has been paralysed by an excessive dose, instantly to promote vomiting by a full dose of sulphate of zinc or white vitriol, in a dose varying from 20 to 30 grains, or else 10 or 15 grains of sulphate of copper or blue stone; but neither antimony nor ipecacuanha. When the stomach has been well evacuated, strong infusions of coffee, or draughts of vinegar and water are to be given occasionally. In all cases of corrosive or acrid poisons, when the lower bowels are affected, it becomes necessary to employ enemas of a soothing and corrective nature. All that the non-professional person can do in any case of poisoning, till the arrival of medical advice, is to empty the stomach of the hurtful matter by the quickest and readiest aids; and when emetics are not at hand, such natural and domestic means are to be resorted to as can be the easiest obtained; warm water, mustard, salt, tickling the gullet with a feather, or pressing down the tongue with a spoon, as already advised. It should be borne in mind, that for mineral poisons *vegetable* emetics are to be used, and for vegetable poisons *mineral* emetics: that in cases of poisoning from the mineral acids, it is useless to give emetics, and dangerous to administer water alone; in such cases, such articles are to be given as will counteract the corrosive virulence of the acid, and convert it into an inert compound, such as magnesia, soda, chalk, soap, or in extremity of means, the plaster from the walls: that where prussic acid has been taken, emetics are equally valueless; the prostrated powers are to be raised by powerful stimulants, and the means already indicated. For the poisons that are applied externally, and prove hurtful by absorption, such as the bite or sting of venomous reptiles, the first duty of an assistant is to tie a garter tape, or some ligature tightly round the limb, a few inches above the wound, next to wash it immediately with warm water, and then, if there are no cracks in the lips or gums, fearlessly to apply the mouth to the bitten part, and slowly and steadily suck it; washing the mouth with cold water every time there is a rest, and the contents are spit out. When cupping glasses are at hand, they should be applied instead of the mouth; in either case, the part, after being sucked or cupped, is to be well rubbed over with lunar caustic, a warm poultice laid upon the place, the limb kept at rest, and, a few hours after, the bandage or ligature removed. See CUPPING. For the poisonous sting of gnats, bees, wasps, and other insects, a piece of lint, wetted in the pure extract of lead, is all that is necessary to cure one or the other. For the sickness, lassitude, and fainting, that often follow the sting of reptiles, it is requisite to administer ether, brandy, and ammonia, and sometimes opium. For the special action, and symptoms of particular poisons, see the article under which it is treated, as ARSENIC, SUBLIMATE, &c.

POLITICAL ECONOMY.—Books: *Mill's Elements*, 3s. 6d.; *McCulloch's Literature*, 14s.; *De Quincy's Logic*, 7s. 6d.; *Sedgwick's Public and Private*, 5s.; *Parker's Questions*, 6s. 6d.; *Newman's Essay*, 7s. 6d.; *Malthus's Treatise*, 3s. 6d.; *Merivale's Essay*, 2s.; *Senior's Lectures*, 5s.; *Whateley's Essay*, 8s.; *Chalmers's Treatise*, 6s.

POLKA. — A popular dance, in which there are but two principal steps, all others belong to fancy dances. *First step:* the gentleman raises the left foot slightly behind the right, the right foot is then jumped upon, and the left brought forward with a glissade. The lady commences with the right, jumps on the left, and glissades with the right. The gentleman during this step has hold of the lady's left hand with his right. *Second step:* the gentleman lightly hops the left foot forward on the heel, then hops on the toe, bringing the left foot slightly behind the right. He then glissades with the left foot forward; the same is then done commencing with the right foot. There are a variety of other steps of a fancy character, but they can be only understood with the aid of a master, and even when well studied, must be introduced with care. The polka should be danced with grace and elegance, eschewing

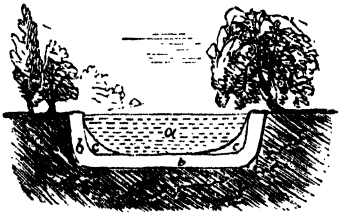
all extravagant and ungainly steps and gestures, taking care that the leg is not lifted too high, and that the dance is not commenced in too abrupt a manner. Any number of couples may stand up, and it is the privilege of the gentleman to form what figure he pleases, and vary it as often as his fancy and taste may dictate. *First figure:* four or eight bars are devoted to setting forwards and backwards, turning from and towards your partner, making a slight stop at the commencement of each set, and holding your partner's left hand; you then perform the same step forwards all round the room. *Second figure:* the gentleman faces his partner, and does the same backwards all round the room, the lady following with the opposite foot, and performing the step forwards. *Third figure:* the same as the second figure, only reversed, the lady stepping backwards and the gentleman forwards, always going the same way round the room. *Fourth figure:* the same step as figures two and three, but turning as in a waltz.

POLYANTHUS.—A variety of the common primrose. The characteristics of a fine polyanthus are, a short straight stem, the eye round, of a bright clear yellow, and distinct from the ground colour. The ground colour is most admired when shaded with a light and dark rich crimson, resembling velvet, with one mark or stripe in the centre of each division of the limb, bold and distinct, from the edging down to the eye, where it should terminate in a fine point. The pips should be large, quite flat, and perfectly round. The edging should resemble a bright gold lace, and be so nearly of the same colour as the eye and the stripes as to be scarcely distinguished. The polyanthus may be propagated by dividing the root, or by slips, for ordinary purposes; and by seed, for obtaining new varieties. The plants from which the seed is to be saved are to be separated from the stems. When ripe, it should be cut off with part of the stem, and so preserved till the sowing season. For the mode of culture, see AURICULA.

POMADE.—In the preparation of pomades, one of the first objects of consideration is to obtain their fatty basis in as fresh and pure a state as possible. Lard, beef and mutton suet, beef marrow, veal fat, and bear's fat, are the substances commonly employed for this purpose, either singly, or in mixtures of two or more of them. The fat, after being separated from extraneous skin and fibre, is pounded in a marble mortar, in the cold, until all the membranes are completely torn asunder. It is next placed in a covered porcelain or polished metal pan, and submitted to the heat of a water bath, which is continued until its fatty portion has liquefied, and the albuminous and aqueous matter, and other foreign substances have completely separated and subsided. The liquid fat is then carefully skimmed, and at once passed through a clean flannel filter. In this state it is perfumed as desired; after which, when it is intended that the pomade should be opaque and white, it is assiduously stirred or beaten with a glass or wooden knife, or spatula, until it concretes; but when it is desired that it should appear transparent or crystalline, it is allowed to cool very slowly, and without being disturbed. To prevent the accession of rancidity, a little benzoic acid, gum benzoin, or nitric ether, may be added to the fat, whilst in the liquid state. The following recipes are given for various kinds of pomades. 1. *Plain pomade*—Lard, two pounds; beef suet, one pound; carefully rendered as above. 2. *Scented pomade*—Plain pomade, one pound; melt it by the least possible degree of heat; add of essence of lemon or essence of bergamot, three drachms, and stir the mixture until it concretes. 3. *Crystallized pomade*—Castor oil, one pound; spermaceti, three ounces; melt them together by a gentle heat; add of essence of bergamot, three drachms; oils of verbena, lavender, and rosemary, of each half a drachm; pour it into wide-mouthed glass bottles, and allow it to cool very slowly and undisturbed. 4. *Pommade divine.*—Beef marrow, two pounds, washed and purified; liquid styrax, cypress-wood, and orris-root, of each two ounces; powdered cinnamon, one ounce; cloves and nutmegs, of each (bruised) half an ounce; digest the whole well together by the heat of a water-bath for six hours, and then strain through flannel.

POMEGRANATE, CULTURE OF.—In propagating this fruit, the single flowering sorts may be raised from seed, and all the varieties by cuttings, suckers, or layers, or by inoculation or grafting on the wild sort. The last is considered much the best mode when fruit is the object, and the next best is by layers; but the common mode is by suckers, which these plants send up abundantly. The directions given for raising and cultivating the orange-tree may be considered as equally applicable to the pomegranate.—See ORANGE.

POND.—A reservoir of water dug out of the soil, and made retentive by puddling with clay the bottom and sides. After the excavation has been cleared out, a layer of clay, well tempered with a little water, is laid over the whole of the bottom and



trodden down till it forms a compact body about a foot thick. Upon this, spread a layer of quicklime an inch or upwards in depth. Over this put another layer of clay similar to the last, and trodden down in the same manner. To prevent the clay being injured by the treading of cattle, the whole

is covered with a layer of coarse gravel or small stones, of a considerable thickness. The sides of the pond may slope rapidly, or the reverse. If the slope be considerable, plants can be more easily fixed and cultivated. The engraving shows the section of a pond thus formed: *a* indicates the surface of the ground at the edge of the water; *b*, the puddle; *c*, the puddle to preserve the facing from injury. When a small pond of this kind is to be made, and the extent of the surface is determined upon and marked out, it will then be necessary to form a second or outer mark indicating the space required for the wall or the side puddle.

PONY.—Ponies are chiefly used for children to ride, or for drawing the pony carriage. It is an extremely useful animal, and will do much more work day by day than the horse. There is a great difference in the size and breed of ponies, some being scarcely eleven hands high, while others reach nearly to fourteen hands. About thirteen hands is the best for all purposes; and ponies well and strongly made of this height will carry and draw great weights, and go long distances if not over-paced. The shooting pony, as it is usually called, whatever may be its height, is a very valuable adjunct to the lame, the lusty, and the elderly sportsman; and also to every one who has to go and return from distant shooting ground. The qualifications of a shooting pony are, to stand fire without wincing; to be a perfectly safe goer over all kinds of ground, particularly down hill; a good canterer and walker; a handy and safe standing leaper; one that shies at nothing, and fully master of the weight he has to carry.

POPE, FOR ANGLING.—See MILLER'S THUMB.

POPE JOAN.—A game played by a number of persons, who generally use a board painted for this purpose, which may be purchased at most turner's or toy shops. To play this game, the eight of diamonds must first be taken from the pack, and after settling the deal, shuffling, &c., the dealer dresses the board by putting fish counters, or other stakes, one each to ace, king, queen, knave, and game: two to matrimony, two to intrigue, and six to the nine of diamonds, styled pope. This dressing is sometimes at the individual expense of the dealer, whilst at others, the players contribute two stakes each towards the same. The cards must next be dealt round equally to every player, one turned up for trump, and about six or eight left in the stock to form stops; as, for example, if the ten of spades be turned up, the nine consequently becomes a stop; the four kings, and the seven of diamonds, are always fixed stops, and the dealer is the only person permitted, in the course of the game, to refer occasionally to the stock for information which other cards are stops in their respective deals. If either ace, king, queen, or knave happen to be turned up trump, the dealer may take whatever is deposited on that head; but when pope is turned up, the dealer is entitled both to that and the game, besides a stake for every card dealt to each player; unless the game be determined by pope being turned up, the eldest-hand must begin by playing out as many cards as possible; first the stops, then pope, if he have it, and afterwards the lowest card of his longest suit, particularly an ace, for that can never be led through; the other players are to follow when they can, in sequence of the same suit, till a stop occurs; and the party having the stop thereby becomes eldest-hand, and is to lead accordingly, and so on, until some person parts with all his cards, by which he wins the pool, and becomes entitled besides to a stake for every card not played by the others, except from any one holding pope, which excuses him from playing; but if pope has been played, then the party having held it is not excused. King and queen are denominated matrimony; queen and knave make intrigue, when on the same hand; but neither these, nor ace, king, queen, knave, nor pope, entitle the holder to the stakes deposited thereon, unless played out; and no claim can be allowed after the board be dressed for the succeeding deal; but, in all such cases, the stakes are to remain for future determination. This game only requires a little attention to remember what stops have been made in the course of the play; as, for instance, if a player begin by laying down the eight of clubs, then the seven in another hand forms a stop, whenever that suit be led from any lower card; or the holder, when eldest, may safely lay it down in order to clear his hand.

POPLAR.—Most species of poplar are very ornamental, more especially in early spring, when the catkins of the males are produced. Their favourite place of growth is in moist soil, near a running stream; but they do not thrive in very marshy situations. All the species are readily increased by cuttings or layers, and some by suckers. As an ornamental tree, it ought to be grouped and massed with trees of equally rapid growth, else it soon becomes disproportionate and out of keeping with those the progress of which is comparatively slow. No tree requires less pruning; even the shortening of its branches is rarely needed, and large limbs ought never to be amputated, as the wounds readily imbibe the wet, and soon communicate a taint and rot to the trunk of the tree. The wood is very white, and when dry, of a tough nature, allowing nails to be driven into it without splitting, on which account, and its lightness, it is well adapted for packing cases; it also affords excellent and durable deals for flooring-boards, barn-doors, &c., and by musical instrument makers is often substituted for the wood of the lime tree.

POPPY.—A well-known plant found growing wild in various situations, especially in corn-fields. It is sometimes cultivated for the narcotic properties which it contains; in such a case the seeds are sown in March or April where they are to remain; they may also be propagated by division of the roots; they prefer a rich, light, sandy soil

POPPIES, SYRUP OF.—Take of poppy heads, without the seeds, fourteen ounces, boiling water, two gallons and a half; boil to one-half, press out the liquor with a strong pressure, boil again to two pints, strain while hot; boil again to one pint, and dissolve in it two pounds of loaf sugar.

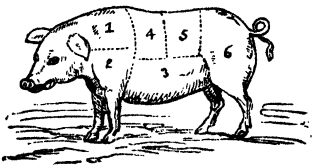
PORK CHOPS.—Cut the chops about a third of an inch thick, trim them neatly and beat them flat. Put a piece of butter into the fryingpan, and as soon as it is hot, lay in the chops, turn them frequently, and they will be well browned in a quarter of an hour. Take one upon a plate and try it; if done, season it with a little finely minced onion, powdered sage, pepper and salt. Or prepare some sweet herbs, sage and onion chopped fine, and put all into a stewpan with a bit of butter. Give them one fry, beat two eggs on a plate with a little salt, and the minced herbs, and mix it all thoroughly together. Dip the chops in, one at a time, then cover them with bread crumbs and fry them in hot lard or dripping, till they are of a light brown.

PORK, DIETETIC PROPERTIES OF.—The flesh of the hog is generally considered the most indigestible of animal food. The average time required for digestion is above five hours. Pork is particularly unwholesome in hot weather, for its indigestible properties make too great a demand upon the system during summer, and induce languor, while, at the same time, the blood becomes heated by the use of such strong food.

PORK, GRISKIN OF, TO DRESS.—As this joint is usually very hard, the best way is to cover it with cold water, and let it boil up. Then take it out, rub it over with butter, and set it before the fire in a Dutch oven; a few minutes will do it.

PORK HASHED.—Put two spoonfuls of chopped onions into a stewpan, with a wineglassful of vinegar, two cloves, a blade of mace, and a bay-leaf; reduce to half, take out the spice and bay-leaf, add half a pint of broth or water, cut some pork previously cooked into thin small slices, season well upon a dish with pepper and salt, stroke a good teaspoonful of flour over it, mix all together and put it into a stewpan; let it simmer gently for ten minutes, pour it out upon the dish, and serve with slices of gherkins in it; a little mustard may be added, if approved of. The remains of salt pork may be cut into large thin slices, and placed into a buttered frying-pan with a little broth, or merely fried in butter, and served with a purée of winter peas, made by boiling half a pint of peas until tender (tied up in a cloth); when done, put them into a stewpan with two ounces of butter; season with pepper and salt, add a gill of milk or cream, pour it into the dish, and dress the pork over. Pork may also be cut into thin slices and put into a soup plate with ketchup sauce over it; let it remain for half an hour; then butter the inside of a pudding basin, and lay a portion of cold peas pudding round it; place in the pork, cover it with some of the pudding, put it into a saucepan with a little water to get hot; let it remain for about half an hour, then turn it out and serve.

PORK, JOINTS OF.—The various joints of the pig are known as follows; according to the accompanying engraving. 1. The spare



rib; 2. Hands; 3. Spring; 4. Fore loin; 5. Hind loin; 6. The leg. The most economical joint in pork is the leg, though all are much more solid than beef, and comparatively free from bone. Pork goes much further than any other meat, one reason for which is, that the fat does not melt away in boiling or roasting to the same extent.

PORK, LEG OF, BAKED.—Rub the leg over with salt and saltpetre mixed; let it lie for five or six days in the brine; then hang it up to smoke for five or six days. Take off the skin, put it into an earthen dish, and pour a little red wine over it; stick a few cloves in it, or beat them to powder, and rub them over it. When it has been in the oven a short time, take some hard biscuit pounded with sugar, and spread it all over. Serve it with gravy and port wine sauce.

PORK, LEG OF, BOILED.—Salt the joint for eight or ten days, turning it daily, but do not rub it after the first day. When it is to be dressed, weigh it; let it lie for half an hour in cold water to render it white; allow a quarter of an hour for every pound, and half an hour over from the time it boils up; skim it as soon as it boils, and frequently afterwards, but do not boil it fast or it will be hard.

PORK, LEG OF, TO ROAST.—Choose a small leg of fine young pork; cut a slit in the knuckle with a sharp knife, and fill the space with sage and onion chopped, and a little pepper and salt. Score the skin in slices, but do not cut deeper than the outer rind. Set it down at first at some distance from the fire, but baste it frequently to prevent its scorching; then, when about three parts done, rub the skin rather freely with raw butter, after which, flour it lightly and put it close to the fire, to make the crackling crisp. Apple sauce should be served with it.

PORK, LOIN OF.—This is usually roasted in the ordinary way, an improvement on this mode, however, is the Portugese fashion, as follows:—Cut the skin of the pork across with a sharp knife, at distances of half an inch; roast as usual. Cut two onions small, and put them into a dripping-pan with a pint of vinegar; baste well with this and serve hot.

PORK PIE.—Raise some boiled crust into a round or oval form, and have ready the trimmings and small pieces when the hog is killed. If these be not sufficient, take the meat of a sweet bone. Beat it well with a rolling-pin, season with pepper and salt, keep the fat and lean separate; put it in layers quite up to the top; lay on the lid, cut the edge smoothly round, and pinch it together. Bake it in a slow oven.

PORK SAUCE.—Take two ounces of green sage leaves, an ounce of lemon-peel thinly pared, an ounce of minced shalot, an ounce of salt, half a drachm of cayenne, and half a drachm of citric acid. Steep them for a fortnight in a pint of claret, shake it often, and let it stand for a day or two to settle. Decant the clear liquor and cork it up close. When wanted, mix a tablespoonful in a quarter of a pint of gravy or melted butter.

PORK SAUSAGES.—Chop fat and lean of pork together; season it with sage, pepper, and salt, and add a slight seasoning of allspice; with this half-fill hog's entrails which have been soaked and made extremely clean; or the meat may be kept in a very small pan closely covered, and rolled and dusted with a very little flour before it is fried; serve on mashed potatoes; put in a form plain, or browned with the salamander, or before the fire; they must be pricked with a fork before they are dressed or they will burst, unless very carefully fried.

PORK STEAKS.—Cut the steaks from a loin or neck, and of middling thickness; pepper and broil them, and keep them turning. When nearly done, sprinkle them with salt, rub a little butter over them, and serve immediately they are taken off the fire, a few at a time.

PORK, TO CARVE.—See MUTTON.

PORK, TO CHOOSE.—To judge of pork, pinch the lean; if young and good, it will easily part. If the rind is tough, thick, and cannot be easily impressed with the finger, it is old. A thin rind in general denotes a good quality. When fresh, the meat will be smooth and cool; if clammy, it is tainted. What is commonly known as measly pork is very unwholesome, and may be known by the fat being full of kernels, which, in good pork, is never the case.

PORRIDGE.—See OATMEAL.

PORT WINE.—This wine is universally esteemed as the most generous and invigorating of any foreign liquors, and there cannot be a doubt that it supplies a grateful stimulus to persons of a weak and delicate constitution. It should, however, be used moderately, and, as a general rule, the quantity per diem should not exceed a pint. When purchased in large quantities, this wine may be procured genuine, but when a person can only afford to buy it as it is required for immediate drinking, the chances of obtaining it unadulterated are very slender. The best plan is, to ascertain where port wine may be best obtained, and to procure it there, although the cost may be comparatively high.

PORTER, TO BREW.—Take a mixture of brown, amber, and pale malts, nearly in equal quantities, and then turn them into the mash-tub in the following order. Turn on the first liquor at a hundred and sixty-five degrees; mash over hops, and then coat the whole with dry malt: in one hour set the tap. Mix ten pounds of brown hops to the quarter of malt, half old and half new; boil the first, work briskly with the hops for three-quarters of an hour, and after putting into the copper a pound and a half of sugar, and a pound and a half of liquorice to the barrel, turn the whole into the coolers, rousing the wort all the time. Turn out the second liquor at a hundred and seventy-four degrees, and in an hour set tap again. This second wort having run off, turn on again at a hundred and forty-five degrees; mash for an hour, and let it stand for the same time; in the interval, boiling the second wort with the same hops for an hour. Turn these into the coolers as before, and let down into the tub at sixty-four degrees, mixing the yeast as it comes down. Cleanse the liquor the second day at eighty degrees, previously throwing in a mixture of flour and salt, and rousing thoroughly.

PORTMANTEAU.—A convenient receptacle for clothes, &c., usually employed by persons when travelling. By proper packing, they may be made to contain a large number of articles. They may be obtained at various prices, but it is always better to purchase one made of real leather; there is a cheaper kind manufactured of inferior material, and by no means calculated to resist damp and wet.

PORTRAIT.—When relatives and friends are removed from us by distance or by death, the possession of their portrait, forms some sort of compensation for their absence in their own proper person. At the present day, the rapidity with which photographic portraits are executed, together with the lowness of charge, renders them available to all classes of the community. When persons are about to have their portrait taken, they should, if they wish to secure the most perfect resemblance of themselves as they generally appear, sit to the artist without 'making themselves up' for the occasion; thus: a novel style of arranging the hair, divesting the face of whiskers, beard, or moustache, or making any other changes, will so palpably alter the general appearance of the individual, as to render recognition a task of some difficulty. All constrained attitudes and unmeaning expressions of the features should be also avoided. When accessories are introduced by way of accompaniment to the portrait, care should be taken that these are characteristic of the sitter's tastes and habits, and reasonable in themselves. Thus, placing a book in the hands of a person who is notoriously illiterate is an obvious solecism; as is also representing a female striking a guitar who does not know a note of music. Setting a person down before a table on which are placed four decanters of wine, a pyramid of pine apple, and several pounds of grapes, which appear to be intended for the solitary

individual's own especial enjoyment, borders on the extravagant and absurd; particularly if the person thus represented has pecuniary resources so limited, as to permit of his only partaking occasionally of malt liquors and spirits. When persons are having their portraits taken, it is a good plan to divert the mind by recurring to some agreeable incident in their past life, the thoughts of which will impart a pleasant and natural expression to the features.

PORTUGAL CAKES.—Mix into a pound of flour a pound of loaf sugar, beat and sifted, and rub it into a pound of butter, till it becomes thick, like grated white bread; then put into it a little rose water, a glass of white wine, and ten eggs; work these well with a whisk, and stir in half a pound of currants. Butter the tin pans, fill them half full, and bake them.

☞ Flour, 1lb.; sugar, 1lb.; butter, 1lb.; rose water, 1 tablespoonful; white wine, 1 wineglassful; eggs, 10; currants, ½lb.

PORTUGAL WATER.—Orange-flower water, one pint; rose water, one pint; and myrtle water, half a pint; to these put a quarter of an ounce of distilled spirit of musk, and an ounce of spirit of ambergris. Shake the whole well together, and the process will be finished.

POSSET.—See ALE, ALMOND, LEMON, ORANGE, TREACLE, WINE, &c.

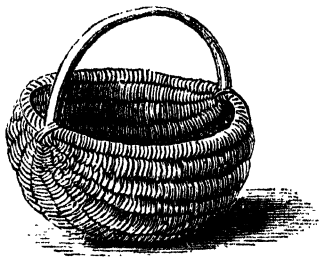
POSTAGE OF LETTERS, &c., RATES AND REGULATIONS OF.—The following are the rates of postage as relates to Great Britain. Letters not exceeding half an ounce in weight, one penny; one ounce, twopence; two ounces, fourpence; three ounces, sixpence; and so on, two rates being added for every ounce. Letters put unpaid into the letter boxes are charged with double the prepaid rates. All inland letters to pass unpaid by the post, may not exceed four ounces. All above that weight must be prepaid. In the event of any unpaid letter above the weight of four ounces being posted, it will be charged with double the prepaid rates of postage; if insufficiently paid, it will be charged with double the amount of the deficiency. A letter to pass by the post, either paid or unpaid, must not exceed the dimensions of twenty-four inches in length, breadth, width, or depth. Any packet above those dimensions, may, if fully paid, be detained and opened, or forwarded, at the option of the postmaster-general. All persons sending letters by the post unpaid, which, from any cause whatever, cannot be delivered to the parties to whom they are addressed, are liable to pay the postage charged thereon, which may be recovered with costs, by summary process before a magistrate. The regulations of the *book post* are as follows:—For a packet not exceeding four ounces, one penny; eight ounces, twopence; sixteen ounces, fourpence; one pound and a half, sixpence; and so on, twopence being charged for every additional half pound or any less weight. The postage must be prepaid in full by means of stamps. Every packet must be left open at the ends or sides. A book packet may contain any number of separate books or other publications, prints or maps, which may be either printed, written, or plain, or any mixture of the three. Book-binding, rollers of prints, &c., markers, and anything else necessary for the safe transmission of the contents, may be sent by book-post. No written letter must be sent with the packet, but printed ones are allowed. Letters can be posted at the receiving houses in London, every evening (except Sunday) until half-past five; or by affixing an extra stamp, until six. At the head offices half an hour to an hour beyond this time is allowed. Non-commissioned officers, captains' and pursers' stewards, clerks-assistant, seamen, stokers, and soldiers, can send and receive letters to and from places abroad, and places in the China and India seas, while they are employed in Her Majesty's service, or in the service of the East India Company, for one penny. Letters addressed "Post Office, London," or "Poste Restante, London," are delivered only at the window of the General Post Office, St. Martins le Grand, between the hours of 10 and 4. Foreigners applying for letters must produce their passports. Foreign letters addressed above are retained for two months at the post office window. Inland letters, similarly addressed, are retained for one month; the letters are then sent to the Dead Letter Office. Over-charges on letters will be returned, if sent to the post-office by the letter-carrier of the district. The morning delivery of general post letters commences at about eight o'clock a.m., and is completed in about an hour, except on Mondays and on other days when there are large arrivals of foreign letters. The bulk of the letters by the day mails arrive at 11·30 a.m. The delivery is completed about two hours after the arrival of the mail. Newspapers, and other publications registered for transmission by post, must either be stamped or have a postage stamp affixed. They must be posted within fifteen days of publication. The packet must be open at both ends, and must not contain any enclosure. The rates of postage for foreign and colonial letters are too numerous and fluctuating to be detailed. Letters may be refused by the person to whom they are addressed, but the seal must not be broken. Any complaints of delay, irregularity, &c., must be laid before the Postmaster-General in writing. Missing letters may be inquired for at the Inquiry Office, General Post Office. A letter once posted cannot, on any account, be returned to the person posting it.

POTATO BALLS.—Mix some mashed potatoes with the yolk of an egg, roll the mass into balls, flour them, or sprinkle them with egg and bread crumbs, and fry them in clean dripping, or brown them in a Dutch oven.

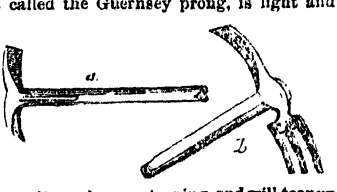
POTATO BREAD.—Boil the potatoes not quite so soft as they are ordinarily boiled, then dry them a short time on the fire, peel them while hot, and pound them as fine as possible; next put a small quantity of pearl-ash to new yeast, while it is working briskly, add as much meal, ground rice, or flour, as can be worked in. Mix the whole well together, but do not add any water to it. After the

dough is thus prepared, let it stand for an hour and a half or two hours, before it is put into the oven. Observe, it will not require so long baking as regular flour bread.

POTATO, CULTURE OF.—The varieties of the potato are numerous. For forcing a first crop in the open ground, there are Broughton dwarf, early Warwick, ash-leaved kidney, Fox's seedlings, early manly, early mule, early kidney, early shaw, nonsuch, gold-finder. For main crops the varieties are ranged in this class, according to their forwardness in ripening:—early champion, ox noble, red-nose kidney, large kidney, bread-fruit, red-streak, black skin purple, red apple, rough red. A dry, friable, fresh, and moderately rich soil, is the best for every variety of the potato; and for the earliest crop, it may be with advantage more silicious than for the main one. The back-skin and rough red thrive better than any in moist or cold strong soils. If manure is necessary, whatever be the nature of the one employed, it is better spread regularly over the surface previous to digging, rather than put into holes with the sets, or spread in the trench when they are so planted. Stable-dung is, perhaps, the best of all factitious manures; sea-weed is a very beneficial addition to the soil, as is salt. Coal-ashes and sea-sand are applied with great benefit to retentive soils; but calcareous matter should never be used. The situation must always be open. It is propagated in general from cuttings of the tubers, though the shoots arising from thence and the layers of the stalks may be employed. New varieties are raised from seed. Planting in the open ground is best done in October and November, and may thenceforward be continued until the end of March. This last month is the latest in which any considerable plantation should be made. They will succeed if planted in May, or even June; yet it ought always to be kept in mind that the earliest planted, especially in dry soils, produce the finest, healthiest, and most abundant crops. The next point for consideration is the preparation of the sets. Some gardeners recommend the largest potatoes to be planted whole; others that they be sliced into pieces containing two or three eyes; a third set, to cut the large tubers directly in half; a fourth, the employment of the shoots only, which are thrown out if potatoes are kept in a warm damp situation; and a fifth, that merely the parings be employed. Cuttings of the stalks, five or six inches in length, or rooted suckers will be productive if planted in showery weather, in May or June; and during this last month, or early in July, the potato may be propagated by layers, which are formed by pegging down the young stalks when about twelve inches long, they being covered three inches thick with mould at a joint. For the main crops, moderate sized whole potatoes are the best. To obtain early crops, where tubers are rapidly formed, large sets must be employed. In these, one or two eyes at most should be allowed to remain. If the sets are placed with their leading buds upwards, few and very strong early stems will be produced; but, if the position be reversed, many weak and later shoots will arise; and not only the earliness, but the quality of the produce is depreciated. For the earliest crops, there are likewise several modes of assisting the forward vegetation of the sets. These should be prepared by removing every eye but one or two; and being placed in layers in a warm room, where air and light can be freely admitted, with a covering of straw, chaff, or sand, they soon emit shoots, which must be strengthened by exposure to the air and light as much as possible, by taking off the cover without injuring them. During cold weather, and at night, it must always be removed: the leaves soon become green and tolerably hardy. In early spring, they are planted out, the leaves being just left above the surface, and a covering of litter being applied every night until the danger of the frost is passed. Planting should be performed by the aid of the dibble, in rows; for the early crops, twelve inches apart each way, and for the main ones eighteen inches. A small round



willow basket with a bow-handle should be provided for every person who is to plant the sets; and as a considerable number of hands are required for the operation, boys and girls may find employment at it, over and above the ordinary field-workers. The potato-dibble is the best instrument that can be employed, the earth being afterwards raked or struck in with the spade, and the soil not trampled upon, but planted, as sufficient is dug for receiving a row; for the lower the soil the less does frost penetrate. The best kind of implements for this purpose are those shown in the engraving; *a* is called the Guernsey prong, is light and



easy; it requires no stooping, and will tear up the deepest-rooted weeds. A somewhat similar implement is illustrated at *b*, which may be used upon strong stubborn soil, with great economy of time and advantage to the land.

As soon as the plants appear they should be well weeded, and kept free from weeds throughout their growth. The very earliest crops will be in production in June, or perhaps towards the end of May, and may thence be taken up as wanted until October, at the close of which month, or during November, they may be entirely dug up and stored. The tubers should be sorted at the time of taking them up; for, as the largest keep the best, they alone should be stored, whilst the smaller ones are first made use of. A variety of the potato is generally considered to continue about fourteen years in perfection, after which period it gradually loses its good qualities, becoming of inferior flavour and unproductive; fresh varieties, therefore, must be occasionally raised from seed. The berries or apples of the old stock having hung in a warm room throughout the winter, the seed must be obtained from them by washing away the pulp during February. The seed is then thoroughly dried and kept till April, when it is sown in drills about a quarter of an inch deep and six inches apart, in a rich light soil. The plants are weeded, and earth drawn up to their stems, when an inch in height; and as soon as the height has increased to three inches they are moved to a similar soil in rows, sixteen inches apart each way. Being finally taken up in the course of October, they must be preserved until the following spring, to be then re-planted and treated as for store crops. The tubers of every seedling should be kept separate, as scarcely two will be of a similar habit and quality, whilst many will be comparatively worthless, and but few of particular excellence. If the seed is obtained from a red potato, that flowered in the neighbourhood of a white tubered variety, the seedlings will, in all probability, resemble both their parents; but an exact resemblance to the original stock is seldom met with. The early varieties—if planted on little heaps of earth, with a stake in the middle, and when the plants are about four inches high, being secured to the stakes with shreds and nails, and the earth washed from the bases of the stems by means of a strong current of water, so that the fibrous roots only enter the soil—will blossom and perfect seed. The season of forcing the potato is from the close of December to the middle of February, in a hot-bed, and at the close of this last month on a warm border, with the temporary shelter of a frame. The hotbed is only required to produce a moderate heat. The earth should be six inches deep, and the sets planted in rows six or eight inches apart, as the tubers are not required to be large. The temperature ought never to sink below sixty-five degrees, nor rise above eighty. If the tubers are desired to be brought to maturity as speedily as possible, instead of being planted in the earth of the bed, each set should be placed in a pot about six inches in diameter. Young potatoes may be obtained in the winter, according to the following plan, without forcing:—Plant some late kinds, unsprouted, in a dry, rich border, in July, and again in August, in rows two feet apart. They will produce new potatoes in October, and in succession until April, if covered with leaves or straw, to exclude frost. If old potatoes are placed in dry earth, in a shed, during August, they will emit young tubers in December.

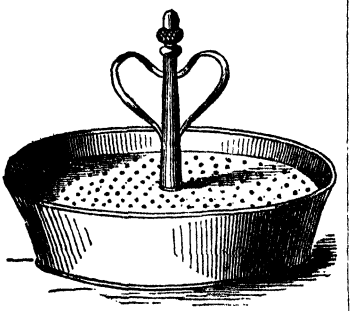
POTATO DUMPLINGS.—Peel some potatoes and grate them into a basin of water; let the pulp remain in the water for a couple of hours; drain it off, and mix with it half its weight of flour; season with pepper, salt, chopped onion, and sweet herbs. If not moist enough, add a little water. Roll into dumplings the size of a large apple, sprinkle them well with flour, and throw them into boiling water. When you observe them rising to the top of the saucepan, they will be boiled enough.

POTATO FRITTERS.—Boil and beat half a dozen potatoes, mix with four beaten eggs, about a gill of cream, some salt and nutmeg, a little sugar, some fresh butter oiled, and a tablespoonful of spirit; beat well together, drop in the boiling dripping, fry a light brown, dish hot, and strew sugar over them.

POTATO JELLY.—Take two or three large potatoes, wash, peel, and grate them; stir the pulp, thence procured, in a jug of water. Pass the mixture of pulp and water through a sieve, and collect the water which passes through into a basin. Let this stand for a few minutes, and a sufficient quantity of starch will have fallen for the purpose required. Pour off the water, and continue stirring up the starch at the bottom of the basin, while boiling water is being poured upon it; and it will soon and suddenly pass into a state of jelly. The only nicety required is to be careful that the water is absolutely boiling, otherwise the change will not take place. It does not require more than eight minutes to transform a raw potato into a basinful of most excellent jelly, which may be seasoned with sugar, spice, and wine to taste.

POTATO PASTY. — For making this dish, a tin mould must be employed, of the construction shown in the engraving, with a perforated moveable top, and a small valve, to allow the escape of steam. Arrange at the bottom of the mould from two to three pounds of mutton cutlets, freed according to the taste, from all, or from the greater portion of the fat, then washed, lightly dredged on both sides with flour, and seasoned with salt and pepper, or cayenne. Pour to them sufficient broth or water to make the gravy, and add to it at pleasure a tablespoonful of ketchup or other sauce. Have ready boiled, and very smoothly mashed, with about an ounce of butter, and a spoonful or two of milk and cream to each pound, as many good potatoes as will form a crust to the pasty of quite three inches thick; put the cover on the mould and arrange these equally upon it, leaving them a little rough on the surface. Bake the pasty in a moderate oven from three-quarters of an hour to an hour and a quarter, according to its size and contents. Pin a folded napkin neatly around the mould, before it is served, and have ready a hot dish to receive the cover, which must not be lifted off until after the pasty is on

the table. For a pasty of moderate size, two pounds or two and a half of meat, and from three to four of potatoes, will be suffi-



cient; a quarter of a pint of milk or cream, two small teaspoonfuls of salt, and from one to two ounces of butter must be mixed up with these last.

POTATO PUDDING.—With a pound and a quarter of fine mealy potatoes, boiled very dry, and mashed perfectly smooth while hot, mix three ounces of butter, five or six of sugar, five eggs, a few grains of salt, and the grated rind of a lemon. Pour the mixture into a well-buttered dish, and bake it in a moderate oven for nearly three-quarters of an hour. Serve with sugar sifted over it.

☞ Potatoes, 1½lb.; butter, 3ozs.; sugar, 5 or 6ozs.; eggs, 5; lemon-rind, 1; salt, a few grains.

POTATO ROLLS.—Boil three pounds of potatoes, bruise and work them with two ounces of butter, and as much milk as will make them pass through a cullender. Take three-quarters of a pint of yeast, and half a pint of warm water; mix these with the potatoes, pour the whole upon five pounds of flour, and add three teaspoonfuls of salt. Knead it well; if not of a proper consistence, add a little more warm milk and water. Let it stand before the fire an hour, to rise; then work it well, and make it into rolls. Bake them about half an hour in a moderate oven. These rolls will cut well, toasted and buttered.

☞ Potatoes, 3lbs.; butter, 2ozs.; milk, sufficient; yeast, ¾-pint; warm water, ½-pint; flour, 5lbs.; salt, 3 teaspoonfuls.

POTATO SOUP.—Cut a pound and a half of gravy beef into thin slices, chop a pound of potatoes and a large onion, and put them into a saucepan with three quarts of water, half a pint of gray peas, and two ounces of rice. Stew these till the gravy is quite drawn from the meat, strain it off, take out the beef, and pulp the other ingredients through a coarse sieve. Add the pulp to the soup, cut in two or three roots of celery; simmer in a clean saucepan till this is tender, season with pepper and salt, and serve up with fried bread.

☞ Gravy beef, 1½lb.; potatoes, 1lb.; onion, 1; water, 3 quarts; gray peas, ½-pint; rice, 2ozs.; celery, 2 or 3 roots; pepper and salt, to season.

POTATOES BAKED.—The potatoes employed for baking should be of a large size. They are merely washed, and put into a slow oven for about half an hour, or longer, according to their size, and are served with butter, pepper, and salt.

POTATOES BOILED.—Fill a saucepan half-full of potatoes of an equal size, washed but not pared; add as much cold water as will cover them about an inch. Set them on a moderate fire, let them boil very gently, and when it is found, by the application of a fork, that they are beginning to get soft, strain off the water, strew a little salt over them, and let them stand on the fire uncovered for about two minutes; then cover them, and set them by the side of the fire, to keep hot.

POTATOES BROILED.—Parboil potatoes, then slice them, and put them on a gridiron over a clear fire, and turn them frequently till they are of a nice brown colour on both sides: serve them hot.

POTATOES CRISPED.—Wash well, and wipe, some potatoes of good flavour; cut them up into slices from half an inch to an inch thick, free them from the skins, and pare the potatoes round and round in very thin and very long ribbons. Lay them into a pan of cold water, and half an hour before they are wanted for table, lift them on to a sieve, that they may be well drained. Fry them in good butter, which should be very hot when they are thrown in, until they are quite crisp, and lightly browned; drain and dry them on a soft cloth, pile them in a hot dish, strew over them a mixed seasoning of salt and cayenne in fine powder, and serve them without delay. Five or six minutes will fry them.

POTATOES FRIED.—If the potatoes are whole, first boil them nearly enough, and then put them into a stewpan with a bit of butter, or some beef dripping. To prevent them burning, shake them about till they are brown and crisp, and then drain them from the fat. To fry cold potatoes, put a piece of dripping into a frying-pan; when melted, slice in the potatoes with a little pepper and salt; set them on the fire, and continue stirring them. When quite hot, they are ready to serve.

POTATOES MASHED.—Boil them till they are perfectly tender, pour off the water, and steam them very dry; peel them quickly, take out every speck, and while they are still hot, press them through an earthen cullender, or bruise them to a smooth mash with a strong wooden fork or spoon. Melt in a clean saucepan a slice of butter with a few spoonfuls of milk, or better still, of cream; put in the potatoes, after having sprinkled some fine salt upon them, and stir the whole over a gentle fire with a wooden spoon, until the ingredients are well mixed, and the whole is very hot. It may then be served immediately, or heaped in a dish, left rough on the surface, and browned before the fire; or it may be pressed into a

well-buttered mould, which has been strewn with the finest bread crumbs, and shaken free from the loose ones, then turned out, and browned in a Dutch or an ordinary oven.

POTATOES SCALLOPED. — Having boiled and mashed the potatoes, butter some clean scallop shells or patty-pans, and put in the potatoes. Smooth them on the top, cross a knife over them, strew on a few fine bread crumbs, sprinkle them a little with melted butter from a paste brush, and then set them in a Dutch oven. When they are browned on the top, take them carefully out of the shells, and brown the other side.

POTATOES, TO PRESERVE.—To preserve potatoes from frost, lay them up in a dry store room, and cover them with straw or a linen cloth. If this be not convenient, dig a trench three or four feet deep, and put the potatoes in as they are taken from the ground: cover them with the earth taken out of the trench, raise it up in the middle, like the roof of a house, and cover it with straw, so as to carry off the rain. A still better protection is afforded, if the potatoes are laid above ground, and covered with a sufficient quantity of mould to protect them from the frost, as, in this case, they are less likely to be injured by the wet. Potatoes may also be preserved by suffering them to remain in the ground, and digging them up in the spring of the year as they are wanted.

POTATOES WITH CREAM. -Flour well a piece of butter, and put it into a stewpan, with a little salt and pepper; mix them well together, and add a glass of cream; stir the sauce till it boils; then cut into slices some potatoes previously boiled; put them into the sauce; and when warmed up, serve hot.

POTATOES WITH MUSHROOMS. — Boil some potatoes in salt and water; when done, cut them into slices, and put them into a stewpan, with some mushrooms and shalots shred fine, and a large slice of butter; let them stand a few minutes on the fire; add a little flour moistened with some good stock, and a seasoning of pepper and salt; let the whole stew together for about a quarter of an hour, then add the yolks of two eggs, and a little white wine vinegar.

POTICHOMANIE.—An exceedingly pleasing and interesting art, suitable to be practised by ladies. It is very simple, requires no previous knowledge, and yet affords abundant scope for the exercise of the most exquisite taste. The following articles are necessary to be procured in practising the art of potichomanie:—Glass vases of shapes suitable to the different orders of Chinese, Japanese, Etruscan, and French porcelain, allumettes, &c.; cups, plates, &c., &c. of Sèvres and Dresden design. Sheets of coloured drawings, or prints, characteristic representations of the designs or decorations adapted to every kind of porcelain and china. A bottle of liquid gum. Three or four hog's-hair brushes. A bottle of varnish. Very fine pointed scissors for cutting out. An assortment of colours for the foundation, in bottles. A packet of gold powder. A glass vessel for diluting the colours. In order to make the directions more plain, let it be supposed that the object selected for imitation is a Chinese vase. After providing yourself with a plain glass vase, of the proper shape, you take your sheets of coloured prints, on which are depicted subjects characteristic of that peculiar style. From these sheets can be selected a great variety of designs, of the most varied character, on the arrangement and grouping of which you will exercise your own taste. After you have fully decided upon the arrangement of your drawings, cut them out accurately with a pair of scissors, then apply some liquid gum carefully over the coloured side of the drawings, and stick them on the inside of the vase, according to your own previous arrangement, pressing them down till they adhere closely, without any bubbles of air appearing between the glass and the drawings. When the drawings have had sufficient time to dry, take a fine brush, and cover every part of them (without touching the glass) with a coat of parchment size or liquid gum, which prevents the oil colour (which is next applied) from sinking into or becoming absorbed by the paper. When the interior of the vase is perfectly dry, and any particles of gum size that may have been left on the glass have been removed, your vase is ready for the final and most important process. You have now to tint the whole of the vase with a proper colour, to give it the appearance of porcelain; for, up to this time, you will recollect it is but a glass vase, with a few coloured prints stuck thereon. Select from your stock of prepared colours, in bottles, the tint most appropriate to the kind of china you are imitating (as it is a china vase which is supposed to be making, it will be of a greenish hue); mix fully sufficient colour in a glass vessel, then pour the whole into the vase. Take now your vase in both hands, and turn it round continually in the same direction, until the colour is equally spread over the whole of the interior; when this is satisfactorily accomplished, pour back the remainder. If the prepared colour be too thick, add a little varnish to the mixture before applying it. If preferred, the colour may be laid on with a soft brush. Should the vase be intended to hold water, the interior must be well varnished after the above operations, or lined with zinc or tin-foil. If the potichomanist wishes to decorate the mouth of the vase with a golden border, he can do so by mixing some gold powder in a few drops of the essence of lavender and some varnish, applying it on the vase with a fine brush; or he can purchase gold bands, already prepared for application, in varied sheets, suitable to the potichomanie designs. Potichomanists have found the art capable of greater results than the mere imitation of porcelain vases, by the introduction of glass panels (previously decorated with choice flowers on a white ground) into drawing-room doors, and also into walls, which, being panel-papered, offer opportunities of introducing centre-pieces of the same character as the doors; elegant chess and work tables, folding and cheval screens, panels

for cabinets, cheffoniers, and book-cases, slabs for pier and console tables, glove-boxes, covers for books, music, albums, &c. The cost of the articles employed is not very great. Glass vases of various shapes may be procured from 9d. each; sheets of coloured designs, from 1s. each; prepared colours (ready for use) of every tint required by the potichomanist, 1s. per bottle; bottles of varnish, 1s. each; bottles of prepared gum, 6d., 9d., and 1s. each; bottles of gold paint, 1s. 6d. each; brushes (hog and camel-hair), from 1d. each.

POT POURRI.—A mixture of odorous flowers, roots, gums, &c., varied according to the taste of the operator, either mixed together dry, or in the fresh state preserved with salt. The usual way of making it is, to collect roses, lavender, and other sweet-scented flowers, as they blow; to put them into a large jar mixed with salt, until a sufficient quantity has been collected; then to add to these such other odorous substances as may be required to form an agreeable perfume.

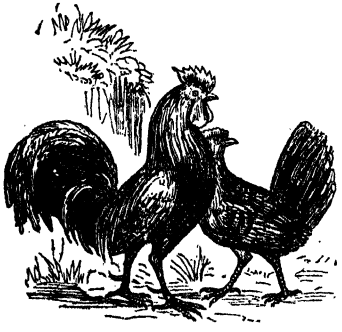
POTTED MEATS, &c. — See BEEF, BLOATERS, GROUSE, HAM, HARE, LOBSTER, MUTTON, SALMON, VEAL, &c.

POTTING.—In gardening, an operation performed as follows.—Having the pots and mould ready for the reception of the intended plants, observe, previous to planting them, to place some pieces of tile, oyster-shells, potsherds, or gravel over the hole at the bottom of the pot, both to prevent the hole from being clogged and stopped up with the earth, and the earth from being washed out with occasional watering; and also to prevent the roots of the plants from getting out. Having secured the holes, place some earth in the bottom of each pot, from two or three, to five or six inches or more in depth, according to the size of the pot and the roots of the plant. This done, insert the plant in the middle of the pot, upon the earth, in an upright position; if without a ball of earth, spread its roots equally every way, and directly add a quantity of fine mould about all the roots and fibres, shaking the pot, to cause the mould to settle firmly about them; at the same time, if the roots stand too low, shake it gently up as occasion demands: having filled the pot with earth, press it gently all round with the hand, to settle it moderately firm in every part, and to steady the upright posture of the plant, raising the earth, however, within about half an inch or less of the top of the pot. It will soon settle lower, and thereby leave a void space at top, which must receive occasional watering. As soon as the plant is thus potted, give directly a moderate watering, to settle the earth more closely about all the roots, and promote their shooting into the new earth, repeating the waterings as occasion requires. Transplanting potted plants from one pot to another is called shifting, and is performed with the whole ball of earth contained in the pot entire, so as to preserve the plants in a growing state. The method of removing plants out of their pots with balls is in general easily effected. Sometimes in small plants it is performed by turning the pot upside down, and sticking the edge against the side of a bench, or edge of the boards of a wheel-barrow, or the like, when the ball comes out entire; or occasionally, a plant that is very well rooted, and the numerous fibres of which surround the outside of the ball, will readily quit the pot when drawn by the stem. But if, by either of the above methods the ball will not readily quit the pot, thrust a narrow thin slip of wood down all round the pot, when the ball will come out, by the process of striking the edge of the pot, with the greatest facility. In replanting in larger pots, the first step regards the management of the numerous fibres which surround the outside ball. When these are not numerous, the general practice is to leave them untouched; but when they are so abundant as to form a sort of matted coat, the practice is to trim the greater part of them off close to the ball, both on the sides and bottom, together with some of the outward old earth of the ball; then, having the pots of proper sizes, larger than the former ones, and having secured the holes at the bottom, and put in some fresh compost, deposit the plant with its entire ball in the pot, taking care that it stands in the centre, erect, and of the same depth as before. Then fill up all the interstices round the ball with fresh mould, pressing it down, and ramming it down the sides with a broad stick, adding more mould gradually, and raising it so as to cover the old ball; finish with a moderate watering, to settle the new earth close in every part. In potting plants from the open ground, or beds of earth or dung, or otherwise, if they have been previously pricked out at certain distances, and have stood long enough to fix their roots firmly, they may be moved into pots with balls, by the proper use of the trowel transplanter, or hollow spade. Seedlings, however, cannot often be raised with balls, and are therefore planted in the smallest sized pots first, and gradually removed into larger ones with their balls entire. Plants in pots are seldom shifted directly from small into large pots, but generally into a size only one gradation larger than that in which they were. In large pots the roots are apt to be chilled and rotted, by the retention of more water than they require.

POULTICE. — An external application generally extemporaneous, used to promote suppuration, allay pain and inflammation, resolve tumours, &c. Poultices are generally prepared with substances capable of absorbing much water, and assuming a pulpy consistence, so as to admit of their application to any surface, however irregular. Their curative action principally depends upon the liquids with which they are moistened, and the heat retained by the mass. With this object they should never be heavy, or very bulky, and should be frequently repeated, and lightly but securely bandaged on, to prevent displacement. The addition of a little lard, olive oil, or glycerine to a poultice, tends greatly to promote its emollient action, and to retard its hardening. —See LINSEED, MUSTARD, &c.

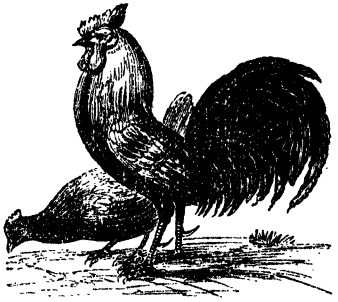
POULTRY.—A general term, including every kind of domestic fowl which is reared about the house or farm-yard. For the production of abundance of eggs, poultry must be well fed, and warmly lodged. The hen-roosts and poultry-house should be securely protected from the weather, and their temperature duly maintained by proximity to the stables, cow-houses, or dwelling-house, and, in cold weather, by the employment, when necessary, of artificial heat. The food should also contain an ample supply of nitrogeneous matter, for without this how can it be expected that hens can produce abundance of eggs, which are peculiarly rich in nitrogen? The greaves sold by tallow-chandlers, and such like substances, are hence excellent additions to the ordinary food of poultry. Poultry should also have abundance of space for exercise and recreation. This space should, if possible, contain living plants of various kinds, and some gravelly or sandy soil; because worms, snails, as well as occasionally grass and herbage, form a part of the food of poultry; and sand or gravel is swallowed by them for the purpose of promoting digestion. The domestic fowl, or common cock and hen, repay the keeper best for his trouble and outlay. The Dorkings (*fig.* 1) are considered a first-class breed. They are good layers, but sit

Fig. 1.



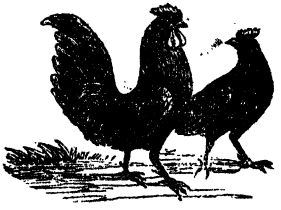
steadily, and are excellent mothers for chicks of an equally robust nature with themselves, but are too clumsy and heavy to nurse the more delicate breeds. They are to be ranked among the largest fowls, and are esteemed among the best in point of quality of flesh. This species, however, appears to bear breeding in-and-in worse than any other variety. It is considered desirable to change the cock of the walk every year, or every two or three years at the longest, if the stock of Dorkings is to be kept up in perfection. The game fowls (*fig.* 2) are an extremely valuable tribe, both on account of their beauty, and their usefulness. They are the most exemplary incubators we have, and during the season are often made to sit nine and eleven weeks at a stretch. They are excellent mothers when the permission is granted them to lead out a brood, and also early in showing a desire to sit; so that whether for ducklings, chickens, pheasants and partridges, or still rarer birds, game hens are the most to be depended on as foster-mothers. Both their flesh and their eggs are first-rate quality for table, though neither attain the bulk of some other breeds. The silver-pencilled, golden-pencilled, and spangled

Fig. 2.



Hamburgs are the most prolific layers we have; they are as good table fowls in quality and fineness of flesh as the Dorkings, and come quite as early to maturity. The Polish fowls are best suited for the purposes of the fancier. The chicks are a long time advancing in growth, and the full-grown birds are not in their prime till the third year, at the soonest. They lay a goodly number of medium-sized eggs, and are slow to sit. Their flesh is excellent. Bantams (*fig.* 3) are old-established pets of poultry fanciers; they maintain their ground in public favour from their neat and pleasing appearance,

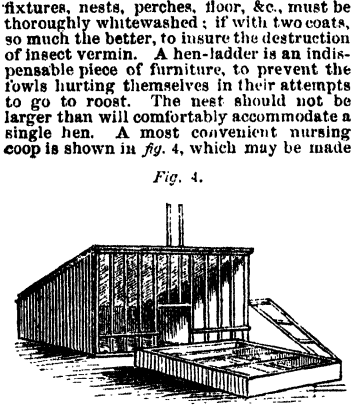
Fig. 3.



the number of their eggs, their usefulness as nurses, the great service they render as destroyers of grubs and insects, and the small extent of accommodation needful for them. It now remains to mention a few points requisite for the successful keeping of poultry. In the first place, the fowl-house must be warm, and yet airy and well ventilated. The floor must be paved with some hard material, so as to allow the dung

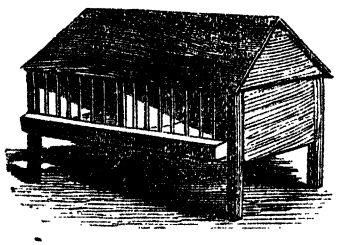
to be scraped clean away, and the house then strewed with fresh sand, or earth, or ashes, which should be performed daily, if possible. Three or four times a year, the whole interior of the building, with its fixtures, nests, perches, floor, &c., must be thoroughly whitewashed; if with two coats, so much the better, to insure the destruction of insect vermin. A hen-ladder is an indispensable piece of furniture, to prevent the fowls hurting themselves in their attempts to go to roost. The nest should not be larger than will comfortably accommodate a single hen. A most convenient nursing coop is shown in *fig.* 4, which may be made

Fig. 4.



of any dimensions suitable for fowls, ducks, or turkeys. The moveable bars show the place where the mother bird is made to enter; the chicks can run in and out through the spaces at the bottom, and can thus be either allowed complete liberty to range within call of their nurse, or can be enclosed within the litter yard in front, which also has moveable bars, to place food, water, &c., within their reach. An excellent fatting coop for fowls is shown in *fig.* 5.

Fig. 5.

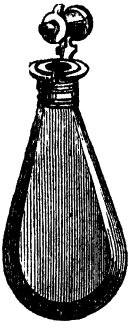


During summer it may stand in a dry, shady spot in the open air; and in the cold months, may be lifted into the shelter of an outhouse, or stable. It is six feet long, six feet high to the ridge of the roof, and two feet eight inches wide, with a partition in the middle so as to divide the fowls, and receive a succession of birds. The feeding-trough in front has a lid on the top, to receive the food without disturbing the trough. See BANTAM, COCHIN-CHINA, DUCKS, GEESE, GUINEA-FOWL, TURKEY, &c.

POUNCE.—A substance used for smoothing paper after making erasures with a knife; it is rubbed on with the finger. To make it, powder very finely some gum-sandarac, sift it, and put it into a little box for use.

POUND CAKE.—Beat a pound of fresh butter to a cream, and put to it nine eggs, well beaten. Next beat them together till thoroughly mixed and light; and put to them a little shred lemon-peel, or a few blanched almonds chopped, sifted sugar to taste, &c. Pound in a quartern of dried and sifted flour. Mix well, and bake in a pan for an hour, in a rather quick oven.

POWDER FLASK.—A portable receptacle for gunpowder. It is sometimes made of very stout leather, but is much more suitably made of either zinc or copper, in which latter cases it is finished off according to fancy: safety, however, should be the first consideration; for many accidents have happened by the whole contents of a powder-flask becoming exploded at once; and which nothing can insure against but completely cutting off the passage between the powder separated for the barrel and that which remains within the flask. The one shown in the engraving will fulfil this purpose. Whatever flask is used, it should be so formed as that the neck, by sliding within another tubular portion affixed to the body of the flask, will measure out three or four different quantities of gunpowder; and according to the gauge of your gun, set this measure, first having weighed these several quantities, which should be engraved on the moveable top or measure.



POWDERS.—The powder is one of the forms of administering medicine, and employed when the medicament is too bulky in itself to admit of being made into a pill, and when a quicker action is desired than could have been obtained by giving the medicine in a form which would take several hours to dissolve in the stomach. Powders are always objectionable modes of giving physic, not only from the size they are sometimes compelled to be—from the subtle lightness of the drug—but from the difficulty of disguising for children, or making palatable so large a quantity of such unsavoury substances. But as the form of the powder is a necessity, and not a choice, the only alternative is to render it as little nauseous as possible; and as children are generally the recipients of this preparation, it is much better to practise a little harmless deception, than, by mixing it before them, lead to tears and struggles, in which half the medicine is lost, the child made suspicious of a spoon, disgusted with jam that tastes of physic, and irritated by what it considers a tyran-

nical injustice. To avoid this, the powder, in the first instance, should be made as small as is compatible with the effect desired, and having secretly mixed it with a little brown sugar in a cup, the child should be permitted to eat it dry; and if he is allowed to hold the folded paper in his hand, with the luxury of burning it when he has eaten the sugar, his satisfaction is equal to his triumph, and the effect of the medicine all the more certain, from the confidence with which it has been taken. The powders most frequently employed are those of an aperient, a febrifuge, and diaphoretic nature, and sometimes of an emetic character; but in the latter case they are invariably dissolved in water before taking—a mode of mixing that, when minerals are given, cannot be adopted, as such articles fall to the bottom of the vessel, and are lost to the patient. *Aperient powder for an adult.* 1. Take of—

Jalap in powder . . .	15 grains.
Cream of tartar . . .	30 grains.

Mix well, and add

Calomel	4 grains.

2. Take of—

Jalap	15 grains.
Scammony	8 grains.
Ginger in powder . .	5 grains.
Antimonial powder . .	6 grains.

Mix. Either of these may be taken in a little sugar made into a paste by a few drops of water, or in jam, treacle, honey or gruel. *Fever powder for an adult.* 1. Take of—

Nitre, powdered . . .	4 grains.
Ipecacuanha	2 grains.
Antimonial powder . .	3 grains.

Mix. One to be taken every four or six hours. 2. Take of—

Powdered sugar . . .	5 grains.
Tartar emetic	$\frac{1}{6}$ grain.
Antimonial powder . .	2 grains.
Calomel	$1\frac{1}{2}$ grain.

Mix; and take one every two, three, or four hours. *Diaphoretic or sweating powder for an adult.* 1. Take of—

Dover's powder . . .	10 grains.

To be taken at bedtime. 2. Take of—

Dover's powder . . .	5 grains.
Powdered squills . . .	$1\frac{1}{2}$ grain.
Antimonial powder . .	4 grains.
Calomel	2 grains.

Mix; and take at bedtime, following both this and the preceding powder, an hour after, by a hot drink of gruel, or some agreeable beverage.

PRAWN JELLY.—Make a savoury jelly of calf's feet or cow-heel, a piece of skate or trimmings of turbot, with horseradish, lemon-peel, an onion, and a piece of lean bacon. When boiled to a jelly, strain it; and when cold, take off the fat, keep back the sediment, and boil it up with a glass of white wine, the juice of a lemon, and the whisked whites and crushed shells of four eggs. Do not disturb it by stirring. When boiled, let it settle for twenty minutes, and run it through a jelly bag. Pour some of the jelly into a deep dish; when it has solidified, put in prawns, with their backs downwards, fill up the dish with the jelly, and when cold turn the whole out.

PRAWN PIE. — Have ready as many well cleaned prawns as will nearly fill a pie-dish. Season with pounded mace, cloves, a little cayenne, or chili vinegar. Put some butter in the dish, and cover with a light puff paste. It will require about three-quarters of an hour to bake it.

PRAWN SOUP.—Boil a hundred prawns in a little water, vinegar, salt, and a few sweet herbs; save the liquor. Pick the prawns, and pound the shells together with a small roll. Pour the liquor over the shells in a sieve, and then pour two quarts of fish stock over them. Tear a lobster into small pieces, and add this with a quart of good beef stock to the whole. Simmer gently, savour with pepper and salt, thicken with floured butter, and serve.

PRAWNS POTTED.—Boil, and pick a sufficient number of prawns, then pound them in a mortar, and mix them up into a paste, with a little butter; season with white pepper, salt, and a little allspice, then press into the pots, and cover with clarified butter.

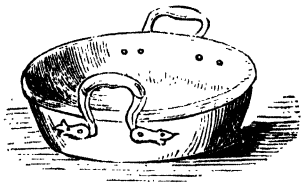
PRAWNS, TO BOIL.—Throw the prawns into plenty of fast-boiling water, to which salt has been added in the proportion of six ounces to the gallon; take off all the scum, and boil the prawns for eight or nine minutes. As soon as they are tender, drain them thoroughly in a cullender, and spread them out on a soft cloth to cool; or dish them on a napkin, and send them hot to table, when they are liked so. Ready-dressed prawns may be preserved fit for eating at least twelve hours longer than they would otherwise keep, by throwing them for an instant into boiling salt and water when they first begin to lose their freshness, and afterwards draining them.

PRECIPITATION. — The formation or subsidence of a precipitate. When the precipitate is the chief object of the process, it is necessary to wash it after it is separated by filtration. This operation requires little attention when the subatance thrown down is insoluble in water; but when it is in some degree soluble in that liquid, great attention is required to prevent the loss which might result from the use of too much water. Precipitates soluble in water, but insoluble in alcohol, are frequently, on the small scale, washed with spirit more or less concentrated. The best precipitating vessel is a very tall glass jar, furnished with a lip and spout, and narrower at the bottom than at the mouth, so that the precipitate may readily collect by subsidence, and the supernatant liquor be decanted off with more ease.

PREPOSITION.—In grammar, a part of speech used to express a relation between different things: thus, in—he went *to* town, he walked *with* his friends, the words *to* and

with connect the notions of "he went" and "he walked," respectively with the notions of "town" and "friend." Prepositions are so called because they are *preposed* or prefixed to the words with which they are connected; but this is sometimes a misnomer, as they are occasionally placed after such words, as in *wherewith, wherein, whereupon, thereby.* The following words are usually considered prepositions: — above; about; after; against; among; amongst; amid; amidst; around; at; between; betwixt; beyond; before; behind; beneath; below; beside; by; down; for; from; in; into; near; nigh; of; off; over; on; upon; since; through, throughout; till, until; to; unto; toward, towards; under, underneath; up; with; within; without.

PRESERVES, DIRECTIONS FOR PREPARING.—In performing this process it is desirable to have three or four wooden spoons, or spatulas, a fine hair sieve, or two large squares of common muslin, and a strainer of closer texture. A pan, as seen in the engraving, is the one ordinarily used for boiling the fruit in. Brass pans, scoured



till they are brightly clean, are still much used for making preserves; but a vessel of double block tin, or of iron very thickly tinned, or, better, enamelled, if kept for jellies and sweet things, answers very well, and is safer, particularly for the coarser preserves, which, being generally made with a coarse allowance of sugar, require long boiling. Damp is a great enemy to preserves, and they should therefore be kept in a dry cool place. When the slightest fermentation is perceptible in the syrup, it should be immediately boiled for some moments, and well skimmed; the fruit taken from it should then be thrown in, and well scalded also; and the whole, when done, should be turned into a very clean dry jar. The following are a few general rules and directions for preserving. Let everything used for the purpose be delicately clean and dry, bottles especially so. Never place a preserving pan flat upon the fire, as this will render the preserve liable to burn to, as it is called; that is to say, to adhere closely to the metal, and then to burn; it should rest always on a trivet, or on the lowered bars of a kitchen range, when there is no regular preserving stove in the house. After the sugar is added to them, stir the preserves gently at first, and more quickly towards the end, without quitting them until they are done; this precaution will always prevent the chance of their being spoiled. All preserves should be carefully cleared of the scum as it rises. Fruit which is preserved in syrup must first be blanched or boiled gently, until it sufficiently softens to absorb the sugar; and a thin syrup must be poured on it at first, or it will shrivel instead of remaining plump and becoming clear. Thus, if its weight of sugar is to be allowed, and boiled to a syrup with a pint of water to the pound, only half the weight must be taken at first, and this must not be boiled with the water more than fifteen or twenty minutes at the commencement of the process; a part of the remaining sugar must be added every time the syrup is reboiled, unless it should be otherwise directed in the receipt. To preserve both the true flavour and the colour of the fruit in jams and jellies, boil them rapidly until they are well reduced, before the sugar is added, and quickly afterwards; but do not allow them to become so much thickened that the sugar will not dissolve in them easily and throw up the scum. In some seasons the juice is so much richer than in others, that this effect takes place suddenly: but the drop which adheres to the skimmer when it is held up, will show the state it has reached. Never use tin, iron, or pewter spoons or skimmers for preserves, as they will convert the colour of red fruit into a dingy purple, and impart besides a very unpleasant flavour. When cheap jams or jellies are required, make them with Lisbon sugar, but use that which is well refined always for preserves in general. Let fruits for preserving be always gathered in perfectly dry weather, and be free both from the morning and evening dew, and, as much as possible, from dust. Never squeeze fruit too much: take merely the juice that flows freely, and use what remains for made wine or plain jams. Unless preserves are bright and of a fine colour, they will lose half their value; and this they will never be if the fruit is squeezed till the skins and seeds are broken. Let sieves be dipped in, and jelly-bags be wrung out of hot water before using them, or they will absorb a great quantity of the jelly. For tying down preserves, shape papers the size of the pots or jars, but leaving them an inch and a half longer, that they may tie and overlap the edges; brush these papers inside, till thoroughly saturated, with beaten white of egg; tie on while moist. They will dry and collapse like bladder. Nothing, however, can more thoroughly exclude the air than bladder over corks, or double bladder. For preserving raw fresh fruits that are merely scalded, good corks dipped in resin are effectual; and for preserved stone-fruit, melted suet in a thick layer is sometimes poured upon the paper.

PRESSER-ROLLER.—An agricultural implement, the chief effect of the application of which is to produce consolidation in the soil over a narrow space, in which space the seeds of plants are to have root: hence its effects are applicable only to the drill system of culture, and that only under the particular circumstance of a consolidated soil the ordinary texture of which is too

loose and friable for the continued support of the wheat plant, and close contact in the furrow-slices of the soil on being ploughed from grass for a seed furrow. The presser-roller is of very simple construction. The carriage consists of a rectangular frame. A pair of horse shafts are bolted upon the frame on the near side; a cast iron bracket supports the frame upon the axle. This axle carries the two pressing wheels, which are provided with the means of being fixed at any desired distance apart, though nine or ten inches is the usual space. The axle carries also the light carriage wheel. The off-side shaft is supported by an iron stay-rod; and two iron scrapers are attached to the hind bar, for the purpose of throwing off any soil that may adhere to the wheel.

PRIMROSE. — An extensive genus of small but very pretty and desirable plants. All the species of primrose succeed best in a mixture of loam and peat, and increase readily by seeds, or by dividing the plants, which should be done as soon as they have flowered.

PRIMROSE OINTMENT. — Bruise a pound of the leaves of the plant in a mortar, along with half a pound of the flowers; simmer them in an equal quantity of hog's lard, without salt, until the primroses become crisp; after which the ointment, whilst fluid, must be strained through a coarse sieve. This is an excellent application for obstinate ulcers, or for burns.

PRIMROSE PUDDING.—Take of petals of primroses, chopped fine, a quart; flour, half a pound, and a little salt. Mix these with water into a paste; form into a pudding; boil, and serve with melted butter and sugar.

PRIMROSE VINEGAR.—Boil four pounds of moist sugar in ten quarts of water for about a quarter of an hour, and take off the scum; then pour the liquor on six pints of primroses, add some fresh yeast before it is quite cold, and let it work all night in a warm place. When the fermentation is over, close up the barrel, and still keep it in a warm place for use.

PRINCIPAL AND AGENT.—The relative rights and duties of principal and agent may be comprised as follows:—The first great duty of an agent is to use faithfully, and in its full extent, the authority which has been given him. An agent's authority is said to be limited when he is bound by precise instruction, and unlimited when he is not so bound. When his authority is limited, an agent is bound to adhere strictly to his instructions in every particular. Thus, if instructed to sell, he has no right to barter; nor if instructed to sell at a certain price, is he authorized to take less. When the agent's authority is not limited by precise instructions, his duty is to act in conformity with what may reasonably be presumed to be the intentions of his employer; and, in the absence of all other means of ascertaining what these intentions are, he is to act for the interest of his principal according to the discretion which may be expected from a prudent man in the management of his own business. Thus, if he is authorized to sell, and no price is limited by his instructions, it should be his endeavour to obtain the best price which the goods are fairly worth. If there have been other transactions of the same nature between the parties, it is to be presumed that the principal intends that the same mode of dealing should be pursued which in former cases he had prescribed or approved of. In mercantile transactions, it is a rule of universal application, that, in the absence of other instructions, the principal must be presumed to intend that his agent should follow the common usage of the particular business in which he is employed. This, therefore, is the course which it is the agent's duty to pursue; and he will in all cases be justified in so doing, even though, under the particular circumstances, he might have acted otherwise to the greater advantage of his principal. An authority is always to be so construed as to include all necessary or usual means of executing it with effect. An agent is, therefore, authorized to do all such subordinate acts as are either requisite by law, in order to the due performance of the principal effects of its instructions, or are necessary to effect it in the best and most convenient manner, or are usually incidental to it in the ordinary course of business.—See AGENT.

PROBANG.—An instrument used to remove obstructions which are lodged in the gullets of animals. The common probang is represented in *fig.* 1, *a* being the cup-end, which is so formed that it may partially lay hold of the piece of turnip or potato, and not slip between it and the gullet, to the risk of rupturing the latter; and being of larger diameter than the usual state of the gullet, on being pressed forward, it distends the surrounding parts, and makes room for the obstructing body to proceed to the stomach. The probang is used in the following manner:—Let the piece of wood, *fig.* 2, be placed over the open mouth of the animal as a bit, and the straps of leather attached to it buckled tightly over the neck behind the horns, to keep the bit steady in its place. The use of the bit is, not only to keep the mouth open without trouble, but to prevent the animal injuring the probang with its teeth, and it offers the most direct passage for the probang towards the throat. Let two or three men seize the animal on both sides by the horns or otherwise, and let its mouth be held projecting forward in an easy position, but no fingers introduced into the nostrils to obstruct the breathing of the animal, nor the tongue forcibly pulled out of the side of the mouth. Introduce now the cup-end, *a*, of the probang through the

Fig. 1.

Fig. 2.

round hole, *b*, of the mouthpiece, *fig.* 2, and push it gently towards the throat until you feel the obstruction resisting your further progress; push then with a firm and persevering hand, cautioning the attendants, previously to doing so, to hold on firmly; for the shifting of the obstruction by the instrument may cause the animal pain, and make it wince and even leap aside. The obstruction will now most likely give way, especially if the operation be performed before the obstructed parts have begun to swell; but if not, the probang must be used with still more force, whilst another person rubs with his hands up and down upon the distended throat of the beast. If these attempts fail, recourse must be had to the knife, and a veterinary surgeon sent for instantly.

PROLAPSUS.—A falling down, or more properly falling out, of some part of the viscera of the body, distinguished from a *procidentia*, or protrusion of the same parts. It will be, however, sufficient to confine the attention to one kind of prolapsus, common to very weak children, and those attended with worms, or of a scrofulous habit of body, and known as *prolapsus ani*, or falling down of the bowel. All the mother need do in this case is to dab the protruded part thoroughly with a piece of lint well wetted in the *extract of lead*, and gently return the part to its natural position. One or two applications, with a course of tonics, and bathing the hips and loins of the child in cold salt water every day, will be all that is necessary to effect a permanent cure of this distressing affection.

PROMISSORY NOTE.—A direct engagement in writing to pay a specified sum within a limited time, or on demand, to a person therein named, or his order, or to bearer. Promissory notes are transferable, and in all respects are so nearly assimilated to bills of exchange, that all the decisions and rules relative to one, are in general applicable to the other. The chief distinction between them is, that there are only two parties to a note, the drawer of a note standing in the place of the acceptor of a bill. No formal set of words is necessary to the validity of a promissory note; nor is it essential it should contain any words rendering it negotiable. A note promising to account with another, at his order, for a certain sum, value received, is a valid promissory note, though it contains no formal promise to pay. A note beginning, "I promise to pay," and signed by two or more persons, is a several as well as a joint note, and the parties may be sued jointly or separately: so, if the note begin, "We jointly and severally promise to pay;" but when a promissory note is made by several, thus, "We promise to pay," it is a joint note only.

PRONOUN.—In grammar a part of speech indicating a word that supplies the place of a noun. Pronouns are of three classes—personal, relative, interrogative. The personal pronouns are three in number—namely, *I, thou, he* (*she*, or *it*). All pronouns refer to some noun, which, as it generally goes before, gets the name of antecedent; but as it may come after, correlative would appear a better term. In the case of one class of pronouns, the reference is so obvious and immediate, that they have been called relative by way of distinction. These are *who, which, that, as*. *Who* is used when the reference is to a person; *which*, when it is to a thing; *that* and *as* refer to persons or to things. The interrogative pronouns, so called because they are used to ask questions, are *who, which, what*, and *whether*. When *what* is not used to ask a question, it gets the name of compound relative pronoun, as it includes in itself the ideas of both correlative and relative; thus, "Give me *what* is in your hand" is equivalent to "Give me *the thing which* is in your hand." The inseparable word *self*, with its plural *selves*, is called the reciprocal pronoun, and denotes that the object and agent of the verb are the same. *Self* is added to personal pronouns for the same purpose that *own* is affixed to pronominal adjectives; that is, to express emphasis or opposition. Thus, "I did it with my *own* hand," that is without the assistance of any other person: "He did it all *himself*," that is without the assistance of any other.

PRONUNCIATION.—The principal rules of pronunciation are as follows:—C before *a, o*, and *u*, and in some other situations, is a close articulation like *k*. Before *e, i*, and *y*, *c* is precisely equivalent to *s* in same, thus, as in *cell, cider, cypress*. E final indicates that the preceding vowel is long, as in *hate, mete, sire, robe, lyre, abate, recede, invite, remote, intrude*. E final indicates that *c* preceding has the sound of *s*, as in *lace, lance;* and that *g* preceding has the sound of *j*, as in *charge, page, challenge*. E final in proper English words never forms a syllable, and in the most used words in the terminating unaccented syllable, it is silent; thus, *nature, genuine, examine, granite*, are pronounced *natur, genuin, examin, granit*. E final in some words of foreign origin forms a syllable: *syncope, simile*. E final is silent after *l* in the following terminations, *ble, cle, dle, fle, gle, kle, ple, tle, zle*, as in *able, manacle, cradle, raffle, mangle, wrinkle, supple, rattle, puzzle*, which are pronounced *ab'l, man'acl, cra'dl, raf'fl, man'gl, wrin'kl, sup'pl, puz'zl*. E is usually silent in the termination *en*, as in *token, broken*, pronounced *to'kn, bro'kn*. Ous in the termination of adjectives and their derivatives is pronounced *us*, as in *gracious, pious, pompous*. Ce, ci, ti, before a vowel, has the sound of *sh*, as in *cetaceous, gracious, motion, partial, ingratiate*, pronounced *cetashus, grashus, moshon, parshal, ingrashiate*. Ti, after a consonant, has the sound of *ch*, as in *christian, bastion*, pronounced *chrischan, bas-*

chon. Si, after an accented vowel, is pronounced like *zh*, as in *Ephesian, confusion*, pronounced *Ephezhan, confuzhon*. When ci or ti precede similar combinations, as in pronunciation, negotiation, they may be pronounced *ce* instead of *she*, to prevent a repetition of the latter syllable, as *pronunceashon* instead of *pronunsheashon*. Gh, both in the middle and at the end of words, is silent, as in *caught, brought, fright, nigh, sigh*, pronounced *caut, braut, frite, ni, si*. In the following exceptions, however, gh is pronounced as *f*: *cough, chough, clough, enough, laugh, rough, tough, trough*. The seven sounds which the combination *ough* variously assumes, are illustrated in the following couplet:—

"Though the rough cough and hiccough
plough me through,
'Mid life's dark lough my course I still
pursue."

When wh begins a word, the aspirate h precedes *w* in pronunciation, as in *what, whiff, whale*, pronounced *hwat, hwiff, hwale*. *w* having precisely the sound of *oo*; in the following words *w* is silent: *who, whom, whose, whoop, whole*. H after *r* has no sound as in *rheum, rhyme*, pronounced *reum, ryme*. H should be sounded in the middle of words, as in *forehead, abhor, behold, exhaust, inhabit, unhorse*. H should always be sounded except in the following words: heir, herb, honest, honour, hospital, hostler, hour, humour, humble, and all their derivatives, as honestly, honourable, &c. K and g are silent before *n*, as *know, gnaw*, pronounced *no, naw*. W before *r* is silent, as in *wrong, wreath*, pronounced *rong, reath*. B after *m* is silent, as in *dumb, numb*, pronounced *dum, num*. L before *k* is silent, as in *baulk, talk, walk*, pronounced *bauk, tauk, wauk*. Ph has the sound of *f*, as in *philosophy*, pronounced *filosofy*. Ng has two sounds, the one as in sugar, the other as in finger. N after *m*, and closing a syllable, is silent, as in *hymn, condemn*. P before *s* and *t* is mute, as in *psalm, pseudo, ptarmigan*, pronounced *sahm, sudo, tarmigan*. R has two sounds, one strong and vibrating, as at the beginning of words and syllables such as *rock, reckon, raw*; the other at the termination of words, or when it is succeeded by a consonant, as *farmer, morn*. Before the letter *r* there is a slight sound of *e* between the vowel and the consonant; thus, *bare, parent, mere, mire, more, pure*, are pronounced nearly *baer, paerent, meer, mier, moer, puer*. There are other rules of pronunciation affecting the combination of vowels, &c.; but the foregoing are the chief.

Errors made in pronunciation are very numerous, and many of them grate offensively on the ear; the abuse of the letter H, being aspirated when it should be silent, and silent when it should be aspirated, is one of the most prominent of these faults. Pronouncing the letter *u* as though it were *oo* is also another error very generally committed. The interchange of *w* for *v*, and *v* for *w*; the sound *k* instead of *g* at the termination of words, as somethink, nothink; the addition of *r* at the end of words ending in vowels, as idear, Elizar; and the pronouncing of words ending in *ow* as though they were spelt *er*—are all of them offences against correct pronunciation and good taste. A glaring error, even amongst intelligent persons, is dropping the final consonant in a word, such as bread an' butter, what will you gi'e for it, no more o' that, instead of bread *and* butter, what will you *give* for it no more *of* that. To attain a faultless pronunciation, a person should exercise himself in writing down certain sentences, repeating them to himself, and correcting errors which fall upon his ear, until he is perfect.

PRUNING.—In gardening and the culture of fruits, pruning denotes the removal of the excrescences or superfluous portions of trees, with the view of rendering the trees more fruitful, to make them grow higher and with greater regularity, or to produce larger and better flavoured fruit. If carried to too great an extent, the desired result is not obtained, for every tree requires a certain amount of leaf-surface for the elaboration of its sap; and, therefore, if this be reduced too much, blossom-buds are produced less abundantly, for leaves are more necessary for the health of the plant; and, by a wise provision, the parts less requisite for individual vigour are superseded by the parts more needed. On the other hand, if the branches are left too thick, they over-shadow those beneath them, and so exclude the light as to prevent that elaboration of the sap, without which no blossom-buds are formed, but an excessive production of leaves, in the vain effort to attain by an enlarged surface that elaboration which a smaller surface would effect in a more intense light. The season of pruning must be regulated in some degree by the strength of the tree; for although, as a general rule, the operation should not take place till the fall of the leaf indicates that vegetation has ceased, yet, if the tree be weak, it may often be performed with advantage a little earlier; but still so late in the autumn as to prevent the protrusion of fresh shoots. The chief guide in pruning consists in being well acquainted with the mode of the bearing of the different sorts of trees, and forming an early judgment of the future events of shoots and branches, and many other circumstances for which some general rules may be given; but there are particular instances which cannot be judged of but upon the spot, and depend chiefly on practice and observation. Summer pruning is a most necessary operation. Young shoots require thinning to preserve the beauty of the trees and to encourage the fruit; and the sooner it is performed the better. It is, therefore, advisable to begin this work in May, or early in June, removing all superfluous growths and ill-placed shoots, which may be done with considerably more expedition and exactness than when the trees have shot a considerable length. When, however, a tree is inclined to luxuriance, it is proper to retain as many of the regular shoots as can be commodiously trained in with any regularity, in order to divide and exhaust the too abundant sap. It will be necessary to review the trees occasionally

in order to re-form such branches or shoots as may have started from their places, or taken a wrong direction; and, according as any fresh irregular shoots protrude after the general dressing may be displaced, or as the already trained ones advance in length, or project from the wall or espalier, they should be trained in close. In the winter-pruning, a general regulation must be observed, both of the mother branches, and the supply of young wood laid in the preceding summer; and the proper time for this work is any period during open weather, from November till March; but the sooner the better. In performing this work, it is proper to un-nail or loosen a chief part of the branches, particularly of peaches, nectarines, apricots, vines, and other trees requiring an annual supply of young wood. The effects of judicious and injudicious pruning are illustrated by the accompanying engravings. *Fig.* 1 represents a tree of

Fig. 1.

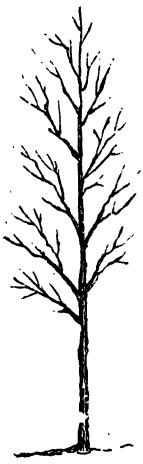
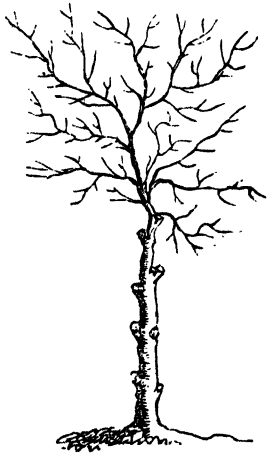


Fig. 2.

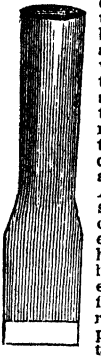


thirty years' growth, which has been regularly and properly pruned. *Fig.* 2, a tree of the same age, which has been neglected as to pruning during its early growth, and has now been pruned in a way too frequently practised, namely, by sawing and lopping off the branches after they have attained a large size. *Fig.* 3 shows the bad consequences of neglecting early pruning in the case of a plank cut from an ash tree, which has been pruned by lopping off the large branches for many years before it was felled. The cuts in this case had been made several inches from the bole, and the branches left being very large, the stumps had become rotten. The enlargement of the trunk had not, however, been stopped, for the new wood had covered over all the haggled parts, in some places to several inches thick. Yet the effects of the previous exposure to the action of the weather, by injudicious pruning, is strikingly marked by the decayed state of the parts connected with branches which had been amputated. From this it will clearly appear that, if pruning is to be practised on deciduous trees at all, it should be commenced while they are young, and carried on progressively; and if so, no such blemishes will be found in the timber when cut up. Yet it does sometimes happen that young plantations under twenty years' growth are to be pruned. In such cases, when the ill-placed branches, or those intended to be removed, exceed in diameter two inches, it is better to commence at their extremities and shorten them back yearly. By thus cutting off their supplies, the base of the branch will be lessened more and more of its nourishment, it will become sickly, and ultimately die away altogether.

Fig. 3.

The implements employed for pruning are various; the following will be found the most useful, and with them every operation of pruning may be advantageously accomplished. Of pruning knives, a small pocket pruner having two blades, the one larger than the other, is to be recommended for general use. Its merits consist in its lightness and small bulk, as well as its being useful for pruning, making cuttings, and cutting flowers. Pruning chisels are nearly as various as pruning knives. The best, however, are in shape of a carpenter's chisel, but with a handle of greater or less length and strength, according to the height

and size of the branch to be amputated. They vary in breadth of cutting face from one to three inches, and are wrought by placing the face of the chisel upon the part of the branch where the cut is to be made, and being held there by one man, while another with a wooden mallet, striking upwards, drives the chisel through the branch. Thus, branches of almost any size, from seven to twenty feet from the ground, may be cut off. Branches nearer the ground may be cut off with chisels having shorter handles, as shown in the engraving. Another modification of it is sometimes used in orchard and ornamental tree pruning, differing only from the former in having a guard or plate placed behind the blade, to prevent it entering too far into the trunk from which the branch is to be removed. The advantage of the pruning chisel in all cases over the pruning saw, is its saving the trouble of ascending the tree, and the damage that may be done to the branches by a man going up to cut off the branch. An excellent substitute for all pruning chisels is found in the American or Indin pole-saw, depicted in the annexed figure. This has a blade about four inches broad, and from eighteen inches to two feet in length, fixed to a pole-handle fo any required length, so as to reach the branch to be removed. This saw differs from the ordinary implement, in operating, by pulling instead of thrusting, so that a person standing on the ground can work the saw to every advantage, while it is sufficiently stiff not to break while passing through the wood. The cuts made by a saw should have the wound smoothed by the knife or small plane, and in most cases be painted over with some mild paint to exclude the air and moisture. The pruning bill is a species of large knife, and in the hands of an expert workman is valuable, in cutting off branches larger than the pruning knife could sever. The stroke should always be given in an upright direction, and, if possible, one blow should perform the operation. They are very useful in pruning thick and overgrown shrubbery, as they can be wrought with greater effect in thick jungles than almost any other cutting implement. Sometimes they have only one cutting face, and that is in general somewhat crooked towards the point; at other times they have an axe-like face of several inches in length upon their back, useful in cutting large branches; and at others they have instead of a cutting face upon their back, a set of teeth or serratures, by which the operation of sawing may be performed. Pruning shears are of a still greater variety; one of the smallest of the kind, and particularly useful for pruning off tender shoots, is seen in the accompanying figure. It may also be used for cutting off leaves, bunches of grapes, flowers, &c., that may not be readily reached by the hand; and while it severs the leaf and stem, still holds the thing severed until it may be taken in the hand. The curve passing round the handle and lever in the form of a ring, when pulled downwards by the cord, draws the leaves towards the handle, and causes the shear-like faces to meet; these, instead of being sharp at their edges, meet in what may be called the half check form, bruising rather than cutting asunder the footstalk of the flower or leaf, and thus preventing its falling. The stud above the ring prevents it from slipping upwards, and the spring between the lever and handle keeps the shears open until acted upon by the cord.



PRUNE PUDDING.—Mix four tablespoonfuls of flour in a quart of milk; add six eggs, two teaspoonfuls of powdered ginger, a little salt, and a pound of prunes. Tie the mixture in a cloth and boil for an hour.

☞ Flour, 4 tablespoonfuls; milk, 1 quart; eggs, 6; ginger, 2 teaspoonfuls; salt, sufficient; prunes, 1lb.

PRUNE TART.—Wash and scald the fruit; take out the stones, and either bruise them and take some of the chopped kernels to add to the tarts, or not, as preferred. Add sugar to taste to the fruit, and bake it as a tart.

PRUNES STEWED.—Put the prunes into a small saucepan with very little water, and stew them till they are soft, but not to a mash. The stones may be broken and a few of the kernels put to the stew. Prunes thus prepared prove very wholesome, and are frequently employed medicinally as a *gentle laxative*.

PRUSSIC ACID.—A compound of the three elementary gases, nitrogen, hydrogen, and carbon. Its odour is powerful and peculiar, and pungent to the nostrils, and is often compared to that of bitter almond.

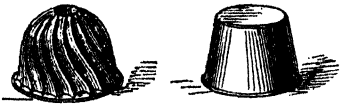
The uses of medicinal prussic acid in the hands of a properly qualified practitioner are most valuable; it acts as a powerful sedative, allaying pain, sickness, and nervous irritability; it is also a most admirable addition to lotions for various purposes, but in every form cannot safely be had recourse to as a domestic remedy.—For information respecting poisoning by prussic acid, see POISONS.

PUBLISHING.—The method by which books, when printed, are disseminated amongst the public. Untried authors frequently experience the greatest difficulty in finding a person to undertake the publication of their works, and this must be necessarily the case, inasmuch as it is a matter of the purest speculation as to whether the works in question will be well or ill-received by the public. When an author, however, possesses the means, and is determined to produce his book, he may surmount this obstacle by having the work published on his own account, that is to say, he himself goes to the expense of printing, paper, binding, advertising, &c., and supplies a publisher with a certain number of copies, who sells the work on behalf of the author, and renders an account periodically, charging a percentage on the amount sold, by way of commission. Should a work thus produced, chance to be successful, the same author may, in all probability, dispose of a subsequent work by selling the copyright to the publisher for a certain sum, and thus avoid any expense or responsibility in the matter. Another mode of publishing, is for the publisher to undertake the production of the work at his sole expense, and to allow the author a certain share of the profits after all expenses are paid. A third method is for the author to sell an edition of a work to the publisher for a specified sum; the author thus secures a certain benefit, and also reserves to himself the copyright, from which he may publish subsequent editions on the same terms as the first. There are several things to be borne in mind by an author in the publication of his work, if he is desirous of rendering it successful. In the first place, he must seek out a publisher who is in the habit of publishing works of a kindred nature; there is an obvious advantage in this, because it follows as a matter of course that a publisher who disseminates an especial class of works, has a reputation in that particular department; this generates what is termed a connection, and through this connection the publisher is enabled always to dispose of a certain number of copies of a work in the branch of literature for which he is celebrated, provided, of course, that the work, both as regards its intrinsic value and external appearance, comes up to the usual standard. Another matter of importance is, that the work should be advertised generally and persistently; this aid to publicity is highly essential, for, without it, the very best of works published under the happiest auspices will fail to make their way. Nor should this be done in a partial and timid manner, in calculating the probable expenses of a work about to be produced, the producer should set down a good round sum for advertising expenses, and disburse that sum with the full assurance that the outlay will be more than repaid. This is of importance, not only as regards the immediate sale of the work to the public, but as affecting the goodwill and exertions of the publisher. If, by dint of advertising, a work is being continually demanded, the publisher is as continually reminded of its existence, awards it a certain amount of attention, and appropriates to it a prominent place. But, if from the want of advertising, the work is seldom or never asked for, its existence becomes almost forgotten; it gradually recedes to the upper and backward shelves, and becomes, in the course of time, literally dead stock. A third important feature in publishing is, that the author previously to producing his book should weigh well in his mind the expenses that he must assuredly incur, and the proceeds which he may reasonably calculate upon accruing. To arrive at this result, he must determine on the number of pages the proposed work is to contain, the quality of paper to be used, and the style of binding that will be employed; he must then procure from the printer, the stationer, and the bookbinder, the several estimates for the material and work referred to; to these he must add, as before mentioned, a sum for advertising, which had better be regulated by the advice of the publisher. Opposite to this, the author can set down the number of books to be printed at so much per copy, and balance the total thus produced against the total of expenses. It must be borne in mind, however, that the selling-price of a book is a nominal one, so far as the author is concerned; for from this price the publisher has to allow "the trade" certain reductions, and these, together with the publisher's own commission, amount to about forty per cent. That is to say, that if a book were published at half-a-crown, and a thousand copies of such work were sold, although the nominal produce would be £125, the amount which the author would be entitled to receive would not be more than £75. This appears to be a large deduction from an amount, the whole of which, a novice in authorship imagines he is entitled to receive. But it must be borne in mind that the author on his part derives many advantages by his connection with the publisher; he is spared all trouble entailed by the sale and forwarding of the work, he is not called upon to give credit, and he reaps the benefit of the publisher's position and celebrity, so that without these aids an author would find the publishing of a work an unremunerative and disheartening speculation to embark in.

PUDDING.—See ALMOND, APPLE, APRICOT, ARROWROOT, BATTER, BLACKBERRY, BREAD AND BUTTER, CABINET, CUMBERLAND, CUSTARD, GOOSEBERRY, LEMON, MARROW, PLUM, PUMPKIN, RICE, SAGO, TAPIOCA, &c.

PUDDING CUPS.—A variety of small and elegant puddings may be prepared at a few minutes notice, and baked in cups such as seen in the engravings. Puddings thus

improvised have the advantage of being easily made, comparatively inexpensive, and an agreeable addition to the repast.



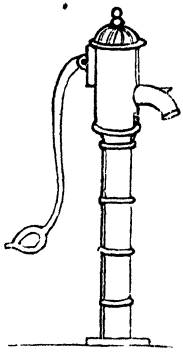
PUFF PASTE.—Break lightly into two pounds of dried and sifted flour eight ounces of butter; add a pinch of salt and sufficient cold water to make the paste; work it as quickly and as lightly as possible, until it is smooth and pliable; then level it with a paste-roller till it is three-quarters of an inch in thickness, and place regularly upon it, six ounces of butter in small bits; fold the paste like a blanket pudding; roll it out again, lay on it six ounces more of butter, repeat the rolling, dusting each time a little flour over the board and paste, add again six ounces of butter, and roll the paste out thin three or four times, folding the ends into the middle. If very rich paste be required, equal portions of flour and butter must be used; and the butter may be divided into two instead of three parts when it is to be rolled in.

PUFFS.—An article of pastry which may be made as follows: Mix two tablespoonfuls of flour, with a quarter of a pint of cream, two eggs well beaten, the fourth of a teaspoonful of grated nutmeg four bitter almonds pounded, two teaspoonfuls of ratafia, and an ounce of butter beaten to a cream. Bake these ingredients in small buttered cups for half an hour; turn them out in a dish, and serve immediately with sweet sauce poured over them.

☞ Flour, 2 tablespoonfuls; cream, ¼ pint; eggs, 2; nutmeg, ½ teaspoonful; bitter almonds, 4, ratafia, 2 teaspoonfuls; butter, 1oz.

PULSE.—The beat or stroke of an artery which is felt by pressing the finger on the wrist. The frequency of these contractions is regarded by medical men as a criterion of the state of the health. In the calm undisturbed state of the body of the adult, the beats are estimated at about seventy in the minute; while, when disease is present, the frequency of the pulse is sometimes fully double. It is not often that it falls below the healthy standard of seventy. It is generally somewhat quicker in the female than in the male; and is always more rapid in early life than in advanced age. In the newly-born infant it is about a hundred and forty. In extreme old age it often falls to sixty; sometimes to forty, and even as low as thirty. The indications of the pulse are of the highest importance, and any extraordinary increase or decrease, is a sure sign of disease.

PUMP.—An implement for forcing water, indispensable in domestic and rural economy. For the latter, the most suitable kind of pump is that shown in the engraving, which according to the bore, or diameter, may be had at various prices, from £2 upwards; the total price depending on the length of tube required to reach the bottom of the well. The operation of the common forcing pump consists in a suction pipe descending into a well, tank, &c., containing water, and having in it a valve opening upwards. The piston, or working barrel, contains a solid piston without any valve, moved up and down by the rod. Siebe's rotatory is found very convenient, either for raising water from a tank or well, or by forcing it up to any height. This pump operates by the rotation of a roller on its axis, having paddles or pistons, by which, when the roller is turned, a vacuum is produced within the barrel. In consequence of this vacuum the water flows up a rising break into the barrel; and as the paddles go round they force it into an opening, which conducts it wherever it may be wanted, and by that means produces a continuous stream. By having an ascending tube, the water may be forced to any height; and by having a horizontal tube with a cock, it may be let out at pleasure as in a common pump. By having several pipes branching from the ascending tube, as many cisterns or reservoirs may be supplied.



PUMPKIN, CULTURE OF.—This plant is propagated by seed, which may be sown in a hotbed of moderate strength, under a frame or hand-glasses, at the end of March or early in April. In May they may be sown in the open ground beneath a south fence, to remain, or in a hotbed if at its commencement, to forward the plants for transplanting at its close, early in June. The plants are fit for transplanting when they have got four rough leaves, or when of about a month's growth. They must be planted without any shelter on dunghills, or in holes prepared in the open ground. Some may be inserted beneath pales, walls, or hedges, to be trained regularly over them, on account of their ornamental appearance. They may be treated in every respect like the cucumber, only they do not need so much care. They require abundance of water in dry weather. When the runners have extended to the distance of three feet, they may be pegged down, and covered with earth at a joint; this will cause the production of roots, and the longer continuance of the plant in vigour. The fruit for seed should be selected and treated in the same manner as for the cucumber. It is ripe in the course of September or October.

PUMPKIN PIE.—Take out the seeds, and pare the pumpkin, but do not scrape

the inside, as the part nearest the seeds is the sweetest. Stew the pumpkin with a little salt, and press it through a cullender. For a large pie, to one quart of milk add four eggs beaten up, a tablespoonful of powdered cinnamon, four tablespoonfuls of sugar, half a teaspoonful of ginger, the peel of a lemon grated, and half a teaspoonful of the juice. Mix the pumpkin thoroughly with these ingredients, and place the whole into a pie-dish, with a thin under-crust. Bake in a moderate oven for about an hour.

☞ Pumpkin, 1; milk, 1 quart; eggs, 4; cinnamon, 1 tablespoonful; sugar, 4 tablespoonfuls; ginger, ½-teaspoonful; lemon-peel, 1; lemon-juice, ½-teaspoonful.

PUMPKIN PUDDING.—Take eight eggs, a pint of stewed pumpkin, a quarter of a pound of butter, a quarter of a pound of sugar, two tablespoonfuls of brandy, a teacupful of cream, a teaspoonful of cinnamon, and a teaspoonful of nutmeg. Stew the pumpkin in a small quantity of water, mash it very fine, add the butter, and let it stand to cool. Then beat up the eggs, and when the pumpkin is cool, add them and the other ingredients. Line a pudding basin with paste, pour in the pumpkin, and bake in a moderately hot oven.

☞ Pumpkin stewed, 1 pint; butter, ¼lb.; sugar, ¼lb.; brandy, 2 tablespoonfuls; cream, 1 teacupful; cinnamon, 1 teaspoonful; nutmeg, 1 teaspoonful; eggs, 8.

PUMPKIN SOUP.—Into two quarts of cold water put three pounds of pumpkin, cut into thin slices, peeled, and with all the seeds removed; two large onions, also peeled and sliced, with a small head of celery, cut into very small pieces. Boil these together slowly for two hours and a half; and then, after adding an ounce of dripping, two large tablespoonfuls of flour, and a seasoning of pepper and salt, boil for half an hour longer, and stir frequently during the whole of the boiling. The pumpkins saved for seed are better for this purpose than those which are less ripe and more watery.

☞ Water, 2 quarts; pumpkin, 3lbs.; onions, 2; celery, 1 head; dripping, 1oz.; flour, 2 tablespoonfuls; pepper and salt, to season.

PUNCH.—A name given to a mixture composed of water, spirit, sugar, and acid. The punch most generally made is composed of equal parts of rum and brandy; but any mixture of spirits, or one spirit alone, if there be acid with it, is called punch. The following are among the most approved receipts for compounding this beverage. *Ordinary punch.*—Take two large rough lemons, juicy, and with rough skins; rub some large lumps of loaf sugar over the lemons till they have acquired the oil from the rind, then put them into a bowl, with as much more sugar as is necessary to sweeten the punch to taste; squeeze the lemon-juice upon the sugar, and bruise the sugar in the juice; add a quart of boiling water, and mix well; then strain through a fine sieve, and add a quart of rum, or a pint of rum and a pint of brandy, or a pint and a half of rum and half a pint of porter; then add three quarts more of water, and mix well. *Oxford punch.*—Extract the essence from the rinds of three lemons, by rubbing them with lumps of sugar; put these into a large jug, with the peels of two Seville oranges, of two lemons, cut extremely thin, the juice of four Seville oranges and of ten lemons, and six glasses of calf's foot jelly in a liquid state. Stir these well together, pour to them two quarts of boiling water; cover the jug closely, and set it near the fire for a quarter of an hour; then strain the mixture through a sieve into a punch-bowl or jug, sweeten it with a bottle of capillaire, add half a pint of white wine, a pint of French brandy, a pint of rum, and a bottle of orange shrub; stir the punch as the spirit is poured in. *Roman punch.*—Take a quart of lemon-ice, add the whites of three eggs, well beaten, with rum and brandy, till the ice liquefies, in the proportion of three parts of rum to one of brandy, and water to taste. Then add a small teacupful of strong green-tea infusion, strained; add, also, half a pint of champagne. *Regent's punch.*—Take a bottle of champagne, a quarter of a pint of brandy, the juice of a lemon, a Seville orange, and a wineglassful of Martinique; with this mix a pint or more of strong infusion of the best green tea, strained; add syrup or sugar to taste. *Norfolk punch.*—Steep the peels of six lemons and six oranges in a gallon of brandy for two days; then make a syrup with three pounds of loaf sugar, and when it is quite cold, add it to the brandy, which should have been previously strained; add the strained juice of eighteen lemons and eighteen oranges, and let the whole stand for six weeks in a closely-corked jar, after which, bottle. *Tea punch.*—Make an infusion of the best green tea, from an ounce of tea to a quart of water; put before the fire in a silver or other metal bowl, to become quite hot, and then put into it half a pint of brandy, half a pint of rum, a quarter of a pound of loaf sugar, and the juice of a large lemon; set these into a blaze, and pour in the tea gradually, mixing it from time to time with a ladle; it will thus remain burning for some time, and in this state is to be poured into the glasses.

☞ *Ordinary punch.*—Lemons, 2; sugar, sufficient; boiling water, 1 quart; rum, 1 quart; *or*, rum, 1 pint; brandy, 1 pint; *or*, rum, 1½ pint, porter, ½ pint; boiling water, 3 quarts. *Oxford punch.*—Rinds of lemons rubbed with sugar, 3; thin peel of lemons, 2; of Seville oranges, 2; juice of 4 Seville oranges and 10 lemons; calf's foot jelly, 6 glasses; water, 2 quarts; capillaire, 1 bottle; white wine, ½ pint; French brandy and Jamaica rum, each 1 pint; orange shrub, 1 bottle. *Roman punch.*—Lemon-ice, 1 quart; eggs, 3 whites; rum and brandy, sufficient to liquefy; water, to taste; green-tea infusion, 1 small teacupful; champagne, ½ pint. *Regent's punch.*—Champagne, 1 bottle; brandy, ½ pint; lemon, juice of 1; Seville orange, 1; Martinique, 1 wineglassful; green-tea infusion, 1 pint; sugar, to taste. *Norfolk punch.*—Peels of six lemons and 6 oranges; brandy, 1 gallon; sugar,

3lbs.; juice of 18 lemons and 18 oranges. *Tea punch.*—Green-tea infusion (tea, 1 oz.; water, 1 quart); brandy, ½ pint; rum, ½ pint; sugar, ½lb.; lemon, juice of 1.

PUNCH JELLY.—Dissolve an ounce of isinglass in six teacupfuls of water; strain, and add to it, when boiling hot, half a pint of brandy, the same of rum, and a teacupful of lemon-juice, with half a pound of powdered loaf sugar; stir till the sugar is dissolved, and pour it into a shape.

☞ Isinglass, 1oz.; water, 6 teacupfuls; brandy, ½ pint; rum, ½ pint; lemon-juice, 1 teacupful; sugar, ½lb.

PUNCTUATION.—The art of dividing written or printed composition into sentences and clauses by points or stops, so as to indicate the closer or more remote connection of the several parts. It serves to elucidate the sense, and thus also assists the delivery, since the latter must have reference to the grammatical construction. The points used in English composition are:—The comma (,), the semicolon (;), the colon (:), the period or full stop (.), the note of interrogation (?), the note of admiration (!), to which may be added the dash (—), the apostrophe ('), and the parenthesis ( ). It is considered that the proper length of the pause of a comma is while we may count one; at a semicolon, two; at a colon, three; and at a period, four. But there is frequently a much greater separation of the sense, and there ought, therefore, to be a longer pause at some commas than at others. The form and structure of sentences are so various, that it would be difficult, if not impossible, to lay down rules for punctuation which should meet every case that can occur. The following may serve as a general guide:—The comma is used to throw together such similar parts of speech as are joined in pairs by the conjunction *and*. To separate the several members of a series, that is, a succession of similar words or members. To separate from the rest of the sentence such clauses as are added by way of explanation or illustration, or such as are really parenthetical, though they may not be so marked. To separate from the rest of the sentence words in the vocative case. In many cases to separate the relative and the antecedent. To separate from the rest of the sentence such clauses as are introduced by a connective, conditional, or exceptive particle, or by an adverb of time or place; and to separate antithetical clauses, and such comparative clauses as are introduced by the adjectives *like, better*, by the conjunctions *as, so, than*, by the adverbs *how, much, more, oftener, rather*, unless the comparative member at the end be short. The semicolon is used when a longer pause is required than at a comma, but when the sense is imperfect, and needs some other member to render it complete. Or it is used for dividing compound sentences into two or more parts which are not so closely connected as those which are separated by commas only, nor yet so independent and perfect as those which admit a colon. The colon may be inserted when a member of a sentence is complete in itself, but is followed by some additional remark or illustration of the subject. When several semicolons have preceded, and when a longer pause is necessary in order to mark the connecting or concluding sentiment. A colon is also generally placed at the close of the words which introduce an example, a quotation, a saying, a speech, or a narrative. The period or full stop is placed at the end of a sentence, that is at the end of such an assemblage of words as present a complete and independent sense. The note of interrogation is placed at the end of every question. The note of admiration is placed at the end of such words or clauses as express any strong passion or emotion of the mind. The dash should be used sparingly; it is introduced with propriety where a sentence or a dialogue breaks off abruptly; when the sense is suspended and continued after a short interruption; where a significant pause is required; where there is an unexpected turn in the sentiment, or a sort of epigrammatic point; when a sentence consists of several clauses which form the nominative to a verb following, or lead to a conclusion or inference, and it is desirable to assist the eye more readily than by semicolons; and in some cases to indicate an ellipsis. The apostrophe shows the omission of a letter, as in *form'd, e'er*, used chiefly in poetry; and in the possessive case, as *man's, boy's*, both in prose and poetry. The parenthesis marks a clause, which should contain some necessary information, or a useful remark introduced into the body of a sentence indirectly, but which might be omitted without doing injury to the sense or the construction. This species of punctuation should be used but very sparingly, as its too frequent introduction tends to confound the sense and distract the reader's attention. It also betrays carelessness of composition, as, in the majority of cases, the parenthetical matter might be very easily incorporated with the sentence, in its regular order.

PURGATIVE.—A medicinal agent, divided into five orders, according to their particular actions. 1. Laxatives, lenitives, or mild cathartics, as manna, cassia pulp, tamarinds, prunes, honey, phosphate of soda, castor, almond and olive oils. 2. Saline or cooling laxatives, as Epsom salts, Glauber's salts, &c. 3. Active cathartics: as rhubarb, senna, aloes. 4. Drastic or violent cathartics; as jalap, scammony, gamboge, croton oil, colocynth. 5. Mercurial purgatives; as calomel, blue-pill, quicksilver with chalk. In the administration of purgatives, regard should be had to the particular portion of the alimentary canal which is to be more immediately acted upon, as well as to the manner in which the medicine effects its purpose. The above classification will serve as a guide for the precise degree of operation which it is desirable to produce.

PURL.—A beverage made as follows:—Put a quart of mild ale into a saucepan, add a tablespoonful of grated nutmeg, and place the mixture over a slow fire till it nearly boils. Mix a little cold ale with sugar to

taste, and add gradually, two eggs well beaten; then add the hot ale, stirring one way to prevent curdling; lastly, add a gill of whisky, or gin. Warm the whole again, and pour it from one vessel to another until it becomes smooth.

☞ Mild ale, 1 quart; nutmeg, 1 tablespoonful; cold ale and sugar, sufficient; eggs, 2; whisky or gin, 1 gill.

PURSE.—A receptacle for money usually carried about the person; purses are made of different shapes, and of various materials; when long purses are used, the end which holds silver, and that for gold should be distinguished severally by a white and yellow tassel, to prevent the coins being paid away in mistake. The recently introduced portemonnaie, is, however, now more generally employed as a purse than any other form; in using these, the gold should be kept in a compartment by itself. Persons should also be careful not to open their portemonnaies ostentatiously, and so discover the contents, as this is apt to excite the cupidity of dishonest persons, and lead to robbery.

PUT.—A game of cards, played with the entire pack, generally by two, but sometimes by four persons. At this game, the cards have a different value from all others. The best card in the pack is a three, the next a two, then come in rotation, as at other games, the ace, king, queen, knave, ten, &c. The dealer distributes three cards to each player, by one at a time: whoever cuts the lowest card has the deal, and five points make the game, except when both parties say "I put," for the score is at an end, and the contest is determined in favour of that party who may win two tricks out of three. When it happens that each player has won a trick, and the third is a tie, that is, covered by a card of equal value, the whole goes for nothing, and the game must begin anew. *Two-handed put.* The eldest hand should play a card; and whether the adversary pass it, win it, or tie it, you have a right either to say "I put," or to place your card on the pack. If you accept the first, and your opponent declines the challenge, you score one; if you prefer the latter, your adversary gains a point; but if before he play your opponent says "I put," and you do not choose to call, he is entitled to add one to his score. It is sometimes good play to say "I put" before you play a card; this depends on the nature of your hand. *Four-handed put.* Each player has a partner, and when three cards are dealt to each, one of the players gives his partner his best card, and throws the other two away; the dealer is at liberty to do the same to his partner, and *vice versâ*. The two persons who have received their partners' cards, play the game, previously discarding their worst card for the one they have received from their partners. The game then proceeds in the same manner as two-handed put. *The laws of put* are:—1. When the dealer accidentally discovers any of his adversary's cards, the adversary may demand a new deal. 2. When the dealer discovers any of his own cards in dealing, he must abide by the deal. 3. When a faced card is covered during the deal, the cards must be re-shuffled and dealt again. 4. If the dealer give his adversary more cards than are necessary, the adversary may call a fresh deal, or suffer the dealer to draw the extra cards from his hand. 5. If the dealer gives himself more cards than are his due, the adversary may add a point to his game, and call a fresh deal, or he may draw the extra cards from the dealer's hand. 6. Either party saying "I put," that is, I play, cannot retract, but must abide the event of the game or pay the stakes.

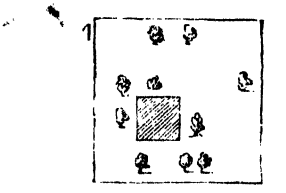
PUTRID FEVER.—See TYPHUS.

PUTTY.—A substance made by mixing whiting with drying oil till a thick paste is produced. It is used to fix panes of glass in sashes, to fill holes and cracks in wood before painting it, &c. It is sometimes found difficult to remove hardened putty from what it adheres to; the best plan is to dip a small brush in a little nitric or muriatic acid, and go over the putty with it. Let it remain for a time, and it will become sufficiently soft to be removed with ease.

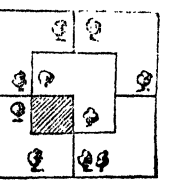
PUZZLES.—These form good and improving pastimes for the winter months or wet evenings when more invigorating exercise may be unobtainable. The best of these are as follows:—

The Garden Puzzle.

A gentleman had a garden, wherein grew ten apple trees, placed as shown in the diagram, *fig.* 1. He wished to divide these



among his five sons, giving to each an equal share of the garden, the arbour being for the use of all. How did he do this? The answer is given in *fig.* 2.

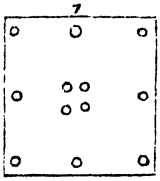


The Circle Puzzle.

Take a sheet of paper, parchment, or cardboard, of the size and shape of the diagram,

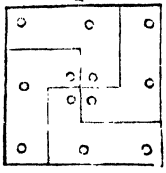
fig. 1, and mark twelve holes or circles in the places shown. The puzzle consists in

1



dividing the paper into four pieces of equal size and shape, each piece to contain three circles. *Fig.* 2 gives the solution.

2



To Guess a Number out of several others.

This is a most mystifying puzzle. You tell a person to write down, without your seeing them, several figures in a row, thus—

9 7 6 8 4 5 8

to add them together; to set down their total under the right hand figures as in a subtraction sum; and to subtract that total from the upper line, thus—

```
9 7 6 8 4 5 8
          4 7
-------------
9 7 6 8 4 1 1
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Then desire the person to mark out any one of the lower row of figures, and if he, or she, will tell you what figures are left, you will name the one scratched out. The explanation is this:—It is a singular property of the figure 9, that any row of figures if added together as above, and the sum subtracted, will continue to yield a sum which may be divided exactly into a certain number of nines. The sum will be either 18, 27, 36, 45, or a similar one. So that when you are told what the remaining figures of the sum are, say,

4 6 7 8 2 3

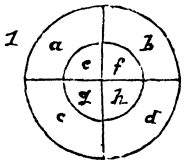
which make 30, you may be sure that the figure 6 has been scratched out.

The Upholstress Puzzle.

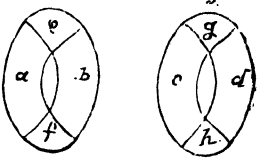
An upholstress had a circular piece of velvet, with which to cover two oval stools. The area of these stools together, exclusive of the hand-holes in their centre, was just equal to that of the piece of velvet. How must she cut the material so as to make it exactly suffice for the purpose?

Answer.

She must find the centre of the circle, and strike a second circle within it, half the diameter of the first, and having the same centre. Then she must cut the whole into four parts, as shown in *fig.* 1. Then cut



along the inner circle, and put the pieces together as shown in *figs.* 2, 3.



PYROLIGNEOUS ACID.—An impure acetic acid obtained by the distinctive distillation of wood in close vessels. Its acid powers are superior to those of the best household vinegar, in the proportion of three to two. By re-distillation, saturation with quicklime, evaporation of the liquid acetate to dryness, and conversion into acetate of soda by sulphate of soda, the empyreumatic matter is so completely dissipated, that on decomposing the pure acetate of soda by sulphuric acid, a perfectly colourless and pungent vinegar rises in distillation. Its strength will be proportioned to the concentration of the decomposing acid.

PYROSIS, OR WATER-BRASH.—This is a peculiar condition of the stomach that can hardly be called an inflammatory action, as the attack comes on periodically, and when relieved by vomiting, seems to be at an end till, after several hours, the same chain of phenomena occurs again. Water-brash usually attacks persons of, or past mid-life, and more generally females than males. It commences with a sense of heat, pain and constriction of the stomach, ending after an hour or more of suffering in nausea and vomiting, the stomach ejecting a small quantity of clear cool water, after which the distressing symptoms cease, but only to return in four, five, or six hours, perhaps longer. The *treatment* of this unpleasant affection is generally very easy; ten or fifteen drops of laudanum in a little water, once or twice repeated, will subdue the half-irritated half-inflammatory state of the stomach, when fifteen grains of carbonate of potass, dissolved in water, or ten grains of dried carbonate of soda will correct the unhealthy state of the gastric juice; while

as a tonic to guard against a repetition, five grains of the oxide of bismuth taken three times a day, will generally be found sufficient. In long standing cases, or where the symptoms are unusually distressing, the dose of laudanum should be followed by two leeches on the pit of the stomach, or else a blister the size of a crown piece laid on the same place, and one of the subjoined pills taken every six hours. Take of

Dried carbonate of soda . .	20 grains
Ginger, rhubarb, and colombo in powder, of each . . .	3 grains

Mix, and make into a mass with the extract of gentian, and divide into six pills. Should this means fail, five grains of oxide of bismuth may be taken three times a day, and two tablespoonfuls of the following tonic mixture every six hours. Take of

Quassia	20 grains
Cascarilla	2 drachms
Cloves	5 grains

Infuse in half a pint—ten ounces—of boiling water for six hours, strain, and add

Nitric acid	15 drops

Mix. In general, however, a dose of laudanum, the simple potass or dried soda, with the daily use of the dinner pill prescribed under the article PILL, will be found sufficient to subdue the painful symptoms, and cure this distressing affection of the stomach.

PYROTECHNY.—See FIREWORKS.

Q.

QUACKERY.—A term commonly applied to empiricism in the art of healing. The evils of quackery are manifold, and they may all be traced to ignorance and credulity. In order to win over the public, the quack puts forth some specific which professedly cures a great number of diseases. But inasmuch as different diseases require different modes of treatment, the panacea which the pretender extols so highly, becomes self-convicted as an absurdity, is opposed to experience, and repugnant to common sense. Notwithstanding this, however, it is certain that a large number of persons do patronize quack medicines, and with what result, it is easy to conceive. In the majority of cases where quack medicines are resorted to, the sufferer not only fails to find relief, but aggravates it, or induces some other complaint, probably more painful and difficult to cure. Many of the deluded victims of quackery, are doubtless persons who have been martyrs to some long-standing complaint, and have probably been under the treatment of properly qualified persons, and have tried every approved remedy, but without any successful result. Despair and doubt seize their mind, the advertisement of a quack meets their eyes, and they resolve, as a forlorn hope, to have recourse to the nostrum. Now the reasonable view to take of quackery is this, if persons who are specially educated for the medical profession are unable, by the exercise of their art and judgment, to cure certain diseases, such power cannot be vested in the hands of ignorant persons, who are not only profoundly ignorant of the diagnosis of disease, but are almost equally unacquainted with the properties of the very drugs they tamper with.

QUADRILLE.—A game of cards, played by four persons. The number of cards required are forty; the four tens, nines, and eights being discarded from the pack. The deal is made by distributing the cards to each player, three at a time for two rounds, and four at a time for one round, commencing with the right-hand player, who holds eldest hand. The trump is made by the person who plays, with or without calling, by naming spades, clubs, diamonds, or hearts, and the suit so named becomes trumps. The following tables will show the rank and order of the cards, when trumps, or when not so:—

RANK AND ORDER OF THE CARDS WHEN TRUMPS.

Clubs and Spades.	*Hearts and Diamonds.*
Spadille, the ace of spades.	Spadille, the ace of spades.
Manille, the deuce of spades, or of clubs.	Manille, the seven of hearts or of diamonds.
Basto, the ace of clubs.	Basto, the ace of clubs.
	Punto, the ace of hearts or of diamonds.
King . . . Six.	King . . . Three.
Queen . . Five.	Queen . . Four.
Knave . . Four.	Knave . . Five.
Seven . . . Three.	Deuce . . . Six.
11 in all.	12 in all.

RANK AND ORDER OF THE CARDS WHEN NOT TRUMPS.

Clubs and Spades.	*Hearts and Diamonds.*
King . . . Five.	King . . . Three.
Queen . . Four.	Queen . . Four.
Knave . . Three.	Knave . . Five.
Seven . . . Deuce.	Ace . . . Six.
Six.	Deuce . . Seven.
9 in all.	10 in all.

From these tables it will be observed that spadille and basto are always trumps: and that the red suits have one trump more than the black. There is a trump between spadille and basto, which is called manille, and is in black the deuce, and in red the seven; they are the second cards when trumps, and the last in their respective suits when not trumps. Punto is the ace of hearts or of diamonds, which are above the king, and the fourth trump when either of those suits are trumps, but are below the knave and ace of diamonds or hearts, when they are not trumps. The two of hearts or diamonds is

always superior to the three; the three to the four; the four to the five, and the five to the six; the six is only superior to the seven when it is not trumps, for when the seven is manille, it is the second trump. There are three matadores, namely, spadille, manille, and basto; the privilege accorded to these cards is, that when the player has no other trumps but them, and trumps are led, he is not obliged to play them, but may play what card he thinks proper; provided, however, that the trump led is of inferior value; but, if spadille should be led, he that has manille or basto only is compelled to lead it, which is the case with basto in respect to manille, the superior matadore always facing the inferior. *Terms used in quadrille:—To ask leave* is to request to play with a partner by calling a king. *Basto* is a penalty incurred by not winning when you stand your game, or by renouncing; in which cases you pay as many counters as are down. *Cheville* is being between the eldest hand and the dealer. *Codille* is when those who defend the pool make more tricks than those who defend the game. *Consolation* is a claim to the game, always paid by those who lose, whether by codille or demise. *Devole* is when he who stands the game makes no tricks. *Double* is to play for double stakes, with regard to the game, the consolation, the sans prendre, the matadores, and the devole. *Forced spadille* is, when all have passed, he who has spadille is then obliged to play it. *Forced sans prendre* is, when having asked leave, one of the players offers to play alone, in which case you are obliged to play alone, or pass. *Friend* is the player who has the king called. *Impasse:* to make the impasse is, when, being in cheville, the knave of a suit is played, of which the player has the king. *Marks*, fish counters put down by the dealer. *Mille*, a mark of ivory, which stands for ten fish. *Ombre* is the name given to him who stands the game, by calling or playing sans appeler, or sans prendre. *Party* is the duration of the game, according to the number of tours agreed to be played. *Pass* is the term used when you have not either a hand to play alone, or with calling a king. *Pool.* The pool consists of the fishes, which are staked for the deals, or the counters put down by the players, or the basts which go to the game. To defend the pool is to be against him who stands the game. *Prise* is the number of fish or counters given to each player at the commencement of the game. *Règle* is the order to be observed at the game. *Remise* is, when they who stand the game do not make more tricks than they who defend the pool, then they lose by remise. *Reprise* is synonymous with party. *Roi rendu* is the king surrendered when called, and given to the ombre, for which he pays a fish; in which case the person to whom the game is given up must win the game alone. *Sans appeler* is playing without calling a king. *Sans prendre* is erroneously used for sans appeler, meaning the same. *Tenace* is to wait with two trumps that must make when he who has two others is obliged to lead, such as the two black aces against manille or punto. *Tours* are the counters, which they who win put down to make the number of coups played. *Vole* is to get all the tricks, either with a friend or alone, sans prendre, or declared at the commencement of the deal. *Laws of quadrille.* 1. The cards are to be dealt in fours and threes, and in no other manner. The dealer is at liberty to begin by either four or three. If in dealing there is a faced card, there must be a new deal, unless it is the last card. 2. He who has asked leave is obliged to play. 3. If a person play out of his turn, the card played may be called at any time in that deal, provided it does not cause a revoke; or either of the adversaries may demand the partner of him who played out of his turn, or his own partner, to play any suit he thinks fit. 4. No matadore can be forced but by a superior card; but the superior forces the inferior when led by the first player. 5. Whoever names any suit for trumps must abide by it, even though it should happen to be his worst suit. 6. If you play sans prendre or have matadores, you are to demand them before the next dealer has finished his deal, otherwise you lose the benefit. 7. If any one names his trump without asking leave, he must play alone, unless the youngest hand and the rest have passed. 8. If the person who won the sixth trick plays the seventh card, he must play the vole. 9. If you have four kings, you may call a queen to one of your kings; but you must not call the queen of trumps. 10. If a card is separated from the rest, and it is seen, it must be played, unless the person who separated it plays sans prendre. 11. If the king called, or his partner plays out of his turn, no vole can be played. 12. No one is to be basted for a renounce, unless the trick is turned and quitted; and if any person renounces, and it is discovered, if the player should happen to be basted by such renounce, all the parties are to take up their cards and play them over again. 13. Forced spadille is not obliged to make three tricks. 14. The person who undertakes to play the vole has the preference of playing before him who offers to play sans prendre. 15. The player is entitled to win who has his king called before he declares for the vole. 16. When six tricks are won, the winner of the sixth must say, "I play," or "do not play, the vole;" or "I ask;" and no more. 17. He who has passed once has nought to play after, unless he has spadille; and he who asks must play, unless somebody else plays sans prendre. 18. If the players show their cards before they have won six tricks, they may be called. 19. Whoever has asked leave cannot play sans prendre, unless he is forced. 20. Any person may look at the tricks when he is to lead. 21. Whoever, playing for a vole, loses it, has a right to stakes, sans prendre, and matadores. 22. Forced spadille cannot play for the vole. 23. If any person discovers his game, he cannot play the vole. 24. No one is to declare how many trumps are out. 25. He who plays and does not win three tricks is basted alone, unless forced spadille. 26. If there are two cards of a sort, it is a void deal, if discovered before the deal is played out.

QUADRILLES.—Dances in which four couples or eight persons are engaged, a couple standing on each side of a square. The lady is always placed on the gentleman's right. There are many sets of quadrilles, the figures in each varying from the others, but in by far the greater number of instances one set is adhered to, which is termed Payne's first set. This set consists of four figures and a finale. The couples at top and bottom first perform a figure; then it is performed by the others, and so on. *Le Pantalon.*—First right and left, set and turn partners; ladies' chain, which is performed by the two ladies giving their right hands to each other, and changing places; then their left hands to the gentlemen, and turn round; and the same back again to places. Now promenade (each couple holding hands crossed) to the opposite side; then half right and left back to places. *L'Eté.*—The first lady and opposite gentleman advance and retire, dance to the right, then to the left, cross over, lady and gentleman changing places. Dance to the right and the left, cross again to their own places, and turn their partners. The second lady and the first gentleman do the same. *La Poule.*—The first lady and opposite gentleman cross over, giving their right hands; back again, giving their left and their right to their partners, and set, forming a line; promenade to opposite places. The two who began, advance and retire; advance a second time; the lady curtsies, and the gentleman bows, and return. The two couples advance and retire, half right and left to their original places. *La Trenise.*—Ladies' chain; set, and turn partners; first couple advance and retire; advance again; the gentleman returns, leaving the lady on the left of the opposite gentleman; the two ladies pass or cross to the opposite side, changing to opposite corners, during which the gentleman passes between them, and sets. The ladies cross over again, and pass to opposite corners, while the gentleman returns to his place, and sets. The first couple set and turn. During these performances the gentleman at the bottom of the dance stands still. The movement being finished, a similar figure is performed by himself and partner. *La Finale.*—All eight dance or chassé across, changing places with their partners, and set at the corners; back again to places, and set. After this, *L'Eté* is danced, concluding with chassé across. This finale is danced another way. All eight promenade round the room, to their own places. The first and second couple advance and retire; advance again, chaining partners, and promenade. This is called the galopade finale.—See CALEDONIAN QUADRILLES, LANCERS QUADRILLES, &c.

QUAIL.—A bird, native of the East, which migrates from warmer to colder regions. They are naturalized and bred in England, changing their residence in it, on the approach of winter, from the more exposed to the more temperate districts. Although the quail is not domesticated with us, there is no difficulty in rearing and preserving it in the same manner as the partridge and the pheasant.

QUAILS BROILED.—Singe and draw them, and split them down the back; put them into a stewpan with a little salad oil, two or three bay leaves, and a seasoning of salt and pepper; cover them with slices of bacon, stew them over a slow fire for about a quarter of an hour; then take them out, cover them with bread crumbs, and broil; serve them with the sauce in which they have been dressed, which must be strained and boiled up.

QUAILS ROAST.—Having cleaned them, cover them with slices of bacon, and roast as directed for partridge, basting well at first with butter; serve with a piquant sauce.

QUAILS STEWED.—Place them in a stewpan with a slice of veal, three or four rashers of bacon, a little butter, salt, pepper, a little stock or good gravy, and a gill of white wine; stew over a slow fire for half an hour; then take them out, strain the liquor, and serve over the birds. Or, singe and draw the quails, and put them into a stewpan with a little gravy, a glass of white wine, some stock, parsley, and green onions, a bay leaf, and a few cloves; stew for half an hour, and serve, garnishing the dish with toasted bread.

QUAKING PUDDING.—Scald a quart of cream; when almost cold, put to it four eggs well beaten, and a spoonful and a half of flour, with nutmeg and sugar. Tie it close in a buttered cloth, boil it for an hour, and turn it out carefully without cracking it. Serve it with melted butter, a little wine, and sugar.

QUARRIES.—A species of paving tile manufactured in Staffordshire, and formed of small squares six inches on the side, coloured blue, red, drab, and black. These, if properly arranged, make beautiful floors, and pathways for hothouses, gardens, &c.

QUARTER DAYS.—Four days in the year, upon which, by common consent, certain obligations are discharged, and pecuniary engagements fulfilled. These days

are especially set aside for the payment of rent, taxes, &c. They are Lady Day, the 25th of March; Midsummer Day, the 24th of June; Michaelmas Day, the 29th of September; and Christmas Day, the 25th of December.

QUEEN CAKES. — Wash a pound of butter in a little orange-flower water, beat it to a cream with a large wooden spoon, a pound of finely powdered loaf sugar, a pound of flour, dried and sifted, three-quarters of a pound of currants, eight eggs well beaten, a little grated nutmeg, and two ounces of bitter almonds pounded; add the sugar to the butter, put in the eggs by degrees, and then the flour and the other ingredients, adding last of all a wineglassful of brandy; beat the whole well together for an hour, and bake it in small buttered tins in a brisk oven.

☞ Butter, 1lb.; orange-flower water, sufficient; sugar, 1lb.; flour, 1lb.; currants, ½lb.; eggs, 8; nutmeg, to flavour; bitter almonds, 2ozs.; brandy, 1 wineglassful.

QUICKLIME.—See LIME.

QUICKSILVER.—See MERCURY.

QUILLS, TO PREPARE.—Immerse the quill, when plucked from the wing, in water almost boiling; leave it there till it becomes sufficiently soft; compress it, turning it on its axis with the back or blade of a knife. The immersion and compression must be continued till the quill is clear. When cold, and the membrane and greasy covering are entirely removed, it is immersed a last time to render it cylindrical, which is done by whirling it between the thumb and forefinger; it is then dried in a gentle temperature.

QUINCE BLANC MANGE. — Dissolve in a pint of prepared juice of quinces an ounce of the best isinglass; add ten ounces of sugar, roughly pounded, and stir these together gently over a clear fire, from twenty to thirty minutes, or until the juice forms into a jelly as it falls from the spoon. Remove the scum carefully, and pour the boiling jelly gradually to half a pint of thick cream, stirring them briskly together as they are mixed; they must be stirred until very nearly cold, and then poured into a mould which has been rubbed in every part with the smallest possible quantity of very pure salad oil, or, if more convenient, into one that has been dipped into cold water. This jelly, if carefully made, and with ripe quinces, is one of the most richly-flavoured preparations of fruit it is possible to imagine.

☞ Juice of quinces, 1 pint; isinglass, 1oz.; sugar, 10ozs.; cream, ½ pint.

QUINCE, CULTURE OF.—The quince is a fruit somewhat resembling the apple, but of a peculiar flavour. The trees may be raised from seed sown in autumn, but there is no certainty of having the same, or any good fruit from the seedlings. The several varieties may be propagated by cuttings and layers; also by suckers from such trees as grow upon their own roots, and by grafting and budding upon their own or pear stocks. Cuttings, layers, and suckers may be planted in autumn, winter, or early spring. Choose young wood for the cuttings and layers. They will be rooted by next autumn; then transplant into nursery rows two feet asunder; plant the suckers also at the same distance, and train the whole for the purposes intended; if for standards with a stem, to any desired height from three to six feet; then encourage them to branch out at top, to form a head; those designed for dwarfs must be headed near the ground, and trained accordingly for espaliers or dwarf standards. When they have formed tolerable heads, plant them out finally. Standard quinces, designed as fruit-trees, may be stationed in the garden or orchard, and some by the side of any water in bye-places, suffering the whole to take their own natural growth. And as espaliers, they may be arranged with other

moderate growing trees, about fifteen feet apart. The fruit should be gathered early in November, choosing a dry day, bruising them as little as possible, and then placing them thinly on the shelves of the fruit room, or in any other cool place; examine them frequently, and remove all such as appear to be beginning to decay, as they are subject to the attacks of a minute fungus, which, if not checked, would speedily spread over the whole stock.

QUINCE JELLY.—Pare, core, and quarter some ripe but perfectly sound quinces as quickly as possible, and throw them as they are done into part of the water in which they are to be boiled, allow one pint of this to each pound of the fruit, and simmer it gently until it is a little broken, but not so long as to redden the juice, which ought to be very pale. Turn the whole into a jelly-bag, or strain the liquid through a fine cloth, and let it drain very closely from it, but without the slightest pressure. Weigh the juice, put it into a very clean preserving pan, and boil it quickly for twenty minutes; take it from the fire, and stir in it, until it is entirely dissolved, twelve ounces of sugar for each pound of juice, or fourteen ounces, if the fruit should be very acid: keep it constantly stirred, and thoroughly cleared from scum from ten to twenty minutes longer, or until it jellies strongly in falling from the skimmer; then pour it directly into glasses or moulds. If properly made, it will be sufficiently firm to turn out of the

latter, and it will be beautifully transparent and rich in flavour. It may be made with an equal weight of juice and sugar, mixed together in the first instance, and boiled from twenty to thirty minutes.

☞ To each pound of quinces, 1 pint of water; to each pound of juice, 12ozs. sugar; or, juice and sugar, equal weight.

QUINCE JUICE.—Pour into a clean earthen pan two quarts of spring water, and throw into it, as quickly as they can be pared, quartered, and weighed, four pounds of quinces. When all are done, stew them gently, until they are well broken, but not quite reduced to a pulp; turn them into a jelly-bag, or strain the juice from them, without pressure, through a closely-woven cloth, which should be gathered over the fruit and tied, and suspended above a deep pan until the juice ceases to drop from it: this, if not very clear, must be rendered so before it is used for syrup or jelly; but for all other purposes, once straining it will be sufficient.

QUINCE MARMALADE. — Pare and quarter some quinces, and weigh an equal quantity of sugar. To four pounds of the latter put a quart of water, boil and skim it well, during the time the quinces are being prepared. Lay the fruit in a stone jar, with a teacupful of water at the bottom, and pack them with a little sugar strewn between. Cover the jar close, set it in a cool oven, or on a stove, and let the quinces soften till they become red. Then pour the syrup and a quart of quince juice into a preserving pan, and boil all together till the marmalade be completed, breaking the lumps of fruit with the ladle; otherwise the fruit is so hard that it will require a great deal of time.

QUINCE PIE.—Pare, cut, and core sufficient quinces to fill the dish, put a small cup in the centre, add one clove to every three quinces, a pint of powdered cinnamon, a small piece of chopped lemon-peel, and sugar; bake according to size.

QUINCE PRESERVED.—Pare and core some quinces, and cut them into quarters or little round slices, put them into a preserving pan, and cover them with the parings and a very little water. Cover them close, to keep in the steam, and boil them till they are tender. Take out the quinces, and strain the liquor through a bag. To every pint of liquor allow a pound of loaf sugar; boil the juice and the sugar together for about ten minutes, skimming it well; then put in the quinces, and boil them gently for twenty minutes. When the sugar seems to have completely penetrated them, take them out, put them in a glass jar, and pour the juice over them warm. Tie them up when cold with brandied paper, and set them by in a cool dry place.

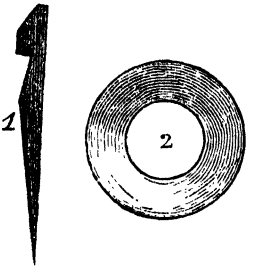
QUINCE PUDDING.—Scald six large quinces till they become very tender, pare off the thin rind, and scrape them to a pulp. Add powdered sugar enough to make them very sweet, and a little pounded ginger and cinnamon. Beat up the yolks of four eggs with some salt, and stir in a pint of cream; mix them with the quinces, and bake it in a dish, with a puff crust round the edge.

QUINCE WINE.—This wine is made from very ripe quinces. When gathered, they must be thoroughly wiped and pared; then slice the quinces lengthwise, and remove cores, bruising them thoroughly in a mashing-tub with a pestle. Strain off the liquid part, by pressing the pulp in a hair bag; warm this liquor over the fire, and skim it, but do not allow it to boil. Sprinkle into it some powdered loaf sugar, then, in a gallon of water and a quart of wine, boil twelve or fourteen large quinces thinly sliced; add two pounds of fine sugar, and then strain off the liquid part, and mix it with the natural juice of the quinces; put this into a cask, and mix the whole well together, then let it settle; put in two or three whites of eggs, and afterwards draw it off. To make it still better, add a quarter of a pound of stoned raisins, and half an ounce of cinnamon to a quart of liquor, to the consumption of a third part, and put it into the cask when the wine is fermenting.

QUINZE. — A game of cards usually played by two persons only; it is much admired for its simplicity and fairness, as it depends entirely upon chance, is soon decided, and does not require the attention which most other games do. It is, therefore, particularly calculated for those who are fond of the sport upon an equal chance. The name of quinze means fifteen, that being the number of the game, which must be made as follows:—1. The cards must be shuffled by the two players, and when they have cut for deal, which falls to the lot of him who cuts the lowest, the dealer has the liberty to shuffle them again. 2. After the cards are shuffled, the adversary cuts them: the dealer then gives one card to his opponent and one to himself. 3. Should the dealer's adversary not approve of his card, he is entitled to have as many cards given to him, one after the other, as will make fifteen, or come nearest to that number; which are usually given from the top of the pack: for example, if he should have a deuce and draw a five, which amounts to seven, he must continue going on, in expectation of coming nearer to fifteen. If he draw an eight, which will make just fifteen, he, as being eldest hand, is sure of winning the game. But if he overdraw himself, and make more than fifteen, he loses, unless the dealer should happen to do the same; which circumstance constitutes a drawn game; and the stakes are consequently doubled. In this manner the players persevere until one of them has won the game, by standing and being nearest to fifteen. 4. At the end of each game, the cards are packed and shuffled, and the players again cut for deal. 5. The advantage is invariably on the side of the elder hand.

QUOITS.—An excellent game affording healthy exercise to the players. To play at quoits an iron pin, *fig.* 1, called a hob, is driven into the ground to within a few inches of the top, and at the distance of

eighteen or twenty yards, as may be agreed upon; a second pin of iron is also fixed. The players are generally divided into parties, and each one pitches a quoit, *fig.* 2, from hob to hob: those who pitch the nearest reckoning towards the game. But the determination is discriminately marked; for instance, if a quoit belonging to A lies nearest to the hob, and a quoit belonging to B lies second, A can claim but one towards the game, though all his other quoits lie nearer to the mark than all the other quoits of B, because one quoit of B being the second nearest to the hob "cuts out," as it is called, all behind it; if no such quoit had interfered, then A would



have reckoned all his as one each. Having cast all their quoits, the players walk to the opposite end, and determine the state of the play; then, taking their stand there, throw their quoits back again, and continue to do so alternately as long as the game remains undecided. A quoit that falls with its flat side upwards does not count. The quoit should be delivered from the hand by an upward and forward pitch with a steady aim at the pin, near which it should sink with its sharp edge in the turf. The dress in quoits should be loose and easy, with no restraint from braces.

R.

RABBIT BOILED.—Wash the rabbit thoroughly, truss it firmly with the head turned and skewered to the sides, put it into sufficient boiling water to keep it quite covered until it is cooked, simmer it gently for thirty or forty minutes; when very young they will require less time than this. Cover it with rich white sauce, mix it with the liver parboiled, finely pounded, and well seasoned with cayenne and lemon-juice; or serve with onion sauce.

RABBIT COLD, TO DRESS.—Cut the rabbit into quarters, beat up one or two eggs, according to the quantity dressed, with a little grated nutmeg, pepper and salt, some parsley minced fine, and a few bread crumbs; mix them well together, and cover the rabbit with this batter; broil it, or put it into a Dutch oven, or have ready some hot dripping in a pan, in which fry the rabbit to a light brown colour; thicken a little gravy with some flour, flavour with mushroom ketchup, and serve.

RABBIT CURRIED.—Cut up a rabbit into rather small pieces, splitting the head in half, cut two large onions and one apple into very small dice, and fry them in a stewpan with two ounces of butter; when nicely browned, add a tablespoonful of curry powder, a teaspoonful of curry paste, a teaspoonful of flour, and a pint of stock; mix the whole well together, then put on the rabbit with half a pound of streaked bacon cut into small square pieces; let the whole stew very gently upon a very slow fire, for three-quarters of an hour; when done, which may be ascertained by trying with the point of a knife if the flesh will leave the bone easily, pour off as much of the fat as possible, and turn the rabbit out upon a dish; serve with rice separately.

RABBIT FRICASSEED.—Wash a young rabbit thoroughly, and cut it into joints, put it into a stewpan with a quarter of a pound of streaked bacon cut small, an onion stuck with cloves, a bunch of herbs, a blade of mace, and some salt; cover the whole with water, and let it simmer for twenty minutes, keeping it well skimmed; pass the liquor through a sieve. Into another stewpan put two ounces of butter, a tablespoonful of flour, and a little of the liquor; set it on the fire, and stir it well till it boils; add the rabbit and bacon with a dozen and a half of small onions, let the whole simmer until the onions are done; skim well; then pour in a wineglassful of white wine mixed with the yolks of two eggs and a little grated nutmeg; leave it to thicken, remove the rabbit, pile it on sippets, pour sauce over it, garnish with sliced lemon, and serve hot.

RABBIT FRIED.—Cut a rabbit into joints, dip them into beaten egg, and then into fine bread crumbs, season with salt and pepper, and when all are ready, fry them in butter over a moderate fire for twelve or fifteen minutes; simmer two or three strips of lemon-peel in a little gravy until it is well flavoured with it; boil the liver of the rabbit for five minutes, let it cool, and then mince it; thicken the gravy with an ounce of butter, and a small teaspoonful of flour, add the liver, give the sauce a minute's boil, stir in two tablespoonfuls of cream and a small quantity of lemon-juice; dish the rabbit, pour the sauce under it, and serve it quickly.

RABBIT GIBELOTTE.—Cut up a rabbit and put into a saucepan with butter, add small slices of bacon, and brown it; then take it out of the saucepan for a few minutes, and put in a tablespoonful of flour, which is to be lightly browned; put back the rabbit and the bacon, add a little stock and a small quantity of white wine, some chopped mushrooms and sweet herbs; stew, and about a quarter of an hour before it is done, add several small sized onions, previously browned in butter.

RABBIT HASHED.—Cut the rabbit into joints, put the trimmings into a stewpan with a quart of the liquor it has been boiled in, and a large onion cut into quarters; let it boil for half an hour; strain it through a sieve; then put two tablespoonfuls of flour into a basin, and mix it well by degrees with the hot broth; set it on the fire to boil up, then strain it through a fine sieve, wash out the stewpan, lay the poultry in it, and pour the gravy on it; set it by the side of the fire to simmer very gently for fifteen minutes; five minutes before it is served up, cut the stuffing into slices, and put it in to warm, then take it out and lay it round the edge of the dish, and put the poultry in the middle; carefully skim the fat off the gravy, then shake it round well in the stewpan and pour it to the hash. The dish may also be garnished with sippets of toasted bread.

RABBIT MUMBLED.—Boil a rabbit well, but not too much, remove the flesh and chop it up fine; then add nutmeg, salt, lemon-peel, and the juice of a lemon. Put whole into a stewpan with twelve eggs and three-quarters of a pound of butter; stir it well, and serve in a dish with sippets.

RABBIT PATTIES.—Mince the best parts of a cold roast rabbit into small pieces, with a little finely shred mutton suet. Make a gravy from the bones and skins, or use any other good gravy; thicken it with butter and flour, and season with salt, cayenne, pepper, nutmeg, mace, half a lemon grated, and a very little red wine. Stew the mince, fill patty-pans with it, and bake in a moderate oven.

RABBIT PIE.—Cut a rabbit into joints, splitting the head in half, and lay them in lukewarm water for half an hour: then dry them upon a cloth, season well with pepper and salt, and with chopped shalots, parsley, two bay leaves, and a teaspoonful of flour; cut three-quarters of a pound of streaked bacon into square pieces, lay in the pieces of rabbit and bacon together, in a pie dish, pour in a little water, cover with paste, and bake in a moderate oven.

RABBIT PUDDING.—Wash a rabbit thoroughly, remove the head, and cut the body into small pieces; make a light suet paste, allowing a quarter of a pound of fresh beef or veal suet finely minced, to a pound of flour; season the rabbit with pepper and salt, and a little mushroom powder, line a dish with the paste, put the rabbit in and boil it in a cloth for two hours and a half; serve it with gravy in a sauce-tureen. One or two slices of pickled pork, or streaked bacon, may be added.

RABBIT RAGOUT.—Half-roast a rabbit, cut it into joints, and stew it in good stock with a couple of onions, two dozen corns of allspice and black pepper, a few cloves, a piece of lemon-peel, and a couple of bay leaves. Skim the stew, and keeping the lid quite close, let it simmer for three-quarters of an hour. Strain off the gravy, leaving the rabbit in the stewpan to keep hot. Take off the surface of fat, which will soon form, and thicken the gravy with butter rolled in browned flour, until it is as soft as pancake batter. Add to it a glass of white wine and a little lemon-juice. Dish the rabbit, pour the sauce over it, garnish with fried bread, and serve.

RABBIT ROASTED.—Truss the rabbit, and stuff it with the liver minced raw and mixed with grated bread, ham, butter or suet, and chopped parsley, seasoned with a little lemon-thyme, grated nutmeg, salt, and pepper, and bound with beaten egg. Sew it up, set it down before a quick fire, and baste it with butter. Serve with gravy, or melted butter with lemon-juice in it.

RABBIT SOUP.—Take two full-grown or three young rabbits; cut them into joints, flour, and fry them lightly; add to them three onions of moderate size, also fried to a clear brown; on these pour gradually seven pints of boiling water, throw in a large teaspoonful of salt, clear off all the scum carefully as it rises, and then put to the soup a bunch of parsley, four medium-sized carrots, and a small teaspoonful of peppercorns; boil the whole very gently for five hours or five hours and a half; add more salt if needed, strain off the soup, let it cool sufficiently for the fat to be skimmed clear from it, heat it afresh, and send it to table with sippets of fried bread. Add a thickening of rice flour, or of wheaten flour browned in the oven and mixed with a spoonful or two of ketchup.

RABBIT STEWED.—Wash a rabbit thoroughly, let it lie for two or three hours in cold water, cut it into joints, dry them upon a cloth, dredge them with flour, fry them of a light brown with butter, and stew them in the following sauce: brown three ounces of butter in a stewpan, with a tablespoonful of flour, a minced onion, some pepper and salt; add a pint of gravy and the rabbits, stew them till they are tender, and just previous to serving, stir in a tablespoonful of ketchup. When the rabbit is to be dressed with a white sauce, it should not be fried, but stewed in the white stock, which is seasoned with white pepper and salt, and thickened with a piece of butter mixed with flour. A few minutes before serving add a little cream, and a tablespoonful of lemon pickle.

RABBIT, TO CARVE.—See RABBIT.

RABBIT, TO CHOOSE.—A rabbit when old, has the haunches thick, the ears dry and tough, and the claws blunt and rugged. A young rabbit has claws smooth and sharp, ears that tear easily, and a narrow cleft in the lip.

RABBIT SHOOTING.—In some parts where the country is of a light sandy soil, rabbits are tolerably numerous, although not claimed as private property; and such a locality prevents a fair opportunity for the amusement of ferreting them, which, to be well done, must be performed quietly and adroitly. In the first place, the ferrets must be muzzled: thus unable to seize the rabbit by the throat, they are turned into the burrows. Attention must now be paid by the shooters, who stand at a moderate distance from the rabbit-holes, from whence they watch the bolting of the game from the different holes, out of which the ferrets

have driven the rabbits. Rabbit shooting on open warrens is, however, the most legitimate sport; and although the numbers here are not great, there is often sport enough to repay the search after them. In approaching these wary animals, a degree of caution is necessary, so as not to disturb them. It is well, therefore, never to advance in a straight line, or even look directly towards them; walk leisurely along in the face of the wind; stoop and pick up, or appear to pick up, a bough or piece of turf, or to examine any matter before you, and such conduct will often throw them off their guard. While doing this, if a dog is with you, keep him close; your clothes, also, should be dark, so as not to be seen on the approach a long way off. When you have ventured as near as they will allow without retreating to their earth, then stoop. When storms arise, the intervals between are often favourable for getting near rabbits, particularly when the wind blows from them to you. When a number are come upon suddenly at the edge of a wood frequented by them, it often happens that the old ones will immediately take the covert; but not so the young ones, who prick up their ears, and perhaps raise themselves up to examine you; now take your shot.

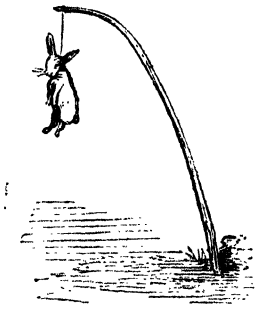
RABBIT SNARE. — Rabbits are frequently found to be mischievous animals by the farmer, costing him much trouble and expense. They may be caught by steel traps, by wire snares, and also by nets. The traps mostly used are either snares or steel traps. In order to trap the animals successfully, it is requisite to know something of their habits. They feed in the evening, and sleep in their "form" during the day: they are very active and playful during moonlight nights. Their running consists of a succession of leaps; and as they are very swift and strong, considerable strength is required in the traps that are to hold them. After a rainy night, they leave cover on account of the wet; the generality, under such circumstances, run the highways or stony lanes. When the ground is dry and the wind cold, rabbits then prefer the paths that are covered with leaves. In looking for a rabbit, much depends upon the season; if it be spring, she will be found upon the fallows or green corn; during the autumn, she will frequent the stubble and turnips; and in winter, she will not unfrequently sit near houses, in brambles or bushes of thorns. From the frequency with which the rabbit goes over the same ground, she establishes, both in cover and out of it, what is termed a "run," a beaten track, over which she is almost sure to pass within a short space of time. The run is distinguished by the leaves and grass being pressed down, by small brambles being turned aside, and in fallow grounds by a smoothness that is imparted to the surface, and sometimes by the track of feet. It is in these runs that the traps should be set. The steel trap is constructed on the same principle as the "gin" used for rats, but is somewhat stronger in the spring. These steel traps, of various sizes and degrees of strength, are sold by most ironmongers, and by dealers in agricultural implements. The steel trap is simply buried in the run, and leaves, grass, or earth strewed over its surface so as to give no appearance of an unusual character. It is unnecessary to bait the trap. Precaution should, however, be taken to tie the trap to a bough or peg in the ground, by a piece of strong string, otherwise the rabbit will carry away the trap. Wire snares are also very effective traps. They are made of fine copper wires, and being inexpensive, a number of them may be set where rabbits abound. The wires are made to form a running loop, just such as we form with string; only the wires are so arranged that they all unite to form the one loop. No ingenious person could fail to form the loop, after a few minutes' handling of the wire. It is so simple that it will suggest itself. The loop thus made, is set across a run, so that the top of the loop stands say about six inches from the ground; and in order to keep it in its proper position a peg of wood is driven in the ground a little way from the run, and in the top of the peg there is a slit which serves to catch the ends of the wires and hold them in position. The wires must be tied firmly at the end to a string, which may lie on the ground; the end of the string should be tied to a bough sufficiently high from the ground to yield a little when it is pulled. This yielding of the bough prevents the rabbit from snapping the string, which it would otherwise do in its endeavours to escape. Netting rabbits is effected by nets being placed across the runs, but it is very seldom resorted to, as it is less practicable than other methods. There is an ingenious mode of taking rabbits by single wires and what is called a springle, as seen in *fig.* 1. A strong and springy

Fig. 1.

stick (A), is stuck deep into the ground in an upright direction; its smaller end is then bent over, and also buried sufficiently in the ground to keep it down. To this end a wire (B) is tied by a short string, and when the rabbit is caught, his first jump pulls the end of the springle out of the soil, and it then lifts the rabbit completely from the ground, as seen in *fig.* 2, thereby depriving it of all power of escape. Rabbits are also caught with the aid of ferrets. A ferret being put into a hole, a square net, about a yard square, is then thrown over the mouth of the hole; the rabbit runs out with a jump, and is instantly entangled in the net, so that escape is impossible. This mode of netting is far easier and more expeditious than the loop netting, in which the net is made as a bag, drawn together by a running string, for this method gives considerable

trouble to get the rabbit out, whereas it is perfectly easy to take them from a square net. The form of trap called the "tipe" is only applicable to large warrens, or to places where rabbits so abound, as to make it a point of importance to reduce their numbers. A large pit is dug in the ground,

Fig. 2.



and over this a false surface, just like the ground, so evenly balanced by a hinge that the weight of a rabbit will turn it completely over. The trap being thus prepared, the door is kept fixed for a night or two, to give the rabbits confidence; then it is set free, and in this way large numbers of rabbits may be taken in a single night. The same modes here enumerated for the taking of rabbits are for the most part equally applicable to hares.

RABBITS, TO BREED AND REAR.—The breeding and rearing of rabbits not only affords an agreeable pastime for youth, but, owing to their amazing fecundity, renders the keeping of them in a tame state an object of some consequence in cottage economy. The rabbit litters seven times in the year, and generally produces eight young at a time. At the age of five months the animal begins to breed, but it is as well to defer it till nine. In choosing rabbits for stock, it will be found that those which are in colour nearest the wild ones, are in general the most hardy; after the black or black and white, then the white, then the sandy, and lastly the grey and white. The young fancier may either purchase a doe with young, or he may obtain four or five young ones. If the former, he should be guided in his selection by some experienced person; if the latter, he should take especial care that the young ones are in good health, and have no signs of pot-belly, and that they are of full size and strong build. The rule is to take the largest of the rabbits, where there are fewest in the litter. The rabbit-house should be dry and well ventilated. The huts, or hutches, should be placed on stands about three feet high, around the sides of the rabbit-house. Each hutch intended for breeding should have two apartments, one for sleeping and one for eating. The floor of the hutch should be planed smooth, that the wet may run off: a common hoe with a short handle, and a small broom, are convenient for cleaning the hutches. The breeding-hutches should be about two feet high, two feet six inches deep, and four feet long; about one-third of this length should be separated by a panel arched doorway. Above this, there should be a sliding door, which can at any time be put down, so as to shut the doe into either of the compartments as occasion may require. The edges of the doorway should be cased with tin, as should also the edges of the feeding-trough, and any other part that the rabbit can get at with his teeth. The front of the hutch has two doors, one of which, belonging to the inner apartment, is made of boards, and the other, belonging to the feeding-room, is open, having wirework in front; both these doors are fastened by buttons in front, but in a contrary direction. The bottom of the hutch should have a long narrow piece of wood in front, below the wires, which should be moveable, and this, upon being removed, will permit an iron rod or scraper to be introduced, for cleansing the hutch from time to time. In placing the hutch upon the stand it should be placed a little aslant backward, and there should be a few holes drilled at its back partition, for the purpose of letting all liquid pass off. Young persons should begin by keeping common rabbits, for which common hutches, such as they can construct themselves, if so inclined, will be quite good enough. When they have acquired experience in the management of the rabbitry, and not before, they may, by degrees, introduce superior animals to their stock, and dispose of the common ones. The buck's hutch must obviously be made different in every way from that of the doe. He should have a large roomy house with a partition, and a back apartment where he can retire when he pleases; for it is a great comfort to him to be able to hide himself, and to skip in and out of his little chambers. His hutch ought also to be higher than that of the doe, and it should have a little trough for his dry victuals, and a little iron-wire rack on one side for his green food, if you wish to make him very comfortable. It is a bad plan to put hutches on the top of each other, and the buck's hutch should always be kept out of sight of the doe. The feeding of rabbits is a most important point. On this mainly depends the prosperity and health of the stock. Rabbits should be fed three times a day; and the principal thing to be attended to is, always to give a good deal more dry than succulent food. Almost all the vegetables and roots used for the table may be given to rabbits; in preference to all others, celery, parsley, and the roots and tops of carrots; they also eat lettuce leaves with avidity, but these must be given sparingly; turnips, parsnips, and even potatoes in a raw state, may be occasionally given on an emergency, when better roots or good greens are scarce. In the spring time, tares form an excellent food for them, so that they are not wet; in fact, no greens ought to be given to rabbits when there is much moisture on the surface. It must be

mentioned that a doe will eat nearly twice as much when suckling as at other times; and when her little ones begin to eat, the allowance of food must be gradually increased. The grain proper for rabbits are oats, peas, wheat, or buckwheat; to these, as the best kind of dry food, may be added bran, pollard, dry clover, peas and bean straw. Rabbits full grown, having as much corn as they can eat, can never take much harm from an abundant supply of vegetable food. But young rabbits ought to be carefully attended to in this respect; a very little vegetable food is the most proper, and that should be of the best kind, or they will soon die. The doe goes thirty or thirty-one days with young. The best breeding rabbits are those that kindle in March. Some days before this event takes place, hay should be given to the doe wherewith to make her bed. This she speedily does, lining the nest for her forthcoming little ones. The litter should be reduced to five or six, by destroying the weak and sickly young ones so soon as their defects are perceived. If more than this number are left to be suckled, some will perhaps die, others be sickly, and none of them fine. The doe should not be disturbed by any other rabbit during the period of gestation, nor should she be handled by her keeper. Should she be weak after kindling, give her a malt mash, scalded fine pollard, or barley-meal, in which may be mixed a small quantity of cordial horse-ball. In this case, and in fact whenever a doe is weak, bread, soaked in milk and squeezed rather dry again, if she will take it, will considerably strengthen her. At the time of kindling, a little cold water should be placed conveniently in the hutch, as the animal appears to be much gratified by it. Rabbits are in perfection for eating when about nine months old, and should be put to fatten when they are about six. It requires about three months to make a rabbit thoroughly fat; half the time may make them eatable, but by no means equal in the quality of their flesh. They should be kept in a single hutch, and fed with oats, hay, cabbage, bran, and chicory. They may be also treated to a little barley-meal and a few peas; but they must be kept very clean and have plenty of air. No animal is less liable to disease than the rabbit, when carefully attended; but neglect and want of cleanliness, or improper food, produce in them many complaints, among the foremost of which is what is called "pot belly," and which is very common to young ones. It is generally occasioned by want of air and exercise, and the use of too large a quantity of green food. The remedy is dry food, and to let the rabbits run about in an open dry space every day. Rabbits are subject to colds and hoarseness, and have what is called "the snuffles." While this disease lasts they should be kept dry and warm, and be fed with barley-meal made into a paste with a little milk, and no water or green food should be given them till they recover. Squeezed tea-leaves generally restore a doe to health if weak or otherwise affected after kindling, if the food directed to be given at that time should fail. When old rabbits are attacked by a looseness, dry food will in general restore them; but do what you will, it is very difficult, and in most cases impossible, to save young ones from sinking under it; dry food for them, as well as for the old ones, is the only remedy. One of the most common faults of rabbit fanciers is, first to over-feed their pets, and afterwards to neglect and half-starve them. Not only do thoughtless boys forget to feed the objects of their care, but frequently to suffer them to become diseased, for want of attention to cleanliness. Such neglect is cruel in the extreme. Rabbits should have their hutches cleaned out every morning, and require many little attentions to provide for their comfort and health; and those who are not disposed to afford this, ought not to venture on rabbit keeping.

RACKET. — This game, which affords much healthy exercise, is played in an open space of ground, bounded on one side by a high wall, which should be painted black. The ground should be divided into four equal compartments, marked with chalk, so that there may be two divisions against the wall and two behind them, which divisions are occupied by the players. A broad line is marked with chalk or white paint along the whole length of the wall, at the height of forty-two inches from the ground, above which line every ball ought to strike the wall. The game is extremely simple, and may be played by two or more players. When it is played by four persons, one stands in each of the compartments; those near the wall being called in-hand, and those farthest from it out-hand players. When two play, each player takes two of the divisions, and the one who takes the first from the wall is called in-hand player, and the other out-hand player. Having determined by lot who is to begin the game, the in-hand player nearest the wall strikes his ball against it; if it strike under the line, goes over the wall, does not rebound into the out-hand spaces, or goes beyond the racket ground, the striker is out, and the out-hand player takes his place; but if the player is more successful, and the ball rebounds into the out-hand spaces, and hopping from the ground is sent back to the wall again to rebound into one of the in-spaces, the game goes on. The play of the game is, that the in-player should send the ball in such a manner against the wall that, on its rebound, the opposite party, or player, shall be able to pick it up or hit it. Whenever this happens, he who struck the ball counts one point, or an ace, and the play is continued until one player or party scores eleven, or as is sometimes now more frequently played, fifteen.

RADISH, CULTURE OF.—There are two forms of cultivated radish, the spindle-rooted, and the globular, or turnip-rooted; and these again are divided into the spring and autumn varieties. The first may be sown at all times of the year; but the last, requiring a greater length of time to perfect their roots, can only be obtained during the latter part of the year. The soil best suited

for this vegetable is a mouldy loam, rather silicious than otherwise, and moderately fertile. It should be dry a full spade deep, and well pulverized. The subsoil is best to be rather hard. Manure should not be applied at the time of sowing, if avoidable, as it is apt to cause the roots to be fibrous. If employed, it should be in a finely divided putrescent state. The situation should always be open; but for early and late crops, warm and sheltered. Radishes are propagated by seed, which may be sown at all times throughout the year. For the earliest productions, during December, January, and February, in a hotbed; and in the open ground once a week during winter, and every fortnight during the other seasons of the year. In the open ground, the seed is generally sown broadcast, and well raked in, but drilling is the most preferable mode; in either case, it must be inserted thin, and buried half an inch deep; thick sowing causes the tops to be large and the roots sticky. If broadcast, the beds should be laid out four or five feet wide, divided by alleys a foot in width, the earth from which may be thrown out to raise the beds, or not, according as the season renders it desirable for them to be dry or moist. If drills are employed for the spindle-rooted, they are required to be three inches or under; for the turnip-rooted, four or five inches. When the seedlings are well up, and advanced to five or six leaves, they are ready for thinning; the spindle-rooted to three inches apart, the turnip-rooted to four. These spaces, however, require to be rather increased in moist warm weather. In dry weather they ought to be watered regularly every night, as the goodness of their flavour and tenderness depends upon their rapidity of growth, which is chiefly accelerated by a constant supply of moisture. The early and late crops that have to withstand the effects of frost, &c., should be kept constantly covered with dry straw or fern, to the depth of about two inches, or with matting, supported by short sticks, until the plants make their appearance, when the covering must be removed every mild day, but renewed towards evening, and regularly during frosty or tempestuous weather. The time of drawing radishes is by no means indifferent. They eat in the greatest perfection if pulled in the morning before the sun has attained any power, and laid in a cool damp place until wanted. The bed should have a plenteous watering in the morning before that on which they are taken, but none afterwards until subsequent to the drawing. In November, those wanted for winter must be taken up during dry weather and preserved in sand. To draw the small salads when the seminal leaves are pertaining, sowings must be made once a week. For the production of seed in April or May, some of the most perfect plants of a main crop, when in full vigour, must be taken up with as little injury as possible to the roots and leaves, and plant in rows three feet asunder each way, being inserted by the dibble completely down to the leaves. Water must be applied as well until they have taken root as occasionally throughout their growth, especially when in flower. If practicable, it is best to leave some plants when raised. For forcing, a moderate hotbed is required for this crop, of a length according with that of the frame to be employed; the mould about eight inches deep, on the surface of which the seed is to be sown as soon as the violent heat is abated, and an additional half inch of mould over it. The seedlings are in general up in less than a week, and in six weeks they will be ready to draw. Throughout their growth, air must be admitted as freely as is allowable. The glasses, however, must be closed on the approach of evening, and mats or other covering put on, in proportion to the severity of the season. When the mould appears at all dry, a light watering must be given at noon. The plants must not stand nearer than two inches to each other. If there is a deficiency of frames, hoops and mats may be employed, a frame of boards being formed round the bed, light and air being admitted as freely and as often as possible. If seed is sown within a frame without any bottom heat, the plants will be two or three weeks more in advance than if sown in the open ground.

RADISHES BOILED.—The turnip radishes are the best for boiling. They should be freshly drawn, young and white. Wash and trim them neatly, leaving on two or three small inner leaves of the top. Boil them in plenty of salted water from twenty to thirty minutes, and as soon as they are tender send them to table well drained, with melted butter or white sauce. Common radishes when young, tied in bunches, and boiled from eighteen to twenty-five minutes, then served on a toast like asparagus, are very good.

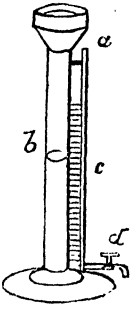
RAGOUT.—See BEEF, CHICKEN, FOWL, HARE, LAMB, MUTTON, RABBIT, VEAL, &c.

RAGS.—Rags should never be thrown away as useless, as they may be employed for a variety of purposes in connection with domestic and rural economy. When rags have become dirty they should be boiled in the suds used for washing, dried, and put by in the rag-bag. Linen rags should be especially saved, for they are extremely useful in sickness. If they have become dirty and worn by cleaning silver, &c., wash them and scrape them into lint. Rags also form an excellent manure, their composition principally consisting of a substance similar to albumen united to gelatine.

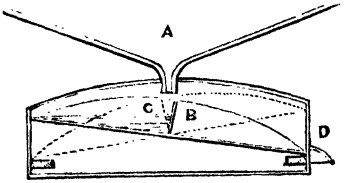
RAILWAY TRAVELLING.—As this has become the almost universal mode by which passengers and effects are transported from one place to another, a few hints calculated to render the mode of travelling more comfortable, cannot fail to be acceptable. The first thing which a person should do who is about to travel by rail is to ascertain certainly from the time table the hour at which the train starts; the next thing is to make arrangements for being conveyed from the place he is staying at to the station; and the third provision is to have everything packed in readiness, so as to avoid hurry and confusion at the last moment. If a person has a great deal of

luggage, such as, for instance, two or three rooms full of furniture, he will do well to request the railway officials to send a waggon, in which the goods may be packed, and this being placed bodily upon the rails, arrives at its destination without the articles being disturbed, is then lifted from the rails, and driven to the assigned destination. When the choice of train is optional, the intending traveller should observe whether the one he is about to adopt is a fast or slow one; in the latter case, the travelling is comparatively tedious, the pace being a very moderate one, and all the stations stopped at. Express trains are also, as a matter of course, the best for speed; but as an extra fare is frequently demanded by these trains, that again remains for the traveller's consideration. The farthermost corner, with the back to the engine, is the most comfortable place in a railway carriage, as the passenger is here less likely to be disturbed, does not feel the motion of the train, and escapes cinders, dust, &c. It is possible for a railway traveller to make himself very comfortable, if he is so disposed. In the first place, a rug should be wrapped round the legs to keep them warm, a close fitting cap drawn over the head for the same purpose, and to admit of leaning back; and for second and third class passengers, an air-cushion to sit upon, to soften the rigour of the wooden seat. Unless the distance is a very long one, it is desirable not to leave the carriage, as the former degree of comfort is seldom secured; the getting out to obtain refreshment is purely a matter of taste. One thing is certain, that you are not so sure to obtain what you order, or at any rate not until the train is again about to start. Experienced travellers carry their own provisions with them, by which means they may appease their wants whenever they please, and at their leisure. Many persons who are very fond of smoking, find it a great denial to be debarred from enjoying their cigar or pipe when travelling by railway; on some of the lines this want is met, by providing carriages expressly for smokers, and this fact should be ascertained previous to starting. There are also carriages on most lines devoted exclusively to the use of ladies, a source of great comfort and convenience for some female travellers. When about to start by railway, make a point of always being a few moments beforehand; this admits of your making choice of seat and carriage, and taking up your position in a more satisfactory manner than when hurried.

RAIN.—The life of plants and animals depending as much on moisture as on temperature, and their development being greatly modified by the dryness or humidity of the atmosphere, the cause and effect of rain become important objects of study to the agricultural student. A rain-gauge is an instrument employed for measuring or gauging the quantity of rain which falls at a given place. Its principles and construction are of the simplest nature; but it is made in a variety of shapes. A convenient form of the instrument is represented in the annexed figure, where the rain which enters the funnel (*a*) is collected in a cylindrical vessel of copper (*b*), connected with which at the lower part is a glass tube (*c*) with an attached scale. The water stands at the same height in the cylinder and glass tube,



and being visible in the latter, the height is read immediately on the scale. The cylinder and tube are constructed so that the sum of the areas of their sections is to given parts; for instance, a tenth of the area of the funnel at its orifice, each inch of water in the tube is equivalent to a tenth of an inch of water entering the mouth of the funnel. A stop-cock (*d*) is added, by which the water is drawn off from the cylinder after each observation is made. A rain-gauge on a new and greatly improved construction is shown in the annexed figure. Its superiority consists in its power of self-registering the quantity of rain fallen. It consists of a funnel (A) of the usual form, through which the rain passes to a vibrating



trough (B), when, after a sufficient quantity has fallen into its higher side (C), it preponderates and discharges the rain, which escapes by a tube (D), and, by its vibrating action, moves a train of wheelwork and indices, to record upon a dial-plate the quantity of rain fallen.

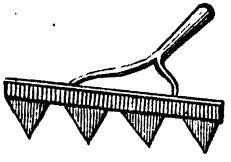
RAISIN PUDDING.—Beat well together three-quarters of a pound of flour; the same quantity of raisins; six ounces of beef suet finely chopped, a little salt, some grated nutmeg, and three eggs which have been thoroughly whisked, and mixed with about a quarter of a pint of milk, or less than this should the eggs be large. Pour the whole into a buttered dish, and bake it for an hour and a quarter.

☞ Flour, ½lb.; raisins, ½lb.; suet, 6ozs.; salt, small pinch; nutmeg, ½ teaspoonful; eggs, 3; milk, ½ pint.

RAISIN WINE.—First boil the water which is to be used for the wine, and let it again become perfectly cold; then put into a sound sweet cask eight pounds of Malaga raisins for each gallon that is to be used; taking out only the very large stalks; the fruit and water may be put in alternately

until the cask is full, the raisins being well pressed down in it; lay the bung lightly over, stir the wine every day or two, and keep it full by the addition of water that has, like the first, been boiled, but which must always be quite cold when it is used. So soon as the fermentation has entirely ceased, which may be in from six to seven weeks, press in the bung, and leave the wine untouched for twelve months; draw it off then into a clean cask and fine it, if necessary, with isinglass tied in a muslin bag and suspended in it. The refuse raisins make admirable vinegar, if fresh water be poured to them and the cask placed in the sun. March is the best time for making the wine.

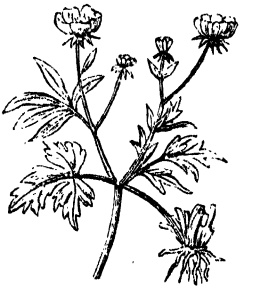
RAKE.—An implement used in agriculture and gardening. The rake used in agriculture is of two kinds, the hay-rake and the corn-rake. Both consist of a handle and head set with teeth; in the corn-rake these are generally of iron. The hay-rake is usually made of willow, that it may be light and easy to work; and the teeth should be short, otherwise they are apt to pull up the stubble or roots of the grass in raking. Sometimes the teeth are made to screw into the head, and fasten with nuts, which prevents their dropping out in dry seasons. The corn-rake is of different dimensions and constructions in different counties. In general, the length of the rake is about four feet; and the teeth of iron about four inches long, and set from one to two inches apart. The daisy rake has teeth sharpened on both edges like lancets, and is used for raking or tearing off the flower-heads or buds of daisies and other plants in grass lawns. The drill-rake, employed as its name imports, is a simple and most efficient implement, and is constructed of a head-piece, like that of a common rake, only double the size, into which broad flat wooden teeth are set, tapering towards the points, and at such distance apart as the drills are to be drawn. Sometimes the head is in two



flat pieces, to admit of the teeth being set at different distances, to adapt it to different crops, according to the distance the rows are to be apart, these pieces being screwed together at each end; or, if more than three drills are to be drawn at once, a third screw is placed in the middle. The ordinary garden-rake is a well-known implement, although much less in use than formerly when broad sowing was prevalent. Still it has its uses in covering up seed, separating and pulverising the soil, &c. The head of the rake is best made of wood, and of this ash is most desirable. If the head be of iron, they are continually coming loose.

Rakes, with heads about six inches long, are required for dressing flower-borders, but for open ground-work the length may be fifteen inches. The rake and the hoe are sometimes attached to one handle, but although thus useful as a combination, it is a form which, without care, is liable to frequent entanglement in the flower-garden, for which it is designed.

RANUNCULUS.—This favourite flower is propagated by dividing the roots, which naturally produce offset shoots, which attain maturity in one season, and are easily separated at the season of lifting. Ranunculuses may also be produced from seed.



The sowing is best performed in October and in February. Flat pots, pans, or boxes should be filled with moderately rich loam, with about a sixth part of leaf-mould, carefully cleared from insects, particularly wire-worms. Under the compost sufficient drainage should be placed, and over that the siftings, or coarser portions of the soil. The surface being rendered smooth and level, the seed should be sown thinly; for, if the young crop come up too thick, the plants are weakened, and many perish. Each seed should be sown the eighth of an inch apart from the neighbouring one. Cover lightly with finely-sifted soil, and apply a gentle watering with a fine rose watering-pot. Set the seed-pans on a dry floor of coal-ashes in an open well-exposed place, and cover them with a frame and glass shades. Little shading will be required at this period of the year, and but a limited supply of water; nevertheless the soil must not be allowed to become at all dry. In four or five weeks the young plants will appear, when great vigilance will be required to guard them against the attacks of insects, dry cutting winds, and even severe frosts. In May remove the seed-pans to an open border, where the morning sun only shines upon them, and plunge them in the soil. Here they should remain till the middle of July, when the foliage will begin to ripen and turn yellow: at this time water must be withheld; and if covered with a spare glass frame, so much the better. When the foliage has totally disappeared, the roots will be ripe, and in a very proper state for taking out of the soil. This must be done with

care, so that none of the very small ones be left behind, as these often turn out the finest varieties. Dry the roots moderately in the shade, and pack them in boxes amongst dry sand. The best season for planting is the middle of October, the latest period at which they can be safely done is the beginning of February. By following the former course the roots suffer less from being kept dry; they also begin to vegetate slowly, on account of the soil not being as yet cooled down by frost, enabling them to make fresh roots, and so be in a condition to start strongly into growth early in spring. The roots are fit for taking up when the foliage has died down; and in dry seasons and soils this should then be done. In wet soils—and such, be it observed, are very unfavourable for this plant—and in late wet seasons, the roots should be taken up before the foliage has completely died down, and just after it has assumed a yellowish colour. There is danger in allowing the roots to remain too long in the ground, because, particularly in wet seasons, they are apt to begin growing again, so that this must be guarded against. When taken up, the roots should be gradually dried, cleansed of soil, and placed in shallow drawers, or in canvas or paper bags, and kept in a dark dry place, secured from mice, and occasionally examined until the time of planting again arrives.

RAPE SEED.—The culture of this plant ceases after the sowing of the seed, as the crop is not thinned out like other rooted green crops, the object being to raise a sufficient number of stems to produce a large crop of leaves, for which purpose two pounds of seed to the acre will suffice; and as the seed is large compared with that of the common turnip, and about the size of that of the Swede, that quantity will not produce too many plants to stand in the drill. Rape will grow on almost any soil, and certainly will on clay, on which it requires less manure than on hard loam; but it grows on none so well as on drained moss resting on a clay subsoil. The ashes of the surface of a peat bog, pared and burned, form excellent manure for rape or drained moss. Rape is raised to be consumed by sheep, by folding on the land, as a mode of manuring fallow ground. This is a common practice in England, for the double purpose of manuring the soil and fattening sheep; and to attain both ends the rape seed is sown in May, and the crop is ready for being folded on in July or August.

RASPBERRY CAKE.—Take half a pound of dry raspberries, and a pound and a quarter of sugar; when the sugar has been sufficiently boiled and thoroughly skimmed, throw in the raspberries, adding the white of an egg beaten with a little cream, and mix the above ingredients well with it; then give the whole a boil, and turn it out into moulds.

☞ Raspberries (dried), ½lb.; sugar, 1¼lb.; egg, white of 1; cream, sufficient.

RASPBERRY CORDIAL.—To a gallon of brandy put two quarts of raspberries; bruise them in a little of the brandy; let them steep for ten or twelve days; cover them up close, then strain them through a sieve; put to the liquor three-quarters of a pound of sugar; when it is fine bottle it.

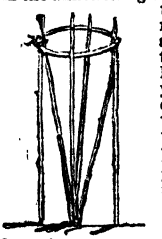
☞ Brandy, 1 gallon; raspberries, 2 quarts; sugar, ½lb.

RASPBERRY CREAM.—1. Rub a quart of raspberries through a hair sieve, in order to remove the seeds; mix the juice well with cream; sweeten it with sugar to taste, then put it into a stone jug, and whip it to a froth. As the froth rises, take it off with a spoon, and lay it upon a hair sieve. When there is as much froth as is required, put what cream remains in a deep china dish, and pour the frothed cream upon it, as high as it will lie on. 2. Take half a pound of raspberry jelly or jam, with the seeds taken out; whisk quickly three-quarters of a pint of rich cream, to which has been added the juice of a lemon. The jam must be sweetened with sifted lump sugar, and may be coloured with a very little cochineal; three-quarters of an ounce of gelatine must be previously dissolved in rather less than a quarter of a pint of water, and added to the cream at last. It must be put into the mould as soon as it begins to set. If required to be kept, it should be put into a crockery mould, that the colour may be preserved.

☞ 1. Raspberries, 1 quart; cream, sufficient; sugar, to sweeten. 2. Raspberry jelly or jam, ½lb.; cream, ¾ pint; lemon, juice of, 1; sugar, to sweeten; cochineal, to colour; gelatine, ½oz.; water, ¼ pint.

RASPBERRY, CULTURE OF.—There are many varieties of this plant; for a moderate-sized garden the best are *Woodward's red globe, Barnet, double-bearing, Cornwallis's seedling, Cornwallis's prolific, Lord Exmouth's red Antwerp, late-bearing Antwerp, yellow Antwerp, white Antwerp, Cornish, Siberian, late cane.* The varieties can be perpetuated by young sucker-shoots rising plenteously from the root in spring and summer, when these have completed one season's growth, they are proper to detach with roots for planting, either in the autumn of the same year or the next spring, in February or March, but not later than the middle of April. These new plants will bear some fruit the first year, and furnish a succession of strong-bottom shoots for full bearing the second season. New varieties are easily raised from seed; and they come into bearing the second year. All the varieties will succeed in any common mould, trenched about two feet deep and sufficiently manured; but the soil in which the raspberry bush best prospers and bears the finest fruit is a rich light loam. In forming a plantation, it is necessary that the respective heights to which the different varieties attain should be known. This will enable the planter to arrange them to the greatest advantage. For this purpose the tallest growers must be placed at the back, the middle growers next, and the shortest growers in front. By this mode of arrangement the shorter and the middle growers will receive their due proportion of sun, without being interrupted by those which attain the greatest degree of elevation. The

necessity of such an arrangement as this must be obvious to those who are aware of the advantage to be derived, in wet and cloudy seasons, in leaving this delicate and tender fruit fully exposed to the sun, and receiving a free and plentiful admission of air. In making such a plantation as this, it will be advisable, if possible, to have the rows extend from east to west. They should be four feet at least from each other; and supposing one row only can be allotted to each sort, and that six rows are to form the extent of the plantation; then the first or north row may be planted with the Cornish, the second with Woodward's red globe, the third with red Antwerp, the fourth with yellow Antwerp, the fifth with Barnet, and the sixth with double-bearing. The shoots in the first and second rows should be four feet apart; those in the third and fourth, three feet and a-half; those in the fifth and sixth, three feet. In planting, young suckers should be made choice of; and if abundant, three of these should be allowed to each stool, placing them in a triangle of six inches apart. If fruit is not wanted the first year, the plants will gain considerable strength by being cut down within six inches of the ground, as soon as planted, instead of leaving them three or four feet high in order to obtain from them a crop of fruit. In training, the earliest and finest fruit are obtained from canes planted beneath a south wall. After the stools are established, if fruit of the largest size be required, care must be taken to select the strongest canes, and a few of these only from each plant in proportion to its strength, shortening each to about four-fifths of its original height: these should be supported singly by a small stake to each. For general purposes stakes are unnecessary, as three, four, five, or six canes from the same stool may be tied together on their tip ends; this may be done so as to give each cane a bow-like appearance, which will allow more room for their laoteals to form than if tied up in a perpendicular manner. In open ground the best mode of training is in the form of round small hoops, as seen in the annexed figure. As a succession of



this very favourite fruit must always be desirable for the dessert-table, it may be prolonged considerably beyond its usual time, by cutting down some of the shoots wholly to within a few inches of the ground, instead of leaving the canes at four-fifths of their length. This operation may be practised upon both the red and yellow Antwerp, as well as upon several of the other varieties from which good crops can be obtained in August. The double-bearing varieties should have every alternate stool cut down annually: these will furnish an abundance of fruit, as late as September, and in a fine warm autumn even to a later period. In summer, the plants should be kept clear from weeds by hoeing between the rows; at the same time loosening the earth about the plants. Under this management the plants, if tolerably strong, will yield a moderate crop the first summer, and supply young stems for planting, in greater plenty and perfection, the following season, and so from year to year, the summer culture should be repeated. As the plants get established, let all straggling suckers between the rows, or from the extreme roots of single stools, be cleared out by hoeing, or twisted off to admit the sun and air freely to the fruit. Every winter or spring, it is necessary to cut out the dead stems, and to thin and regulate the succession of young shoots. This annual pruning may be performed any time during open weather, from November to the beginning of April. When kitchen-garden crops are cultivated between the rows, it is most convenient to do this as soon as the old leaves begin to decay. As to pruning indiscriminately in the open weather of winter, it sometimes happens that severe frosts immediately follow, and partially kill the plants; therefore it is safer to shorten the tender young stems early in spring. Cut out all the old dead stems clean to the bottom; and having selected from the strongest young shoots on each main stool, three, four, or five to be preserved for a succession of bearers, cut away the superabundant ones close to the ground. Let each of the shoots retained be pruned at the top, below the weak bending part; cutting them, in the smaller plants, to about three or four feet in length, and in the large sorts to the length of five or six feet. If any of the stems diverge irregularly or straggle much asunder, they may be tied together at top, and thus the strong ones will support each other; or the taller varieties may have the support of stakes. It has been found by experience that raspberries will not thrive long in the same spot of ground. Plantations in gardens, therefore, ought to be renewed frequently. To obtain fruit of a very large size, the best method is, other circumstances being favourable, to destroy all the suckers. The fruit of the different varieties comes in from the end of June or July till October or later. As it ripens it should be timely gathered for immediate use, because when fully ripe it will not keep above two or three days before it moulds or becomes maggoty, and unfit to be used. Raspberries may be forced by growing the plants in large pots plunged in the open garden, and the plants shaken out carefully and planted in front of the pits or houses annually.

RASPBERRY DROPS.—Press out the juice of some ripe raspberries through a piece of flannel or cloth, upon twice their weight of sugar, boil them till they crystallize when cold, then drop the sugar thus boiled upon white paper, or upon tin plates, and dry in a slow oven, or in the sun.

RASPBERRY EFFERVESCING DRAUGHT.—Take six pints of raspberry juice, filter till quite bright and clear, make a syrup with three pounds of sugar, and add six ounces of tartaric acid. Keep this in well-corked bottles. For a tumbler three

parts full of water, add two tablespoonfuls of the above syrup, and a scruple of carbonate of soda. This forms a most agreeable draught for summer.

RASPBERRY FLUMMERY.—Mix with half a pint of white wine vinegar one pound of preserved raspberries, let it boil for three or four minutes, stirring it constantly, strain it through a hair-sieve; dissolve an ounce of isinglass in half a pint of water; mix with it three-quarters of a pound of powdered sugar, add it to the strained raspberries; stir it all well together; boil and strain it through muslin, and put it into a shape. Turn it out when cold.

☞ White wine vinegar, ½ pint; raspberries preserved, 1lb.; isinglass dissolved in ½ pint of water, 1oz.; sugar, 3lbs.

RASPBERRY ICE.—To a pint of cream add an ounce of isinglass (dissolved in the smallest possible quantity of water), two tablespoonfuls of powdered loaf sugar, and a teacupful of raspberry jelly, made liquid. Mix all well together, put it into a mould, and let it be placed in a cellar, or any very cold place until wanted. This recipe, from the ease and expedition with which it can be prepared, will be found excellently adapted for family use when, from any cause, an extra dish of sweets is unexpectedly required. If no jelly should be at hand, raspberry jam may be strained through a piece of muslin to get rid of the seeds, and it will then answer the purpose quite as well.

☞ Cream, 1 pint; isinglass dissolved, 1oz.; sugar, 2 tablespoonfuls; raspberry jelly, 1 teacupful.

RASPBERRY JAM.—Bruise gently with the back of a wooden spoon, six pounds of ripe and freshly gathered raspberries, and boil them over a brisk fire for twenty-five minutes; stir to them half their weight of sugar, roughly powdered, and when it is dissolved, boil the preserve quickly for ten minutes, keeping it well stirred and skimmed.

RASPBERRY JELLY.—Bruise the fruit a little and place it high above a clear fire, that the juice may be gently drawn from it; it may remain thus for twenty minutes or longer without boiling, and be simmered for four or five minutes; strain and weigh it, boil it quickly for twenty minutes, draw it from the fire, add three-quarters of a pound of good sugar for each pound of juice, and when this is dissolved, place the pan again on the fire, and boil the preserve fast from twelve to fifteen minutes longer; skim it thoroughly, and keep it well stirred: the preserve will then require rather less boiling. When it jellies in falling from the spoon or skimmer, it is sufficiently done. Nothing of tin or iron should be used in making this preserve, as these metals will convert its fine red colour into a dull purple. A jelly for flavouring creams may be made as follows:—Take the stalks from some quite ripe and freshly gathered raspberries, stir them over the fire until they render their juice freely, then strain and weigh it; or press it from them through a cloth, and then strain it clear; in either case, boil it for five minutes after it is weighed, and for each pound, stir in a pound and a quarter of sugar reduced to a fine powder, sifted and made very hot; boil the preserve quickly for five minutes longer, and skim it clean. The jelly thus made will sufficiently sweeten the creams without any additional sugar.

RASPBERRY PASTE.—Mash a quart of raspberries, strain one half and put the juice to the other half; boil them for a quarter of an hour, put to them a pint of red currant juice, and let them boil altogether till the raspberries are done enough. Then put a pound and a half of double refined sugar into a clean pan, with as much water as will dissolve it. Boil it to a mass again, then put in the raspberries and the juice, scald and pour the mixture into glasses. Put them into a stove to dry, and turn them when necessary.

☞ Raspberries, 1 quart; red currant juice, 1 pint; sugar, 1½lb.

RASPBERRY PIE.—Place the fruit, picked and washed, into a flattish pie-dish, raising it high in the middle. Put in sufficient sugar, and cover with a rich light paste. Currants are frequently mixed with raspberries for making a pie, as they improve the flavour and add to the juice.

RASPBERRY PUDDING, BAKED.—Take a sufficient quantity of raspberry jam, a little good cream, the yolk of eight eggs well beaten, sugar to sweeten, and half a pound of clarified butter; beat the whole well together and bake in a dish lined with puff paste.

RASPBERRY PUDDING, BOILED.—Line a basin with a plain suet crust, and fill with the fruit, either preserved or prepared as pies and puddings. Pinch in the paste, tie a floured cloth over the basin, boil from two to three hours, and turn it out.

RASPBERRY RATAFIA.—Take three pints of raspberry juice, and half a pint of cherry juice; dissolve in these a pound and a half of refined sugar; let it stand some time, and then add three quarts of the best brandy; strain it, and when quite clear, bottle it. Put it into well-corked bottles.

☞ Raspberry juice, 3 pints; cherry juice, ½ pint; sugar, 1½lb.; brandy, 3 quarts.

RASPBERRY SPONGE.—Dissolve in a little water three-quarters of an ounce of isinglass, add to it three-quarters of a pint of cream, and the same proportion of new milk, half a pint of raspberry jelly, and the juice of a lemon. Whisk it well in one direction until it becomes thick, and looks like sponge, then put it into an earthenware mould and turn it out the next day.

☞ Isinglass dissolved in water, ¾oz.; cream, ¾oz.; milk and cream, ¾ pint; raspberry jelly, ½ pint; lemon, juice of 1.

RASPBERRY SYRUP.—Put any desired quantity of fruit into a pan or basin, and reduce it to a mash. Cover the basin or pan, so as to keep out dust or dirt, and put it into a warm place for three or four days, or until fermentation commences, so as to destroy the mucilage, the syrup would become a jelly in the bottles. Filter the juice through a flannel bag, and let it be clear. To a pint of filtered juice add two pounds of powdered loaf sugar, which put

into a preserving pan; place it on the fire, and stir the mass together until the sugar is dissolved. Take off all the scum as it rises. When cold, bottle it and cork close.

RASPBERRY TART.—Roll out some thin puff paste, and lay it in a patty-pan. Put in the raspberries, strew some fine sugar over them, cover with a thin lid and bake the tart. Mix a pint of cream with the yolks of two or three eggs well beaten, and a little sugar. Cut open the tart, pour in the mixture, and return it to the oven for five or six minutes. Another way is, to line the dish with puff paste, put in sugar and fruit, lay bars of paste across and bake the tart.

RASPBERRY VINEGAR.—Bruise a quart of fresh-gathered raspberries in a basin; pour over it a pint of vinegar, cover it closely; let it stand for three days, and stir it daily; strain it through a flannel bag; let it drop as long as anything will come from it, but do not press it; to a pint of the liquor put a pound of powdered loaf sugar, boil it for ten minutes and take off the scum as it rises. When cold, bottle and cork it securely. This is a very useful preparation to keep in a house, not only as affording the most refreshing beverage, but being of singular efficacy in complaints of the chest. A large spoonful or two in this case is to be taken in a tumbler of water.

☞ Raspberries, 1 quart; vinegar, 1 pint; sugar, 1lb. to each pint of liquor.

RASPBERRY WATER ICE.—Take a pint of strong syrup with half a pint of water. Mix, first rubbing the fruit through a sieve, and freeze.

RASPBERRY WINE.—Thoroughly wash, clean, and stone, three pounds of raisins, then boil two gallons of spring water for half an hour, as soon as it is taken off the fire, pour it into a deep stone jar and put in the raisins with six quarts of fresh raspberries, and two pounds of loaf sugar; stir the whole well together, cover the jar closely, and set it in a cool place, stir it twice a day; then pass it through a hair sieve, and a pound more of sugar, and put the liquor into a barrel; and when fine, which will be in about two months, bottle it off. To each bottle, put a tablespoonful of brandy or a glass of wine.

☞ Raisins, 3lbs.; water, 2 gallons; raspberries, 6 quarts; sugar, 3lbs.

RASPBERRIES, TO PRESERVE WHOLE.—Have a pan of sugar boiled to the *blow*. Place in a few, fine, unbroken, dry, but not over-ripe raspberries, boil them for a few minutes, and take them out with a skimmer without breaking them. Do more raspberries with the same sugar, and so on until all are done, putting them, when taken out, as dry as possible into preserving jars; lastly, pour over them the rest of the syrup, or some apple jelly. Put them by in closely-corked bottles.

RATAFIA.—A liquor prepared from different kinds of fruits. These fruits should be gathered when in their highest perfection, and the largest and finest chosen for the purpose. *For Red Ratafia.*—Take twenty-four pounds of black-heart cherries, four pounds of small black cherries, three pounds each of raspberries and strawberries. Pick the fruit from their stalks, and bruise them, in which state let them continue for twelve hours; then press out the juice, and to every pint of it add a quarter of a pound of sugar. When the sugar is dissolved, run the whole through a filtering bag, and add to it three quarts of proof spirit. Then take four ounces of cinnamon, an ounce of mace, and two drachms of cloves. Bruise these spices, put them into a still with a gallon of proof spirit and two quarts of water, and draw off a gallon with a brisk fire. Add as much of this spicy spirit to the ratafia as will render it agreeable; about a fourth is the proportion. *Dry or Sharp Ratafia.*—Take thirty pounds each of cherries and gooseberries, seven pounds of mulberries, and ten pounds of raspberries. Pick all these fruits clean from their stalks, &c., bruise them, and let them stand for twelve hours; but do not suffer them to ferment. Press out the juice, and to every pint add three ounces of sugar. When the sugar is dissolved, run it through the filtering bag, and to every five pints of liquor add four pints of proof spirit, together with the same proportion of spirit drawn from spices.

RATAFIA CAKES.—Blanch and pound with the whites of four eggs, a pound of Jordan almonds. Add to this two pounds of fine sugar, and pound these ingredients to a paste; then put in eight more whites of eggs. Beat the whole well together, and chop the biscuit from a knife-point on to wafer paper; bake them slowly on tins.

☞ Almonds, 1lb.; sugar, 2lbs.; eggs, 12 yolks.

RATAFIA CREAM.—In a teacupful of thin cream boil two or three large laurel or young peach leaves; when it has boiled three or four minutes, strain, and mix with it a pint of rich sweet cream; add three well-beaten whites of eggs; and sweeten with pounded loaf-sugar. Put it into a saucepan, and stir it gently in one direction over a slow fire till it be thick; pour it into a china dish, and, when quite cold, ornament it with sweetmeats cut out to resemble flowers.

☞ Cream, 1 teacupful; laurel or peach leaves, 2 or 3; cream, 1 pint; eggs, 3 whites; sugar, to sweeten.

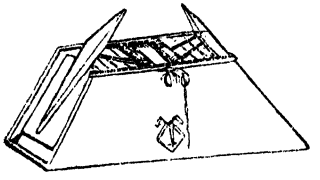
RATAFIA DROPS.—Blanch and pound with an ounce of fine sugar and a little water, four ounces of bitter, and two ounces of sweet almonds. Add to the almond paste, a pound of sugar, the beaten whites of two eggs, and a little noyeau. Beat the whole well, and when light, drop the batter from a biscuit-funnel on paper of the size of pigeons' eggs, and bake in tins.

☞ Sugar, 1oz.; water, sufficient; sweet almonds, 2ozs.; bitter almonds, 4ozs.; sugar, 1lb.; eggs, 2 whites; noyeau, to flavour.

RATAFIA PUDDING.—Blanch and pound in a mortar until they become a paste, four ounces of sweet, and a quarter of an ounce of bitter almonds with a dessert spoonful of water; then add an ounce and a half of fresh butter, melted with a little cream, two well-beaten eggs, a little nutmeg, sugar,

and brandy. Butter a cup or an earthenware dish, pour in the pudding and bake it. When done, turn out and serve with the following sauce. Take a wineglassful of white wine, half a glass of rum, a little grated lemon-peel, sugar to taste, and a pint of powdered cinnamon: stir this into some thick melted butter, and serve with the pudding.

RATS, TO DESTROY.—Rats prove to be the most troublesome and destructive kind of vermin both within and without doors. One of the best ways of destroying them in the house is as follows:—Melt hog's lard in a bottle plunged in water, heat to about a hundred and fifty degrees of Fahrenheit; introduce into it half an ounce of phosphorus for every pound of lard; then add a pint of proof spirit or whisky; cork the bottle firmly after its contents have been heated to a hundred and fifty degrees, taking it at the same time out of the water, and agitate smartly till the phosphorus becomes uniformly diffused, forming a milky-looking liquid. This liquid being cooled will form a white compound of phosphorus and lard, from which the spirit spontaneously separates, and may be poured off to be used again, for none of it enters into the combination, but it merely serves to comminute the phosphorus, and diffuse it in very fine particles through the lard. This compound, on being warmed very gently, may be poured out into a mixture of wheat, flour, and sugar, incorporated therewith, and then flavoured with oil of rhodium or not at pleasure. The flavour may be varied with oil of aniseed, &c. This dough, being made into pellets, is to be laid in rat-holes. By its luminousness in the dark it attracts the notice of the vermin, and, being agreeable to the smell and taste, is greedily devoured, and proves certainly fatal. The destruction of these animals in farmeries and gardens is a work of more considerable difficulty—the extraordinary numbers in which they muster, their extended field of action, and the out-of-the-way nests they build for themselves, frequently baffling the best-directed efforts. With regard to farmeries, the best method of warding off the visits of rats, is to have



the barn floor and roof constructed in such a manner as to prevent them obtaining a permanent harbour in the building. The next best step is, before the entire clearance of the barn, while yet a little corn remains, to prevent them quitting it, to close every part of the barn by carefully covering any holes there may be with sacks and tarpaulings, so as to prevent all access of the outward air, leaving only the door open for a few minutes while the process is going on. This done, some common iron chafing dishes should be placed upon the floor and in the bags, or, if they cannot be had, build up a few bricks, clay, or any rubbish that will secure a fire from spreading, leaving a cavity in the centre, and filling it up with charcoal. Then light the charcoal from the bottom, and when the heaps are all burning, quickly strew a good quantity of broken brimstone upon the top; retire immediately, shut the door fast, and leave the building entirely closed during the two following days. On opening it, the greater portion of the rats and mice will be found dead around the charcoal; and, although some of them may have been suffocated while in their holes, and if not discovered will occasion an unpleasant smell until their remains are dried up, still it will not last long. The operation should be repeated just previous to harvest, and if any opening be found into the barns while they are full, by the burrowing of the rats, brimstone matches should be inserted into them before they are stopped up. In gardens, the rat-trap may be used to advantage; this implement should generally be a box, or an enticing engine of some sort rather than a toothed iron trap, because, unless there is a great scarcity of food, it will not be allured by the ordinary bait; whereas a trap may be so disguised by straw, or moss, or leaves, and so scented by oil of anise, as not to be recognised by the rats until they are taken.

RAVEN.—Although the raven scarcely comes under the denomination of a cage bird, it nevertheless affords great amusement to keep, and repays the trouble if there be sufficient room for it. The raven

is not very choice in its food, and will eat anything that is ordinarily consumed at table, or the refuse of food generally. No one should attempt to keep a raven in a cage, or even in a small enclosure, as the wild spirit of the bird prefers freedom of

action. A careful watch should be kept upon it, as ravens are much given to mischief and theft.

RAZORS, PRESERVATION OF.—As the razor is a most important implement of the male toilet, the keeping it in a fit state for constant and immediate use is an important consideration. The best plan is to have a razor for every day in the week, for it is certain that the edge of a razor is much improved when the instrument has lain by for a few days. To keep a razor in good condition, it should be stropped after using, having previously been dipped in hot water and wiped perfectly dry. Dryness is essential to its preservation; and it is even a good plan to place the razor, after using, before the fire, and to put it away while hot. The mode of applying the razor to the beard is of no small importance. If it be applied flat against the face, the edge must be most keen; and even then, much of the finest hairs bend down and pass beneath it. On the other hand, if the angle at which the back of the razor is raised from the face be too great, the edge of the razor is more speedily turned, and not only requires more stropping, but is consequently more speedily worn out. The edge of the razor should be applied to the beard at the slightest possible angle, but to lay down any absolute rule upon this is impossible, and must be ascertained by observation and experience. It will, however, be easily understood, that the pain frequently felt in shaving very frequently arises from the razor not being applied at the most effective angle. Razors should always be kept under lock and key, not only to prevent accidents with them, but to keep them from being used for other than their legitimate purposes.

RAZOR STROP.—Several kinds of strops or implements for sharpening razors upon, have been from time to time invented. The best, perhaps, is one of American invention with four sides of different degrees of fineness, from the hone to smooth stropping. In any case, take care always to draw the razor smoothly and flatly from head to point along the strop. Do not draw first one way and push another. In general, one or two turns will be enough. Razor paste is the term applied to certain compositions employed on razor-strops to give them the necessary whetting surface. 1. Emery reduced to an impalpable powder, two parts; spermaceti ointment, one part; mix together, and rub it over the strop. 2. Jeweller's rouge, blacklead, and suet, mixed in equal parts. 3. Prepared putty-powder, one ounce; powdered oxalic acid, a quarter of an ounce; powdered gum, twenty grains; make it into a stiff paste with water, and evenly and thinly spread it over the strop with very little friction; this last will give a fine edge to the razor, and its efficiency is still increased by being moistened.

READING.—The employment of reading is one of the most agreeable and profitable exercises; and, when practised aloud, is beneficial in a physical point of view. To be able to read clearly and distinctly is an important acquisition, and one which is not only satisfactory to the reader himself, but capable of affording much agreeable entertainment to others. It is nevertheless to be regretted that this accomplishment is possessed by comparatively few persons, which is the more surprising from the fact of its being so easily attained. The truth is, that incorrect reading arises from carelessness and indifference, for, where a person is in earnest with the subject he is perusing, and brings to bear the commonest rules of elocution, he cannot fail to read well. The reader should bear in mind that every word, every letter carries with it a certain significance which, by being slurred over, fails to produce its intended effect, and in many cases totally alters the sense. Practising the art of reading aloud and alone will effect much good. In London and other large cities, public readers have been recently established, who select certain well-known pieces in prose and poetry, and read them to the audience: attending these readings, and listening with close observation to the reader, will serve to correct many errors which an ordinary reader never discovered before, and he will at the same time be able to judge how much greater is the effect produced, how infinitely clearer the sense becomes, and how much more telling the sentiment appears, when the piece under perusal is read by an accomplished elocutionist, instead of being slovenly delivered by an incompetent and careless reader. The physical advantages arising from reading aloud consists of the exercise which is thus given to the lungs. At the same time, the reader, when he finds his voice failing him, his throat becoming irritated, and his chest uneasy, should desist for a time, and resume his task after he has taken sufficient rest.

READY RECKONER.—Books: *Pocock's Banker's and Merchant's*, 2s. 6d.; *Wise and Simpson's Readiest ever Invented*, 5s.; *Collier's*, 1s.; *Leybourne's*, 2s. 6d.; *Masters'*, 1s.; *Smith's Barrack*, 1s. 6d.; *Christison's Complete*, 2s. 6d.; *English and Foreign*, 2s. 6d.; *Shelton's English and French Tables*, 2s. 6d.; *McDerment's Farmer's*, 5s.; *Harrison's, for Coal Trade*, 2s.; *Masters's Finding the Price*, 1s.; *Fordham's Maltster's and Farmer's*, 2s.; *Poole's Tons, &c.*, 2s. 6d.; *Hotson's General*, 8s. 6d.; *Scoffern's Gold*, 3s. 6d.; *Renton's Grazier's*, 2s. 6d.; *Fremlin's Hop-planter's*, 2s. 6d.; *Marshall's Index*, 2s. 6d.; *M'Culloch's Land Measurer's*, 2s. 6d.; *Machell's Customs Duties*, 2s. 6d.; *Dillon's Parish*, 4s.; *Poor Law Union*, 6s.; *Mallonson's Sharebroker's*, 5s. 6d.

REAPING.—Cutting down corn or pulse with a sickle, hook, or scythe, or by a reaping machine. The sickle is a light tool with a semicircular blade and a short handle; it generally has a notched or serrated edge, but sometimes it is made with a thicker back and broader blade, and with a smooth edge. In using either tool, the reaper takes a handful of corn in his left hand and cuts through the straw with the instrument in his right; he then lays it carefully upon a straw-band, placed upon the ground, and proceeds to cut more, until a sufficient quantity has been cut to form a sheaf; it is

then bound up, either by the reaper himself, or a person called a "bandster," who follows for the purpose, and will bind up for several reapers; the latter is by far the most expeditious mode of proceeding. The sheaves being cut and tied up, are placed upright in stooks or shocks of twelve each, upon the middle of each alternate ridge: the sheaves should be bound firmly together, but not so tightly as to exclude the air, for the more freely they are exposed to the air the sooner they will be ready to carry. The sheaves, when placed on the stooks, should rest upon their butts with their ears leaning against each other, but the bodies of the sheaves should be sufficiently separated for the wind to blow through them. Wheat dries quickly, and may be carried in two or three days if the weather be favourable: but barley and oats require to remain longer on the ground; only ten sheaves, therefore, are placed on the stook of these latter crops, and two others are placed lengthways upon them, their butts touching, and the ears spread out and bent down so as to form a shelter to those placed upright. The manner of stooking, as generally performed, is as just described, but many other plans are adopted. Sometimes the sheaves are placed in a circular form with and without hooding, and at other times the sheaves are set up singly. In many cases the corn is made up into small ricks and remains on the field for a length of time, being temporarily thatched. Grain should not be cut when it is wet, as such practice may cause it to sprout, especially if the weather be warm. The oat dries more rapidly than other species, and loses less weight. It does not suffer so much from being cut damp. Reaping should not be commenced before the sun has exhaled the dew. Corn should always be cut as low as possible, that no straggling ears be lost, nor the most succulent part of the straw. The scythe has of late years been much introduced for the purpose of cutting of corn, and is becoming general. It requires considerable expertness on the part of the mower, and is very hard work. The common scythe is the one ordinarily used, but made rather more strongly than usual, and the handle is not made with so great a curvature as grass scythes. If the crops be light, the corn will not fall evenly over the scythe; a cradle is therefore fitted to it for the purpose of gathering the stems and laying the swathe down evenly. The cradle is made of three light ash rods fastened to two upright iron rods, which are attached to the outer end of the scythe by an upright stem, the whole strengthened by a backstay of iron. Reaping machines are of various construction, that seen in the engraving is known as Hussey's. Another implement, termed the Automaton Reaper, operates as follows. It cuts in the same manner as others; it is fitted with a reel for the purpose both of inclining the grain towards the platform preparatory to being cut, and bringing it when cut on to the platform. The knife-bar is on the upper side, in the middle of the blade, and as far forward as the angles of the cutting will allow. The back part is cut zig-zag, and each alternate edge is levelled the other way and serrated: By this arrangement it is scarcely possible to choke, as the knife-blade resting on the

fingers, and the edges front and rear being in close contact with them, any matter accumulating upon the fingers will be picked off by the sharp points of either the front or rear edge of the knife. Sufficient corn for the sheaf having fallen on the board, a long arm comes round, carrying the rake, and falling across the entire bed of the machine, collects the grain into a compact bundle against a sheet-iron plate, and then, with a sheaf in the grasp, the rake and the iron plate immediately make a quarter-turn round to the back of the machine, the rake-arm is caused to stretch out behind, relaxing its grasp, and the sheaf falls in the line of the horse-walk, out of the way of the horses the next round, and the rake-arm takes a sweep back to its work. The gearing is compact and symmetrical, well boxed in, and protected from dirt. The team is relieved of weight and of the side draught, and it is also made to turn conveniently a square corner, which will be learned by a very little practice. The careful handling of the grain by the rake saves a small percentage over raking by hand. The length of cutting is regulated by a very simple arrangement, and the knife may be set close to the ground.

RECEIPT.—In law a written acknowledgment of money or other consideration having been received by one person from another. The unform receipt stamp for all sums above £2 is now 1d, which must be paid by the person giving the receipt. The receipt may be either written upon stamped paper, or an adhesive stamp may be affixed to the paper upon which it is written; but in the latter case, the person giving the receipt must himself cancel the stamp, by writing his initials, or some portion of his signature, over it, before he delivers it.

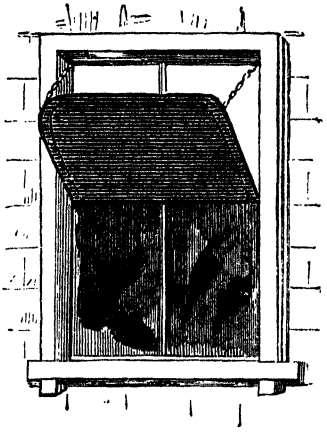
under a penalty of £10. A receipt cannot be made valid afterwards by affixing a stamp. A person giving a receipt for money amounting to £2 or upwards, without a stamp, subjects himself to a penalty of £10; and if when £2 or upwards is paid, a less sum than £2 be specified in the receipt with the view to avoid the duty, or any other contrivance or device be used for the like purpose, a penalty of £50 will be incurred. A party refusing to give a receipt, incurs a penalty of £10. Any note, memorandum, or writing whatsoever, given upon the payment of money, signifying that an account has been discharged, or that money has been paid, or credit given, is a receipt liable to stamp duty. If, therefore, the person receiving the money write, or by means of a stamp, impress on any bill of parcels or invoice the word "paid," "settled," "balanced," "discharged," or any words of a like import, intended to signify the payment of money, he must at the same time, if the paper be not already stamped, affix thereto an adhesive receipt stamp, and cancel the same by writing his initials, or some portion of his signature thereon. If he omit so to do, he will incur a penalty of £10, and the memorandum will be of no avail to the person to whom it is given. Entries made by persons receiving money in pass-books kept by the persons paying the money are receipts; and for every such entry made without affixing a stamp, and writing over the stamp, as hereinbefore stated, when the payment amounts to £2 or upwards, a penalty of £10 is incurred. On every occasion when money amounting to £2 or upwards is paid, whether it be on a sale by auction, or other ready money dealing, or the payment of wages, or on a transaction of any other kind or description, if any receipt be given it must be on a stamp; and so, likewise, must a receipt for money paid on account. Receipts, discharges, or acknowledgments given upon payment made by or with bills, drafts, notes, or other securities, are receipts chargeable with stamp duties. Any receipt, therefore, given on such an occasion, or any memorandum signifying that a bill, note, or draft, or other security has been given or delivered in satisfaction or on account of any demand, must be stamped. Receipts written on promissory notes, bills of exchange, drafts, or orders for the payment of money, duly stamped, or upon bills of exchange drawn out of but payable in the United Kingdom, are exempt from duty. When money due upon a bill or note is payable by instalments, the payments may be written off on the back of the bill or note by the holder; but if a receipt be given to the person making any such payment, it must be stamped. Letters by post acknowledging the safe arrival of any bills of exchange, bank notes, or other promissory notes, or other securities for money, are exempt from receipt duties; but if the receipt of money be acknowledged, a stamp is required. When advice is given by letter to a person that money has been paid to his credit, a letter in return, merely acknowledging the receipt of the letter containing such advice is not chargeable as a receipt; but any intimation that money has been received is liable. All documents or writings usually termed letters of credit are declared by law to be bills, drafts, or orders for payment of money, and chargeable with stamp duty as bills of exchange, drafts or orders. A letter of credit payable on demand must be on a penny stamp; but if the credit be not given until a specified day, or until advised, it is a bill of exchange payable after date, and must be stamped accordingly. Receipts for land tax, assessed taxes, and property and income tax, are exempted from duty. Physicians and barristers' fees are not liable to receipt duty, the money thus passing being a gift and not a payment.

RECOGNIZANCE.—The law has provided a method for the prevention of crimes as well as punishing them when committed. This preventive justice consists in obliging persons whom there is reason to suspect of future misdeeds, to enter into a recognizance to keep the peace, or be of good behaviour. A recognizance is an obligation, with one or more sureties, entered into before a court of record, or magistrate duly authorized, to do some specific act, as to appear at the sessions, keep the peace, or the like. In default, the recognizance is forfeited, and the party and his sureties may be sued for the sums in which they are respectively bound. Justices of the peace may demand security at their own discretion, or it may be granted at the request of a private individual upon due cause shown. Wives may demand it against their husbands, or husbands, if necessary, against their wives. Justices may bind a person over for offences against good manners, as well as against the peace. With respect to the exhibition of articles of the peace, there ought to be a reasonable foundation on the face of the articles to induce a fear of personal danger, before sureties of the peace are required. The court may require bail for such a length of time as they may deem necessary for the preservation of the peace. A recognizance may be forfeited by the commission of any of those acts which the party is bound to refrain from; or it may be discharged either by the demise of the Sovereign to whom the recognizance is made, or by the death of the principal party; or by the order of the court to which it is certified; or in case he at whose request it is granted, if granted upon a private account, will release it, or does not make his appearance to pray that it may be continued. No recognizance can be estreated without the written order of the justice, recorder, corporate officer, chairman, or justices of the peace, to whom a list of forfeited recognizances must be submitted by the proper officer.

REDOWA.—A dance composed of three parts distinct from each other. 1. The pursuit. 2. The waltz called *redowa*. 3. The waltz *à deux temps* executed to a peculiar measure, and which by a change of the rhythm, assumes a new character. The

middle of the floor must be reserved for the dancers who execute the promenade called the pursuit, while those who dance the waltz turn in a circle round the room. The position of the gentlemen is the same as for the waltz. The gentleman sets out with the left foot, and the lady with the right. In the pursuit the position is different, the gentleman and his partner face, and take each other by the hand. They advance or fall back at pleasure, and balance in advance and backwards. To advance, the step of the pursuit is made by a glissade forward without springing; coupé with the hind foot, and jeté on it; you recommence with the other foot, and so on for the rest. The retiring step is made by a sliding step of the foot backwards, without spring, jeté with the front foot, and coupé with the one behind. It is necessary to advance well on the sliding step, and to spring lightly on the two others, *sur place*, and balancing equally in the *pas de pursuite*, which is executed alternately by the left in advance, and the right backwards. The lady should follow all the movements of her partner, falling back when he advances, and advancing when he falls back. Bring the shoulders slightly forward at each sliding step, for they should always follow the movement of the leg as it advances or retreats; but this should not be too marked. When the gentleman is about to waltz, he should encircle the lady's waist as in the ordinary waltz. The step of the *redowa* in turning may be thus described: For the gentleman, jeté of the left foot passing before the lady. Glissade of the right foot behind to the fourth position aside, the left foot is brought to the third position behind; then the *pas de basque* is executed by the right foot bringing it forward, and you recommence with your left. The *pas de basque* should be made in three very equal beats, as in the mazurka. The lady performs the same steps as the gentleman, beginning by the *pas de basque* with the right foot. To waltz *à deux temps* to the measure of the redowa, the dancers should make each step upon each beat of the bar, and find themselves at every two bars, the gentleman with his left foot, and the lady with her right, that is to say, they should make one whole and one half step to every bar. The music is rather slower than for the ordinary waltz.

REFLECTOR.—An apparatus recently introduced for the purpose of superseding gas, &c., in the daytime, and diffusing daylight into all dark places, where it is impeded from the bad construction of premises, proximity of walls or buildings, or other local clauses. The best reflectors are manufactured of indestructible, untarnishable silver metal, shaped by machinery according to requirement, so as to impart both a refractory and diffusing power; the surface being covered with French glass, and rendered air and waterproof—the duration of these reflectors will extend over a period of many years; the only expense to be incurred, after the original outlay, being merely that of painting the frames once a year. The prices vary from £1 to £10 and



upwards, according to the quality and dimensions.

REGISTER OFFICES.—Establishments located in London and other large towns for the purpose of providing employers with servants, and servants with employers. The plan adopted is for the proprietor of a registry office to keep a book in which are entered the names, addresses, and specialities of parties who are seeking for situations, or who have situations to offer, and thus acting as a medium between the two. The person requiring a situation presents himself at the office, pays a small fee, and receives in return a list of names likely to suit his wants; should none of these answer his purpose, he calls again on the next and following days until he is successful. It will be readily understood that this mode of intercommunication, greatly facilitates the search made for the objects alluded to, and is of especial importance to those who are out of employment, and who cannot afford to waste either their time or their money. Great caution must, however, be observed in selecting an office of respectability, as some of this class have fallen into disrepute by conducting their business in a manner which is neither honest nor straightforward.

RELAXATION.—In order that the daily duties of life may be well and pleasantly performed, it is absolutely necessary that the ordinary routine of employment should be broken by occasional intervals of relaxation. No person can work continuously and unremittingly upon a set task for a protracted period of time, without prejudicing not only his own health, but the labour he is employed upon. And if there are instances on record of an amount of labour of almost superhuman extent being performed by one man, in a given space of time, the terrible sacrifices that have been made at the time.

and the consequences which have frequently resulted, ought to be sufficient to deter any one from following in the same path. Supposing even that no injury accrued from these unbroken spells of labour, on the score of saving of time, the system will be found defective. If a man work twenty hours to-day, he will probably not be able to work at all the following day, and on the next not more than five or six hours—making twenty-six hours in the three days; but if he worked ten hours the first day, he would be able to work for the same space of time on the second and third days, making in all thirty hours, or a gain of four hours in the three days. Carrying out this principle in a more extended form, it will be easily perceived that, as a general rule, the person who has his periods of relaxation will be enabled to work for more years than the incessant labourer, and thus extend his lifetime, not only for the operations of his mind and his hands, but also for the enjoyment of the comforts and pleasures of life which Providence has assigned him. In taking relaxation, one grand principle should be followed, in order to derive unalloyed advantage from it, and that is to divest the mind entirely from all thoughts, schemes, or plans in connection with everyday occupations, and to live and move only in those scenes which have been resorted to for the purposes of relaxation.

RELIEF, PARISH.—Commissioners of the poor law have to make regulations as to the relief to be given to able-bodied persons out of the workhouse; all relief given contrary to such regulations to be disallowed: but overseers or guardians may, under special circumstances, delay the operation of such regulation for thirty days, reporting within ten days after the cause of such delay to the commissioners. If commissioners approve of such delay, they may peremptorily fix a day, from which all relief granted contrary to these regulations shall be disallowed; still, in cases of emergency, relief may given, provided a report of the same be made to the commissioners within fifteen days after, and they approve of such departure from their regulations. Where guardians, select vestries, or similar bodies have been established under this, or any other general or local act, no relief is to be given except as directed by them, subject to the control of the commissioners. But in sudden or extreme cases, overseers may give temporary relief to persons, whether settled or not in the parish, in articles of absolute necessity, but not in money. If overseers neglect or refuse to give such casual relief, justices may order it; and overseers disobeying such order are liable to a penalty of £5. Justices may also give an order, under like penalty, for medical relief in cases of dangerous illness. In any union formed under the Act, two justices may order relief to be given out of the workhouse to any adult person wholly unable to work, from old age or infirmity of body; but justices must certify in their order as to inability to work, and the pauper desire such out-door relief. All relief given to a wife or children is considered relief given to the husband. A husband is liable to maintain the children of his wife born before marriage whether legitimate or illegitimate, till they attain the age of sixteen, or till the death of their mother; such relief as commissioners may direct to be considered as a loan, for which the wages of recipient may be subsequently attached in the hands of his employer. A married woman may be relieved, the same as a widow if her husband be beyond sea, in the custody of the law, or confined in a lunatic asylum; but not to affect future liability of a husband for such relief. A widow with a child dependent upon her, and not having had an illegitimate child since the commencement of her widowhood, may be relieved, though not in the parish of her legal settlement. An order for paying the whole or part of the cost of maintenance of a lunatic married woman, in any lunatic asylum, and chargeable to any parish, may be made upon her husband.

REMOVING HOUSEHOLD FURNITURE, PERSONAL EFFECTS, &c.—This is an undertaking of some importance, and requires to be conducted with great care and circumspection. If proper caution is used, little or no damage will accrue; but if, on the other hand, carelessness is displayed, several pounds worth of damage is likely to be the consequence. For several days previous to removal, various articles in different parts of the household should be consigned to their respective packages; then the crockery and glass should be carefully stowed away in hampers, packed in hay; in order that this may be performed properly, it will be as well to engage the services of a person to remove the furniture who is accustomed to this kind of work. This done, all ornaments, knick-knacks, and fancy articles should be packed in boxes by themselves, or stowed away in drawers. It is to be observed, however, that every package as it is closed should have the contents indicated outside, so that, when the time of unpacking arrives, there need be no confusion or vain searching for some articles, the destination of which is uncertain. Perhaps the most comfortable way of removing is to send one portion of the things to the new abode a day or two previously to the remainder coming; this will afford time to set some of the rooms in order, and will economise labour and time. It will be found an excellent plan to have the carpets of the sitting-rooms already laid down, so that the various articles of furniture may be at once placed in their assigned positions without any after-moving; mirrors, looking-glasses, pictures, musical instruments, &c., should be placed in spring vans by themselves, to prevent the jolting motion from breaking, or otherwise injuring them. When a bedstead is taken down, the screws, nuts, &c., should be carefully placed away, so that they may be found in a moment; for the want of this forethought much delay and inconvenience is frequently occasioned. The various articles of bedding should be rolled up in the bed from which

they were taken, and the whole tied up in a soiled sheet or curtain: everything will be thus ready to the hand when it is wanted. All articles which are likely to be required for immediate use, upon arriving at the new abode, should be packed by themselves, and placed last in the van, so that they might be taken out and carried to some place handy for use. The best time to commence removing is very early in the morning, the job is then likely to be finished before dark sets in. If this cannot be done in that space of time, it is better to have an extra day or two, rather than allow the furniture to be damaged through being removed hastily in the dark. Removing is generally an expensive job; but there is a way of conducting it much more economically than is generally employed. Thus: a few days before the removal takes place, send for some respectable van proprietor in the neighbourhood, conduct him over the house, show him the articles to be removed, tell him where you wish them to be taken to, and ask him how much he will do the whole for. If he answer that he will do so as reasonably as possible, do not receive such reply, but tell him that you must have an understanding upon the point, and that, if he objects to this mode of business, you will send for some other person who will not object. This will, doubtless, have the desired effect, and you will, in all probability, get the business done much more expeditiously and cheaper than if it were left to the man to charge for vans, horses, and men at any rate that he should deem proper. If any of the van proprietor's assistants should display recklessness and carelessness in moving or carrying your furniture about, object to it at once, and give both the men and master to understand that you will not suffer your property to be destroyed from sheer wantonness.

RENNET.—A substance used in the making of cheese. To prepare it, take out the stomach of a calf as soon as killed, and well scour it inside and outside with salt, having previously cleaned it of the curd which is always found in it. Let it drain for a few hours, then sew it up with two handfuls of salt in it; or stretch it on a stick well salted; or keep it in the salt wet. When required for use, soak a portion of it, which may be employed several times by using fresh water.

RENT.—The sum of money or other consideration issuing yearly out of lands or tenements paid by the occupier to the owner. Rent is demandable and payable any time between sunrise and sunset. Under ordinary circumstances, rent is considered due every three months, upon one of the quarter days. Weekly or monthly rent is payable weekly or monthly; but if the parties let it run to a quarter, and it is then paid as a quarter's rent, the tenure will become a quarterly one. For the non-payment of rent on the day it is due, the law has furnished landlords with several methods of recovering it, the chief of which are:—1. By action of law. 2. By ejectment. 3. By distress on the premises. The last is most commonly resorted to. Distress is a remedy given by the legislature to a landlord, by which he is empowered to seize the goods of his tenant on the premises, to sell the same within a certain period, and thus to reimburse himself for the rent in arrear, and the charges consequent on the distress. In general, all chattels found on the premises, whether the property of a tenant or a stranger, may be distrained. But dogs, rabbits, poultry, fish, or things of a wild nature; things on the premises in the way of trade, as horses at a forge, the cattle and goods of a temporary guest at an inn (but not carriages or horses at livery); the tools and implements of a man's trade in actual use; the books of a scholar, or the axe of a carpenter; wearing apparel, when upon the back; a beast at the plough, or a horse a man is riding upon; a watch in a man's pocket, pawnbrokers' duplicates, deeds, writings, or anything unsaleable; also loose money. None of these things can be taken by distress. To these heads of things not distrainable may be added all goods in the custody of the law whether as being already distrained or taken in execution; but, in the last case, so long as they remain on the premises, the landlord has a beneficial lien on them. Nothing can be distrained which cannot be returned in as good a state as when taken, as milk, fruit, and the like. Distresses must be proportioned to the sum distrained for. If a man take unreasonable distress, he may be heavily fined. Distress must be made in the day time, and not till the day after the rent is due. If made after the tender of money, it will be illegal: and though the tender be made after the distress, but before it is impounded, the landlord must deliver up the distress, and the expenses, if any, must be paid by him. The place where the distress is deposited in security, or, as it is termed, impounded, may be on such part of the premises as is most convenient; but, if the goods distrained are removed, notice must be given of the place where, and such notice contain an inventory of the goods distrained. When premises are held at will, or for less than seven years, and possession is legally determined, and there is no rent, or the rent is under £20, a constable may give possession after notice and application to a magistrate. Any constable of the Metropolitan Police Force may stop and detain, until inquiry has been made, all carts and carriages employed in removing the furniture of any house or lodging between the hours of eight in the evening and six in the morning, or whenever the constable has good grounds for believing such removal is made for the purpose of evading the payment of rent. In the case of landlord and tenant, where half a year's rent is in arrear, and the landlord or lessor has a right to re-enter for non-payment, he may bring a writ of ejectment; and, on proof that there were not sufficient goods to satisfy distress, he shall recover judgment and execution; but on the tenant's paying all rent and costs before trial, the proceedings are to cease. The landlord's former remedies, however

are saved. Where a tenant at rack-rent, or at full three-fourths of the yearly value, deserts his premises, being half-a-year's rent in arrear, without leaving sufficient distress—and though a man is in possession—two justices may, after fourteen days' notice publicly affixed on the premises, put the landlord in possession; and the lease, if any, is afterwards void.

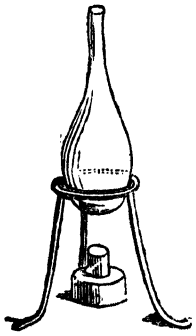
REPORTER.—A person employed in a literary capacity on the public journals, to give an account of various events which pass under their notice. Notes of what transpires at the time are taken in shorthand by the reporter, and re-written by him at a subsequent period. The qualifications for a reporter are a quick ear, a ready apprehension, and a facile hand. In addition to this he should be a person of gentlemanly bearing and good address, as these are likely to procure him admission into places, where it is necessary to use a little persuasion to gain admittance. The income of a reporter almost wholly rests with himself; if he is active and energetic, and really proficient, he will be able to earn a very respectable livelihood.

RESERVOIR.—A conservatory of water. The husbanding of water is now becoming a subject of peculiar interest to the agriculturist. This arises from its scarcity in many districts, in consequence of the improved drainage of the land, and from the many uses to which machinery may be applied in farming operations by the agency of water power. The construction of reservoirs must resolve itself into the following heads:—first, where a sufficient quantity of water can be diverted directly from the channel of a stream or river. Second, where the supply is to be obtained from drainage, which maintains a stream during part of the year, but which stream fails during the summer months. Third, where there are grounds affording a favourable situation for the construction of a reservoir, but through which there is no natural stream passing. Previous to the formation of a reservoir, the following conditions must be taken into consideration: the annual average fall of rain and dew balanced against the evaporation; the extent of ground from which the water is to be derived; the supply and purposes for which it is required, and whether the country is liable to heavy floods. The following substances will be necessary for the embankments:—grout, a thin description of very old mortar, sufficiently fluid to run into the irregular spaces between the stones in rough facings. Concrete, or artificial stone, which is a compound of coarse and fine gravel with about one-sixth or eighth part of slaked lime and water, laid in regular layers of six inches in thickness, each layer being grouted and instantly hard rammed down. Sheet piling, which is formed by driving flat stakes into the ground, having their edges placed close together, and which should be from eight to twelve inches broad. If they are always under water, beech wood will be found well calculated for this purpose, and it should be charred. Lastly, puddles of moistened and well-pounded clay, laid down in layers.—See POND, TANK, &c.

RESINS.—Vegetable juices, which are solid, are not soluble in water, but dissolve in alcohol; they are generally brittle, and more or less transparent. The resins best known and which are used in medicine, are left after the distillation of the essential oil of turpentine; they vary in appearance, according to the mode in which the distillation has been conducted. Resin is only used in medical practice, at present, as an addition to plasters.

RESPIRATORS.—Instruments employed to protect the air-passages from the direct effect of the atmosphere, more especially when it is misty and cold. These instruments are without doubt beneficial in many cases. The principle on which they are constructed, is that the warm breath passing out from the lungs, should impart its heat to a number of small closely set wires, this heat being taken up at the next inspiration, by the cold air, in its passage through those wires to the lungs. Thus in many cases of chest affection, these instruments furnish a means of protection of the highest value, particularly for those, who, suffering from delicacy of the lungs, cannot, by reason of their avocations, avoid exposure after nightfall or to cold or foggy air of any kind. When a means of protection only is required, it may be obtained by placing some article across the mouth on the same principle as the respirator.

RETORT.—Vessels used for distilling on a small scale. The materials are put into the retort, to which heat is applied; and the fluid distilled, after rising in vapour and condensing, pours into a receiver, which is kept cool. The thin pint Florence flasks, in which we receive olive oil from Italy, are extremely useful for many operations where heat is employed, as their thinness enables them to resist sudden changes of temperature better than our flat-glass flasks: but they should be chosen as free as possible from knots and flaws, and should be carefully handled, as they are not strong. The engraving represents boiling in a flask, placed upon a stand made of thick wire. The flasks when got from oilmen are generally oily. They may be cleaned by putting a little alkali in the water to wash them; but it is better to pour in a little strong nitric acid, or some oil of vitriol, and then heat them over a lamp; after this everything will come away, on washing with water.



RETRIEVER.—A species of dog which owns no fixed parentage, but may be generated by any congenial varieties, as the spaniel and Newfoundland, the spaniel and

poodle, &c. One parent, at least, should be stiffly coated, tough skinned, and moderately high on the leg; and it is also essential that both parents be hardy, of excellent scent, and zealous in the pursuit of game. It is of the first consequence that the retriever be under such command, as never to stir in pursuit of any game until a signal is made for him to start. It is not so difficult as might be supposed, so to break and tutor a dog of mixed breed, that he should make a moderate pointer, a still better setter, and a handy hunter in cover in pursuit of wounded game.

RHEUMATIC GOUT.—The disease which is sometimes erroneously called by this name, is rheumatic fever; and the local affection of the toes and feet still more generally believed in, is nothing more than rheumatism attacking the smaller joints, where, from the extreme pain, the soothing system is found more conducive to recovery than the stimulating; that is fomentations of chamomile and poppy-heads, and the occasional employment of doses of laudanum, from fifteen to twenty drops, two or three times a day.

RHEUMATISM.—A very painful disease which affects the muscles and joints of the human body, chiefly the larger joints and most important muscles, as those of and around the shoulder, hip, knees, and back. Rheumatism is divided into acute and chronic; or that condition, when the disease is in vigour and freshness attended with extreme pain, and more or less of general fever, and that state, when the system, by long acquaintance with the disease, has become familiar to its attack, and it comes on from any trifling exposure to cold, and after affecting a larger or smaller surface, declines of its own accord—all the symptoms, however, being materially lighter than in the acute state. Besides being acute and chronic, rheumatism is very often both general and local, and this, under both the previous conditions, and the diseases known as lumbago and sciatica, are merely forms of acute or chronic *local* rheumatism.

ACUTE RHEUMATISM, OR RHEUMATIC FEVER, is a disease which, in many of its symptoms, strongly resembles inflammatory fever, and usually commences after the languor, restlessness, and shivering, which precede all febrile actions, and is attended with great heat, much thirst, headache, a quick bounding pulse, white tongue, constipated bowels, and acute pain either confined to one or two parts, or more generally diffused over the body. There is at the same time an oppression in the breathing, the abdomen is often tense and tumid, and the secretion from the bladder, scant, and of a deep red colour; while, from the surface of the body a perspiration breaks out, which, though unattended with relief, by its peculiar acid smell defines the disease, and affords a good diagnosis, before asking the patient a single question. Upon entering the room the air seems redolent of stale vinegar, and this fact, while helping the physician to a suggestion of the disease, serves to define the attack from inflammatory or any other form of fever. Another characteristic and distinctive symptom of this disease, is the increase of pain in the course of the muscles on any attempt to move the patient into another position. The symptoms, if from the first unrelieved, gradually increase in intensity; and the pulse in such cases becomes, in addition to its velocity, hard and jerking. In all cases the symptoms are aggravated at night, and remit their violence in the morning. The pain though sometimes intense, is not always continuous, it is often only partial in its situation, and sometimes abates for hours, but in all cases it is the *last* symptom the patient loses. The disease after a course of from fifteen to thirty days subsides, often leaving one or more members in a state of chronic tumefaction.

The causes that induce rheumatic fever, are generally exposure to cold damp air, or transitions from a warm moist atmosphere into a cold or wet one, and the period most liable to an attack that of youth and vigorous manhood, the full-bodied and the active, rather than the spare and the torpid; and men more frequently than women. The only other disease with which rheumatism can be confounded, is gout, and from this it can always be known by the indigestion and little constitutional disturbances which always precede gout; and lastly, by that disease attacking the *small joints*, as the toes or fingers, instead of, as in rheumatism, the shoulder, knee, or hip.

Treatment.—Bleeding has always been regarded as the chief if not sovereign remedy in this disease; but as depletion is known to favour that dangerous state known as *metastasis*, or a sudden removal of the disease from one part to another; and, not infrequently, from the surface to some internal organ, bleeding should, therefore, if possible, not be repeated, the physician depending upon other means to effect the depletion necessary. Indeed, in many cases, the extraction of blood from the system is quite uncalled for, as all its benefits can be obtained by less serious, and equally efficacious remedies, and by adopting the following mode of treatment—one that will generally be found sufficient to render the lancet quite

unnecessary; or should bleeding in the first stage have been adopted, it may be employed with equal advantge after; only in that case, it will be less requisite to give the aperient pills in such large doses. Take of

Powdered nitre	1 drachm.
Tartar emetic	4 grains.
Camphor water	10 ounces.
Laudanum	2 drachms.

Mix. Give two large tablespoonfuls every three hours, apply a bottle of hot water to the feet, and administer two of the following pills an hour after the first dose of the mixture, and one every six hours after, till an effectual action is excited in the bowels, when they are to be discontinued. Take of

Compound extract of colocynth	1 scruple.
Calomel	15 grains.
Camphor, powdered	4 grains.
Croton oil	2 drops.

Mix thoroughly together, make into a mass, and divide into six pills. Should the pain continue excessive, and the patient be debarred from sleep by the nightly exacerbation, either twenty-five drops of laudanum, in half a wineglass of water, with a teaspoonful of spirits of sweet nitre, is to be given to him, if an adult, at bed-time; or else ten grains of the Dover's powder in a little gruel; and should it be required (one or the other), repeated at night for two, three, or more occasions, as may be needed; the patient, during the day, reverting to the mixture and an occasional pill, sufficient to excite one or two actions in the twenty-four hours. Thin gruel, lemonade, or linseed tea as a diluent, are to be used frequently to quench the thirst, and a diet of the least solid or exciting kind established till all the febrile symptoms are subdued. After a lapse of from four to twelve days, the inflammatory stage, or the acute form of the disease, will generally have been passed through; after which, the treatment assumes a different form, such as is described under the head of CHRONIC RHEUMATISM, though this term strictly signifies a disease of considerable standing; for the sake of perspicuity, that condition of the system existing at the termination of the acute form, has been classed under it, which, though not correct as to fact, is perfectly so as respects treatment, which is analogous in all conditions not attended with inflammatory fever. In chronic rheumatism, the inflammation and the pain are both confined to the locality or part, and the object of the treatment is to allay that pain by reducing the inflamed condition of the muscle or member. This is effected either by internal remedies, or what are called constitutional means, or through friction, by producing counter-irritation, or an artificial inflammation in the parts of the body immediately above the suffering place; or else by a judicious blending of the two modes of practice.

When the fever, or the acute stage has been subdued by the means already mentioned, and a part of the body remains swollen and tender, or when in old cases this condition comes on without other symptoms, the following mixture is to be given, and the part carefully guarded from the cold.—Take of

Solution of acetate of ammonia	2 ounces
Wine of colchicum	½ ounce
Syrup of saffron	2 drachms
Camphor water	3½ ounces

Mix, and give a tablespoonful every three hours, and one of the following pills every night an hour before bed-time.—Take of

Ipecacuanha	3 grains
Acetate of morphia	1 grain
Liquorice powder	10 grains

Mix well, form into a mass with conserve, and divide into six pills.

When the health is debilitated, and the appetite defective, a grain of quinine made into a pill may be taken an hour, before each meal for a succession of days. If this course is not marked with early benefit it will be necessary to employ friction, which may be carried on concurrently with the medicine, and the best agent for this purpose is the camphorated oil, which is to be rubbed gently but steadily in with the hand for several minutes three times a day, after a few days, or in old standing rheumatisms, increasing the strength at first by adding a third part of turpentine to the camphoretted oil, and finally another third of spirits of hartshorn. Mustard plasters and even blisters are sometimes employed in cases of inveterate rheumatism, but the steady and judicious use of a stimulating embrocation with a hot bath, friction with the flesh brush, warm clothing and exercise, will in almost every case cure a chronic rheumatism without the necessity of either rubifacient or blister.—See EMBROCATION, LUMBAGO, and SCIATICA.

RHODODENDRON.—A genus of highly-prized evergreen shrubs, which, in addition to the beauty of the foliage, bear large and showy flowers. All the species thrive best in a fresh soil mixed with sand,

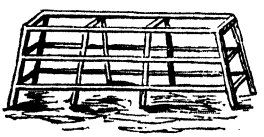
in a moderately shaded damp situation, with an eastern or northern exposure; they may be propagated by seed, by layers, or by cuttings. The seed is either procured

from America, or sown in this country; it is of very small size. Early in spring the seed is sown in pans of peat earth, which are then placed in the shade, or in winter put under a cold frame for protection. As soon as the plants fairly come up, they must be pricked out into pots or beds: and after two years, they are to be again transplanted into wider spaces, where they may remain till required for their final destination. They commonly flower from the fourth to the seventh year of their age. In raising from layers the young shoots only are used, which may be laid down in June and July, when in full growth, or in autumn. By the former plan, a year is gained, as the shoots will be rooted, and may be removed by the succeeding winter or spring; although some kinds require two years to form a sufficient number of roots. The plants when removed may be put into beds, and protected during the first winter with mats.

RHUBARB COMPOTE.—Take a pound of the stalks after they are pared, and cut them into short lengths; have ready a quarter of a pint of water boiled gently for ten minutes with five ounces of sugar, or with six, should the fruit be very acid. Put it in, and simmer it for about ten minutes. Some kinds will be tender in rather less time, some will require more.

☞ Rhubarb, 1lb.; water, ¼ pint; sugar, 5 or 6ozs.

RHUBARB, CULTURE OF.—There are several species and varieties in cultivation of this plant. All sorts may be raised either from seed or by dividing the roots. If from seed, which is the best mode, sow in light deep earth in spring; and the plants, if kept eight or nine inches asunder, will be fit for transplanting in autumn, and for use next spring. When the roots are divided, care must be taken to retain a bud on the crown of each section; they may be planted where they are finally to remain. When a plantation is to be made, the ground, which should be light and rather sandy, but well manured, should be trenched three spits, or as deep as the subsoil will admit, adding a good manuring of well rotted hotbed dung. Then plant in rows three feet wide by two feet in the rows. When manure, is applied, it should be buried not less than from two to three feet, that the extremities of the roots may derive benefit therefrom. The plants should be set out singly, and not in threes, as is so often done. For the first year the ground between the rows may be cropped with lettuce, turnips, or similar low-growing crops; but after the second year the leaves will cover the whole space, and require it also for their full development. From the depth to which the roots extend subsequent manurings will have little effect upon them; therefore, in preparing the ground for a new plantation, it should be enriched to the depth recommended above; and if a liberal supply of broken bones be incorporated with the manure, so much the better, as they consume slowly. The after culture required is very little more than keeping the ground free from insects, occasionally stirring it during summer with a three-pronged fork, and adding a dressing of well-rotted manure every autumn and spring, stirring in the earth as deep as possible. Such a plantation will continue good for many years. Some cultivators never allow the flower-stalks to produce flowers, and others cut them over as soon as they have done flowering, to prevent the plants from being exhausted by the production of seeds. The former seems the preferable method, as the flower-stalks of plants cannot, like the leaves, be considered as preparing a reserve of nourishment for the roots. For forcing rhubarb, plant a single row three feet apart on ground that has been trenched two spades deep and dressed with well-putrefied dung at the time. The forcing may commence in December: first cover either with sea-kale or common garden pots (twelves), but chimney pots are still better, the leaf-stalks becoming much longer and finer, and envelope them with fermenting dung. A frame is much less objectionable, formed by driving stakes into the ground on each side of the bed alternately with the plants. These are to be three feet high above ground, and the space between the two rows of stakes two feet at the bottom, but approaching each other and fastened by cross pieces, so as to be only fifteen inches apart at top. To the sides and top stout laths are fixed, as in the accompanying engraving, to prevent the manure falling on the plants. The dung may be either fresh, or that which has already undergone fermentation, placed all round the frame eighteen inches thick, and the top covered with long litter. The temperature in the



interior should have a range of from fifty-five to sixty degrees. If it rise higher, two or three large holes made through the top soon correct it. Rhubarb may be forced without extra pots or frames, by merely covering the plants six inches deep with light litter, care being taken that the plants are not injured. Another mode of forcing is to place in the winter as many plants as necessary in large deep pots, each pot receiving as many as it can contain, and the interstices entirely filled up by fine sandy loam washed in. The tops of the roots are placed on a level with each other, and about an inch below the surface. These being covered with inverted pots the same size, may be placed in a vinery or hotbed, and on the approach of spring any time after January, any room or cellar will be sufficiently warm. If copiously supplied with water, the plants will vegetate rapidly and vigorously, and each pot will produce

three successional cuttings, the first two being the most plentiful. As soon as the third is gathered, the roots may be changed, and those removed replanted in the ground, when they will attain sufficient strength to be forced again in a year's time. If not, it is of little consequence, for year-old roots raised from cuttings, or even seed sown in autumn, are sufficiently strong for use. In gathering the crop, during the second year after planting, a few of the largest and first-formed leaves, with their foot-stalks attached, may be gathered for use; but the gathering should not commence too early in the season, because in that case the plants would be weakened. From the third year as long as the plantation lasts, it may be gathered with freedom. A plantation in a good soil, and not over much deprived of its foliage, will last from ten to fifteen years; but the former period is more consistent with good management, because plants under that age will be more vigorous, and this will admit of a rotation taking place in the ground. When the leaves are about half expanded, they may be taken off for use; but where the largest returns are expected, as in the case of market-gardens, they should be allowed to attain their full size. In removing them, they should be pulled off close to their base, and not cut, to prevent an unnecessary escape of sap, which in all succulent plants flows more copiously from a clean cut than from one slightly lacerated or torn; the foot-stalks should then be separated from the leaves, and tied up in bundles of from six to twelve each, in which state they are fit for the kitchen. Seed may be obtained frequently from two year old plants, and always from three year old. It must be gathered as soon as ripe, and great care taken that none is scattered over the beds, for the plants thence produced often spring up, and greatly injure the old plants by growing unobserved amongst them.

RHUBARB DUMPLINGS.—Line a tin basin with a plain suet crust, and fill with the fruit. Pinch in the paste, tie a floured cloth over the basin, and boil them for two or three hours; then turn out.

RHUBARB FOOL.—Scald a quart of rhubarb, carefully peeled, and cut into pieces an inch long; pulp it through a sieve, sweeten, and let it stand to cool. Put a pint of cream or new milk into a stewpan, with a stick of cinnamon, a small piece of lemon-peel, a few cloves, coriander-seed, and sugar to taste; boil for ten minutes. Beat up the yolks of four eggs, add a little flour, stir up the cream, set the whole over the fire till it boils, stirring in the meantime. Remove and let it stand till cold. Mix the fruit and cream together, add a little nutmeg, and serve.

☞ Rhubarb, 1 quart; cream or milk, 1 pint; cinnamon, 1 stick; lemon-peel, small piece; cloves and coriander-seed, to flavour; sugar, to taste; eggs, 4 yolks; flour, to thicken; nutmeg, to flavour.

RHUBARB PASTY.—Make a hot crust, with dripping or lard melted in boiling water: roll it out quickly, and stamp it so as to be of a semicircular form when turned over. Lay rhubarb in the crust, with sugar to sweeten; add a little ginger; double up and pinch the crust; trim the edges, and bake the pasties in a moderate oven. If there be icing at hand, they may be iced.

RHUBARB PIE.—Peel off the skin from stalks of young rhubarb, and cut them obliquely into pieces of about an inch and a half. Some kinds need no peeling. Stew them slowly in sugar, or in butter, and a little water till soft; sweeten and make them into a covered pie.

RHUBARB PRESERVED. — Take a quart bottle with a wide neck, and cut the sticks of young rhubarb small enough to go into the bottle; add powdered loaf sugar, and tie a piece of bladder tight round the neck; put as much water into the copper as will immerse the bottle, and make the water to boil just over the bladder; then take out the fire and let the bottle remain till cooled; take them out and place them on a dry shelf.

RHUBARB PUDDING. — Put several sticks of rhubarb, peeled, into a stewpan, with the rind of a lemon, a stick of cinnamon, two cloves, and as much moist sugar as will sweeten it. Set it over the fire, and reduce it to a marmalade; pass it through a hair sieve; then add half a nutmeg grated, a quarter of a pound of fresh butter, the yolks of four eggs, and the white of one. Mix all well together; line a pie-dish with good puff paste, put in the mixture, and bake it for half an hour.

☞ Rhubarb, sufficient; lemon, rind of 1; cinnamon, 1 stick; cloves, 2; sugar, to sweeten; nutmeg, half of 1; butter, ¼ lb.; eggs, 4 yolks, 1 white.

RHUBARB SHERBET. — Boil six or eight sticks of peeled rhubarb for ten minutes in a quart of water; strain the liquor into a jug, in which is the peel of a lemon cut very thin, and two tablespoonfuls of clarified sugar. Let it stand for five or six hours, and it will then be fit to drink. In summer this will be found a very refreshing and agreeable drink.

RHUBARB SOUP.—Peel, clean and blanch a bundle of rhubarb, cut the stems into inch lengths, and put them to two quarts of good veal or beef gravy, with two or three onions, a few thin slices of bread, crust and crumb together, salt and cayenne; skim off all the fat and scum; simmer till tender; steam and serve with toasted sippets.

RHUBARB TART.—Strip off the peel, and if the rhubarb is large cut it into two or three strips, and then into pieces about an inch long; sweeten well with brown sugar, and cover the dish with paste.

RHUBARB WINE.—Take five pounds of rhubarb cut into small pieces; add a gallon of cold water, and put it into a tub for eight or nine days, stirring it well two or three times each day. Strain, and to every gallon add four pounds of loaf sugar; the juice and half the rind of a lemon; put it in a cask with half an ounce of isinglass, dissolved in a little of the liquor; a gill of brandy may be added. Bung the cask

closely for a month, and bottle in ten or twelve months more.

☞ Rhubarb, 5 lbs.; water, 1 gallon; sugar, 4 lbs. lemon, juice of 1, rind of ½ of 1; isinglass, ½ oz.; brandy, 1 gill.

RHUBARB, MEDICINAL. — Rhubarb is an astringent, stomachic, and purgative. In small doses its operation is principally or wholly confined to the digestive organs; in larger quantities, it first acts as a mild aperient, and afterwards as an astringent; hence its value in diarrhœa. *Dose*, as a stomachic, five to eight grains; as a purgative, fifteen to thirty grains. It is most effective when chewed, or in the form of powder produced by grating it.

RIBS, BROKEN. — Few parts of the anatomy are more liable to fracture than some of the twelve small bones constituting the ribs and cage for the vital organs of the thorax; and but for the admirable manner in which each bone is shaped, and the whole are united behind to the spine, and forward to the sternum, or breast-bone, they would be endangered by every trivial accident. As it is, though often broken by a sudden force, they are, in certain positions of the body, enabled to resist with impunity an impetus that in another situation would splinter or stave them in. The accidents that most frequently lead to the fracture of the ribs are, sudden blows given obliquely from the side, a kick from a horse hoof, or falling on the side or face over a log of wood or tree, on the edge of a step, or any sharp and narrow elevation. The ribs are seldom broken near either of their extremities, but almost always where the bone is most convex. Though the fracture is occasionally jagged, it is much more frequently simply transverse, and merely requires to be placed in position to cause it to reunite. The ribs most liable to be broken are the fourth, fifth, and sixth; the first three are too firmly united with the adjacent parts, and at the same time too far removed from the kind of danger to which the others are exposed; while the last five, being only united by cartilage with the breast-bone, offer no resistance to an injury, and consequently escape without accident. It is sometimes impossible to discover a fractured rib, from there being no depression to indicate the point of severance, and it is only by the difficulty of breathing and the smarting pain over the spot which received the injury, that the fact is known. This, however, is a matter of very little consequence, as the same treatment is employed whether the ribs have received a fracture or are merely bruised. A broken rib is indicated by an acute smarting pain in the side, which increases with every inspiration made. Occasionally when the ribs are broken from the passage of a wheel over the chest, the bone is splintered, the sharp fragment wounding the pleura, or lungs, and causing a dangerous hæmorrhage; in which case the patient must be at once bled, a full dose of laudunum exhibited, the side bandaged, and the person placed on his back in bed. Formerly it was customary to envelope the whole chest and shoulders in convolutions of bandages, but this is now quite exploded, as troublesome and unnecessary. All that is requisite is a broad flannel girth, deep enough to cover the ribs, and which is to be passed quite round the chest, and stitched with thin twine up the front, and drawn so tight as to keep the ribs stationary; two broad pieces of tape are then to be attached to the top of the flannel at the back, and brought crossed over like a pair of braces, and sewed in front, to keep the bandage from slipping down. If the pain is very severe it will be necessary to bleed to the extent of ten or twelve ounces, and from fifteen to twenty drops of laudanum given in a little water every four hours, if the pain demands the repetition. Rest must be strictly enjoined, and the patient advised to draw short inspirations, so as to avoid as much as possible calling the ribs into action. The bandage should not be removed, if possible, till the bones have reunited, which will generally require three or four weeks to effect completely.

RICE BALLS.—To a quarter of a pound of rice add a pint and a half of milk, and boil it with a little cinnamon, sugar, and lemon-peel, until it is quite tender; allow it to remain till cold, and then make it into balls. Beat up an egg, and roll the balls in it, and afterwards in grated bread crumbs. Fry them in lard, drain them on a piece of paper, and serve them up strewed with sifted sugar.

RICE BIGNETS.—In a pint of new milk simmer three ounces of rice till it becomes a stiff paste; add half a teacupful of thick cream, the grated rind of half a lemon, two ounces of loaf sugar, and a little powdered cinnamon, mace, and nutmeg, and two eggs well beaten; grate a small teacupful of bread crumbs; when the rice is cold, cut it into bits and roll it into small balls, dip each in the yolk of an egg, roll in the bread crumbs, and fry them quickly; serve with curry sauce.

☞ Milk, 1 pint; rice, 3ozs.; cream, ½ teacupful; lemon-rind, ½ of 1; sugar, 2ozs.; cinnamon, mace, and nutmeg, to flavour; eggs, 2; bread crumbs, 1 small teacupful.

RICE BISCUITS. — Mix together three pounds of wheat flour and one pound of rice flour. Put the whole in a pan, make a hole in the middle, rub in by degrees a pound and three-quarters of loaf-sugar and half a pound of butter; make the whole into a dough, add three-quarters of a pint of milk, with an egg. Roll out the dough into a sheet, about the sixth of an inch thick, cut out the biscuits with a plain round cutter about three inches in diameter; rub over the tops with milk, and throw them into rice flour, place them on buttered tins, and bake in a moderate oven.

☞ Wheat flour, 3lbs.; rice flour, 1lb.; sugar, 1½lb.; butter, ½lb.; milk, ½ pint; egg, 1.

RICE BLANC MANGE. — Stir three tablespoonfuls of finely ground rice into three gills of new milk; add loaf-sugar to sweeten, taking care not to put too much, or it will prevent the mixture settling. Flavour it with lemon-peel or almond essence; set it on the fire, and let it boil thoroughly,

stirring it and beating it extremely well for rather more than half an hour, and then pour it into a mould that has been soaked in cold water.

☞ Rice, 3 tablespoonfuls; milk, 3 gills; sugar, to sweeten; lemon-peel or almond essence, to flavour.

RICE BOILED.—Rice may be boiled in a variety of ways. 1. Wash a cupful of rice in salt and water, and in two or three fresh waters; then set it over the fire in plenty of boiling water, and boil it (uncovered) as fast as possible, ten or fifteen minutes will do, when it will be tender. Drain off the water, and put the rice into a cullender before the fire to dry, lightly pricking it with a fork occasionally. Each grain will be dry and separate, and the whole beautifully white. Keep it hot till used, if possible before the fire, but do not cover it. 2. Wash as much rice as is required in two waters. Throw it into sufficient boiling water, and boil till three parts done, when drain. Butter the inside of a stewpan, into which put the boiled rice; fix the lid tight, and set the stewpan on a trivet in a warm oven until the rice is quite tender. 3. Boil the rice in water in the proportion of three pints to half a pound. When getting soft drain off half the boiling water, and replace it with cold. Add salt, shake the rice briskly to separate the grains. When done, drain off off the water, and place the rice before the fire to swell and dry. 4. Pick the rice carefully, and soak it in cold water for a quarter of an hour; strain, and put it into boiling water, which should rise three inches above the rice. Cover, and boil for six minutes, skimming when necessary. Add a gill of sweetened milk for each pound of rice, and in two minutes more remove the saucepan from the fire; strain without squeezing; return it dry into the pot, and place it over a slow fire; pour over it half an ounce of melted butter mixed with a tablespoonful of the hot water in which the rice was boiled, and in six minutes it will be ready for table. 5. The following method of boiling rice applies especially when it is intended for curries, mulligatawny, soups, &c. Choose Patna or small-grained rice in preference to any other. Take out the unhusked grains, wash the rice in several waters, and put it into a large quantity of cold water; bring it gently to boil, keeping it uncovered, and boil it softly for fifteen minutes, when it will be perfectly tender, and every grain will remain distinct. Throw it into a capacious cullender, and let it drain for ten minutes near the fire; should it not then appear quite dry, turn it into a dish, and set it for a short time into a moderately heated oven, or let it steam in a saucepan near the fire. It should not be stirred except just at first, to prevent its lumping while it is still quite hard, nor should it be touched with either fork or spoon; the stewpan may be shaken occasionally, should the rice seem to require it, and it should be thrown lightly from the cullender upon the dish. A couple of minutes before it is done, throw in some salt, and from the time of its beginning to boil remove the scum as it rises.

RICE BREAD.—Boil a pound and a half of rice gently over a slow fire in three quarts of water for about five hours, stirring it, and afterwards beating it up into a smooth paste. Mix this while warm with four pounds of wheat flour, adding at the same time the usual quantity of yeast, allow the dough to work for a certain time near the fire, after which divide it into loaves, and it will be found when baked to produce twenty eight or thirty pounds of very excellent white bread.

RICE BUTTERED.—Swell the rice till tender in new milk. Pour off the thick milk, and add melted butter, sugar and cinnamon. Serve hot.

RICE CAKE.—Mix half a pound of sifted rice-flour with half a pound of loaf-sugar sifted, and put to this six eggs well whisked and strained. Season with a little ratafia and orange flower water, two drops of essence of lemon, some finely-grated rind of lemon. Beat the whole together for twenty minutes, and bake in a quick oven.

☞ Rice flour, ½lb.; loaf sugar, ½lb.; eggs, 6; ratafia and orange-flower water, to flavour; essence of lemon, 2 drops.

RICE CAKES.—Whisk well six yolks and two whites of eggs; then, with a wooden spoon, beat in six ounces of finely-pounded loaf sugar, add half a pound of sifted ground rice, and two tablespoonfuls of orange-flower water, and just before the mixture is put into the tins, stir into it six ounces of fresh butter melted; dust the patty-pans with flour, and rub them with butter; let them be half filled, and bake the cakes in a quick oven.

☞ Eggs, 6 yolks, 2 whites; sugar, 6ozs.; ground rice, ½lb.; orange flower-water, 2 tablespoonfuls; butter, 6ozs.

RICE CASSEROLE.—Wash half a pound of the best rice, drain it on a hair sieve, put it into a very clean saucepan, and pour on it a quart of cold new milk. Stir them well together and place them near the fire, that the rice may swell very gradually; then let it simmer as gently as possible for about half an hour, or until it begins to get quite tender; mix with it, two ounces of fresh butter and two ounces and a half of pounded sugar, and let it continue to simmer softly until it is dry, and sufficiently tender to be easily crushed to a smooth paste with a wooden spoon. Work it to this point, and then let it cool. Before it is taken from the fire, scrape into it the outside of some sugar which has been rubbed upon the rind of a fresh lemon. Have ready a tin mould well buttered in every part; press the rice into it while it is warm, smooth the surface, and let it remain until cold. Dip the mould into hot water to loosen the contents, turn out the rice, and then again reverse it on a tin or dish, and with the point of a knife mark round the top a rim of about an inch wide; then brush some clarified butter over the whole pudding, and set it in a brisk oven. When it is of an equal, light, golden brown, draw it out, raise the cover carefully, where it is marked, scoop out the rice from the inside, leaving only a crust of about an inch

thick in every part, and pour into it some preserved fruit warmed in its own syrup, or fill it with a compote of plums or peaches.

☞ Rice, ½lb.; milk, 1 quart; butter, 2ozs.; sugar, 2½ozs.; lemon, rind of 1.

RICE CAUDLE.—This may be made with water or milk; when it boils, add some ground rice, previously mixed smoothly with a little cold water; boil till thick enough, when sweeten it, and grate in nutmeg, or add a little powdered cinnamon.

RICE CHEESECAKES.—Boil four ounces of ground rice in milk, with a blade of cinnamon; put it into a pot, and let it stand till the next day. Mash it finely with half a pound of butter; add to it four eggs, half a pint of cream, a nutmeg grated, a glass of brandy, and sugar to sweeten. Bake in a moderate oven.

☞ Rice, 4ozs.; cinnamon, 1 blade; butter, ½lb.; eggs, 4; cream, ½ pint; nutmeg, 1; brandy, 1 glassful; sugar, to sweeten.

RICE CREAM.—Soak three ounces of rice over night in water for a short time, then drain it in a sieve. Next morning partially pound it, and slightly boil it in half a pint of milk; then put it into a basin to cool; add half a pint of cream, half an ounce of isinglass, and whip it to a strong froth; put it in the mould all day, and add sweetmeats or French prunes in the middle.

☞ Rice, 3ozs.; milk, ½ pint; cream, ½ pint; isinglass, ½oz.

RICE CUSTARD.—Boil three pints of new milk with a blade of cinnamon, lemon-peel, and sugar. Mix the yolks of two eggs, well beaten with a tablespoonful of rice, flour, and a cupful of cold milk. Take a basinful of the boiling milk, mix it with the cold which has the rice in it, and add it to the remainder of the boiling milk, stirring it one way till it begins to thicken. Pour it into a pan, stir it till it is cool, and add a tablespoonful of brandy. This is a good imitation of cream custard, and considerably cheaper.

☞ Milk, 3 pints; cinnamon, 1 blade; lemon-peel and sugar, to flavour; eggs, 2 yolks; rice-flour, 1 tablespoonful; milk, 1 cupful, cold; brandy, 1 tablespoonful.

RICE DUMPLINGS.—Pick and wash a pound of rice, and boil it gently in two quarts of water till it becomes dry, keeping it well covered and not stirring it. Then take it off the fire and spread it out to cool on an inverted sieve, loosening the grains lightly with a fork, that all the moistnre may evaporate. Pare some apples and scoop out the cores, then fill up the cavity with marmalade or with lemon and sugar. Cover every apple all over with a thick coating of the boiled rice. Tie up each in a separate cloth, and put them into a pot of cold water. They will require about an hour and a quarter after they begin to boil, perhaps longer.

RICE FLOUR.—Take any quantity of whole rice, wash it thoroughly, changing the water several times; drain and press it in a cloth, then spread it on a dish, and dry it perfectly; beat it in a mortar to a smooth powder, and sift it through a fine sieve. When used to thicken soup or sauces, mix it with a small quantity of cold water or of broth, and pour it to them while they are boiling. This flour when newly made is of much purer flavour than any usually prepared for sale.

RICE FLOUR CEMENT.—An excellent cement may be made from rice flour as follows:—Mix the rice flour intimately with cold water, and gently simmer it over the fire, when it will readily form a delicate and durable cement, not only answering all the purposes of common paste, but admirably adapted for joining together paper, cards, &c., in forming the various beautiful and tasteful ornaments which afford much employment and amusement to the ladies. When made of the consistence of plaster clay, models, busts, bas-reliefs, &c., may be formed of it, and the articles, when dry, are susceptible of high polish and very durable.

RICE FLUMMERY.—Mix two tablespoonfuls of rice flour with a little cold milk, and add to it apint of boiled milk sweetened and seasoned with cinnamon and lemon-peel. Two bitter almonds pounded will heighten the flavour. Boil this, stirring it constantly, and when of proper consistence, pour it into a mould or basin. When cold turn it out, and serve with cream or a thin custard round it, or with a sauce of wine, sugar, and lemon-juice.

RICE FRITTERS.—Boil four ounces of rice in a quart of cream or very rich milk till it is of the consistence of pap. Stir in a quarter of a pound of sugar. When cold, mix intimately together four tablespoonfuls of flour, a little salt, and eight eggs well beaten. If not stiff enough, add more flour and sugar, and fry the butter as fritters. Serve with a little melted butter, wine, and sugar poured hot into the dish.

☞ Rice, ½lb.; cream or milk, 1 quart; sugar, ½lb.; flour, four tablespoonfuls: salt, sufficient; eggs, 8.

RICE GRUEL.—Wash and boil a quarter of a pound of rice in a quart of water for three or four hours. Strain the gruel away from the rice, and put it in a cool place. When wanted for use, take half a panikin of it, and warm it with an equal quantity of milk. Add a little sugar. This is very useful in cases of relaxed bowels.

RICE JELLY.—Boil half a pound of rice, and a small piece of cinnamon, in two quarts of water for one hour; pass it through a sieve, and when cold it will be a firm jelly; which, when warmed in milk and sweetened, will be very nutritious; add a pint of milk to the rice, in the sieve, boil it for a short time, stirring it constantly, strain it, and it will resemble thick milk if eaten warm.

☞ Rice, ½lb.; cinnamon, small piece; water, 2 quarts; milk, 1 pint.

RICE MILK.—Wash the rice, and pick out the black parts. If milk be plentiful, it may be boiled in milk, if not, boil it in water to plump and soften it, and when the water is wasted put in the milk; take care that the rice in thickening does not adhere to the saucepan. Season with sugar and a bit of cinnamon boiled in milk.

RICE PANCAKES.—Boil half a pound of ground rice to a jelly in a pint of water or milk, and keep it well stirred from the bottom to prevent it being burnt; if too thick add a little more milk, take it off the fire; stir in six ounces of butter, a pint of cream, six eggs well beaten, a little salt, sugar, and nutmeg, with as much flour as will make the butter thick enough. Fry with lard or dripping.

☞ Rice, ½ pound; milk or water, 1 pint; butter, 6ozs.; cream, 1 pint; eggs, 6; flour, sufficient.

RICE PASTE.—Boil a quarter of a pound of ground rice in a very small quantity of water; strain from it all the moisture as well as you can; pound it in a mortar with half an ounce of butter, and one egg well beaten, and it will make an excellent paste for tarts, &c.

☞ Rice, ½lb.; water, sufficient; butter, ½oz.; egg, 1.

RICE PORRIDGE.—On half a pound of rice pour three quarts of boiling water; let it swell till it becomes quite a jelly; add half a pound of oatmeal, previously mixed with cold water, stir it well together, add an ounce of onions finely chopped, half an ounce of bacon-fat, butter, or lard, salt and pepper to taste. Boil the whole together, stirring all the time.

☞ Rice, ½lb.; water, 3 quarts; oatmeal, ½lb.; onions, 1 oz.; bacon-fat, lard, or butter, ½ oz.; salt and pepper to season.

RICE PUDDING.—This favourite dish may be prepared in a variety of ways, of which the following are some of the most approved:—1. Throw six ounces of rice into plenty of cold water, and boil it gently from eight to ten minutes; drain it well in a sieve or strainer, and put it into a saucepan with a quart of milk; let it stew until tender, sweeten it with three ounces of sugar, stir to it gradually three eggs, beaten and strained; add grated nutmeg, lemon-rind, or cinnamon, and bake it for an hour in a gentle oven. 2. Boil a quarter of a pound of rice in a quart of milk, with a stick of cinnamon till it is thick; stir it often, to prevent burning; pour it into a pan, mix in a quarter of a pound of butter, and half a nutmeg grated; add sugar to taste, and two tablespoonfuls of rose-water; stir all together till cold; beat up the yolks of eight eggs, and the whites of four, incorporate all thoroughly together, lay a thin puff-paste at the bottom of the dish, and nip the edge; then pour in the pudding and bake it. 3. Take a quarter of a pound of rice, well picked and washed, tie it in a cloth leaving room for it to swell; boil it for an hour; take it up and stir in a quarter of a pound of butter, some nutmeg and sugar, tie it up again very tight and boil it for another hour. Serve with milk, butter, and sugar, over it. 4. Wash very clean a quarter of a pound of whole rice, pour on it a pint and a half of new milk, and stew it slowly till quite tender; before it is taken from the fire, stir in two ounces of good butter, and three of sugar; and when it has cooled a little, add four well-whisked eggs, and the grated rind of half a lemon. Bake the pudding in a gentle oven from thirty to forty minutes. As rice requires long boiling to render it soft in milk, it may be partially stewed in water, the quantity of milk diminished to a pint, and a little thick sweet cream mixed with it, before the other ingredients are added. 5. Mix very smoothly five ounces of ground rice, with half a pint of milk, and pour it into a pint and a half more which is boiling fast; keep it stirred constantly over a gentle fire from ten to twelve minutes, and be particularly careful not to let it burn to the pan; add to it before it is taken from the fire, a quarter of a pound of butter, six ounces of sugar and a few grains of salt; turn it into a pan, and stir it for a few minutes, to prevent its hardening at the top; then mix with it by degrees but quickly, the yolks of eight eggs and the whites of two, the grated rind of a lemon and a glass of brandy. Lay a border of rich paste round a buttered dish, pour in the pudding, strain a little clarified butter over the top, moisten the paste with a brush, or small bunch of feathers dipped in cold water, and sift sugar over it. Bake it in a very moderate oven for three-quarters of an hour. 6. Scald the rice in a small quantity of water; when all the water is absorbed by the rice, add a quart of new milk, and let it boil up, with a stick of cinnamon; beat three eggs with fine moist sugar, stir to them gradually the boiling milk and rice; add an ounce of beef suet or butter; when it is in the pan, or dish, which should be buttered before putting in, grate nutmeg over the top; put it in the oven as soon as made, and bake for an hour.

☞ 1. Rice, 6ozs.; water, sufficient; milk, 1 quart; sugar, 3ozs.; eggs, 3; nutmeg, cinnamon, or lemon-rind, to flavour. 2. Rice, ½lb.; milk, 1 quart; cinnamon, 1 stick; butter, ½lb.; nutmeg, ½ of 1; sugar, to sweeten; rose-water, 2 tablespoonfuls; eggs, 8 yolks, 4 whites. 3. Rice, ½lb.; butter, ½lb.; nutmeg, to flavour; sugar, to sweeten. 4. Rice, ½lb.; milk, 1½ pint; butter, 2ozs.; sugar, 3ozs.; eggs, 4; lemon-rind, ½ of 1. 5. Rice, 5ozs.; milk, ½ pint, and 1½ pint; butter, ½lb.; sugar, 6ozs.; salt, few grains; eggs, 8 yolks, 2 whites; lemon-rind, 1; brandy, 1 wineglassful. 6. Rice, sufficient; milk, 1 quart; cinnamon, 1 stick; eggs, 3; sugar, to sweeten; suet or butter, 1oz.

RICE RAGOUT.—Take some well picked rice, wash it well, and boil it five minutes in water; strain it, and put it into a stewpan with a bit of butter, a good slice of ham, and an onion. Stew it over a very gentle fire till tender, have ready a mould lined with very thin slices of bacon, mix the yolks of two or three eggs with the rice, and then line the bacon with it about half an inch thick. Put it into a ragout of chicken, rabbit, veal, or of anything else; fill up the mould, and cover it close with rice; bake it in a quick oven an hour, turn it over, and send it to table in a good gravy or curry sauce.

RICE SAUCE.—Steep a quarter of a pound of rice in a pint of milk, with onion, pepper, &c., as in the last receipt; when the rice is quite tender (take out the spice), rub

it through a sieve into a clean stewpan; if too thick, put a little milk or cream to it. This is a very delicate white sauce, and, at elegant tables, is frequently served instead of bread sauce.

RICE SNOW-BALLS.—Wash and pick half a pound of rice very clean, put it on in a saucepan with plenty of water; when it boils ten minutes, drain it on a sieve till it is quite dry, and, then pare six apples, weighing two ounces and a half each. Divide the rice into six parcels, in separate cloths, put one apple in each, tie it loose, and boil it one hour; serve it with sugar and butter, or wine sauce.

RICE SOUFFLÉ.—Boil two ounces of rice in milk, add the yolks of two eggs, a little sugar, and some candied orange-peel; then boil it again, and make a wall with it around the edge of the dish. Have ready some apples pared, and the cores scooped out; stew these apples in a little lemon-juice and sugar, filling the apertures with candied sweetmeats. Fill the shape with the apples, and cover them with the whites of eggs, beaten to a froth, with white sifted sugar. Harden it in a cool oven.

RICE SOUP.—This soup is served well thickened with the rice, which is stewed in it for upwards of an hour and a half, and makes thus, even with the common bouillon of the country, an excellent winter potage. Wipe, in a dry cloth, eight ounces of the best rice; add it, in small portions, to four quarts of hot soup, of which the boiling should not be checked as it is thrown in. When a clear soup is wanted, wash the rice, give it five minutes' boil in water, drain it well, throw it into as much boiling stock or well-flavoured broth as will keep it covered till done, and simmer it very softly until the grains are tender, but still separate; drain it, drop it into the soup, and let it remain in it a few minutes before it is served, but without simmering. When stewed in the stock, it may be put at once, after being drained, into the tureen, and the clear consomme may be poured to it. An easy English mode of making rice soup is this:—Put the rice into plenty of cold water; when it boils throw in a small quantity of salt, let it simmer for ten minutes, drain it well, throw it into the boiling soup, and simmer it gently from ten to fifteen minutes longer. An extra quantity of stock must be allowed for the reduction of this soup, which is always considerable.

RICE THICKENING, except for white soup, to which arrow-root is more appropriate, the most preferable to all other ingredients generally used for this purpose the finest and freshest rice-flour, which, after being passed through a lawn sieve, should be thoroughly blended with the salt, pounded spices, catoup, or wine, required to finish the flavouring of the soup. Sufficient liquid should be added to it, very gradually, to render it of the consistence of batter; and it should also be perfectly smooth: to keep it so, it should be moistened sparingly at first, and beaten with the back of a spoon until every lump has disappeared. The soup should boil quickly when the thickening is stirred into it, and be simmered for ten minutes afterwards. From an ounce and a half to two ounces of rice-flour will thicken sufficiently a quart of soup.

RICE WATER is used in diarrhœa as the only drink which will not increase the mischief. It is made by boiling a spoonful of washed Carsline rice in a pint of water for two or three hours, reducing this with more water until it is thin enough to suit the palate. A little lemon-peel may be added towards the last to give a flavour, and it should be sweetened to the taste. It makes a very pleasant drink. Nutmeg is liked by some people, and cloves or cinnamon by others, as an additional flavour.

RICKETS.—A disease almost invariably found in children, and is a peculiar condition of the system, attacking infants between the eighth month and their second year, and exhibiting itself by a remarkable softening of the bones, especially those supporting the frame, or exposed to weight and pressure, by which, according to the action of the muscles, the bones become warped, bent, or even twisted, till the body assumes a crippled and deformed appearance. Whatever may be the immediate cause of this unnatural condition, whether it is, as is generally supposed, the consequence of scrofula, or some other latent and specific evil in the blood, science has not yet discovered; and all that is actually known is, that at and during the period of *teething*, the child begins to lose its health and colour, and the bones, which should every day, if in a state of health, become harder by the addition to their structure of the bony principle—the *phosphate of lime*—become softer, and what lime they already had in their texture is gradually absorbed till what was, and should have developed into bone, becomes little more than gristle, which, under the weight of the body and action of the muscles, is bent and deformed in the most extraordinary fashion. This condition usually begins in the spine, extends to the hips, and downwards to the thighs and legs; the upper extremities suffering in a like manner, though not to so great an extent, either at the same time or afterwards.

The *treatment* of rickets has been a subject of great controversy, some practitioners believing that, as the whole evil resulted from the loss of phosphate of lime in the bones, any treatment that gave back to the body this salt, must ensure a recovery; but though absent from the bones, we have no proof that the phosphate of lime is deficient in the system, though the proper organs do not deposit it in the bony cells. Such theories, then, however feasible, have long been exploded, and the best treatment now adopted is to keep the child *as much on its back as possible*, and neither allow it to stand or sit up, but by a steady course of tonics, good and nutritious food, pure country air, frequent cold water, or cold sea-bathing, with a steady friction of the back, sides, and limbs, with the hand, wait patiently till the powers of the system are so far

recovered from their diseased state as to commence a reaction, and Nature, as she will do when judiciously aided, herself effects a perfect cure. To enable the system to recover itself, straighten the curved limbs, and restore the little patient to health and symmetry. All *bandages, restraint, compression*, and *mechanical means*, once so much in use for rickets, must be *thrown aside*; a course of quinine, varied with an occasional use of steel wine, regularly adopted and given three times a-day, with an aperient powder once a-week, a removal, if possible, into the country, and the daily use of a cold bath, and friction of the body with the hand; these will be found a better means of straightening the bones than any mechanical appliance whatever. By such a course as this, continued for a few months, the worst cases of rickets may be effectually treated and permanently cured. The following preparations will be found the most useful medicines for the attainment of the several objects. *Tonic mixture.* Take of—

Quinine	12 grains.
Infusion of red roses .	5½ ounces.
Sulphuric acid	5 drops.

Dissolve, and add syrup of poppies, half an ounce; mix, and give from half to a full teaspoontul, according to age, three times a-day. *Steel mixture.* Take of—

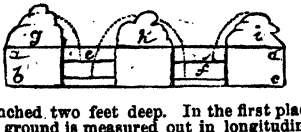
Steel wine	2 ounces.
Syrup of saffron . . .	3 drachms.
Water	1½ ounces.

Mix, and give in the same quantity and at the same time as the other. *Aperient powder.* Take of—

Grey powder	18 grains.
Sulphuret of antimony .	12 grains.
Scammony	18 grains.
Jalap	12 grains.

Mix, and divide into 6 powders; half or a whole powder, according to the age of the child, once or twice a week.

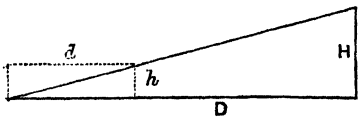
RIDGING OUT.—In gardening, a mode of finishing the surface, applicable either to dug or trenched grounds. By this means the soil becomes more thoroughly exposed to the atmosphere and heat, which is highly promotive of vegetation. The most effectual mode of ridging may be described by the aid of the annexed figure:—*a*, *b*, *c*, *d*, represent a section of the ground to be



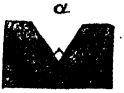
trenched two feet deep. In the first place, the ground is measured out in longitudinal beds four feet wide; this done, the top spit of the bed *e* is laid on the bed *g*, and the second spit of the bed *e* is laid on *h*. The first or top spit of the bed *f* is then laid on *h*, so that the top soil and subsoil are kept on separate and alternate beds, and may be mixed, reversed, or returned as taken out, at the will of the operator. By this method the advantages are, much greater exposure of the surface to the action of the weather; the opportunity of incorporating with the soil any desirable or obtainable manures, and at any desired depth; a thorough blending of the soil to the depth of two or three feet; and it also facilitates the operation of draining where necessary. When the first thrown-out beds are sufficiently pulverized, they are levelled down, and others thrown out in the same manner; *g*, *h*, *i* represent the ridges thrown out, and left as rough as possible.

RIFLE PRACTICE.—The formation of rifle corps in England is at the present moment one of the most important and generally approved movements which has ever been organized in this nation. In every part of the kingdom, and amongst all grades of society, rifle corps are being formed, which promise in the aggregate to become a sufficient defence to guard our native shores. Nor does the benefit derivable stop here; there cannot be a doubt but that every rifle volunteer will find personal advantage in the practice of the rifle, and the drill which accompanies it. It will tend to develope his frame, to inure his system, to give him a better carriage, and more elasticity of movement, and, in a word, to impart to him that healthy tone, both morally and physically, which ever attends active and manly exercises. The terms and conditions of entering the different rifle corps vary according to the locality, the social position of the volunteers, and other circumstances; all these particulars may be learned with very little difficulty by applying at the proper quarters; and, generally speaking, the volunteer will find that he can enrol himself at very little personal interruption to his ordinary pursuits, and at a trifling expense. Supposing that the volunteer is now enrolled, and has a rifle placed in his hands, it becomes essential to lay down some general rules for his guidance, which greatly simplify and facilitate his practice. With this end in view the chief objects are—1. That each individual should have sufficient knowledge of every part of his rifle to enable him to take it to pieces, and put it together again when requisite. 2. That he should know how to load it properly. 3. How to regulate his aim according to the distance of the object to be hit. 4. Be practised in estimating distances within the ordinary range of his rifle. 5. Be ready on all occasions to take up a position in which he will be enabled to aim with facility. To keep his body steady without constraint; to be careful, above all, not to allow his sights to incline on one side or the other; to support the recoil. 6. When pulling, or rather "pinching" the trigger in the act of firing, to be particularly careful not to derange his aim. These few simple rules comprise nearly all that is really necessary to enable any man to attain the maximum effect with his rifle. The operations with the rifle when placed in the hands of beginners are conducted by what is termed the target drill. For this exercise the traversing rest is used to support the firelock; or else three sticks tied together near the top, and supporting a bag of sand about four feet and a half from the ground,

answer the same purpose. A squad never exceeds ten men at a time at each rest; it is formed in a single rank, each man having his own firelock. The instructor first explains the principles of aligning the sights on an object, confining the attention of the squad to the following rules. 1. That the sights do not incline either to the right or left. 2. That the line of sight is taken along the centre of the notch of the back sight and the top of the fore-sight, which is made to cover the centre of the target. 3. That the eye is fixed steadily on the mark, and not on the barrel or fore-sight, which latter will be easily brought into the alignment if the eye be fixed as directed. Particular attention is directed to this rule, for beginners are apt to fix the eye on the fore-sight instead of the mark, in which case the latter can never be distinctly seen, and the difficulty of aiming is greatly increased. 4. That in aiming, the left eye be closed. It is evident that to make use of sight in the field it is absolutely necessary that soldiers should be exercised at calculating distances by the eye. If a person look at one and the same object at different distances, the distances are in an inverse ratio to the several "apparent heights" of this object. In order to understand clearly what is meant by apparent height, it should be remarked that, when a person looks at a distant object, of whatsoever dimensions it may be, this object can always be concealed as to its whole height by a straight line placed at a short distance from the eye; the length of the line, concealing completely the height of the object, is merely the apparent height of the object. To calculate these apparent heights, therefore, it is sufficient to consider that the two visual rays, which are directed from the eye to the upper and lower extremities of the object looked at, form with the real height of that object two similar triangles, of which the sides are proportionate one to the other. In the



accompanying engraving D represents the distance from the eye to the object, *d* the distance from the eye to the point where the apparent height is taken, H the real height, and *h* the apparent height. If for H and D we take known quantities, then to calculate the several values of *h*, ascending to the distances, it will suffice to divide successively the produce H × *d* by the different values of D. In practice, *d* is taken equal to the length of an outstretched arm; and H is taken equal to six feet or eight feet, which are the height of an infantry or cavalry soldier (mounted) respectively. The calculations necessary to find the ranges are also most simple: for if the apparent height, *h*, be ten times, one hundred times, two hundred times smaller than the real height, the distance D will be ten times, one hundred times, smaller than the real distance, D. In connection with this important point of rifle practice, the instructor makes it his business to explain the differences of sight as immediately applying to the rifle. He points out the difference between *fine* sight and *full* sight in aiming; the former being when the line of sight is taken along the bottom of the notch of the back-sight, the fine point of the fore-sight being only seen in the alignment as *a*: the latter is when the point of the fore-sight is taken in alignment with the shoulder of the notch of the back-sight, as *b*. As these two methods of aiming, cause a slight difference in the angle of elevation, it is necessary the soldier should understand that the ordinary rules for aiming are intended to apply to *half-sight*, which means that the alignment is taken with the summit of the fore-sight at half-distance between the shoulder and bottom of back-sight, as *c*. As some firelocks carry higher, and others lower than the average, allowance can be made for this defect by aiming with full sight when the musket is found to carry low, and by aiming with fine sight when it carries high; when, however, no such defect is observed in the practice with the firelock, the learner is invariably taught to aim at half-sight. Having explained the foregoing rules, the instructor causes each pupil to take aim at an object of the same size as the bull's-eye used in practice, at every distance of fifty yards from one hundred to nine hundred yards. After each man has aimed, he steps aside that the instructor may see if the aim has been correctly taken; should he perceive any error, he causes the next man to advance and point out the defect; the error, however, is always corrected by the person who has aimed. To vary the practice, the squad is occasionally exercised at intermediate distances, and is also made to aim at a soldier placed in front of the target, or at a group of men. *The position drill* differs from the platoon exercise; the latter comprehending the positions of loading and firing in the ranks, in which the rifleman is instructed by the serjeant, whereas, in the position drill the attention of the instructor of musketry is confined exclusively to the essentials of good independent firing. For this drill the squad parades in marching order, and is formed in single rank at one pace apart, and is placed at a convenient distance from the target; the instructor then orders the squad to fix bayonets and proceed with the position drill, first in slow time standing, according to the instructions hereafter detailed; and, as it is considered that too much pains cannot be taken to



ensure that each man takes a deliberate aim at some specified object whenever he brings his firelock to the "present," if no natural object presents itself for the rifleman to aim at, several small bull's-eyes are marked on the barrack wall. 1. *Load.* According to regulation. 2. *Ready.* Adjust the sight, and proceed according to regulation. 3. *Present.* At this word the firelock is brought at once to the shoulder, the centre part of the heel-plate being pressed firmly into the hollow of it with the left hand, which grasps the piece at the "swell," the right hand holding it at the "small," the right elbow raised (but, when firing in platoon, not so much as to impede the aim of the rear-rank man), the muzzle inclining to the bottom of the object, and the fore-finger of the right hand extended along the side of the trigger-guard, the left eye being at the same time shut. "*Two.*" The recruit now raises the muzzle steadily until the foresight is aligned through the back-sight with the object on which the right eye is fixed, the second joint on the fore-finger being on the trigger, and the breathing restrained. "*Three.*" The trigger is "pinched" rather than pulled with the second joint of the fore-finger, by a steady pressure, without the slightest motion of hand or elbow, the eye being kept still fixed on the object, as in the preceding motion. "*Four.*" The rifle is brought down to the capping position and the flap shut down, at the same time the right foot is brought to the position in which it was placed before coming to the "ready;" a pause of slow time is counted, and the recruit comes to the position of "prepare to load." 4. *Load.* According to regulation. The whole squad having thus been put through the drill in slow time, and the position of each man corrected, the instructor gives orders to continue the motions of loading and firing independently, each man aiming at a specified mark. The most minute attention is now given to each man's position when at the "present," and more especially that the firelock is pressed firmly to the shoulder with the left arm, and that the trigger is pulled without the slightest jerk, and with the motion of the fore-finger only, the eye being fixed upon the mark during and after snapping the lock. In this drill the instructor frequently places himself in front of the squad at five or six paces distant, and causes each man successively to aim at his right eye, in order to ascertain that he obtains the alignment quickly and correctly, and that his aim is not disarranged by pulling the trigger; this is of the utmost importance. When the men have been sufficiently exercised in the position of firing standing, they are put through the drill in the kneeling position with unfixed bayonets, going through it at first at slow time, according to regulation, observing the several points to which the attention is called in the foregoing remarks. *Judging distance drill* is an important branch of rifle-practice, for, in order to apply the rules of firing laid down for the rifle, it is necessary to know the distance which separates a man from the object he is firing at. In firing for instruction, the target is generally placed at known and measured distances; but before the enemy, the distance being unknown, it is necessary to judge the distance quickly and exactly, in order to regulate the elevation of the piece accordingly. In order to teach the rifleman to estimate distances by the eye, he is instructed according to the following rules in the first instance:—The instructor causes a line of three hundred yards to be measured accordingly; this line is divided into equal parts of fifty yards each by perpendicular lines. At the extremity of each of these perpendicular lines is a soldier standing at ease, and facing the squad he is about to instruct. It will be observed that each of these soldiers is placed at a greater distance from the line of three hundred yards, in proportion as he is distant from the point where the squad commences its instruction, in order that each soldier may serve in turn as a point of distance for the squad to make observations on. The instructor points out successively to the men the different parts of the figure, arms, accoutrements and dress, which they can still perceive distinctly on the soldier placed at fifty yards distance, and also those parts which they can no longer clearly distinguish at this distance: the men are then questioned one after the other respecting the observations they make on what they see. Eyesight is not the same in all. Every rifleman is directed to impress upon his mind the appearance of the man placed at fifty yards. The instructor, then, by moving the squad to the right, places it in front of the soldier at one hundred yards distance, and causes each rifleman to make observations of the same kind as on the man at fifty yards, desiring him also to make comparisons between the two men placed at these two distances. The instructor then passes on to the other distances, proceeding in the same manner as for the first two. He endeavours, above all, to point out to each recruit, according to the observations he may make, the differences that exist between the men placed at the six different distances comprised in the subdivisions of three hundred yards, pointing out at each distance what parts of the figure, dress, and equipment are clearly perceivable, those that are seen confusedly, and those that are no longer visible. The instructor next causes the men to take notice of the position of the sun and state of the atmosphere and background while making these observations, that they may be accustomed to alterations in the appearance of the several objects. The men placed as point are from time to time relieved; for which purpose the squad usually consists of double the number of men employed as points. When all the men of the squad have made a sufficient number of observations on the different points designated, and when these observations are well fixed on their minds, the instructor proceeds in the following manner to the estimation of distances comprised within the limits of three hundred yards. After having marched the squad on

to different ground from that on which the appreciation of distances has taken place, the instructor forms them into single rank, and sends a man to the front, marching him by means of the bugle diagonally to the right and left, and occasionally at the double, in order that the rest of the squad may not count his paces; then, at any concurrent distance within three hundred yards, he will command "Halt;" when the man faces the squad and stands at ease. He then orders the men to observe the soldier facing them, and to estimate the distance, recollecting the observations previously made on the men placed at measured distances. The instructor then calls each man separately to the point and questions him, noting down his answer, which must be given in a low tone of voice, in order that those following him may not be influenced by his opinion. Every man adjusts the sight of his firelock to the distance he judged. When the men have all given their answers, the squad proceeds to measure the correct distance by advancing towards the man judged from, the instructor placing himself in the centre, the men counting the number of paces, the instructor only counting them aloud. The men are taught to measure the distance in the following manner: at every 120 paces they double up one finger of the right hand to make 100 yards, commencing again 1, 2, 3, and so on. When at the end of any division of 100 yards the remaining distance appears to be within 100 yards, they commence counting by tens of yards, by doubling up a finger at every twelve paces. The correct distance is, however, afterwards ascertained by actual measurement. The men having been drilled up to 300 yards, continue the exercise up to 600 yards; first at fixed points at every fifty yards from 350 to 600 yards, and subsequently at unknown distances. In exercising the men at great distances, the squad is usually separated into two equal parts, facing each other. After every man has judged the distance which separates them, they advance towards one another, each party measuring half the distance; by this means much time and walking are saved. *Judging distance practice* is another essential department in rifle exercise, and should, when practicable, be carried on by the sections not occupied in firing, when at target practice. A cord of the length required for the practice (divided into parts of five yards each, with the distances of each division from the end so marked as to be distinguished only on close inspection) is stretched in any convenient direction, care being taken to vary the point as much as possible for the several practices. One or more men, when judging at 300 yards only, but beyond that distance a section of not less than eight or ten file, are stationed at the end or any other point of the cord that may be directed, to serve as objects to estimate from. The answers of each man are recorded in a register. The strictest silence is observed throughout the practice, the men are prevented from consulting together in judging their distauce, and in giving their answers they are required to speak in a low tone, so that they may not influence in any way the judgment of each other. The commander fixes on a point at any uncertain distance to commence the practice, to which he marches the section or party, halting at about ten paces either to the right or the left, and facing the objects; he then arranges the non-commissioned officers who are to keep the register, three paces to the front of their several sections, to prevent if possible the answers, when given, being heard by those in rear; these non-commissioned officers then call in succession upon each man of their section, who is required to judge the distance in yards, and give his answer, which is then immediately noted down in the register. When all the answers of each section or party have been noted down, they are read over to the men, and any error is at once corrected; after which the commander refers to the cord, and states aloud to the men the correct distance, which is at once noted at the top of the column, the number opposite obtained by each individual being at the same time registered and made known. At the conclusion of each practice the number of points obtained by each man is read over to the men, and the register, when completed, is signed by the non-commissioned officers; and this register is afterwards transcribed into the company's judging distance practice return. The practice of judging distance, like the target practice, is divided into three periods, each period consisting of four practices. Every man commences the course of practice in the third class, and is exercised therein at sixteen different distances in four practices. At the conclusion of these practices the register is made up. All those men who obtain sixteen points pass into the second class, the remainder recommence the practice of the third class. Each company is now told off into two classes and into sections, and the practices continue in that order, each class being exercised at sixteen different distances in four practices. At the conclusion of the practice in the second period, the register is made up as before. All those men who in the practice of the second class obtain sixteen points, pass into the first class, the remainder repeat the practice of the second class. The test for passing from the third to the second class is the same as in the practice of the first period. The company is now told off into three classes, and into sections as before, and each class exercised at sixteen different distances in four practices. The second class is composed partly of men who repeat the practice of the second class, and partly of those who have passed out of the third class in the second period. At the conclusion of the practice in the third period, the columns of this period in the company's judging distance practice return, are added up and signed as directed for the first and second periods. A final classification is then made, and the man who, in the practice of the first class, obtains the greatest number of points, receives the prize as the best judge of distance.

The following remarks apply to rifle-practice when left entirely to the independent judgment and undirected effort of the rifleman:—One of the first lessons should consist of the following practice at a target about eighteen inches in diameter, and at a distance of ten or twelve paces. Having put a small copper thimble, or percussion-cap, from which the composition has been removed, upon the nipple, the pupil should raise the rifle (previously cocked) steadily to his shoulder, and, while closing his left eye, look intently with the right along the first sight to the more distant one, the gaze being steadily fixed upon the mark, however, and not on the sight, and the muzzle being raised above the bull's-eye. The rifle should now be steadily lowered, and at the instant that the more distant sight covers the centre of the bull's-eye the motion should be arrested, the centre of the heel-plate, as above directed, firmly pressed against the muscle of the shoulder, and the trigger simultaneously pulled. All delay is bad when once the aim has been clearly got. After the cock has fallen on the nipple, the eye should still look, for the space of a second at least, as fixedly as before upon the target, noting carefully the deflection upon each occasion. Easy as this may appear, it will be found that to do it without flinching requires some considerable practice. When that amount of proficiency is obtained, the same process should be repeated with caps, proceeding gradually to the use of a few grains of gunpowder, increasing the charge to two or three drachms. When the slightest terror is no longer felt at the critical moment of the explosion, a bullet, with a very small charge of powder may be ventured on. By degrees the shooter will find himself acquiring confidence, and having repeatedly struck the target at a dozen yards with half a drachm of powder, he will find the same feat practicable enough at twenty, fifty, and finally at a hundred yards, with one drachm, or one drachm and a half. Having proceeded so far, he will do well to continue working daily at the latter range for some weeks, until he can make certain of raising his rifle to the "present," and of striking the bull's-eye almost at the same moment. He may then progressively extend his distance by twenty or twenty-five yards at a time, till he has reached the extremest limits at which good shooting can be calculated upon. He may consider himself somewhat above an average shot, when at fifty yards he can make sure of obtaining twenty hits all within a circle of five inches in diameter; at a hundred yards within a circle of ten inches; at two hundred yards within a circle of twenty inches; and so on up to a thousand yards. As to that range, if the shooter can be certain of putting ten bullets in succession within eight feet in diameter, he will do as much as any one need hope to achieve. There are many apparently trifling and non-essential points to attend to in rifle-shooting which a tyro is little apt to heed, among which are the following:—A very important matter to be kept in mind while practising at the target is the charge of powder. It cannot be too strongly inculcated that, after careful trial, the proper charge for a particular rifle having been once determined upon, that charge ought never to be increased or diminished even by a grain. When the greatest possible accuracy is required in shooting, it is well worth while to weigh each charge in a delicate balance, and subsequently to enclose it in a small dry glass or metal tube, carefully securing it with a cork or stopper. If this process be deemed too tedious, a small brass charger should be used, slightly "hooped," each time that it is filled; it should then be tapped lightly at the bottom, so as to shake off the superfluous grains, leaving the measure exactly filled. Care should be taken that no extraneous matters get mixed up with the powder, as every particle of the kind, however small, will diminish more or less the momentum of the bullet, causing it to strike low, for besides displacing a certain bulk of powder, any matter of the kind prevents the due and regular ignition of the charge. It has frequently been remarked that, when using a loose charge, the best shooting was at the commencement of the practice, when the flask was full. This arises from the common habit of filling a flask when about three parts empty; the dust, smaller grains, &c., thus collect at the bottom, and the force of each later discharge is proportionably feebler. To avoid this, the stock of powder should be occasionally sifted through a lawn or silk sieve. American riflemen attach much importance, at shooting-matches, to wiping out the barrel after every discharge. For this purpose the shooter is provided with a number of pieces of rag (the material preferred being cotton flannel), each about two inches square; one of these being twisted round a rod kept for the purpose, is passed up and down the barrel after each shot, care being taken never to use the same rag twice until it has been thoroughly washed. In England so much nicety is not considered essential even in match-shooting; but there can be little doubt that the occasional removal of the products of combustion is very desirable.—Books: *The Rifle and How to Use it, by Hans Busk*, 2s. 6d.; *Rifle Volunteers*, 1s.; *Jervis's Rifle Musket*, 2s.

RINGWORM.—A disease of the skin which is generally confined to the scalp of the head, but sometimes appears on, or extends to the forehead, the neck, the arms, the hands, and other parts of the body. The first symptoms of ringworm are, small red pimples breaking out in a circular form, and containing an acrid fluid. At the same time, if the seat of the disease be the scalp, the hair breaks and falls off, leaving a bald circular patch; this from being of an inconsiderable size at first, spreads until it sometimes becomes as large as the palm of the hand. Great teching accompanies the disorder, and the patch will be found scurfy, slightly red, with the irregularly broken hairs protruding. If the disease be unchecked by treatment, it goes on extending,

until at the last it involves almost the entire scalp. The hair which is not detached on the affected part, becomes lighter in colour and woolly in texture. If pustules form, the discharge from them dries in the form of scurfy scabs or in crusts. The *treatment* of ringworm consists in shaving the part and keeping it clean with soap and water. The applications first employed should be of a soothing nature, and stimulants had recourse to gradually. Numerous remedies are resorted in the case of ringworm with varying success; the following are deemed the most reliable. When the disease is not of long standing, use the following lotion:—Take of

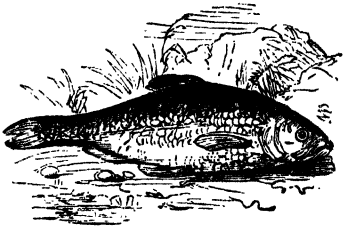
Sulphate of zinc . .	½ a drachm to 1 drachm.
Acetate of lead . .	15 grains.
Distilled water . .	6 ounces.

Mix them for a wash. With this lotion the affected parts are to be washed, and if this fails the following may be used:—

Nitrate of silver . . .	1 drachm.
Dilute nitric acid . .	½ ounce.

With this mixture, the diseased circles, after the scalp has been shaved, should be pencilled over, and in ten or fifteen minutes afterwards, the parts should be well sponged, first with tepid water, and then covered with pledgets of lint dipped in cold water, and the evaporation diminished by covering the wet lint with oiled silk. An ointment composed of a drachm of sulphate of zinc, to an ounce of simple cerate, is also found to be of the greatest service. Care should be taken to wash the head free from the previous ointment or lotion, before a fresh application is made. During the prevalence of the disease, the head should be enveloped in a linen cap. Few diseases give more trouble and vexation in the management than ringworm, for it often resists for months the best directed treatment, and that which succeeds admirably in one case often fails to make any impression in another. The greatest care, therefore, should be exercised in this respect, and the moment the disease presents the slightest indications, active steps should be taken to repel it. Nor does the cure depend upon local applications alone. The system generally should be watched and regulated; an occasional mild saline aperient should be administered, aided by tonic medicines, such as iron, bark, and mineral acids. The diet must likewise be strictly attended to, and nutritious food, of which red meats and ripe fruits form a portion, should be rigorously adhered to. Clothing, ventilation, and exercise must in their turn be equally well cared for. It is difficult to determine what is the precise origin of the disease; but want of cleanliness and improper food, particularly an exclusively vegetable diet, are the most commonly predisposing causes. When it happens that one child in a family or a school is attacked with this disease, he should be kept apart from the rest until a cure is effected. The comb, brush, towel, and every other article likely to come in contact with the part affected, should be scrupulously kept for his separate use, and, indeed, these articles should not be permitted to leave the room in which the patient is, until they have been thoroughly washed and cleansed. So highly contagious is this disease, that it is frequently extended to different portions of the same head by combs, brushes, &c., or by the nails, which children are apt to use freely, on account of the itching; and it sometimes occurs that a whole school will in a few days take the complaint from a single pupil.

ROACH.—A handsome fish inhabiting many of our deep still rivers, and preferring, in general, quiet waters. The roach is deep but thin, and the back elevated; the scales are large, and easily fall off. The fins are red, particularly whilst in perfection, as they may also be known to be by the smoothness of the scales, which, when out



of season, feel like the rough side of an oyster-shell; the side line bends much on the middle towards the belly, and the tail is a little forked. The best season for roach-fishing is from autumn until the following spring. In May they usually spawn; and after this they continue out of season for several weeks, hardly recovering until the latter end of July, Roach-angling affords much interest to those lovers of the sport who are shut out from the higher pursuits of fly-fishing. The rod used is a very light but long one, with a tolerably stiff top. A considerable length of rod is absolutely necessary to command a sufficient swim without exposing the angler to the sight of the fish. It must be also remembered, that although this, in common with every rod, should be elastic, it must by no means be too limber or flexible, or it will not strike the fish smartly. The action of the wrist would be lost, or communicated too slowly, when it had to be diffused through the elasticities of too pliant a rod. With regard to the line, the most expert anglers, in this particular branch of the sport, will seldom use any but one of single hair; others use the finest gut procurable, especially for the lower portion of the line. Some, again, employ a line made of two hairs twisted for the upper part, and allow two or three feet of the lower portion to be formed of one hair only, by which, should a fish break away, the hook only is lost, and not the float. The hook in roach angling should be as fine as the line: when

of single hair, it may be No. 9, 10, or 11; and in the depth of winter, when the bitings amount to little more than a nibble, this will not be too small. If a gut line be employed, the hook may be No. 8 or 9; and it is also advisable to take off the glare of the gut, and make it as little conspicuous as possible, to stain it very lightly of a pale water blue. The shooting of the line should engage as much attention as the rest, that the lead may not scare the fish. Unless there be much wind, or a strong ripple from current, &c., there should be somewhat less than a quarter of an inch of the float to appear above the water. The length of line from the float to the rod may vary according to circumstances, as from eighteen inches to two feet; but the shorter it is, the more command will the angler have over the extremely fine winter bites of the largest fish. The baits used in roach-fishing are principally gentles and pastes. In rivers, lakes, and ponds, in out-of-the-way places, although gentles are used, yet worms are chiefly depended on. As worm baits, the marsh, the brandling, the blood, and the red, are taken with cagerness by roach when they are on the feed; but the worms should be well secured to ensure success. Worms may be considered as the early spring bait. In its more advanced periods, worms alternate with caddies, with larvæ and pupæ, or lobs and grubs of all sorts. Salmon-roe is a favourite bait at this season with some anglers, who find it taken freely by roach, particularly in the still deeps of rivers. Gentles are employed for the advanced summer and autumn months, with pastes of various kinds, particularly the stale bread paste for still waters, and the new bread paste for streams and currents. When angling in a tide river for roach, it is essentially necessary to try the bait at various depths, for roach then never remain stationary, particularly from the time the tide is flowing until high water. To this period they commonly bite well, but as commonly they cease as soon as the tide turns, except there be a fresh in the river when they will oftentimes take in the ebb also. In navigable rivers, choose those days when there is a flush of water let out of the pounds and locks. In these cases, the fish be waiting for what the disturbed state of the stream brings down. Should the current flow very strong, try for them towards the sides of the stream.

ROACH BOILED.—Scale, gut, and wash the fish; wipe them, cut them in three or four places on the sides; put into a stew-pan some small beer, vinegar, and water (enough to cover the fish); add some salt, a bunch of sweet herbs, parsley, and a stick of horse-radish sliced; when it boils, put in the fish. Serve with anchovy sauce.

ROACH FRIED.—Scale and gut the roach, wash them in salt-and-water, and wipe them exceedingly dry: flour and fry them in boiling lard until they are brown and crisp; lay them in a warm dish; pour the fat out of the pan, put in a piece of butter, and when it boils, fry some sage and parsley until it is crisp, lay it on the roach, and serve with anchovy sauce.

ROADS, TO MAKE.—The first thing to be attended to in the construction of a road, is the drainage of the foundation. In country roads a ditch should be formed on each side. It should be of sufficient capacity to carry off all the water which falls on the surface. The foundation of a road may be either the natural surface of the ground, rendered dry by drainage, or it may be raised above the natural surface by embanking. And, as a rule, the road should be raised by embanking above the surface of the ground, on each side, in order that it may be dry, and may be acted on by the sun or wind. In forming embankments, the best mode is to follow by shallow layers of the materials. Each layer should be allowed to settle, which it will do to a concave surface, as seen in the annexed figure; and be pounded or rammed before

the next is added. In this way an embankment of the greatest solidity will be obtained. In the common roads of this country no further preparation is made than the mere drainage of the ground; the protective materials or road being simply laid on the natural surface without any intervening base. But unless the traffic is to be exceedingly light, such a construction is false economy. The great aim should be to extend the pressure on the surface of the road on as great an extent of the foundation as possible. This is effected by the interposition of the base of the road, formed of a layer of brushwood or faggots, of a solid mass of concrete or of a pitching of large stones, and sometimes on very soft ground, the layer of brushwood or faggots is used in combination with either of the other two. In either case, the first operation is to solidify by rolling or priming the earth foundation, and to form it to the same transverse section that the upper surface of the roadway is to have. When faggots or brushwood are used, which should only be in wet situations, the layer should be from four to six inches thick, with the joints well crossed; and it must be at such a depth as to be beyond the influence of atmospheric changes. In laying broken stones, or macadam, to form a road surface, great care is requisite; it should be spread in shovelfuls, equally, so as to form an even layer of three inches thick. When this layer is consolidated, another of the same thickness should be added in the same way, and so on till the requisite depth of covering is obtained. Moist weather should be chosen for laying on macadam, as in dry weather the stones do not bind together, but roll about, and are ground to dust. To accelerate the binding together of the stones, it is sometimes the practice to spread a thin layer of sand, gravel, or other foreign matter over the surface of the macadam. This practice, when needlessly resorted to, or badly done, or when improper materials are used, is

injurious in its effects; but when, on the contrary, it is used in cases of necessity, such as when macadam is laid on in dry weather, and when its effect is simply to cement the stones in their places till they become locked and compacted together, it is most beneficial. To produce such an effect, the blending material should be in very small quantity. The best is the grit of the macadam stones; the worst is chalk, on account of the effect which the weather has on it. Soft sand is bad also, because it lifts with the wheels, and balls the horses' feet. When the road is newly covered, particular attention must be paid to raking in the ruts, and placing large stones or other fenders, so as to oblige vehicles to pass over every portion of the surface in turn. In using gravel for the surface of a road, it is important to choose that which contains the smallest portion of brittle stones, such as flints. When taken from the pit, the gravel should be screened through a screen, with meshes of about three-quarters of an inch square. The portion which passes through is termed "hoggin," and is reserved for foot-paths; and of the remainder, the stones which exceed two inches should be broken. The gravel should not be divested of loam which adheres to it when it is dry from the pit, as this forms the cement which causes the separate stones to unite together until they are finally compacted by the traffic. But sometimes the gravel is perfectly clean, in which case recourse must be had to some other material, for the purpose of binding it, as loam, chalk, or clay. These, or any of them, should be added in sufficient quantity to cause the setting of the round stones. The loam of the road itself is the best material to be used, and next to that clay; chalk is the worst. When necessity compels the use of chalk, it should be reduced to powder, and mixed with the gravel, before the latter is spread, and not used as a top-dressing. The maintaining of a macadam road in repair can only be done by incessant attention. It will not do to wait till the road is worn into deep ruts and hollows, and then to fill up these with a few loads of macadam. The repair, so to speak, must go on continually. The road must never be allowed to wear into ruts; but as soon as a portion is observed beginning to wear, its surface should be loosened with the pick, and the stones replaced, so that the coating shall become all of an equal thickness. By this means the crust will wear down equally, and when fresh stone requires to be applied, it must be done by slightly loosening with the pick all the surface where it is required, and spreading the fresh stones in a stratum, not exceeding in thickness their own depth. For this general repair spring or autumn is the best season. It is a most judicious plan to coat irregularly a great length of road at a time. No sooner does wet weather set in at the close of the autumn than the roads, already heavy enough, are coated in half-mile lengths, irregularly from side to side, with four or five inches of new stone; and the result is that the poor animals of draught must only carry half their proper load, or work at half speed. Fender stones have also to be laid down in such a way, that the zig-zag course taken to avoid them nearly doubles the length of way to be travelled. It is much better to coat the road from side to side with the thin layer as above described, and in short lengths from twenty to thirty yards, leaving between each length an interval of the same length uncoated. The relief given to the animal by this uncoated portion is such that he does not alter his pace, and as there is no need of fender stones, his course is straight. So soon as the coated portions have become set, the intervals between are treated in the same way. By this means the traffic is spread over the whole surface of the road, and the macadam wears down equally, and not in ruts. When a macadam road is very wet, its materials grind to powder rapidly under the traffic. There is, therefore, the greater necessity for facilitating the flow of the water from the road in wet weather, by removing all mud or filth that obstructs it. This is done by scraping either with a hand-scraper or with the machine. The hand-scraper has an iron blade about eighteen inches long and six inches deep, slightly curved at each extremity, and fixed at right angles to a long handle. The machine-scraper is much more efficient in sweeping, and less destructive to the roads. But when the mud on the road is in a pasty condition, and the road has been softened under it by long-continued rains, or has been broken up by frost, and the surface is lifted by the tyres of the carriage-wheels, the employment of the scrapers would tend to tear up the surface and destroy the road. In such a case the remedy is to add water to the mud till it is of a consistence to flow, and does not stick to the tyres of the wheels. The materials will then be fastened again in their places by the traffic, and after a short time the scraper may be employed. But a much more effectual cleanser is the scavenger's brush: and although the use of this cannot be afforded on country roads, it can be so in the neighbourhood of towns, and with great advantage. Sweeping does not injure a road so much as scraping, and it can be done when the road is too wet for the scraper to be employed. The mud swept or scraped to the sides of the road should be collected in heaps, and carted away as speedily as possible. In very dry weather, macadam is very speedily worn to dust, unless the road be regularly watered. The watering carts should be made light and mounted on springs, and should proceed at a smart space, spreading the water in a gentle shower. For the purpose of repairing the roads, depôts for broken stone should be established at intervals of about a quarter of a mile; they should be in the form of a parallelogram, walled on three sides, for the facility of moving the stones, which this form affords; and they are of ample size if they contain about thirty cubic yards of stone. In determining the width of a road, regard must be had to the amount of traffic; and in consideration of this, to make provision for one, two, or more vehicles pass-

ing, as the case may require. First, therefore, the extreme width of the largest vehicle used in the district, with its load, should be ascertained, and to this a foot should be added, and the width of the road should be some multiple of the dimension.

ROASTING. — The first requisite for roasting is to have a clear brisk fire, proportioned to the joint that is to be roasted; without this, every attempt must prove abortive. The next thing is to see that the spit is properly cleaned before it enters the meat, and the less it passes through, the better. A neck and loin of meat requires to be carefully jointed before it is put on the spit, that the carver may separate them easily and neatly. The joint should be balanced evenly on the spit, that its motion may be regular, and the fire operate equally on every part; for this purpose balancing skewers are necessary. All roasting should be done open to the air, to ventilate the meat from its own fumes, and by the radiant heat of a glowing fire; otherwise it is in fact baked and rendered less wholesome. For the same reason when a joint is dressed, it is better to keep it hot by the fire, than to put it under a cover, that the exhalations may freely escape. In making up the fire for roasting, it should be three or four inches longer at each end than the joint on the spit, or the ends of the meat cannot be properly browned. Half an hour at least before the roasting begins, prepare the fire by putting on a few coals, so as to be sufficiently kindled by the time the fire is wanted. Put some of them between the bars, and small coals or cinders wetted at the back of the fire. In some families not provided with a jack or spit, a bottle-jack is a valuable instrument for roasting; and when this cannot be had, a skewer and a string, or rather a quantity of coarse worsted loosely twisted, is as philosophical an apparatus as any, and will answer the purpose quite as well. Do not put the meat too near the fire at first. The larger the joint, the farther it must be kept from the fire; if once it gets scorched, the outside will become hard and will acquire a disagreeable taste. If the fire is prevented from penetrating it, the meat will appear done, before it is little more than half-roasted, besides losing the pale brown colour which has so inviting an appearance in roasted meat. From ten to fourteen inches should be the distance at which the joint is placed when first put down, and afterwards it should be brought nearer by degrees. If the joint is thicker at one end than the other, lay the spit slanting, with the thickest part nearest the fire. When the meat is thin and tender, the fire should be small and brisk; but for a large joint, the fire should be strong, and equally good in every part of the grate, or the meat will not be uniformly done. Stir the fire well before the meat is set down, keep it clear at the bottom, and take care that there are no smoky coals in the front. If a jack be used it should be carefully oiled and kept clean, and covered from the dust, or it will never act well. The dripping-pan should be placed at such a distance from the fire as just to catch the drippings; if it be too near, the ashes will fall into the pan and spoil the contents. If too far from the fire, the drippings will not only be lost, but the meat will be blackened and spoiled by the fetid smoke, which will arise when the fat falls on the live cinders. The meat must be well basted, to keep it moist. When it does not supply dripping enough for this purpose, add some that has been saved on some former occasions, and properly prepared: this answers as well, if not better, than butter. Roasting meat should not be sprinkled with salt till nearly done, as it tends to draw out the gravy. Basting with a little salt and water when the meat is first laid down, is often done, but the practice is not good. Where the fat is very fine and delicate, it is best to cover it with writing paper, to prevent it wasting; but fat in general is as well exposed to the action of the fire. Half an hour before the meat is done, prepare some gravy, if necessary; and just before it is taken up, put it nearer the fire, to brown it. If it is to be frothed, baste and dredge it carefully with flour. When the joint is quite done, take it up immediately, as every moment beyond that is injurious to the meat. With respect to the time required for roasting, the general rule of a quarter of an hour to a pound of meat is a pretty fair estimate, but it will not do for all kinds of joints. The use of a meat screen must also be taken into consideration, as it tends materially to assist the operation, by concentrating the heat and excluding the cold draughts of air. Attention must be paid to the nature of the joint, whether thick or thin, the strength of the fire, the nearness of the meat to it, and the frequency with which it is basted. The more it is basted, the less time will it take, as it keeps the meat soft and mellow on the outside, and the fire acts upon it with greater force. Much will depend on the time the meat has been kept, and on the temperature of the weather. The same weight of meat will require twenty minutes or half an hour longer in cold weather to roast it than in warm weather; and the same principle applies to meat when fresh killed than when it has been kept till it is tender. If meat should happen to get frozen, it should be thawed, by lying some time in cold water; and then be thoroughly dried in a clean cloth previously to being laid down before the fire. The mean time of roasting for various joints and articles of food may be estimated as follows:—

Sirloin of beef, from fifteen to eighteen pounds, four hours.

Ribs of beef, same weight, four hours.

Collared ribs, about three hours and a half.

Haunch of venison, from three to four hours.

Haunch, if in paper and paste, from four to five hours.

Leg of mutton, of eight to ten pounds, two hours and a half.

Shoulder, of eight pounds, two hours.

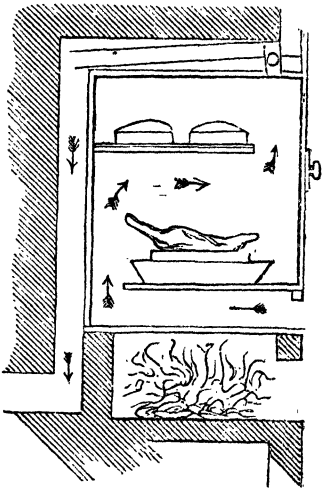
Fillet of veal, of ten pounds, stuffed, three hours.

Brisket of veal, of eight pounds two hours,

Loin, of eight to nine pounds, two hours.
Leg of lamb, of six pounds, one hour and a half.
Loin, of three to four pounds, one hour and a quarter.
Leg of pork, of eight pounds, two hours and three-quarters.
Loin of pork, of six pounds, two hours.
Goose, if large, fifty minutes to an hour.
Green goose, fifty minutes to an hour.
Duck, if large, fifty minutes.
Hare, an hour and a quarter to an hour and a half.
Turkey, from two and a half to three and a half hours, according to size.
Leveret, fifty minutes.
Rabbit, large, one hour.
Wild duck, thirty-five minutes.
Partridge, large, thirty minutes.
Pigeon, from twenty to twenty-five minutes.
Chicken, from twenty to fifty minutes, according to size.
Blackcock, from an hour to an hour and a quarter.
Sucking-pig, from an hour and a quarter to two hours, according to size.
Fowl, large, sixty-five minutes.
Ox-heart, stuffed, from two hours to two hours and a half.
Calf's heart, one hour.
Grouse, thirty-five minutes.

In a dietetic point of view, roasted meat is not so easily digested as boiled meat, but it is more nutritious. It retains, moreover, the gelatine, which is greatly dissolved out in the process of boiling. If, however, the cooking is carried too far, and the meat be over-done, its nutritious properties are impaired. On the other hand, if meat is under-done, although more nutritious, it is certainly less digestible. In placing paper over fat, to preserve it, never use pins or skewers, they operate as so many taps to carry off the gravy; besides, the paper frequently starts from the skewers, and is, consequently, liable to take fire, to the great injury of both the flavour and the appearance of the meat. For these reasons, always fasten on the paper with tape, twine, or any other suitable string.

ROASTING OVEN. — Apparatus for roasting meat are made in various forms, intended to possess the combined advantages of an ordinary oven and roasting convenience. The accompanying engraving represents a general section of the roasting oven as it is now usually executed. The body of the iron roaster is of a square form, larger or smaller, and set in the brickwork with a fire below it. The fire, which burns on the bars, ascends round both sides of the roaster in a cavity left between it and the brickwork, passes over the top in a similar cavity, and then descends by the back of the roaster, in the direction of the arrows, making its exit by a horizontal flue situated at the lower part on the left, and goes at last in the perpendicular flue to the top of the house. Within the oven are two shelves, on which to place the dishes. In the circulation of hot air, when required, there is an aperture beneath the door of the roaster, having a register to close it when it is not wanted. When hot air is to circulate, this register is opened, and the air which is heated by the bottom of the roaster, turns



out at the furthest end of the lower shelf, as represented by the arrow; passes over the meat placed in its pan and gridiron, ascends through the vacancy occasioned by the upper shelf not reaching to the front, and finally passes off into the tube at the top of the roaster, which can be closed by a register, moveable by a small rod coming to the front. This hot air then joins that from the fire, and passes into the flue.

ROBERT SAUCE. — Put an ounce of butter into a saucepan; set it over the fire, and when browning, throw in a handful of onions cut in small dice; fry them brown, but do not let them burn; add half a spoonful of flour, shake the onions in it and give it another fry; then put four spoonfuls of gravy, and some pepper and salt, and boil it gently ten minutes; skim it. When ready to serve, add a teaspoonful of made mustard, a spoonful of vinegar, and the juice of half a lemon, and pour it round the steaks or chops. They should be of a fine yellow brown, and garnished with fried parsley and lemon. The sauce must not boil after the mustard is put in, otherwise it will curdle.

☞ Butter, 1oz.; onions, handful; flour, ½ tablespoonful; gravy, 4 tablespoonfuls; pepper and salt, to season; mustard, 1 teaspoonful; vinegar, 1 tablespoonful; lemon, juice of ½ of 1.

ROCHELLE SALT.—This salt is a mild aperient taken in ounce doses, and more agreeable than Epsom salts. To produce it dissolve twenty ounces of sub-carbonate o soda in ten pints of water, add, whil

boiling, twenty-four ounces of cream of tartar, filter, evaporate to a pellicle, and set aside to crystallize.

ROCK CAKES.—1. Clean and dry a pound of currants, and add the same quantity of flour, well dried, half a pound of beaten sugar, half a pound of butter, the yolks of eight eggs, and the whites of six, well beaten separately; add a little nutmeg and cinnamon; mix the whole well together, the butter having been first beaten to a cream; drop the paste in small quantities, on buttered paper, and bake on tins in a quick oven. 2. Mix a quart of cream with twelve tablespoonfuls of flour, the yolks of eight eggs, well beaten, six tablespoonfuls of finely pounded loaf-sugar, a little rose-water, and half a glass of brandy or ratafia; beat all well together; heat the wafer irons, put into them a tablespoonful of the butter, and turn the irons, that it may bake equally. While hot, roll them round a stick.

☞ 1. Currants, 1lb.; flour, 1lb.; sugar, ½lb.; butter, ½lb.; eggs, 8 yolks, 6 whites; nutmeg and cinnamon, to flavour.—2. Cream, 1 quart; flour, 12 tablespoonfuls; eggs, 8 yolks; sugar, 6 tablespoonfuls; rose-water, to flavour; brandy or ratafia, ½ glass.

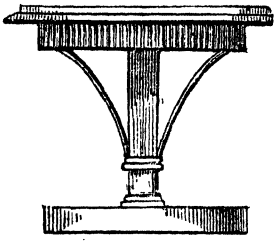
ROCK, IRISH.—Blanch a pound of sweet and an ounce of bitter almonds; pick out a few of the sweet almonds, cut them in strips, and blanch them in rose-water; pound the rest in a mortar with a tablespoonful of brandy, four ounces of pounded and sifted loaf-sugar, and half a pound of salt butter washed; pound them till the mass appears very white, and set in a cool place to stiffen; then dip two tablespoonfuls into cold water, and with them form the paste as much like an egg as possible; place on the bottom of a glass dish a small plate or saucer reversed, and pile the rock high up; stick over it the cut almonds, and ornament with sweetmeats.

☞ Sweet almonds, 1lb.; bitter almonds, 1oz.; brandy, 1 tablespoonful; sugar, ½lb.; salt butter, ½lb.

ROCKERY.—A rockery, if judiciously disposed, is a very fitting arrangement for a town garden, as it presents a greater apparent extent of space, in consequence of its abruptly undulated surface admitting of the walks being carried along within a few feet or yards of each other, and yet being completely hid. Rockwork should always be kept in the background, if artificial; and in a garden, placed on a level surface, because it is an attempt to imitate nature, where all around it is art. The case is different where the situation is naturally rocky, and where projecting portions of rock can be laid bare to form the ground-work. It may be advantageously employed in the formation of screens for shutting out objects which are not wished to be seen; to render more secluded and sheltered, small places, such as villa gardens: and it may form the termination of a long or even principal walk, provided nothing better can be substituted. It should never rise out of the smooth-dressed lawn, nor be placed too near the house, shrubbery and terraced banks, being better for shutting out objects in the foreground. When the culture of rock plants is an object, the rockery should present two or more aspects, one damp and shaded, the other fully exposed to the sun. Ferns and plants of shade should occupy the former, while sun-loving plants should inhabit the latter. Rocks associate naturally with water; when a pool can be placed at its base, with its margin sufficiently broken and rugged, the effect will be heightened, and the plants derive advantage from the watery exhalations rising during the heat of summer. Every appearance of art and approach to regularity will be out of place in the construction of rockery. On the contrary, the surface of the whole cannot be too irregular, or too varied, indented, or prominent. An additional projection may be given to some of the parts by moderate-sized bushes or short-stemmed weeping trees. Evergreen shrubs or low trees will be particularly useful. For ordinary practice, the materials of which a rockery, however small, is formed, should be on their broadest or flat sides, and not be set on edge, much less be placed with their points upwards. Any great elevation should not be sought in small rockeries. This would be inconsistent with their breadth, and would render them too prominent and artificial. They should not be carried higher than the point at which they can be well supported and backed with a broad mass of earth and vegetation. Additional height may sometimes be given, if desired, by excavating into a hollow the base from which they spring. Rocks should appear to spring out of the polished grassy lawn; for grass and rocks do not harmonize. The vegetation around the base of rockeries should be of rustic plants, such as the varieties of our hardy native heaths and similar plants. These should, however, bear no resemblance to having been planted, but as if they had been brought in large masses, and scattered irregularly around the margin. Rockwork may be introduced both in the gardenesque and picturesque styles of flower-gardens, but never into the geometric. The intention of rockwork is to shut out objects not wished to be seen; to divide the garden into different compartments; to cover sterile banks, in the gardenesque style; and to imitate natural rocks, cascades, Alpine rivulets, and to divide into different compartments, or to exemplify the natural stratification of some particular locality, in the picturesque style. To accomplish these with judgment and taste, nature must be imitated as closely as possible. The rockwork being formed should be sufficiently clothed with plants indigenous to similar situations naturally. The rocky vine, the mountain brow, and the sea beach, are the most fertile sources of materials for a rockery; and it is necessary in selecting them to pay minute attention to the manner in which the various rocks are deposited in their beds, and also to the mosses, heaths, and ferns which are congenial to them; for in proportion as the selector shall succeed in imitating nature will he please his own

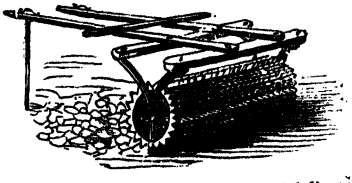
eye, and gratify others. Having fixed on the quarter whence materials are to be procured, the next step is to find out an intelligent workman, who may execute the charge intrusted to him with care. On this a great deal depends, and some pains should be taken to make him understand thoroughly what is wanted. The size of the stones should always be varied, but proportioned upon the whole to the intended size of the rockwork. A number of detached erections never look well; they are stiff and artificial. The whole should show an evident and well-defined connection; and with regard to the stones, the greatest possible variety in form and size should be studied. The foundations should consist of mounds of earth, which answer the purpose as well as any more solid erection, and will make the stones go farther. Rocks of the same kind and colour should be placed together; if intermixed, they seldom wear a natural appearance. A dark cave penetrating into the thickest part of the erection is not very difficult to construct, and when encircled by ivy, and inhabited by a pair of horned owls, it will form a very interesting object. Rock plants of every description should be profusely stuck around, and in one short twelvemonth, the whole scene will exhibit an impress of antiquity far beyond anticipation. The whole should be enclosed with trees of large foliage, that the visitor to the scene may meet with it unexpectedly. Water, in all cases, adds greatly to the general effect, and a small pond permits the construction of a rocky island, which should be formed with jutting points for the sake of the reflection in the water. By a simple expedient, streams of water may be made to issue from the rocks, or to sport into the air and fall into beautiful cascades. Rockwork should be, in general, an independent feature. It rarely looks well when piled against a wall, around the roots of a tree, or in any situation where it is over-shadowed by trees; in short, where it does not form the prominent feature in the scene. It looks well near water, and merging into it; or in an open airy garden where it is surrounded by a gravel walk; but it does not look so well when rising from turf, without an adjoining walk, or where large shrubs grow up amongst the stones. Indeed, it may be laid down as a general principle, that rockwork should either adjoin gravel or a piece of water, and that it should seldom or never adjoin trees or grass, or walls or buildings. Rockeries may, however, be made to answer one or two simple purposes independent of ornamentation. Where there are raised banks between one part of a garden and another, rocks can be employed to face the more private side of them, and will contribute to their solidity, at the same time that they increase their propriety and interest. If, again, a walk be cut through a bank, rocks may be used to hold up the sides of the opening when very steep. Or where a walk travels along a narrow hollow between two banks, the slopes of the bank can be partially covered with masses of rock. In both these last cases, a miniature and imperfect imitation of a small defile will be produced, and may be made very consistent and natural. The plan will be particularly serviceable where the hollow has to be made as narrow as possible, and the banks have consequently to be kept nearly upright.

ROCK-PLANT STAND.—A picturesque effect is produced in the garden by elevated stands for rock-plants of the rarest kinds,



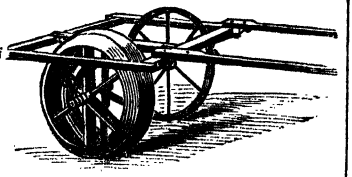
and most minute species. The use of such a stand is twofold, namely, preserving them from being run over by stronger young kinds, and placing them in a more convenient position to be seen.

ROLLER.—An agricultural instrument constructed of wood, stone, or cast-iron, according to convenience, or the purposes for which it is to be used. For tillage lands the roller is used to break the lumps of earth, and in some cases to press in and harden the ground about newly-sown seed. In constructing heavy rollers, they should not have too great a diameter, whatever the material be of which they are formed, as the pressure is diminished when the instrument is of very large size, by its resting on too much surface at once, except an addition of weight in proportion be made. By having the roller made small, when loaded with some weight, a much greater effect will be produced, and a considerable saving of expense effected in the construction of the implement. A species of roller called the clod-crusher, as seen in



the engraving, consists of cast metal discs, or roller parts, placed loosely upon a round axle so as to revolve independently of each other. The outer surface of each roller part is serrated, and has a series of sideway-projecting teeth, which act perpendicularly in breaking clods. The size, six feet wide by two and a half in diameter, consists of twenty-three roller parts. Each alternate ring is made larger in the eye, and in

revolving, causes an up-and-down motion along the entire surface of the roller, thereby increasing the power and effecting the best means of self-cleansing. Another kind of roller, sometimes called the pressing plough,



generally consists of two cast-iron wheels, for the purpose of impressing two small seed gutters or drills on the furrow slices turned over by the common plough, and a third wheel for running in the bottom of the furrow for the purpose of keeping the machine steady. The wheels are kept clean by scrapers. The implement is used in breaking up clover leys for wheat. The advantages are said to be a firm bed for the seed, by which it is not liable to be thrown out in the winter season, and not so liable to be attacked by the grub and wire worm.

ROLLS.—A species of fancy bread which may be made in a variety of ways, as follows:—*Dinner or Breakfast rolls.*—Crumble down very small indeed an ounce of butter into two pounds of the best flour, and mix with them a saltspoonful of salt. Put into a basin, a dessertspoonful of solid well-purified yeast, and half a teaspoonful of pounded sugar; mix these with half a pint of warm new milk; hollow the centre of the flour, pour in the yeast gradually, stirring to it sufficient of the surrounding flour to make a thick batter; strew more flour on the top, cover a thick double cloth over the pan, and let it stand in a warm kitchen to rise. In winter it must be placed within a few feet of the fire. In about an hour, should the leaven have broken through the flour on the top, and have risen considerably in height, mix one lightly-whisked egg, or the yolks of two, with nearly half a pint more of quite warm new milk, and wet up the mass into a very smooth dough. Cover it as before, and, in from half to three-quarters of an hour, turn it on to a paste-board, and divide it into twenty-four portions of equal size. Knead these as lightly as possible into small round, or olive-shaped rolls; make a slight incision round them, and cut them once or twice across the the top, placing them, as they are done, on slightly-floured baking sheets an inch or two apart. Let them remain for fifteen or twenty minutes; then wash the tops with yolk of egg mixed with a little milk, and bake them in a rather brisk oven from ten to fifteen minutes. Turn them upside down upon a dish to cool after they are taken from the tins. An additional ounce of butter and another egg can be used for these rolls when richer bread is liked, but it is much less wholesome than a more simple kind. A cup of good cream would be an admirable substitute for butter altogether, rendering the rolls exceedingly delicate both in appearance and flavour. The yeast used for them should be stirred up with plenty of cold water the day before it is wanted: and it will be found very thick indeed when it is poured off, which should be gently done. Rather less than an ounce of good fresh German yeast may be used for them instead of brewer's yeast with advantage.

French rolls.—Take a pint and a half of milk quite warm; and a half a pint of small-beer yeast: add sufficient flour to make it as thick as butter; put it into a pan; cover it over and keep it warm; when it has risen to its utmost height, add a quarter of a pint of warm water, and half an ounce of salt; mix them well together; rub into a little flour two ounces of butter; then make the dough not quite so stiff as for bread; let it stand for three-quarters of an hour, and it will be ready to form into rolls; let them stand afterwards until they have risen, and bake them in a quick oven. *Brentford rolls.*—Mix together two pounds of flour, a little salt, two ounces of sifted sugar, four ounces of butter, and two eggs beaten with two tablespoonfuls of yeast and about a pint of milk. Knead the dough well and set it to rise before the fire. Bake a dozen rolls, butter tin plates, and set them before the fire to rise till they are of a proper size, then bake them for half an hour. *American potato rolls.*—Choose five large potatoes, boil, peel, and wash them well; then rub them through a sieve; to each potato allow a pint of sifted flour, a tablespoonful of strong fresh yeast; a gill of milk-warm water; a saltspoonful of salt; the yolk of an egg, and an ounce of butter; mix together in a large broad pan the flour, the mashed potatoes, and the salt. Make a hole in the centre of the mixture, and pour into it the yeast mixed with the warm water. Sprinkle a little flour over the top, and mix in a little from round the sides of the hole. Cover it with a clean cloth, and over that a flannel, and set it near the fire to rise. When the dough is quite light and cracked all over the surface, knead in the butter and also the yolks of eggs, having previously beaten them well, and add a small teaspoonful of soda dissolved in a little warm water. Then divide the dough into equal parts, make it into long-shaped rolls, and lay them in a tin or iron pan sprinkled with flour. Cover them, and again set them to rise in a warm place. When perfectly light (which should be in about an hour), set the pan in an oven, and bake the rolls brown. They are best when quite fresh. Pull them open with the fingers and eat them with butter. *Geneva rolls.*—Break down into very small crumbs three ounces of butter with two pounds of flour; add a little salt, and set the sponge with a large tablespoonful of solid yeast, mixed with a pint of new milk, and a tablespoonful of strong saffron-water; let it rise for a full hour, then stir to a couple of well-beaten eggs as much hot milk as will render them lukewarm, and wet the rolls with them to a light lithe dough; leave it for about forty

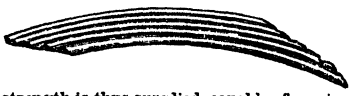
minutes longer, mould it into small rolls, brush them with beaten yolk of egg, and bake them from twenty minutes to half an hour. The addition of six ounces of sugar, three of butter, half a pound more of currants, the grated rind of a large lemon, and a couple of ounces of candied orange-rind, will convert the whole into excellent rolls. When the flavour of saffron is not liked, omit it altogether.

☞ *Dinner or breakfast rolls.*—Butter, 1oz.; flour, 2lbs.; salt, 1 saltspoonful; yeast, 1 dessertspoonful; saffron, ½ teaspoonful; milk, ½ pint; eggs, 1 or the yolks of 2; milk, ½ pint. *French rolls.*—Milk, 1½ pint; yeast, ½ pint; flour, sufficient; warm water, ½ pint; salt, ½oz.; butter, 2ozs. *Brentford rolls.*—Flour, 2lbs.; salt, sufficient; sugar, 2ozs.; butter, ½lb.; eggs, 2; yeast, 2 tablespoonfuls; milk, 1 pint. *American potato rolls.*—Potatoes, sufficient; flour, 1 pint to each potato; yeast, 1 tablespoonful; water, 1 gill; salt, 1 tablespoonful; egg, yolk of 1; butter, 1oz.; soda, 1 teaspoonful. *Geneva rolls.*—Flour, 2lbs.; butter, 3ozs.; yeast, 1 tablespoonful (saffron, 1 spoonful; water, less than ½ pint); new milk, 1 pint; salt, sufficient.

ROLLY-POLY PUDDING.—This well-known pudding is made by rolling out a thin layer of suet or butter paste as for puddings, upon which either a preserve or dried currants are spread evenly, leaving an inch bare at the edges all round except on that next the cook, and then the whole is rolled up into a long pudding, closed at the ends by pinching the paste, and enveloped in the same way in a cloth, which is tied with a string at each end, and boiled about one hour.

ROMANCES.—Works of fiction differing from the novel, inasmuch as the scenes and incidents are not taken from every-day life, but are, for the most part, the author's own creation. Among the best authors of this class of literature are Mrs. Radcliffe, William Godwin, Maturin, M. G. Lewis, Beckford, Jane and Anna Maria Porter, Mrs. Shelley, Thomas Hope, Plumer Ward, G. P. R. James, and W. H. Ainsworth.

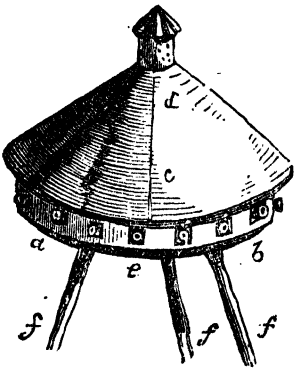
ROOFING.—The covering of buildings, generally very complicated and often exercising all the ingenuity of even a skilful workman. Roofs should always be put together on the ground; and, after they have had all their parts marked, to be taken to pieces again, in order to be raised to their proper places on the walls. Corrugated iron roofs are composed of sheet iron, impressed so as to present a surface of semi-circular ridges, with intervening furrows lengthwise of the sheet. By this means the sheet, from a plane flat surface having no strength but from its tenacity, becomes a series of continued arches, abutting against each other, and the metal, by this new position, will, after undergoing the process of corrugation, bear upwards of seven hundred-weight without bending in the least degree. Iron so furrowed will be preferable to common sheet iron for covering a flat roof; because the furrows will collect the water, and convey it more rapidly to the eaves; but this is a trifling advantage compared with others which follow. Suppose that, in addition to furrowing a sheet lengthwise so as to give it a flat appearance, it is also bent in one general curve in the direction of its length, causing it to approach the form seen in the engraving: an arch of great



strength is thus supplied, capable of serving as a roof without rafters, or any description of support, except at the eaves or abutments. It is evident that, the span of any roof being given, segments of corrugated iron may be riveted together so as to form such an arch as may be deemed proper for covering it.

ROOK PIE.—Draw and skin six or eight rooks, let them lie in cold water one or two hours, cut out the back-bones, wash the birds, season them lightly with pepper and salt, and pack them closely into a pie-dish; add half a pint of gravy or water, and lay over them half a pound of fresh butter; cover the dish with a flour-and-water paste, and bake for two hours. The following day take off the coarse, and cover with a puff paste, and bake it till it be sufficiently done.

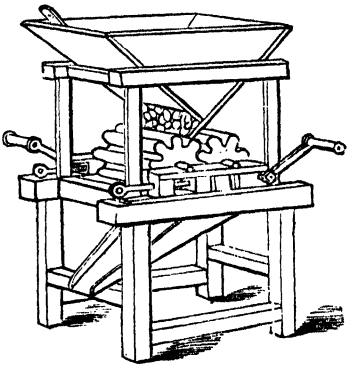
ROOKS, TO DESTROY.—The rook has a bad reputation, for the injury it occasions to growing crops and vegetation generally. Many devices have been formed to drive these destructive birds from the field; one of the most common of which is the scare-crow. After a time, however, the birds become familiar with these objects, and they cease to exercise any influence. Gunpowder is the most effectual means of scaring away rooks. Rags steeped in a solution of gunpowder, dried, and placed on the windward



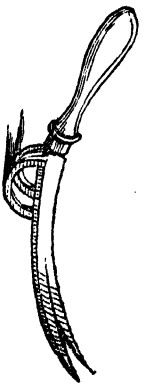
side of a field, will act as a scare as long as they last, but the renewal of them occasions a good deal of trouble. One of the best contrivances is that shown in the an-

nexed figure, which can be made to keep up a fire throughout the day. It consists of a circular plate of strong tin, *a b*, eighteen inches in diameter, upon the circumference of which is soldered a hoop of equally strong tin, three inches in height, and through which are pierced twenty-four embrasures, three-quarters of an inch square each, at equal distances from one another. At each embrasure is inserted brass cannon, four inches in length, upon a carriage soldered to the bottom-plate, and removable at pleasure by means of a clasp. The plate and rim are covered by a conical tin top, *c*, with an eave projecting one inch, to prevent the drops of rain running down the rim. The cover is surmounted with a cylindrical lantern, *d*, two inches and a half in diameter, pierced with holes. The cannon are loaded with fine gunpowder, and wadded with woollen wadding, to prevent its ignition. They are fired with a match consisting of cotton thread dipped in a solution of saltpetre; and the thread is brought over and held upon the touch-hole of each cannon by a bit of copper-wire attached to the carriage. The match-thread is made longer or shorter, as the time is determined on between the discharge of each cannon, and to dispose of it for this purpose, the central part of the plate *a b* is divided by perpendicular partitions of tin, so arranged as to form numerous alleys, along which the match-thread is made to traverse at such a length as to burn it in down in time to reach the touch-hole at a given hour. Plate *a b* is affixed to a circular board *e*, nine inches in diameter, and one inch in thickness; and in its circumference are attached three legs, *f f f*, which support the apparatus in tripod form, at a height sufficient to elevate it above the standing corn. The battery is placed in the part of the field most frequented by the rooks, and where it may best be seen. Suppose that the guns are loaded and the match lighted at five in the morning, and that by eight at night it is time to cease firing, which is fifteen hours, in which time thirty-seven and a half minutes will require to elapse between the discharge of each of the twenty-four cannons. Such discharges are much more to be depended on for regularity than the firing of any fowling-piece by a herd-boy. In addition to the discharges of the guns, if a piece of woollen rag, steeped in a solution of gunpowder and dried, were placed in a cup of tin at *d*, immediately below the lantern of the cover, and set fire to, the smoke arising from it would still further intimidate the rooks, and cause the discharge of the cannons at longer intervals to suffice. The position of the battery should be changed every day, and a piece of laid corn is the best spot for erecting it on, to be best seen from a distance. It may be set amongst potatoes, as also in a plot of turnips growing for seed. The number of such apparatus required for a farm would depend on the number of the corn-fields subject to the attack of birds, and also on the succession or ripening of the different crops. Batteries could be made of any size and to fire as often as desired, and the smaller-sized ones, when longer in use than all the cannons can reach the time, the cannons might be loaded oftener than once a day.

ROOT BREAKER. An implement used for breaking or bruising potatoes, turnips, carrots, or other raw roots, into small or moderate-sized pieces before giving them to cattle or horses. It is composed of two widely-fluted rollers placed under a hopper, turned by two men. The same implement



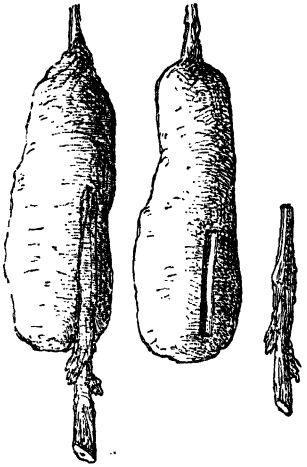
may be set so close by means of two screws as to serve for a whin-bruiser, or for breaking beans or corn of any kind.



ROOT EXTRACTER. — An excellent implement for taking up soiled roots, &c., and which may be carried in the pocket. The mode of using it is to thrust it deeply into the ground, so placed that the root may be taken between the prongs. The bent part near the handle, acting as a fulcrum against the surface of the ground, greatly facilitates the withdrawal of the root without breaking it, when the handle is pressed towards the ground. This implement will be found not only convenient, but will prevent injury being done to the roots.

ROOT-GRAFTING AND PRUNING.—Root-grafting is a method often practised in nurseries in cases where stocks of the species intended to be increased are scarce, and at other times, to economise time, and the operation can be performed during the winter and under protection, so that, when spring arrives, they may be taken out and planted in nursery lines. One precaution ought to be taken in this mode—namely,

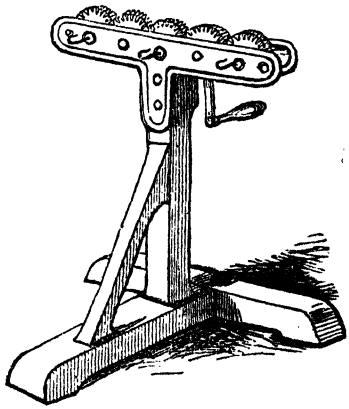
washing the top parts, at least, of the root stocks, to prevent the possibility of earthy matter getting between the scion and the stock. When the attachment has taken place, and planting is completed, draw up the earth around the neck of the plants so as to become the point of union. The rarer species of oaks, for example, may be grafted upon the roots of the common sorts; and the otherwise useless roots left on the ground, upon removing old thorn hedges, may be used as excellent stocks upon which to attach peony-grafts. The tree peony has been successfully grafted upon the flesh roots of the herbaceous kinds of the same genus; the melon and cucumber, the potato and love-apple, and many others have been or are capable of being grafted on each other. In the case of the tree peony, the operation is performed from the middle of July to the middle of August. The tubers throw out roots in autumn, and are then taken up and potted, and preserved under cover during winter. The operation is exceedingly simple, and consists in selecting single tubers of the plant, in which a trian-



gular notch is cut near its top; to this notch a scion of the tree sort is made to fit, having two or three buds upon it; when placed it is tied with soft matting, and clayed or waxed over in the usual manner. If the plant which supplies the scion be scarce, then one bud may be used instead of three. In selecting the tubers for this purpose, barren ones, that is, those having no visible eyes—are as good, if not possibly better, than those which have them. By this means dahlias may be multiplied largely, as every tuber is suitable for a stock, while only the crown of the whole root produces cuttings. *Root-pruning* is adopted as a check to over-luxuriance. This it does effectually, for such excess of growth arises from the roots imbibing too much food; by pruning, and thus reducing their number, therefore, we reduce their imbibing power, and it is found that such pruning checks the production of leaf-buds, and will cause any kind of fruit-tree to produce blossom-buds, provided the tree is healthy, and that its barrenness arises from over-luxuriance. To know what proportion of the roots to cut away, the trees may be supposed to be divided into three classes. *First*, trees of moderate luxuriance: *second*, those which may be termed robust; *third*, those of gross habit. To a further idea, it may be said that the first class will make young shoots on an average a foot in length; those of the second, two feet; and the third, three feet; the latter, indeed, frequently burst into lateral or side shoots, from the young shoots of the same season. From the first class, therefore, it is advisable to cut away about a sixth part of the roots; from the second class, a fourth part; and from the third class, a third part. It must be borne in mind that the extremities of the roots alone should be cut off and the surface of the roots preserved by every possible means.

ROOTS, TO GATHER AND PRESERVE. — Roots should be gathered in spring with but few exceptions, and are better for being fresh. Roots to be dried should be well washed and sliced, unless they are preserved for the sake of the bark, when they must be merely washed and dried. The process of drying may be simply performed by stringing the pieces together, or scattering them on paper trays, and exposing them for a sufficient time to a gentle heat, say from ninety to one hundred degrees.

ROPE TWISTER. — An implement necessary on large farms, and desirable on

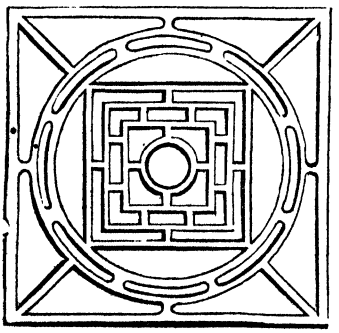


these of ordinary size, by which straw ropes for use in thatching, may be twisted with

greater speed and accuracy than is possible with the slow and awkward implements formerly employed, and which required two pairs of hands to every rope. The mode of its action is plain enough. The turning of the handle gives motion to five wheels, the centre one being on the axis of the handle, and all toothed into one another; and the axis of every alternate wheel is lengthened out into a hook on the other side from the handle, over which a wisp of straw being doubled, the twisting of the rope commences and regular additions of material being skilfully made, continues until any length that may be desired is obtained.

ROSE, CULTURE OF.—The rose may be propagated by a variety of methods; most kinds by cuttings, the best time for making which is in April. The most convenient-sized pots in which to place the cuttings are five inches across; fill them with moderately rich light earth, press it firmly down, then fill the pots quite up to the rim with silver sand; give a gentle watering from a fine-rosed watering-pot, then divide the cuttings into lengths of about four inches, remove all the leaves except those belonging to the top buds; make the cut very smooth across, just under the lowest bud; the cutting is then ready to be planted. Have a small stock about as thick as a quill, and thrust it into the soil just the depth of the cutting, so as to leave the top bud out: close the earth firmly to the bottom of the cutting with the stick; place the cuttings close to the edge of the pots, with the leaves of all pointing inwards, then close up the holes with a little of the sand, and give a gentle watering. The best situation to place the pots in is a pit, with hand-glasses over them. If there is not that convenience, plunge the pots in coal ashes on a shady border, covering them with hand-glasses. Shift into larger pots as they require. For cuttings in the open ground, choose a shady border, next a low wall or hedge—the latter to be close-clipped with the garden shears. Let the soil be well dug and chopped small, and the surface raked very fine; then pour some water upon it, and let it stand a day, to become moderately dry again. Prepare the cuttings as directed above, and expose them as little as possible to the sun and air; they may be preserved fresh by covering them with a little damp moss or hay as soon as they are prepared. As soon as a sufficient number are ready, open a trench with a small spade at the end of the border. Chop the side of the trench furthest from you straight down, just a sufficient depth between the topmost bud and leaf out of the soil; then place the cuttings against this upright bank, about three inches apart. When the row is filled with cuttings, with your spade put the soil against the cuttings, and with your foot tread it firmly to them. Take great care that the soil is quite close and firm around each. Then fill up level with the top of the row of cuttings another portion of the soil, until there is a bank of earth six inches distant from the first row. Chop down the outermost edge of the soil, so as to leave another upright bank to set the second row of cuttings against, and so proceed from row to row, till the span set apart for this purpose is filled. Examine a few of them occasionally after about six weeks, and if they are rooted, lift them carefully with the trowel or small spade, and either put them or plant them out in rows in a more open situation, where they are to grow and flower. *By budding.*—This mode is a very general one, and particularly for standard roses. For budding roses, the best time of the day is either early in the morning, or after three o'clock in the afternoon; cloudy moist days, are the most suitable. Cut off the heads of your stocks, and all the side branches to three, that is for standards. For dwarfs, cut off to within six inches of the ground; then, with the knife, make an incision on the upper part of the young side-branches, as close to the main stem as possible. The incision should be about an inch long, lengthwise in the branch. Cut a cross just at the top of this incision, in a direction somewhat slanting. Then take off the bud, previously cutting off the leaf, leaving part of the leaf-stalk. Cut away with the bud a portion of the bark from the parent stem, and a portion of the wood with it. This bud, and the bark, and the wood with it, should be altogether rather more than three-quarters of an inch long. Turn the bud over between your finger and thumb, and dexterously take out the greater part of the wood full in the eye of the bud. Then raise one side of the bark of the incision, in the shape of a T made in the stock, and with the ivory handle of the budding-knife slip in one side of the bark attached to the bud, then turn your knife, and lift up the other side of the incision, and the bud will drop into its place; pass the bark of the bud to the farther end of the incision, and, if any projects beyond the cross incision on the stock, cut it off. Then tie with worsted neatly, and the operation is complete. *By layers.*—The common mode is to lay down the young shoots of the preceding summer, late in autumn, or early in the succeeding spring; and then, with the exception of the moss-rose and one or two others, they form rooted plants by the next autumn. After the plants are removed from the stools, they are planted in nursery rows; and in a year, the blossom-buds having been carefully pinched off from the first laying down, they will be fit for removal to their final destination. The shoots are then to be pruned, and the soil stirred and enriched. An improved method of laying roses consists in entering the knife up the centre of the inward portion of the wood of the layer, and keeping the slit so formed open by a small piece of wood or a stone. *By suckers.*—Roses send up many suckers annually, which may be taken up in autumn, winter, or early spring, with some rootlets attached; and the strongest may be planted out finally, and the weakest in the nursery for a year or two longer. They will readily grow, and will most of them produce flowers the following summer. When rose-trees have grown into large bunches, with many suckers, the whole

may be taken up and slipped, or divided into separate plants. The moss, and some others, furnish suckers but sparingly. *Soil and situation.*—The best soil is a rather strong loam; the deeper it is the better. It should be well-drained. Such land as will grow good wheat or good hops will grow fine roses. Next it should be rich to grow them fine: if not already so, it ought to have thoroughly decayed dung added to it. Bones dissolved in vitriol will be of great benefit to them, a manure that may be obtained of any respectable dealer. The rose-garden ought to open to the south and east, but be sheltered from the north and north-west winds. Tall beech or hornbeam hedges, are the best shelter against gales blowing from those points. Roses should not be planted so near trees as to be overhung by them, as the drip from the trees will prevent them from thriving, and injure the flowers. *Raising roses from seed* is an interesting pursuit, but little attended to in this country. It is easy in all points, except the obtaining of mature seed from the better varieties, what in our climate does not often occur in the open air; and this circumstance is doubtless the cause of the seeming neglect which has hitherto attended this part of their culture. When ripe berries can be gathered in October, they should be taken from the tree before they are much frozen; the seed cleared out, and at once buried in sand, placing first a layer of sand in a large pot, then a sprinkling of seed, and of some more sand, continuing them alternately till the pot is full; the seed is then to be kept till the following April, when it may be sown in the usual way, in pans of light loam, and plunged into a moderate hot-bed; some of it will come up the same season, and the remainder in the following; the young plants should be potted off as soon as they can be safely handled, and afterwards are to be treated with a frame, and nursed till strong enough to be trusted out of doors. No very definite directions can be given for



arranging the rosary, the working upon existing circumstances must determine it; though in general a series of beds, either circular or rectangular, are most convenient, because by varying their size the several groups may be accommodated, and the method admits of additions being subsequently made without disturbing the established portion; but whatever its size or form, no other plant should be allowed on the prescribed space, or at least nothing more than a few prostrate growing things to cover the earth between the stems or in front of the borders. The preceding engraving is suggestive of a rosarium in keeping with the above-mentioned requisites. The approaches may be made through avenues of tall standards, the boundary marked by climbing kinds, trained in festoons upon chains suspended from posts, and as a central object, either a heap of large stones upon which the creeping kinds may ramble, half a dozen rustic pillars, supporting a roof to be covered with climbing sorts, or a little grove of creeping roses, will be appropriate.

ROSE LIP-SALVE.—Take eight ounces of sweet almond oil, four ounces prepared mutton suet, an ounce and a half of white wax, two ounces of spermaceti, and twenty drops of otto of roses; steep a small quantity of alkanet root in the oil, and strain before using. Melt the suet, wax, and spermaceti together, then add the oil and otto of roses.

ROSE LOZENGES.—To a pound of finely-sifted loaf-sugar, put an ounce of powdered gum arabic, or tragacanth; mix it into a stiff paste with rose-water, and grind up with the paste a little of the conserve of roses, which gives both flavour and colour; punch the mass into round or oval lozenges, each containing about fifteen grains, and dry them in a stove.

ROSE OIL.—Put any quantity of dried rose leaves into an earthen pipkin, cover them with olive oil, and keep it hot for some hours. The oil will extract both odour and colour. A little oil of rosemary may be added.

ROSE-WATER.—When the roses are in full bloom, pick the leaves carefully off, and to every quart of water put a peck of rose-leaves; put them in a still over a slow fire, and distil gradually; then bottle the water; let it stand in the bottle three days, and then cork it close.

ROSES, MILK OF.—Mix four ounces of the oil of almonds, with half a gallon of rose water, and then add forty drops of the oil of tartar.

ROSES, TINCTURE OF.—Put into a bottle the petals of the common rose and pour upon them spirits of wine; cork the bottle, and let it stand for two or three months. It will then yield a perfume little inferior to otto of roses. Common vinegar is much improved by a very small quantity of this mixture being added to it.

ROSEMARY, CULTURE OF.—A hardy under-plant, evergreen slightly aromatic. The green is hardiest as a plant, and is the sort generally used. The finest plants are raised from seed. Sow either broadcast or in small drills, six inches apart. The green is also raised by planting slips or cuttings of the young shoots in spring or summer in

a shady border. Let these be taken off from five to seven inches long, detaching the under-leaves. Set them in a row from six to twelve inches apart, nearly two-thirds into the ground: water at planting, and occasionally afterwards till they have struck. The plants will be strong and well-rooted by autumn, when they should be transplanted at proper distances. A light sandy soil assists exotic evergreens, that retain some of their original delicacy, to stand the winter; partly by preventing them from growing too luxuriant, and partly by not being a conductor of frost. In their final situations, train the plants either with a bushy head of moderate growth, or, if near a fence, in fan-like order.

ROSEMARY POMATUM.—Strip from the stem two large handfuls of recently gathered rosemary; boil it in a copper saucepan, with half a pound of hog's lard, until reduced to four ounces; strain it, and put in a pomatum pot.

ROSEWOOD. — A favourite wood for articles of furniture, especially those of a smaller description. It is considerably more expensive than mahogany. Many articles of rosewood furniture are veneered; but the best is of solid wood. The colour is permanent, except it be much exposed to the rays of the sun; and it takes a fine polish, which is improved by the application of French polish. It may, however, be kept in good condition, by being rubbed every day with a clean soft cloth.

ROSEWOOD, IMITATIVE.—Brush the wood over with a strong decoction of logwood, while hot; repeat this process three or four times; put a quantity of iron-filings amongst vinegar; then with a flat open brush, made with a piece of cane, bruised at the end or split with a knife, apply the solution to the wood in such a manner as to produce the fibres of the wood required. After it is dry, the wood must be polished with turpentine and bee's-wax.

ROTATION OF CROPS.—The rotation or succession of crops is absolutely necessary for the successful and economical cultivation of the soil. Crops have been divided by agriculturists into exhausting crops, restoring crops, and cleaning crops. The most exhausting crops are usually considered to be those of corn, but all those that are allowed to ripen their seed, and which are carried off the ground, are also exhausting, but in different degrees. Even clover, tares, and grass cut green, are considered as exhausting, but in a less degree than those which are allowed to ripen. Restoring crops are such as are allowed to decay upon the ground; or are consumed upon it by domestic animals. Cleaning crops are such as are grown in drills, and undergo the usual operation of weeding, hoeing, &c.; the majority of these may be also regarded as exhausting crops. An exhausting crop should always be followed by a restoring or cleaning crop; or, where possible, by both combined. Crops should also succeed each other in such a way that the soil may not be exhausted of any one particular kind of nutriment. This is best effected by so rotating the crops that plants which are nearly allied should not succeed each other on the same soil, or at all events not more than once.

ROT.—See SHEEP, TO BREED AND REAR.

ROTTEN-STONE. — An earth of ash-brown colour, very light, moderately hard, dry, and useful as a polishing powder. Mixed with oil, and applied with a leather, it is an excellent polisher of brass, steel, and zinc articles.

ROUGE.—A preparation for the toilet, and also for polishing jewellery, &c., made as follows:—Wash safflower till the water comes off colourless; dry and pulverize it, and digest the powder in a weak solution of crystallized carbonate of soda; then place some fine cotton-wool at the bottom of a porcelain or glass vessel, pour the filtered tinctorial solution on this, and throw down the colouring matter by gradually adding lemon-juice or white wine vinegar, until it ceases to produce a precipitate; next wash the prepared cotton in pure cold water, and dissolve out the colour with a fresh solution of soda; to the new solution add a quantity of finely-powdered French chalk, proportionate to the intended quality of the rouge; mix well, and precipitate with lemon-juice, as before; lastly, collect the powder, dry it with great care, with as little heat as possible, and triturate with a very small quantity of oil of olives.

ROUT DROPS.—Mix two pounds of flour, one pound of butter, one pound of sugar, one pound of currants, clean and dry; then wet into a stiff paste, with two eggs, a large spoonful of orange-flower water, the same each of rose-water, sweet wine, brandy; drop on a tin plate, floured. A very short time bakes them.

☞ Flour, 2lbs.; butter, 1lb.; sugar, 1lb.; currants, 1lb.; eggs, 2; orange-flower water, rose-water, sweet wine, brandy, one dessert-spoonful each.

ROUX.—For ordinary purposes this may be made as it is wanted for use; but when it is required for various dishes at the same time, or for cookery upon a large scale, it can be prepared at once in sufficient quantity to last for several days, and it will remain good for some time. Dissolve, with a very gentle degree of heat, half a pound of good butter, then draw it from the fire, skim it well, give time for it to settle, pour it gently from the sediment into a very clean frying-pan, and place it over a slow but clear fire. Put into a dredging-box about seven ounces of fine dry flour; add it gradually to the butter, shake the pan as often as it is thrown in, and keep the thickening constantly stirred until it has acquired a clear light brown colour. It should be very slowly and equally done, or its flavour will be unpleasant. Pour it into a jar, and stir a spoonful or two, as it is needed, into boiling soup or gravy. When the butter is not clarified it will absorb an additional ounce of flour, the whole of which ought to be fine and dry. This thickening may be made in a well-tinned stewpan even better than in a frying-pan, and if simmered over a coal fire

it should be placed high above it and well guarded from smoke. *White roux.*—Proceed exactly as for the preceding receipt, but dredge in the flour as soon as the butter is in full simmer, and be careful not to allow the thickening to take the slightest colour; this is used for white gravies or sauces.

ROWING.—In practising this art, it may be laid down, as a general rule, that in calm weather, a light and sharp boat is preferable; and, in rough weather, a heavier and broader one. The learner, however, should not at first begin in too light a boat, nor should he practise in rough weather, until he gets acquainted with its management. To leave the shore, the rower should with the boat hook, push the boat off, head upon tide, or opposite to the current. To leave the stairs, the rower must either push the boat off with the boat-hook, or place the blur of the scull forward and nurse the boat out from the shore. This being done, the rower sits down to his sculls. These he puts on the rullocks, and turns the concave front, or pulling of the scull, towards the stern of the boat. The rower must sit amidships on the thwart or seat of the boat, otherwise she will reel to the side on which he is sitting, and much of his labour will be lost. He should sit with ease to himself, having his feet on the middle of the stretcher, and his legs not quite extended; but his knees, as he rows, should be brought down, and his legs stretched. In grasping the oar for the pull, hold the hand square and firm, but with sufficient freedom to let the muscles of the arm have play. The body is now to be inclined forward from the hips (*fig.* 1) till

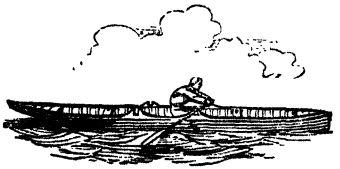


Fig. 1.

the head comes nearly over the knees, and the arms extend till the knuckles come over the joints of the instep. The edge of the oar being now turned parallel with the water, so as to feel no resistance from the wind, the dip is made (*fig.* 2) and at the mo-

Fig. 2.

ment of doing this the oar is dexterously turned so that its edge cuts the water in descending, and being completely immersed and no more, the broad part of the blade is pressed strongly and firmly against the water by the pull. When the pull is fairly and evenly given, and in such a way as that the whole power shall be brought to bear upon the water without any jerking or trembling of the oar, the time is come for lifting it out of the water (*fig.* 3), and in doing this,

Fig. 3.

the hand or hands are brought close to the side, a little below the chest, the oar is slightly turned or feathered as it rises to the surface then lifted, and the stroke then repeated (*fig.* 4). In river-rowing, when the

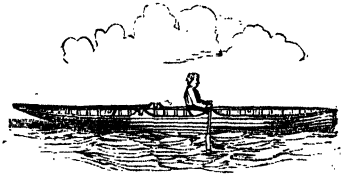


Fig. 4.

tide or current is with the rower, a learner should in general take the middle of the stream. When the tide or current is against the rower, he should take the sides; preferring that side on which, owing to the course of the river, the current is least. In backing water the oars are suddenly turned, the concave parts facing the sculler or rower, who pushes from him. This forces the boat backwards. In turning a boat it is usual to back-water with one oar, or to hold water, at the same time that you pull with the other. If you wish to turn your boat's head to your left side, you pull with the right oar and back with your left, or pull with your left oar and back with your right. In meeting any other craft, the boat which comes with the tide must get out of the way. In this case, both boats, if close, lay the blades of their sculls flat on the floater, lift them out of the rullocks, and let them drift alongside. Each replaces them when the other has passed. In passing a boat, the rower who passes must take the outside, unless there is ample room within; and must also keep clear of the other's sculls or oars. If one boat is crossing the water, and another coming with the tide, the one coming with the tide must keep astern of the other, and have a good look out ahead. In landing, bring your boat in a slanting direction to the landing-place, whether going against or with the current, by which method her stern will slue round, and she will be partly broadside on, with her stern towards the direction of the tide. When you step out of the boat, either use your oar or boat-hook to assist you, unship the sculls, as before directed, lay them in the boat, jump ashore with one end of the painter (or rope by which the boat

is made fast) in your hand, and fasten it to the post or ring. *Sea rowing* is much more difficult than river rowing, and requires more strength and management. One of the most difficult things is launching a boat, in doing this from the sea-beach, when the weather is rough and there is a heavy surf, the two bowmen must get into the boat with their oars run out; and the other rowers follow the boat quickly in the descent; but they should not jump in till she is quite afloat, lest their weight might fix her on the beach, and she might ship a sea. In rowing, each man has in general a single oar, and sits on the opposite side of the galley from the rullock through which his oar passes. The oar must consequently cross the boat, and be held on its opposite side, so as to clear the back of the man before. The stroke must be longer in sea than in river rowing. The oar must be thrown out with a heave, caused by the simultaneous extension of the body and the arms. It is still more essential to feather in sea than in river rowing. The oar must be drawn back with great power, caused by the simultaneous contraction of the body and the arms; time with the rowers being accurately kept and distinctly marked. When the oars are delivered from the water, the time, until they go into it again, may be counted—one, two, three—when they pass through the water. The time is kept by the sternmost man of the rowers. In landing on a sea-beach, the rowers should always look ahead for a proper place, for there are great inequalities in apparently the smoothest beach, and landing in one place may be very good, while in another place, not twenty yards off, it may be dangerous. When a proper place is discovered, the rowers may give "good way" on shore. The bowman should be in the bows, with his boat-hook in one hand and the end of the painter in the other, and immediately the boat grounds, should jump out and haul in. The other portion of the crew should now jump out as quickly as possible, and assist him in pulling the boat up. Then everything should be stowed away safe and secure, and the boat left beyond the reach of the tide at high water. It will always be well to observe the following hints and cautions in rowing:—If you are rowing with others, always keep the stroke. If you are rowing a pair of oars or sculls by yourself, always put both oars into the water at the same time. Keep a good look-out ahead, that you may not fall foul of other craft. Do not put your oar too deep in the water, and mind that the blade of the oar is thoroughly covered. Look well to your thowls, and see that they are not rotten before you place them in the holes. Let your boat-hook lie clear of your oars, and all clear of the painter. See that your foot-boards are properly hitched to the ports of the boat made to receive them. In pushing off a boat from a ship or other craft, be careful not to stand on the seats of the boat, and not to overbalance yourself. Keep your boat neat, trim, and clean, and see that she is well baled out before entering her. Should you be rowing in a boat in which there is a steersman, always be sure to obey orders. If you steer, always bear well forwards with each stroke, as it assists the rowers. Keep the rudder ropes as tight as bars, and move the rudder as little as possible.

RUDD is a bastard roach, supposed to be a cross between it and the bream; it is somewhat like the roach, with its tail more forked; its habits are much like those of the true roach, although its seasons are different, the warm months being those most favourable for its capture.

RUE.—A plant easily propagated by seeds, cuttings, or slips of the young shoots, in March, April, or May, planted in a shady border. It delights in a poor, dry, calcareous soil, in which it will continue for many years; and if cut down occasionally, always in full leaf and well furnished with young shoots. Letting it run to seed weakens the plant and shortens its longevity.

RUFFE.—This fish is like the perch in shape, and the gudgeon in colour, which it likewise resembles in size; it is a very delicious fish, but is to be found in but few of our rivers; it lies in shoals in quiet rivers where the water is deep, and is to be fished for with a small red worm, during the summer months, from May to August.

RUG.—An article of furniture, used to save the carpet near the fire; and likewise to afford greater warmth and softness to the feet at that place. They vary much in style and price, and should be chosen to suit the carpet in colour and degree of richness.

RUM.—An ardent spirit, obtained by distillation from the fermented skimmings of the sugar-boilers, the drainings of the sugar-pots and hogsheads, the washings of boilers and other vessels, together with sufficient cane juice or wort prepared by washing the crude cane, to impart the necessary flavour.

RUM JELLY.—Clarify and boil to a syrup, a pound of loaf-sugar; dissolve an ounce of isinglass in half a pint of water, strain it through a sieve into the syrup when it is half-warm, and when nearly cold, stir in a quart of white wine; mix it well, and add two tablespoonfuls of old Jamaica rum, stir it for a few minutes, and pour it into a mould or glasses.

RUM SHRUB.—Take six gallons of rum, three pints of lemon-juice or orange juice, three gallons of orange wine, three ounces of lemon-rind freshly peeled, and an ounce and a half of fresh orange-peel; both pared from the fruit as thinly as possible, and previously steeped for a few days in the rum; add ten pounds of loaf-sugar, and fill up the cask to thirteen gallons with water; stir them well together, and add more sugar, if not sweet enough; if too sweet, add more lemon-juice. Dissolve the sugar in the water used for making up the quantity required.

☞ Rum, 6 gallons; lemon or orange juice, 3 pints; orange wine, 3 gallons; lemon peel, 3ozs.; orange-peel, 1½ oz.; sugar, 10 lbs.; water, sufficient.

RUMP STEAK BROILED.—Have the steaks cut of an even thickness, but should they not be, divide the thicker from the thinner pieces, and give them time accordingly. Take care to have a very clear, brisk fire; throw a little salt on it; make the gridiron hot, and set it slanting, to prevent the fat from dropping into the fire, and making a smoke. It requires more practice and care than is generally supposed, to do steaks to a nicety; and for want of these little attentions, this very common dish, which everybody is supposed capable of dressing, seldom comes to table in perfection. It is usual to put a tablespoonful of ketchup, or a little minced shalot into a dish before the fire, while you are broiling; turn the steak with a pair of steak-tongs; it will be done in about ten or fifteen minutes; rub a bit of butter over it, and send it up garnished with pickles and finely scraped horse-radish.

RUMP STEAK PIE.—Cut three pounds of rump steak (that has been kept till tender) into pieces half as big as your hand, trim off all the skin, sinews, and every part which has not indisputable pretensions to be eaten, and beat them with a chopper. Chop, very fine, half a dozen shalots, and add them to half an ounce of pepper and salt mixed, strew some of the mixture at the bottom of the dish, then a layer of steaks, then some more of the mixture, and so on, till the dish is full; add half a gill of mushroom ketchup, and the same quantity of gravy or red wine; cover it as in the preceding receipt, and bake it two hours. Large oysters, parboiled, bearded, and laid alternately with the steaks, their liquor reduced, and substituted instead of the ketchup and wine, will be a variety.

RUMP STEAK, STEWED.—The steaks must be a little thicker than for broiling—let them be all of the same thickness, or some will be done too little and others too much. Put an ounce of butter into a stewpan, with two onions; when the butter is melted, lay in the rump steaks, let them stand over a slow fire for five minutes, then turn them and let the other side of them fry five minutes longer. Have ready boiled a pint of button onions; they will take from half an hour to an hour; put the liquor they were boiled in to the steaks; if there is not enough of it to cover them, add broth or boiling water to make up enough for that purpose, with a dozen corns of black pepper and a little salt, and let them simmer very gently for about an hour and a half, and then strain off as much of the liquor (about a pint and a half), as you think will make the sauce. Put two ounces of butter into a stewpan, when it is melted dust in as much flour as will make it into a stiff paste; some add thereto a tablespoonful of claret or port wine, the same of mushroom ketchup, half a teaspoonful of salt, and a quarter of a teaspoonful of ground black pepper; add the liquor by degrees, let it boil up for fifteen minutes, skim and strain it; serve up the steaks with the onions round the dish, and pour the gravy over.

RUMP STEAK, WITH ONION SAUCE.—Peel and slice two large onions, put them into a quart stewpan with two spoonfuls of water; cover the pan close and set it on a slow fire till the water has boiled away, and the onions have got a little browned—then add half a pint of good broth, and boil the onions till they are tender; strain the broth from them, chop them very fine, and season it with mushroom ketchup, pepper, and salt; put the onion into it and let it boil gently for five minutes, pour it into the dish, and lay over it a broiled rump steak. If, instead of broth, you use good beef gravy, it will be the superlative.

RUNNING.—In order to perform this exercise well, the feet should not be raised too high from the ground; the knees are to be bent as little as possible, the upper part of the body is bent slightly forward, and the arms kept as closely as possible to the sides. Observing these directions, short distances should be essayed to be done in a given time. After some little practice, a person will soon become a good runner, without getting out of breath or feeling tired.

RUPTURE.—This term in surgery implies the act of breaking or bursting away of any parts of the contents of one of the great cavities, especially as regards those of the head and abdomen; the accident being known by the name of hernia. Hernia, or a rupture properly speaking, is a tumour formed by the protrusion of some part, and occasionally, of one entire viscus of the cavity beyond—as in the abdomen—of a portion or nearly the whole of the alimentary canal, and in the cranium of a part of one of the hemispheres or lobes of the brain. In the latter case, whether at birth, or the accident occurs subsequently, the severity of the case is certain to demand the early attention of a surgeon; consequently, rupture of the brain, as a very rare misfortune, may be passed over. Of the abdominal ruptures, as they are remarkably numerous, peculiarly liable to occur in both sexes, and may be produced in a moment, more definite explanation is necessary, and a more elaborate description demanded. The contents of the cavity called the belly, such as the liver, spleen, stomach, and bowels, are all invested, surrounded, and circumvoluted by a fine delicate membrane, like the pellicle lining an egg-shell; when from any cause, therefore, a rupture is produced, a portion of this membrane, as well as the fatty apron that hangs in front of the bowels, and called *omentum*, is carried forward into the tumour or swelling made by the mass of bowel distending the skin; so that if the tumour or swelling, known as a rupture, were dissected layer by layer, the organs would be found in the following order: cuticle, true skin, lining membrane of the abdomen, known as *peritoneum*, the caul or omentum, and lastly a greater or less portion of one or each part of the bowels. The parts of the body most liable to rupture are those where apertures are left in the anatomy of the part, or where the crevices between muscles afford an easier exit for the enclosed organs; as without a violent and unexampled force, it is impossible to drive

the bowels through the muscles themselves, which act as a wall to the abdomen. Such liable parts, however, are the *navel*, the *groin*, and the *upper front of the thigh*; females are most subject to to the first and last; and men to the *inguinal* or *groin* rupture. The remote cause of rupture is not always the consequence of any imperfection of nature in leaving the part unprotected, but the immediate result of a certain and *suddenly-applied pressure*, forcing the bowels out, at a part insufficiently strong to resist the *vis a tergo*, or force from behind. Such causes are either lifting sudden and heavy weights, exerting great strength in pulling, or carrying heavy loads, or by running or leaping; besides these reasons in man, in the female must be enumerated the straining of child-birth. Ruptures are of two kinds, either *reducible*, or non-reducible ,or *incarcerated*, than is, fixed and incapable of being returned by the hand and pressure. When the bowel escapes to form a rupture, it often splits the aperture through which it passes, making the reduction easy; at other times, only a very small portion, a mere bend of the intestine passes through, or, rather, is forced out, where, like a finger caught in the hinge of a door, it is compressed by the unyielding nature of the adjacent parts and *strangulated;* forming the second condition of *incarcerated* rupture. As this is a very dangerous form of the accident, inflammation, mortification, gangrene, rapidly supervene, and death in a few hours terminate the case. It is necessary that immediate steps should be taken to relieve the bowel of the constriction, and pass it into the abdomen; consequently, a knowledge of *how to act* in the absence of a surgeon, is of vital importance to every one likely to be placed in the way of such accidents.

Treatment of simple or reducible rupture.—The patient should be placed on the back, the legs parted, and bent, to relax the muscles; and the tumour grasped gently but firmly, by the fingers and thumb of the right hand. It is then to be drawn a little out, so as to stretch the bag of the swelling, and with the point of the forefinger guide and push little by little of the bowel upwards into the abdomen; the gurgling noise, and the facility of disappearance, guaranteeing the success of the operation. As soon as all has passed up, a compress, made of folds of linen cloths enclosing a penny-piece or square of lead should be laid on the opening, and the whole secured by a bandage firmly bound round the hips and thigh before the patient is allowed to sit up, and kept on till a properly fitted truss is adjusted, and in future worn. Sometimes, from the strength of the individual, and the nervous rigidity of the muscles, it is impossible to reduce the rupture; in that case the patient must be weakened, and the muscular tissue released, before the operation can be effected. In such cases, an emetic, or a nauseating dose of a grain of tartar emetic will produce all the objects aimed at, and ensure such bodily relaxation, that the same means repeated in the same manner, will be crowned with success. Instead of the tartar emetic, a full dose of thirty or sixty drops of laudanum, or a hot bath, will effect the same results. In strangulated rupture, there is much pain in the part and over the whole abdomen, attended with great anxiety, sickness or retching, and fever, and when mortification has set in, the fatal symptom of hiccough. In such cases, if the hot bath, bleeding, or the exhibition of tartar emetic or opium fails in producing relaxation, or the ultimate reduction of the bowel, the only other remedy that will produce prostration, is the *injection of the smoke of tobacco;* should this fail, the surgeon can alone afford a chance of life, by cutting into the tumor, and with a peculiarly shaped knife, enlarging the internal aperture, and thereby permitting the imprisoned bowel to escape into the abdomen. In all cases of rupture, a *truss* scientifically made, and *properly applied*, should, except when in bed, be for ever after worn.

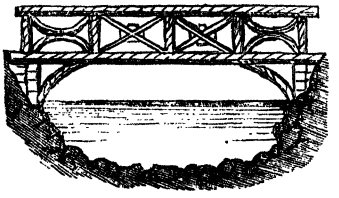
RUSHES.—An extensive genus of coarse plants, many of them aquatics, which are common on most wet lands. Rushes prefer a deep rich soil, and thrive best in land which is too cold and wet for other plants. The growth of these may be easily prevented by under-surface draining, which will prevent the stagnation of water on the soil, and by the application of saline or calcareous top-dressings, such as sand, lime, ashes, and road-scrapings. All the species of rush thrive best in a moist situation, some of them entirely in water, and others in a peat soil; they may be increased by seeds, or dividing the roots.

RUSKS.—Sift flour into a pan; cut up the butter in the milk, and warm them a little so as to soften the butter, but not to melt it entirely. Beat your egg; pour the milk and butter into the jar of flour, then the egg then the rose-water and spice, and lastly the yeast. Stir all well together with a knife, spread some flour on a paste-board; lay the dough on it, and knead it well. Then divide it into small pieces of an equal size, and knead each piece into a little thick rusk. Butter an iron pan, lay the rusks in it, and set them in a warm place to rise. When they are quite light, bake them in a moderate oven. Rusks should be eaten fresh.

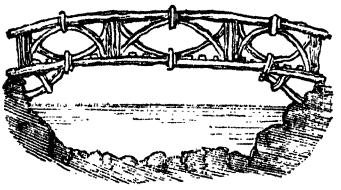
RUST, TO PREVENT.—Mix with fat oil varnish, four-fifths of well rectified spirits of turpentine. The varnish is to be applied by means of a sponge; and articles varnished in this manner will retain their metallic brilliancy, and never contract any spots of rust. It may be applied to copper, and to the preservation of philosophical instruments, which, by being brought into contact with water are liable to lose their splendour and become tarnished.

RUSTIC STRUCTURES.—These have a pleasing and picturesque appearance in gardens and pleasure grounds, and may be made to combine the useful with the ornamental. A specimen of rustic vase or basket is given in the accompanying engraving. The form is attained by construc-

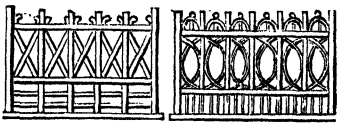
ting a box of durable timber, and elevating it on a pedestal formed also of plank. The pedestal and lower part of the basket are covered with thick rugged bark of oak or elm, or with thin slabs cut off trees of that description. The angles are covered with a beading of moss rope, as are also the bands round both pedestal and basket. The upper part is also covered with bark, and on it are nailed, at equal distances, rustic rods placed in a slightly diagonal direction. The top is cut in an undulated manner, of unequal lengths, and finished after the same fashion, only of a larger size, as the angles and bands are. The annexed figure is formed of four kneed rustic pieces of wood, as near in size and form as can be procured. The panels between them are filled up with planking, the surface of which is covered with rods or with rustic bark; and over that, with moss rope or rustic rods, and given any fantastic appearance the ingenuity of the designer can suggest. The top, for greater strength, may be capped with a rustic piece of timber of the same diameter as the main support, sawn through the middle, and neatly mitred at the corners. Rustic bridges associate well with garden scenery, and admit of great variety of form. The one shown in the subjoined illustration



has stone abutments, upon which the principal timbers rest. They are adapted to cross rivulets, or spaces from ten to twenty feet in width. They are best constructed of from three to five feet in width, a breadth quite sufficient for foot passengers, for which purpose they are chiefly intended; but they can be so built as to carry carts or carriages, by laying from each abutment three six-inch Baltic battens, set on edge across, and tied together at the ends and middle with an iron bar, to keep them in their places. Over this a flooring of deal or oak is laid, rough from the saw, the upper surface of which is to be covered with a coat of asphalt, to form the footway, and to keep the flooring dry. The outer sides of the two outer battens are covered with larch bark, and the parapets or hand-rails are constructed of pieces of the same kind of tree, cut into the necessary lengths, and selected so as to be of as near the same thickness as possible. The middle of the footway should be rather higher than the sides, to allow of the escape of rain water, which can be easily done by regulating the thickness of the asphalt accordingly. Another kind of bridge also looks very pretty when neatly executed. The footway is covered with larch poles laid across.



The supports beneath are let into the abutments, which are covered with rough stones and wild plants. Rustic fences may be frequently introduced into gardens, pleasure grounds, &c., with excellent effect; they may be formed of shoots of the oak, hazel,



or larch, and may be introduced, both as interior and surrounding barriers. — See FLOWER STAND, GARDEN SEAT, &c.

RYE BREAD.—Rye has been found to contain more gluten than any other grain except wheat, and, therefore, should be next to it as bread corn. The husk possesses an aromatic and slightly acidulous flavour, which renders it agreeable to the palate. The bran should not, therefore, be entirely separated from the flour; for if the grain be ground fine and divested entirely of the husk, the bread will be deprived of much of its pleasant taste. Rye bread is consequently made of coarse flour. A very excellent bread may also be made of a mixture of one-third rye, and two-thirds wheaten flour, which makes a sweeter bread than that made solely of wheat, and is preferred to any other by those who are in the habit of using it. The bread is very firm and solid, and retains its juiciness and moisture long, being also very nutritious.

RYE CAKES.—Beat two eggs very light, mix them gradually with a quart of luke-warm milk, and sufficient rye-meal to make a thick batter. Then stir in a teaspoonful of brewer's yeast; or twice that quantity if the yeast is home-made. Cover it, and set it to rise in a warm place. If too thin, add more rye-meal. When quite light, and covered on the surface with bubbles, bake it on a gridle. Butter the cakes and eat them warm at breakfast or tea.

RYE, CULTURE OF.—This species of grain is much more hardy, but incalculably less valuable in every respect than wheat. The

preparation and culture of rye, are, however, the same as for wheat; but the same quality of soil is not equally suited to the two kinds of grain. Rye grows most luxurantly for feeding when sown on hazel mould, but any poor, dry, sandy soil is fit for its production. It is sown either broadcast or in drills, in the autumn or spring, but the spring variety is that most hardy, and most generally cultivated. The proportion of seed is from two to three bushels per acre when required for a crop, and three bushels and a half when it is intended to be fed off.

S.

SACK CREAM.—Boil together a pint of cream, the yolk of an egg well beaten, a glass of white wine, and a flavouring of lemon-peel. Stir the whole over a gentle fire till it be as thick as cream, and afterwards until it becomes cold. Then serve it in glasses with sippets of dry toast.

☞ Cream, 1 pint; egg, yolk of 1; white wine, 1 wineglassful; lemon-peel, to flavour.

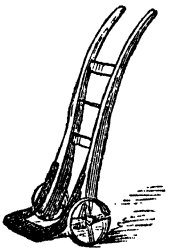
SACK DUMPLINGS.—Grate the crumb of two penny rolls, add to it three-quarters of a pound of suet cut small, three-quarters of a pound of currants washed clean, a nutmeg grated, a little sugar, the yolks of eight eggs, and a gill of white wine. Make the paste into dumplings of a moderate size, tie them in cloths and boil them for two hours. Serve with a sauce made of melted butter with white wine and sugar.

☞ Bread, crumb of 2 rolls; suet, ¾lb.; currants, ¾lb.; nutmeg, 1; sugar, sufficient to sweeten; eggs, 8 yolks; white wine, 1 gill.

SACK MEAD.—To every gallon of water put four pounds of honey, and boil it for three-quarters of an hour, taking care to skim it. To every gallon add an ounce of hops; then boil it for half an hour, and let it stand till the next day. Put it into a cask, and to thirteen gallons of the liquor add a quart of brandy. Stop it lightly till the fermentation is over, and then bung it up close. A large cask should be suffered to stand a year before using.

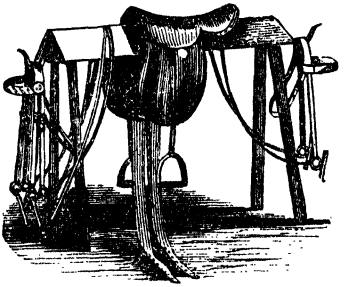
SACK POSSET.—This is made either of thin cream and grated sweet biscuits, or of beaten eggs and milk instead of cream. Boil the cream or milk, and season it with cinnamon and grated nutmeg. Warm the wine in a separate vessel, and stir it gradually into the milk; then pour it quickly from one vessel into another till perfectly smooth; this is especially requisite if made with eggs.

SACKS, MANAGEMENT OF.—The sacks for corn, &c., require to be attended to, to keep them in serviceable condition. They are usually made of a sort of canvas, called sacking, and according to the quality of the tow of which the sacking is made, and the mode in which it is manufactured, the price of sacks varies. Every sackful of corn, before it is put into the cart, is tied at the mouth with a piece of cord, a soft cord answering the purpose best. Every sack should be marked with the initials of its owner's name, or with the name of the farm. The letters may be either painted on with a brush, or formed by painting upon open letters cut through a plate of zinc; in either case, red lead is used. When sacks become wetted with rain, they should be shaken and hung up in the air to dry; and if they get besmeared with mud, they should be washed and dried. If the air cannot dry them in time to prevent mouldiness, they should be dried before a fire. Where steam is used for threshing, sacks may be dried in the boiler-house. An airy place to keep sacks is across the granary, over ropes, suspended between the legs of the couples. Holes will break through sacks by usage or vermin. The best material for darning even canvas sacks is strong worsted; and if well darned, the mended portions become the strongest parts of the sack. When a considerable fracture occurs in a sack, the best plan is to cut it up for mending others. Sacks, when filled, are most conveniently wheeled from one place to another in a barrow made for the purpose. A good form of sack-barrow is seen in the engraving. To be convenient it should stand upright of itself. There are two modes of using it; one when the sacks stand upright when filled, and the other when the sacks lean one against another. On standing behind the wheels, in the first case, and on taking hold of the handle, with the right hand, and the mouth of the sack with the left, and pushing it off, insert the iron scoop of the barrow between the sack and the floor; and on pulling the sack towards you, push the wheels forward by the right foot on the axle, and the sack is placed on the scoop ready for removal. In the other case push the scoop of the barrow below the sack which is lying a little from you; and in pulling the sack towards you it becomes ready for removal. The iron shields over the wheels save them rubbing against the sacks. The load is most easily wheeled with the barrow held in a nearly upright position. The more upright a man walks with a loaded sack on his back, with a short firm step, the less will the load oppress him. A filled sack is moved forward on the ground by placing both knees against the side of the sack, and, while embracing it with both arms, and grasping hold of it with both hands, lifting it from the ground and pushing it forward a space with the knees, and thus from space to space, or around a pivot. In regard to loading a cart with filled sacks, the general principle is to place all the mouths of the sacks within the body of the cart, so that



should any of the tyings give way, the corn will not be spilled upon the ground. One mode of loading a cart is, to lay two sacks flat on the bottom of the cart, with the mouths next the horse. Two are placed on the front with their bottoms outwards, and the mouths of all the four are within the cart. These last four sacks are placed on their edges, with the corners just over the edge of the front and back of the cart. Other two sacks are placed together on edge above these four, and one behind, flat, with all their mouths directed inwards. There are three modes of lifting a sack to a man's back. One is, for the person who is to carry the load to bow his head down in front of the sack, placing his back to its broad side, and bending his left arm behind his own back, across his loins, and his right hand upon his right knee to await in this position the assistance that is to be given him. Two persons assist in raising the sack, by standing face to face, one on each side of it, bowing down so as to clasp hands across the sack near its bottom, below the carrier's head, and thrusting the fingers of the other hands into the corners, which yield and go inwards and thereby afford a firm hold. Each lifter then presses his shoulder against the edge of the sack, and with a combined exertion upwards, which the carrier seconds by raising his body up, the bottom of the sack is lifted uppermost, and the tied mouth downmost, resting against the back of the carrier. The lifters now leaving hold, the carrier keeps the sack steady on his back, with his left arm across its mouth. Another plan is for the carrier to lay hold of the top of the shoulder of the sack with both his hands, his arms crossing each other. His two assistants do as directed before; and while they lift the sack between them, the carrier quickly turns his back round to the sack, and receives it there, retaining a firm hold of the parts he had at first. A third plan is for the assistants to raise the sack upon another, and then the carrier brings his back down against the side of the sack, laying hold of its shoulders with his own shoulders, and rising up straight with it on his back. The last plan requires more strength from the carrier, he having to rise up with the load; the second, most from the lifters, they having to lift the load up, and in the first, both parties are nearly equally concerned. To make sacks stand so as each may be taken away with ease from a number, they should be set, the first one in a corner, with one shoulder against one wall, and the other shoulder against the other wall, and every sack in the same row will stand with the left shoulder against the wall and the right shoulder against the side of the sack set down before it. In the succeeding row, the first sack will have its right shoulder against the wall, and its left shoulder against the side of the first sack that was set up in the corner; and the succeeding sacks will have their left shoulders in the hollows between the sacks in the first row, and their right shoulders against the sides of the sacks which were set down just before each of them, and so on row after row. When filled sacks are wheeled aside, their mouths should be folded in and closed up. On tying sacks intended to be sent away by cart, the tie should be made as near the corn as possible, to keep the whole sack firm.

SADDLE. — This well-known horse equipment is made of pig-skin, strained and stretched over a wooden tree. The sides are made up by the flaps attached to the tree above; and lying on the flap is the stirrup-leather supporting the stirrup. Underneath the flap is a false and padded flap, on which lie the girths, which are buckled to leathern straps fastened to the tree above. For keeping the saddle in proper form and order, it is a good plan to have a saddle tree, as seen in the annexed figure. There should be two pairs of girths

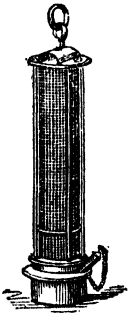


in use with the saddle, when the horse has much work to do, to allow one pair to be thoroughly cleaned and dried while the other pair is in use. The best way to clean girths is, first, to scrape off the mud with a knife, and then to wash them in cold water, and hang them up to a fire, or in the sun, to dry quickly. Warm water makes them shrink rapidly, and so does long exposure to wet. If there is time they should be washed the same day they have been soiled; and if not, on being scraped at night, they should be washed the following morning, and hung up in the air to dry, or if the air is damp, hang them before the fire. Girths allowed to dry with the mud on soon become rotten and unsafe. The stirrup-leathers should be taken off and sponged clean of the mud, and dried with a cloth; and the saddle-flaps should also be sponged clean of mud, and the seat sponged with a wrung sponge, and rubbed dry with a cloth. The stirrup-irons should be washed in water, and rubbed dry with a cloth, immediately after being used. Fine sand and water on a thick woollen rag, cleans these irons well, and a dry rub afterwards with a cloth makes them bright.

SAFE.—In domestic economy, a receptacle for meat, whether cooked or raw, to defend it from flies and other insects, particularly where there is no regular larder. They are portable cupboards, generally of wood, with the panels of the doors and sides filled with

some perforated substance to let the air in properly, but so as to preclude the entrance of flies, &c. The most usual material for this purpose is what is called safe canvas. Iron wire is also employed, not being liable to be gnawed by mice and rats; but this requires to be kept well painted in oil, otherwise it will soon decay by rust. The common wire cloth is woven by a machine; a stronger wire is woven by hand, but is more expensive though more durable. Perforated zinc plates are likewise employed for this purpose; and safes made altogether of zinc are constructed for exportation to tropical climates, where the white ants frequently destroy those of wood. Safes are also used in commerce, and are necessary adjuncts to offices, &c., for keeping books, money, deeds, and other important documents. The manufacture of these receptacles has been brought to great perfection, and they are now so constructed, that the locks cannot be picked, nor can fire from without, penetrate to the interior.

SAFETY LAMP.—The utensil invented by Sir H. Davy, bearing this name, consists of a common oil lamp, surmounted with a cylinder of wire gauze, the apertures of which are not greater than one-hundredth of an inch square; and the wire of which it is made, of the one-fortieth or one-sixtieth of an inch in diameter. The fire-damp of coal mines in passing through the meshes of such gauze, gets cooled by the conducting power of the wire below the point necessary to kindle it. When this lamp is taken into an explosive atmosphere, although the fire-damp may burn within the cage with such energy as sometimes to heat the metallic tissue to dull redness, the flame is not communicated to the mixture on the outside. The appearances are so remarkable, that the lamp becomes an admirable indicator of the state of the air in different parts of the mine, and if its admonitions are attended to, gives the miner time to withdraw before an explosion takes place.



SAFFRON.—The dried stigmata of a bulbous plant, the *crocus sativus*. It is chiefly employed as a colouring matter for cheese and butter. When good, saffron has a beautiful yellow colour and an agreeable odour, it yields its active principle, an essential oil, to spirit and water. As a medicinal agent it excites the nerves of the stomach, and is in some degree narcotic; its incautious use has been sometimes attended with dangerous consequences. It is sometimes adulterated with safflower and marigolds; but the adulteration is easily detected, for the petals of these flowers will appear distinct from the stigmata of the crocus. Some saffron is imported from

the Continent, but it is inferior to the English.

SAGE, CULTURE OF.—The sage is an evergreen shrub; the leaves of which are used in stuffings and sauces for many kinds of meats, &c., as well as to improve the flavour of various articles of cookery. All the varieties may be propagated by slips or cuttings of the young shoots taken from March to June; but most successfully in May and June, by detaching the young shoots of the same year. The outward shoots are to be preferred. Slip or cut them off, five or six inches long, stripping off the under leaves and preserving the top leaves entire; plant them in a shady border, six inches asunder, inserting them quite down to the top leaves, and water them. They will soon take root freely, especially the young shoots planted in May or June. In the advancing growth, if they spindle up in flower-stalks, pinch or cut that part down, that the plants may shoot out full and stocky from the bottom in close bushy growth for use the same year. In gathering sage for use, cut or slip off the young side and top shoots neatly; and be careful not to strike too close; especially towards winter, and during the season. In July and the rest of the summer it is usual to gather some of the young top growth to dry for winter. Keep the plants in regular bushy heads by cutting away disorderly growth, and the decayed flower-stalks in autumn. Keep them clear from weeds, and sometimes loosen the earth between and about the plants with a hoe, garden-trowel, or small spade in spring and autumn. Make a fresh plantation once in two, three, or four years; as may be necessary by the plants becoming netted, stubby, and dwindling.

SAGE-AND-ONION SAUCE. — Chop very fine an ounce of onion and half an ounce of green sage leaves, put them into a stewpan with four spoonfuls of water, simmer gently for ten minutes, then put in a teaspoonful of pepper and salt, and one ounce of fine bread crumbs; mix well together; then pour to it a quarter of a pint of

broth, or gravy, or melted butter, stir well together and simmer it a few minutes longer. This is a very relishing sauce for roast pork, poultry, geese or ducks, or green peas.

SAGE CHEESE.—Bruise the tops of young red sage in a mortar with some leaves of spinach, and express the juice; mix it with the rennet in the milk, more or less, according to the preferred colour and taste. When the curd is come, break it gently, and put it in with the skimmer till it is pressed two inches above the vat. Press it eight or ten hours. Salt it, and turn every day.

SAGE GARGLE.—Boil quickly in a pint of water a large handful of sage leaves; cover the pan closely, and when reduced to one-half, strain it; when cold, mix it with the same quantity of port wine and vinegar; sweeten it with honey or with brown sugar. The decoction of sage may be used alone as a gargle, or with vinegar and honey without the port wine; or gargle with vinegar and water.

SAGO BREAD.—The following is said to be a good and economical plan:—Two pounds of sago are to be boiled in three quarts of water to one quart, which is then to be mixed with a pint of yeast; and together they are to be poured into twenty-eight pounds of flour, and made into bread in the usual way. Sago is not more nourishing than rice or potatoes, nor does it produce a greater quantity of bread.

SAGO GRUEL.—Wash a tablespoonful of the best clear pearl sago, allow it to soak in a pint of water by the side of the fire for two hours, then boil for eighteen minutes, stirring it well in order to prevent its burning; sugar, lemon-juice, and nutmeg, or ginger may be added as required.

SAGO MILK.—Soak one ounce of sago in cold water for an hour, pour off this water and add a pint and a half of milk; boil slowly until the sago is well incorporated with the milk: sugar and nutmeg may be added as required. These sago drinks are nutritious, light, easily digested, and are peculiarly adapted for persons whose stomachs are in an irritable state, as no substance is more bland and soothing.

SAGO PUDDING.—Put three ounces of sago to soak in cold water for half an hour, then pour off the water and stir the sago by degrees into a pint of milk boiling hot in a saucepan; let it boil five minutes, stir it till quite cool. Beat an egg well, mix it with a little cold milk, one ounce of sugar, and a little grated lemon-peel; mix all well together, and bake in a slow oven an hour and a quarter.

☞ Sago, 3ozs.; milk, 1 pint; egg, 1; sugar, 1 oz.; grated lemon-peel, to flavour.

SAGO SOUP.—Wash in several waters, and float off the dirt from six ounces of fine pearl sago; put it into three quarts of good cold gravy-stock; let it stew gently from half to three-quarters of an hour, and stir it occasionally that it may not burn nor stick to the stewpan. A quarter of an ounce more of sago to each pint of liquid, will thicken it to the consistence of pea-soup. It may be flavoured with half a wine-glassful of Harvey-sauce, as much cayenne as it may need, the juice of half a lemon, an ounce of sugar, and two glasses of sherry; or these may be omitted, and good beef-broth may be substituted for the gravy-soup for a simple family dinner, or for an invalid; or, again, it may be converted into inexpensive white soup by the addition of some cream smoothly mixed with a dessert-spoonful of arrow-root, or thick cream and new milk in equal portions. Veal broth would be the most appropriate for this, or it might be made with half veal and half mutton.

☞ Sago, 6ozs.; soup, 3 quarts.

SAINFOIN.—A deep-rooted perennial, native of Britain, and much cultivated for green food, more particularly on sandy, chalky, and calcareous soils generally. On rocky soils, however, it flourishes most, its roots penetrating into crevices and fissures to an extraordinary depth. Wet clays are utterly unsuited to it; down-lands and calcareous sands are the best. It is sown in the manure as clovers and grasses with a crop. In the following season it is mown for hay or for green food. It attains maturity in the third year. Sainfoin is usually mixed with white clover, but may be cultivated in drills. When sown broadcast, from three to five bushels may be sown; if drilled, half the quantity is sufficient. The time of sowing is usually from the middle of February to the end of March. Sainfoin is often used as a substitute for red clover, as it will grow well in soils not adapted for that plant. It is a productive crop, and yields well. If made into hay, care should be taken not to let it stand long, but cut it as soon as the flower is fairly formed, and make it as quickly as possible, which may be done so soon as its liability to heat ceases.

SALAD DRESSING.—Best white-wine vinegar, one pint; best olive oil, half a pint; vinegar of garlic, onion, or shalot, two large tablespoonfuls; horse-radish vinegar, a large tablespoonful; fresh butter, three ounces; loaf-sugar powdered, two ounces; flour of mustard, two ounces; cayenne pepper, fifteen grains; the yolk of twelve hard-boiled eggs; salt, three ounces. Method of preparing:—Boil the eggs from ten to twelve minutes, and immediately plunge them in cold water. When perfectly cold, remove the shells and the whites, and rub the yolks, or beat them in a marble mortar for at least ten minutes; next, work together with the hands the butter and loaf sugar until they form a perfect cream. If the weather is cold, they may be just melted

over the fire, but great care is requisite to keep the vessel shaken one way, and not leave it over the fire a moment longer than the butter is melted, otherwise it will be apt to oil or curdle. If falling over the fire can be avoided it is much better. The salt, mustard, and cayenne to be well rubbed together. The flavouring vinegar to be mixed with the other vinegar, and the butter and sugar to be rubbed with the yolks of eggs till the whole is blended in a perfectly smooth paste. Next add the oil, and rub till the whole is well incorporated, then the salt, and other powders, and finally the vinegar. When well mixed, put it into bottles that are perfectly clean and dry, cork very closely, cover the corks and tops of the bottles with bottle-cement, and keep in a dry and cool place. It is better to have small bottles than large ones, as frequent opening of a bottle is to be avoided.

SALAD, TO MIX.—This is a point of proficiency which it is easy to attain with care. The main point is to incorporate the several articles required for the sauce, and to serve up at table as fresh as possible. The herbs should be morning-gathered, and they will be much refreshed by laying an hour or two in spring water. Careful picking, and washing, and drying in a cloth, in proportion of each herb, requires attention. The sauce may be thus prepared:—Boil two eggs for ten or twelve minutes, and then put them in cold water for a few minutes, so that the yolks may become quite cold and hard. Rub them through a coarse sieve with a wooden spoon, and mix them with a tablespoonful of water or cream, and then add two tablespoonfuls of fine flask oil or melted butter; mix, and add by degrees, a teaspoonful of salt and the same quantity of mustard; mix till smooth, then incorporate with the other ingredients about three tablespoonfuls of vinegar; then pour this sauce down the side of the salad-bowl, but do not stir up the salad till wanted to be eaten. Garnish the top of the salad with the white of the eggs cut in slices; or these may be arranged in such a manner as to be ornamental on the table. Some persons may fancy they are able to prepare a salad without previous instruction, but, like everything else, a little knowledge, in this case, may not be thrown away.

SALAD VINEGAR.—Take of Tarragon-savory, chives, eschalots, three ounces each; a handful of the tops of mint and balm, all dry and pounded; put into a wide-mouthed bottle with a gallon of the best vinegar; cork it closely, and set it in the sun, and in a fortnight strain off, and squeeze the herbs; let it stand a day or two to settle, and then strain it through a filtering bag.

SAL-AMMONIAC.—This is employed in fomentations, and as a lotion in mania, plethoria, apoplexy, violent headaches, indolent inflammations, chilblains and gargles. It disperses indolent humours when mixed with soap-plaster and applied over them. To form a lotion, add a piece the size of a walnut to half a pint of water, and dissolve; cloths dipped in it produce great coldness, and thereby reduce inflammation.

SAL-VOLATILE.—This is an excellent stimulant, and frequently employed in languor, faintings, hysteria, flatulent colic, and nervous debility, in doses of from half a teaspoonful to two teaspoonfuls; it may be given with the same quantity of spirit of lavender in a wineglass of water, which increases its beneficial effect.

SALE OR RETURN.—When goods are sold upon *sale or return*, no absolute property is vested in the conditional vendor; and the sale of them contrary to the price or terms agreed upon subjects him to an action. But though while the goods remain unsold in the hands of such conditional vendor, no absolute property vests in him, yet, in the event of bankruptcy, they would doubtless pass to the assignees as goods in his possession, order, or disposal; nor would any agreement between the parties protect the goods from the operation of the statute.

SALEP.—A preparation from the bulbs of the orchis *mascula*. It is imported chiefly from the Levant, but some of it is brought from India. It consists of peculiar kind of gums, termed bassorin and fecula. It is more nutritious than arrowroot or sago, and consequently is better adapted for the convalescent than the sick. It is prepared by dissolving the pounded salep in hot water with assiduous stirring, and adding to the solution sugar and milk.

SALINE DRAUGHT.—Dissolve a scruple of salt of tartar in a tablespoonful of lemon-juice and three tablespoonfuls of water; sweeten with lump-sugar, and drink while it effervesces. This is an excellent remedy for sore throats and nausea.

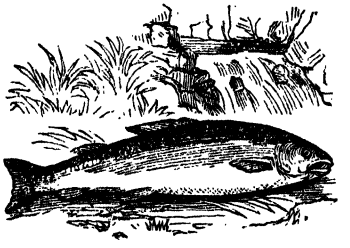
SALLY LUNNS.—Take two pounds of fine flour, two dessert spoonfuls of yeast, with a little warm water; this must be put to rise for half an hour. Put two ounces of butter and the yolk of an egg in as much new milk as will make it a proper stiffness; mix all well up, and put it into cups; when risen, bake them in rather a quick oven.

☞ Flour, 2 lbs.; yeast, 2 dessert spoonfuls; butter, 2 ozs.; egg, yolk of 1; milk and water, sufficient.

SALMAGUNDI.—A preparation used as side dish, and a very inviting one if of delicate shape and varied colours. For this purpose, chop separately the white part of a cold chicken, or of veal, the yolks of four or five eggs, and the same number of whites of eggs; a large handful of parsley, six anchovies, some beet-root, pickled red cabbage, ham, and grated tongue, or anything well flavoured and of a good colour. Put a saucer or basin into a round dish, or a smaller dish into a long one, then make rows round it, wide at the bottom, and growing smaller towards the top: making choice of such of the ingredients for each row as will most vary the colour; put butter at the top, worked into any desired shape, and a little sprig of curled parsley may also be stuck in. Nothing need be put into the dish, as the salmagundi may be laid in rows, or put into the half whites of eggs, which may be made to stand upright by cutting off a small piece at the round end. In the latter case, each half egg has but one

ingredient. Curled butter and parsley may be put as a garnish between.

SALMON.—Salmon fishing is one of the most difficult and delicate branches in the art of angling. It requires a dexterous hand and an acute eye to raise and stroke this fish, and when this is achieved, the sport may be said to be only begun. The salmon is chiefly to be found in large rapid rivers, especially in such as have pebbly, gravelly, and sometimes weedy bottoms. When feeding, this fish generally prefers the rough and upper parts of gentle streams, and the tails of large ones; when gorged they retire to the deep, broad water. When



in motion they swim very fast, usually in the middle of the river, and near the ground. They also move more at night than in the day, halting at convenient places, under bushes, weeds, banks, rocky projections, or stones. The salmon bites best from six till eleven in the forenoon, and from three in the afternoon until sunset, especially when there is a moderate breeze upon the water. The chief months to angle for them are March, April, May, and June, though they will take a fly until October, but they are then out of season; and if tried for let it be with lob-worms and minnows. Worm fishing for salmon should be practised with a long and firm rod, of seventeen or eighteen feet in length, according to circumstances. A full-sized multiplying reel, or otherwise a large single one, should be adapted to the rod, sufficient to contain at least forty yards of the best silk and hair line, twisted very stout, looped to a foot length of gut, with a hook link of double, or of the very strongest single salmon gut, which will in all general cases be found sufficient. Fishing with lob-worms for salmon is often practised by means of a leger-line. Use a No. 1, 2, or 3 hook, run it through the middle of a lob-worm well secured, and pull it above the shank; then take a second, and put the hook in an inch below the tail, drawing it on the hook about three-fourths of the length, the end of the worm being at its point; then draw down the first to the latter worm. Drop this bait into any likely situation, and the current will give motion to it by means of the loose portion of line below the head; and when it has remained a few minutes without a bite, gently move it a little up the stream, and again let the plumb rest at the bottom. Drop it also in strong eddies, and at the declivities leading into deep pools, and particularly on the edges of the rocky precipices under the water. These will be found killing methods to play lob-worms and they are seldom so shown but that they are taken, if salmon are present and on the feed. The time when the water is too much discoloured for fly-fishing, is that in which angling with the worm is peculiarly adapted to the taking of large salmon. If the colouring be considerable, and the water much agitated, use lob-worms; but should the water be moderately coloured only, the largest of the other varieties, as brandlings and marsh-worms sometimes kill best; when there is wind while the water is clearing, almost any worm will be readily taken. In very bright weather, and bright water also, small worms, well shown on a fine hook, as No. 4 or 5, will often attract when flies of all kinds fail. It is necessary in all these practices to observe, that the salmon requires the utmost caution in approaching his haunts; to ensure success, the angler should, if possible, be absolutely hidden; the shadow of even the rod and line ought not to fall on the water; but all ought to be still and quiet around, to lull into security this watchful fish. Except in very gloomy blustering weather, to ensure sport, begin your fishing as early as possible after daylight, and continue it in the evening as late as any light remains. In bright nights it is not unusual to fish all night long, with the lob-worm both above and below, that is, on the top and in the depths. If much dew is falling, salmon will not bite. When the salmon takes the bait, the line is felt to be lighter; and sometimes a sudden pull is experienced; in the former instance, give the fish time to gorge, and then strike pretty sharp, but not violently; in the latter case, it is probable the fish has hooked himself, and you should strike more moderately; but in most instances, keep a light line. Salmon generally take the worm gently within their lips, as it were, and then swim away to gorge it. While they are moving you must not check them, but give them line, until a sudden tightening of it tells you the bait has been gorged. Then strike gently, and play your fish boldly, according to the strength of your tackle. The landing of salmon is usually accomplished by means of a gaff-hook. If one be not at hand, draw the fish on a bank, and by putting a finger into the gills draw it out. The capricious appetite of salmon will occasionally render it necessary for the angler to try various other baits; all the larvæ are taken by them; but more frequently the fresh-water snails of every variety are found enticing. The mussel, limpet, cockle shrimp, &c., are often used, and it may be almost said, that there is no bait whatever taken by any other fish which salmon will not likewise be lured by; and therefore it is prudent, when the angler is satisfied that there are salmon in the water before him, to vary his bait to suit their tastes. The marine testaceous baits are found to answer best in or near tideways, in which situations they will also take the sea-worm, called the lurgan, sometimes better

than the earth-worms; and it is observed that salmon are more ready to do so when the tide is rising than when it is falling: it is particularly so with regard to shrimps, which they will occasionally seize, when drawn on the top of the water, with great eagerness. With a rising tide, insects are stirred up, and small fish forced forward by the current, which the fish are then on the look-out for and ready to receive. Fish baits, used either for trolling or spinning, are also very tempting to salmon. Salmon will likewise readily take gudgeons, either by spinning or on a gorge-hook. When spun, take off a breast fin of one side, and a vent fin of the other. The method of trolling with the various baits does not differ from that employed with fish baits on the gorge-hook generally. The practice proves a very convenient one from the sides of wide rivers, or whenever the salmon-haunts can be approached sufficiently near to spin a bait; for the gorge-lead will allow it to be cast to a considerable distance. This proves a good method also in waters of extreme depth, as in locks, &c.; and then a trolled bait likewise often shows better from a boat than a spinning bait. The spinning bait is, however one of the most killing methods among all those employed by the angler in the capture of salmon. Thus there appear few baits more successful than a full-grown minnow when it is well spun; but when the water is much coloured, a bleak, if it can be procured, is preferable. The methods employed and the tackle used are exactly the same as employed in similar fishing for trout, except that every part of the apparatus should be stronger. As a general bait, minnows are to be preferred; the largest salmon seldom refusing a minnow if well shown; neither is it too large for the smallest fish. Under this view of the subject, with small baits and fine tackle, both large and small fish may be captured by them; but as regards the tackle, this must be received with limitation. In some of the Scotch and Irish lakes, where a fish of twenty or twenty-five pounds may be hooked, it would be most unwise not to be prepared accordingly: here a common pillar winch only should be employed, with sixty or eighty yards of powerful line, and armed with strong hooks firmly whipped to gimp instead of gut. In very wide rivers, and in lakes or lochs, a boat is of great assistance in salmon fishing, and in many situations it is indispensable. From a boat either anchored, rowed, or gently drifting, by trolling with salmon-fry and small trout, very large fish are taken.

SALMON BAKED.—Take a piece of salmon and cut it in slices an inch thick; make a forcemeat, as follows:—Take some of the flesh of the salmon, and the same quantity of the meat of an eel, with a few mushrooms; season it with pepper, salt, nutmeg, and cloves; beat it all together till it is very fine; boil the crumb of a penny roll in milk, beat with it four eggs till it is thick, let it cool, and mix it all together with four raw eggs; take the skin from the salmon, and lay the slices in a dish; cover every slice with the forcemeat, pour some melted butter over them, and add a few crumbs of bread; lay the crust round the dish, and stick oysters round it; put it into an oven, and when it is of a fine brown, pour over it a little melted butter, with some port wine boiled in it, and the juice of a lemon.

SALMON BOILED.—Clean it carefully, boil it gently, putting it in cold water, and take it out of the water as soon as done. Let the water be boiling, if the fish is crimped or split in slices. If under-done it is very unwholesome. Serve with shrimp or anchovy sauce. Salmon takes nearly as long as meat, and for a large fish a quarter of an hour per pound will not be too much to allow.

SALMON BROILED.—Take some slices cut from a fine salmon, wipe them clean and dry; melt some butter smooth and fine, with a little flour and salt, put the pieces of salmon into it, and roll them about that the butter may cover them all over; then lay them on a nice clean gridiron, and broil them over a clear but very slow fire; while the salmon is broiling make sauce with a couple of anchovies washed, boned, and cut into small pieces, a leek cut into three or four long pieces; set on a saucepan with some butter and a little flour, put in the ingredients, with some capers cut small, some pepper and salt, and a little nutmeg; add to them some warm water, and two spoonfuls of vinegar; shake the saucepan till it boils, and the sauce is done; when the salmon is on one side, turn it on the other till it is quite done; take the leek out of the sauce, pour it into a dish and lay the broiled salmon upon it.

SALMON COLLARED.—Split such a part of the fish as may be sufficient to make a handsome roll, wash and wipe it, and having mixed salt, white pepper, pounded mace, and Jamaica pepper, in quantity to season it very high, rub it inside and out well. Then roll it tight, and tie it up with broad tape; put as much water and one-third of vinegar as will cover it, with bay-leaves, salt, and both sorts of pepper. Cover close, and simmer till done enough. Drain and boil the liquor quickly, and put on; when cold, serve with fennel. It is an elegant dish, and extremely palatable.

SALMON CURRIED.—Broil slightly as above, then mix half an ounce of curry-powder to each pound of fish, with a good gravy or stock; stew gently in this for half an hour, and serve with rice as usual.

SALMON CUTLETS.—Cut them from a piece of a split salmon without bone, about half an inch thick, and rub them over with egg well beaten; season with pepper and salt; dip them in chopped herbs and bread crumbs; fry them as you would a veal cutlet; serve with India pickle sauce, cut pieces half an inch thick, season them, put them in paper, and broil until hot through; serve with lemon only. This is usually eaten at breakfast. Slice the salmon, and cover it with salt for two hours; then, dry it, and brush it over with yolk of eggs. Fry it in oil, and serve it cold with salad.

Any small pieces of salmon may be served with salad or with salad sauce.

SALMON DRIED.—Rub your fish with common salt, and hang it to drain twelve hours, if a large fish. Take two ounces of saltpetre, one ounce of bay salt, and two ounces of coarse sugar. Mix them well together, and rub your fish with it; let it lie twenty-four hours, then put a stick across it, and hang it up to dry. If a small fish, twelve hours will salt it. The head is taken off, and the fish split open to the skin of the back. Cut the fish in slices; wrap it in paper, butter, and broil it.

SALMON IN CASES.—Take a piece of salmon, cut it into small cutlets, season them with pepper, salt, and nutmeg; take as many half sheets of paper as cutlets, and put a piece of cutlet in each fold of the paper, that nothing can run out; pour a little melted butter over the papers, and then strew some crumbs of bread over the butter, put them in a tin oven before the fire, but take care the papers do not burn; when they are done enough, serve as they are, without sauce.

SALMON, KIPPERED.—Cut the fish down, take out the inside and roe. Rub the whole with common salt, after scaling it; let it hang twenty-four hours to drain. Pound three or four ounces of saltpetre, according to the size of the fish, two ounces of bay salt, and two ounces of coarse sugar; rub these, when mixed well, into the salmon, and lay it on a large dish or trays two days; then rub it well with common salt, and in twenty-four hours more it will be fit to dry; wipe it well after draining. Hang it either in a wood chimney or in an airy place, keeping it open with two small sticks; or rub with brown pyroligneous acid. Kippered salmon is eaten broiled in paper, and only just warm through, with egg sauce, and mashed potatoes; or it may be boiled, especially the part near the head.

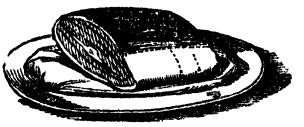
SALMON, PICKLED.—Take a whole fish, bone it, and cut it in pieces (good-sized, square ones); place them in a jar with split allspice and whole pepper; then tie a bladder on the top, to prevent any water getting in; put it into a saucepan of boiling water, let it keep so for two hours; then take it out, and when quite cold, add as much cold vinegar as there is liquor, and the salmon will be delicious.

SALMON PIE.—Boil salmon as for eating, remove the skin and take all the bones out, and pound the meat very fine in a mortar, with mace, nutmeg, and pepper and salt to your taste; raise the pie, and put flowers or leaves on the sides; put the salmon in and cover it, bake it an hour and a half; when it comes out of the oven, take off the cover, and put in four ounces of rich melted butter; cut a lemon in slices, and lay over it; stick in two or three leaves of fennel, and send it to table without a cover.

SALMON PUDDING.—Pound or chop well and rub through a sieve one pound of cold boiled salmon freed entirely from bone and skin, and blend it lightly but thoroughly with half a pound of fine bread-crumbs, a teaspoonful of essence of anchovies, a quarter of a pint of cream, a seasoning of fine salt and cayenne, and four well-whisked eggs. Press the mixture closely and evenly into a deep dish or mould buttered in every part, and bake it for one hour in a moderate oven.

☞ Salmon, 1lb.; bread crumbs, ½lb.; essence of anchovies, 1 teaspoonful; cream, ½ pint; eggs, 4; salt and cayenne to season.

SALMON, TO CARVE.—Give a portion of the back and belly to each person, or as desired. If a whole salmon is served, remember that the choice parts are next the head, the thin part is the next best, and the tail the least esteemed. Make an incision



along the back, and another from the front; cut the thickest part between for the lean; and hinder part for the fat. When the fish is very thick, do not help too near the bone, as the flavour and colour are not so good.

SALMON, TO CHOOSE.—When salmon is fresh, the flesh is of a fine red, but particularly so at the gills; the scales should be very bright, and the fish very stiff.

SALSIFY.—This vegetable, delicately fried in butter, which is a common mode of serving it abroad, forms a delicious second course dish; it is also good when plain—boiled, drained, and served in gravy, or even with melted butter. Wash the roots, scrape gently off the dark outside skin, and throw them into cold water as they are done, to prevent them turning black; cut them into lengths of three or four inches, and when all are ready put them into plenty of boiling water with a little salt, a small bit of butter, and a couple of spoonfuls of white vinegar, or the juice of a lemon; they will be done in from three-quarters of an hour to an hour. Try them with a fork, and when perfectly tender, drain, and serve them with white sauce, rich brown gravy, or melted butter, three-quarters of an hour to an hour.

SALT, PROPERTIES AND USES OF.—The use of salt as a condiment, or as an addition to food, is undoubtedly attended with beneficial effects. Its immediate office is to soften and dissolve the food, and this renders the process of digestion more perfect; it forms, moreover, one of the constituents of the blood, and of the body generally. If salt be denied, the digestion is weakened; the general tone and nourishment of the body are impaired, and worms are, in consequence, likely to be generated in the intestines. Salt, therefore, ought to be an addition to the food of all, and to children, especially, attention should be paid in this respect; and for their use, bay-salt will be found the most suitable, as it con-

tains all the mineral elements of sea-water, and is almost as efficacious when regularly used as sea-air. It is, however, a very different thing, to eat salt with food and to live upon fish or meat which has been salted. In the latter case, certain chemical effects are exerted upon the meat and its nutrient constituents, by the salt, which modify considerably the nutriment afforded to the body. Salt may almost be regarded as medicinal. In some cases of convalescence, in which the craving for it becomes intense, it should be allowed. It appears to act as a tonic. From one to two ounces of salt dissolved in half a pint of water, forms an excellent domestic emetic. It may, however, purge instead of causing vomiting. It is used in the form of a clyster to destroy worms. Externally, salt is used in solution, in which cases it seems to have a tonic effect; warm saline bathing is efficacious in rheumatism. For local bathing after injuries; such as sprains, &c., the salt water douche is well adapted to impart strength. For the above purposes, a pound of salt dissolved in three gallons of water is a good average strength. Salt is also a valuable addition to the food of the lower animals. The quality and quantity of milk from a cow is improved by giving to it in some malt, grains, or other food, about an ounce and a half of salt, an hour before milking. Horses are kept in health by giving about half an ounce of salt twice a day. It should also be given to sheep to the extent of from a quarter of an ounce to half an ounce in the course of twenty-four hours; and poultry is much improved when fattening, if a quarter of an ounce of salt be added to every pound weight of their food. Salt also acts as a manure. The properties of salt chiefly useful in agriculture, are the supply of its constituents, soda and chlorine; attraction for moisture and resistance of freezing; sharpness, without acid or alkaline; solubility and penetration of porous matters; promotion of putrefaction when used sparingly, though the contrary when used freely; mutual decomposition with lime and some of its compounds, as well as some other salts, giving rise to other and often more active fertilisers. The benefits resulting to the farmer from the use of salt are as follows:—In the soil—retention of moisture and softness; general penetration and digestion of all the materials of vegetable food to enrich the root-sap; and destruction of vermin and of seeds when used freely. On other manures, the destruction of all vermin, weeds, roots, and seeds; the digestive action just described; mutual decomposition with lime and its compounds, to the advantage of both; and an improvement in the efficacy of ammoniacal manures, whilst it greatly reduces their cost. In the plant, improvements in the taste, wholesomeness, and nutritive powers, and earlier maturity.

SALT, TO PREPARE FOR TABLE.—Take a lump of salt of the size you think proper, and if not quite dry, place it in a plate before the fire to make it so, then pound it in a mortar till it is perfectly fine; this done, fill your salt-cellars with it higher than the brim, and with the flat side of a knife that has a smooth edge, take it off and press it down even with the top. If the salt-cellars are not smooth on the top, cut it in notches; a tablespoon is the best tool to press and smooth the salt in them—or it makes them look very neat, if the bottom of the salt-cellar is ornamented; and place the bottom of one on the top of the other for the same purpose. The salt should be in a lump, that it may be free from dirt, and the knife must have a smooth edge.

SALT FISH BOILED.—When very salt and dry, this must be long soaked before it is boiled, but it is generally supplied by the fishmongers nearly or quite ready to dress. When it is not so, lay it for a night into a large quantity of cold water, then let it be exposed to the air for some time, then again put it into water, and continue this until it is well softened. Brush it very clean, wash it thoroughly, and put it with abundance of cold water into the fish-kettle; place it near the fire, and let it heat very slowly indeed. Keep it just on the point of simmering, without allowing it ever to boil (which would render it hard) from three-quarters of an hour to a full hour, according to its weight; should it be quite small and thin, less time will be sufficient for it; but by following these directions, the fish will be almost as good as if it were fresh. The scum should be cleared off with great care from the beginning. Egg sauce and boiled parsnips are the usual accompaniment to salt fish, which should be dished upon a hot napkin, which is sometimes thickly strewed with chopped eggs.

SALT FISH PIE.—Boil a side of salt fish in the ordinary manner; cut a square piece out of the middle, about the size of the palm of the hand; take the skin off the other part, and remove all the bones; mince the fish very small with six eggs, boiled hard; season it with pepper, nutmeg, and pounded rice; then slice the crumb of French rolls into a pan, pour over it a quart of boiling milk, and let it stand to soak; in the mean time, make a good puff paste, and cover the dish all over; have in readiness, two spoonfuls of parsley shred very fine, beat the bread well together, then put in the fish and eggs, and chopped parsley; stir all well together; melt about three-quarters of a pound of butter, stir it into the ingredients, with a little lemon-juice; pour this into the dish, lay the square piece of fish in the middle; cover it over, and bake it for an hour or a little more.

SALT FISH, WITH CREAM.—Take and boil some salt fish till about three parts done. Divide it into flakes, put them into a saucepan with some cream, a little pepper, and a handful of parsley scalded and chopped. Stew it gently till tender, thicken the sauce with two or three yolks of eggs, and serve hot.

SALTING MEAT.—In the summer season, especially, meat is frequently spoiled by the cook forgetting to take out the kernels; one in the udder of a round of beef, in the fat in the middle of the round, those

about the thick end of the flank. If these are not taken out, the meat will not keep. The art of salting meat is to rub in the salt thoroughly and evenly into every part, and to fill all the holes full of salt where the kernels were taken out, and where the butcher's skewers were. A round of beef weighing twenty-five pounds will take a pound and a half of salt to be rubbed in all at first, and requires to be turned and rubbed every day with the brine; it will be ready for dressing in four days, if you do not wish it very salt. In summer, the sooner meat is salted after it is killed the better, and care must be taken to defend it from flies. In winter, it will eat the shorter and tenderer, if kept a few days (according to the temperature of the weather) until its fibre has become short and tender, as these changes do not take place after it has been acted upon by the salt. In frosty weather, take care the meat is not frozen, and warm the salt in a frying-pan. The extremes of heat and cold are equally unfavourable for the process of salting—in the former the meat changes before the salt can affect it—in the latter it is so hardened, and its juices are so congealed, that the salt cannot penetrate it. If you wish it red, rub it first with saltpetre, in the proportion of half an ounce, and the like quantity of moist sugar, to a pound of common salt. You may impregnate meat with a very agreeable vegetable flavour, by pounding some sweet herbs and an onion with the salt; you make it still more relishing by adding a little zest or savoury spice.

SALTS.—This medicine, commonly known as Epsom salts, consists of a compound of magnesia and sulphuric acid—sulphate of magnesia—and derive their names from having been first obtained by the evaporation of the water of a spring situated near Epsom, in Surrey, which contains the salt in large quantity. They are now prepared largely from magnesian limestone, and also from sea-water. Epsom salts are tolerably certain in their action, and do not gripe much; on these accounts the medicine is a most valuable one in many diseases, particularly in persons of a full habit; but, as generally employed, it is not suitable for a common or frequently repeated aperient. From its being in many instances taken in a state of too concentrated solution, it acts in a peculiar manner on the blood, so as to produce serious debilitating effects: moreover, after the action of a dose of Epsom salts, the bowels in those liable to habitual constipation, are very apt to be left with a greater tendency to inaction than before; nevertheless, in persons of full strong habit, an occasional dose of the medicine is, without question, beneficial; but it should be taken in smaller quantity, and much more largely diluted than is usually done. The question of dilution is a very important one in the administration of salts, and if attended to, renders it safe and efficient even for the comparatively delicate. From half a drachm, or even less, to a drachm, should be dissolved in six ounces or half a pint of cold or tepid water, and taken on first rising in the morning, when the dose should be followed by a fluid breakfast: many persons liable to constipation find this method a simple and effectual remedy, which may be used for weeks together. From five to ten drops of dilute sulphuric acid are often a good addition to the dose, and one which at the same time corrects in some degree the bitterness of the salt. If there is debility, either of the stomach, or generally, from a quarter to half a grain of quinine, or of some salt of iron, may be added. The quinine appears to increase the aperient power. The most convenient method of taking Epsom salts in this form is to dissolve one ounce in a pint of water, adding the acid or other ingredients in proper proportion. Of the solution, from half to a whole wineglassful may be taken the first thing in the morning, diluted with the proper quantity of water before taking it; or, if preferred, by the latter being drunk immediately after the medicine. The following method for the administration of Epsom salts is also recommended:—Take of water about one pint, powder of roasted coffee two and a half drachms, Epsom salts, one ounce; boil well for two minutes—not in a tinned vessel—remove from the fire, and let the mixture infuse for some minutes, so as to allow time for the development of the aroma; then filter, or merely strain off; it must be sweetened to taste. This fluid does not impart the slightest bitterness of taste to the salt. It should be observed, that the simple infusion of coffee is not capable of removing the bitter taste. The combination of Epsom salts with infusion of senna, constituting the common black draught, is one of the best forms of active occasional purgative in common use. It is well to bear in mind, that there is considerable resemblance between oxalic acid in its crystalline commercial form and Epsom salts, and that in consequence, fatal mistakes have occurred. The intensely acid taste of a single crystal of the former, would at once clear up any doubt; perhaps it might be well always to use so simple a test.

SAMPHIRE, CULTURE OF.—This plant is not easy of culture; it would appear to succeed best in a rich light soil, loamy sand and gravel mixed with it. It must be in a well sheltered situation, and requires to be freely watered in dry weather, till the roots have struck deep among the soil. If a few plants can be induced to take root in an old wall, or on an artificial rock-work, they will have a fair chance of remaining.

SAMPHIRE, TO PICKLE.—On the seacoast this is merely preserved in water, or equal parts of sea-water and vinegar; but as it is sometimes sent fresh as a present to inland parts, the best way of managing it under such circumstances, is to steep it two days in brine, then drain and put it in a stone jar, covered with vinegar, and having a lid, over which put thick paste of flour and water, and set it in a very cool oven all night, or in a warmer oven till it nearly but not quite boils. Then let it stand on a warm hob for half an hour, and let it become quite cold before the paste is removed; then add

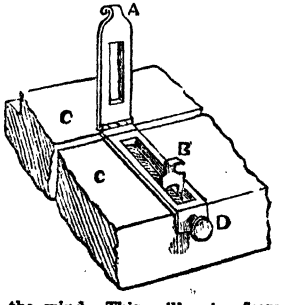
cold vinegar if any more is required, and secure as other pickles.

SANDWICHES. — These require more care than is usually bestowed upon them; for this reason, that every one believes he can cut sandwiches. Where any quantity is required, the bread should be made on purpose, and the baker should be desired to bake it in tins; and either add a little butter to it or prove it well before it is put in tins, so that it should not be full of holes, as in that case too much butter is bad, and the sandwich becomes disagreeable from being greasy. Cut the bread moderately thin, butter it very slightly indeed; lay the meat cut thin, season with salt, pepper, and mustard, as may be required; cover with a second slice of bread, trim the edges, put them one on the other, and cover with a damp cloth until required. Where tongue is used it should be boiled the day before, and when thoroughly done, pressed in the mould in which the bread is to be baked. Chickens boned and forced with a small quantity of forced veal and ham, and treated in the same way, will make excellent sandwiches. All kinds of meat used for sandwiches should be thoroughly done.

SARDINES.—These little delicacies are sometimes imported in brine; but more generally they are preserved in oil, in small tin cases, holding from half a pound to a pound, and containing in each, on the average, about twelve or twenty-four fish respectively, at one shilling and two shillings the case. They are a very wholesome and agreeable addition to the breakfast, luncheon, or supper table.

SARSAPARILLA DECOCTION.—Take four ounces of the root, slice it down; put the slices into four pints of water, and simmer for four hours. Take out the sarsaparilla, and beat it into a mash; put it into the liquor again, and boil down to two pints, then strain and cool the liquor. *Dose*, a wine-glassful, three times a day. Use, to purify the blood after a course of mercury; or, indeed, whenever any taint is given to the constitution, vitiating the blood, and producing eruptive affections.

SASH-FASTENER.—A contrivance used for preventing windows shaking and rattling



with the wind. This will arise from the sashes not fitting tight to the grooves, and is to be prevented by tightening them. For this purpose, one part of the sash-fastener, C, is screwed to the side of the lower rail of the upper sash, and the other part, B, C, D, to the upper side of the upper rail of the lower sash. Then the part A being let down over the part B, which travels backwards and forwards in the box C, is made tight by the thumb-screw D. In this way both sashes are drawn to press against the parting bead which separates the two sashes; and, in consequence, they are effectually prevented from shaking, or from any lateral or perpendicular movement whatever, when the window is shut.

SASSAFRAS.—A laurel growing in Britain, and used for medicinal purposes in the West Indies and America. The wood, root, and oil are employed, and an infusion of the chips is used as tea, in cases of rheumatism and gout. It operates very beneficially as a diuretic and diaphoretic.

SATIN SHOES, TO CLEAN.—Rub them the lengthway of the satin with a piece of new white flannel, dipped in spirits of wine. If slightly soiled, you may clean them by rubbing with stale bread. White satin shoes should be kept in blue paper closely wrapped with coarse brown paper outside.

SATINS, TO CLEAN. — A quarter of a pound of soft soap, a quarter of a pound of honey, the white of an egg, and a wine-glassful of gin; mix well together, and the article to be scoured with a rather hard brush thoroughly; afterwards rinse it in cold water, leave it to drain, and iron whilst quite damp.

SAUCEPANS, TO CLEAN.—In a kettle of boiling water put about the sixteenth part of an ounce of sal-ammoniac, or two pennyworth, which can be obtained from any chemist. Let it boil one hour, and then the petrified substance will be dissolved, and is readily disengaged from the metal. A great saving of time and trouble will be effected in heating the water.

SAUCES.—See ANCHOVY, APPLE, BECHAMEL, BREAD, CAPER, CELERY, CHESTNUT, CUCUMBER, EGG, GOOSEBERRY, HORSE-RADISH, LOBSTER, MAYONNAISE, MINT, MUSHROOM, ONION, OYSTER, ROBERT, SHRIMP, SORREL, TOMATO, TURNIP, VEGETABLE MARROW, WINE, &c.

SAUR KRAUT.—Take some large full-grown cabbages, cut them in very thin slices, and put them in layers of two fingers' thickness, in a tub; when it is full, put on a cover which exactly fits the tub; place on the cover a weight of forty or fifty pounds, and put the tub in a moderate heat. The cabbage sinks when fermentation begins, and the liquor rises to the surface over the cover. When it smells sour, the fermentation has begun. Then put the tub into the cellar, keep it covered, and let the pickle cover the saur kraut. Cover it close each time any is taken out. When you use it, wash it in warm water, and stew it with butter or fat; serve with ham, pickled pork, or sausages.

SAUSAGE CAKES. — Chop lean pork very finely, having removed all the bone and skin previously, and to every pound of meat add three-quarters of a pound of fat

bacon, half an ounce of salt, a pinch of pepper, a quarter of a nutmeg grated, six green onions chopped finely, and a little chopped parsley; when the whole is well chopped and mixed, put it into a mortar and pound well, finishing with three eggs. Then have ready a pig's caul, which cut into pieces large enough to fold a piece of the above preparation of the size of an egg, which wrap up, keeping the shape of an egg, but rather flattened, and boil very gently over a moderate fire.

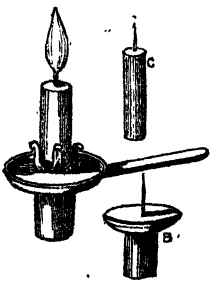
SAUSAGE TOAST.—Make a toast, fry two or three sausages; when quite hot, strip off the skins and spread the meat upon the toast, which should not only be made, if possible, of brown bread, but also buttered with salt butter; season it with a little pepper and mustard. It will be improved by a grating of Gruyère, Parmesan, or old Cheshire cheese.

SAUSAGES, TO FRY.—Are best when quite fresh made. Put a bit of butter or dripping into a clean frying-pan; as soon as it is melted (before it gets hot), put in the sausages, and shake the pan for a minute, and keep turning them (be careful not to break or prick them in so doing), fry them over a slow fire till they are nicely browned on all sides; when they are done, lay them on a hair-sieve placed before the fire for a couple of minutes, to drain the fat from them. The secret of frying sausages is to let them get hot very gradually, they then will not burst if they are not stale. You may froth them by rubbing them with cold fresh butter, and lightly dredge them with flour, and put them in a cheese-toaster or Dutch-oven for a minute.

SAUSAGES, TO FRY WITH APPLES.—Fry a dozen sausages in butter, take them off when they are done enough, and keep them hot till you have prepared the apples; take five or six baking-apples that are acid, pare, and take out the core; cut them in round slices, and fry in the same butter in which the sausages were dressed; when done enough, put the apples on your dish alternately with the sausages, and serve.

SAUSAGES, TO MAKE.—See BEEF, LOBSTER, MUTTON, OXFORD, OYSTER, PORK, VEAL, &c.

SAVE-ALLS.—Are used by the economical in order to avoid the waste of the



lowest inch of the candle, which would otherwise melt in the socket of the candlestick, and not only be wasted, but also injure the metal by the heat imparted to it. The best kind of save-all is a short piece of china of the form and appearance of the candle, A B C, but having a single spike of iron projecting up instead of a wick. This spike is easily forced into the lower end of the candle when it is burnt within an inch or two of the bottom; and, if this is neatly done, the candle impaled upon the point is continuous in appearance with the china and a casual observer would scarcely notice the difference.

SAVELOYS.—Are made of salt pork, fat and lean, with bread crumbs, pepper, and sage; they are always put in skins; boil half an hour slowly. These are eaten cold.

SAVORY, CULTURE OF.—Of this plant there are two kinds, winter or perennial savory, and summer or annual savory. They may be sown in the open ground at the latter end of March or in April, in a light rich soil; thin the seedlings moderately, and they may either remain where sown or be transplanted. Of the winter savory, when the seedlings are about two inches high, it is eligible to plant out a quantity of the strongest, in moist weather in nursery rows, six inches asunder, to remain till September or spring following, then to be transplanted with boles where they are finally to remain, in rows a foot asunder. When designed to have the winter or summer savory remain where sown, the seeds may be in shallow drills, either in beds or along the edge of any bed or border by way of an edging. In the spring, or early part of summer, the winter savory may be increased by slips or cuttings of the young shoots or branches five or six inches long; plant them with a dibble, in any shady border, in rows six inches asunder, giving occasional waterings, and they will be well rooted by September, when they may be transplanted.

SAVOURY JELLY.—Take half a pig's head, boil it for one hour, then cut the meat into small pieces, put it again into the saucepan with half the liquor it was boiled in; add a little seasoning of pepper, salt, and mace; boil another hour; turn it into a mould to get cold. The above is excellent made from calf's head, which, in many country places, can be bought for a trifle; but the mould should then be lined with hard-boiled eggs cut into slices, and a little parsley added to the seasoning. This is an economical breakfast or supper dish.

SAVOY, CULTURE OF.—A species of cabbage propagated by seed sown annually, or by long cuttings of the young sprouts in spring, after the head has been cut off. Sow at the close of February, the plants of which are ready for pricking out in April, and for final planting at the end of May for use early in autumn; the sowing to be repeated about the middle of March, the plant to be pricked out in May for planting in June, to supply the table in autumn and early winter. The main crops must be sown in April and early May, to prick out and plant, after similar intervals, for production in winter and spring. In autumn,

when the plants have attained their full size, and before they have become quite hard, they are fit for use, and in that state are more wholesome than when older. In severe winters the full-grown crops may be taken up and preserved as in the case of drumhead cabbage; and, for prolonging them in a useful state till late in spring, the same means may be employed as are used for brocoli. The plants of the first crops should be set two feet apart each way, but the winter-standing crops are better at two feet by eighteen inches. Water abundantly, if the weather be dry, until the plants are well established. To save seed, such plants must be selected of the several varieties as are most true to their particular characteristics, and as are not the first to run. These, in open weather, from early in November to the close of February, plant entirely up to the head in rows two feet and a half each way, every variety as far from the other as possible. They ripen their seed in July and August.

SAVOY CAKE.—Take nine eggs, with two pounds of sugar, and a pound and a quarter of flour, some grated lemon-rind, or a few drops of lemon-juice, and half a gill of orange-flower water; work them up, then put in the orange-flower water when you take it from the fire; be careful the mould is quite dry; rub it all over the inside with butter, put some pounded sugar round the mould upon the butter, and shake it well to get it out of the crevices; tie a slip of paper round the mould; fill it three parts full with the mixture, and bake it one hour in a slack oven; when done, let it stand for a few minutes, and take it from the mould, which may be done by shaking it a little.

☞ Eggs, 9; sugar, 2lbs.; flour, 1½lb.; lemon-rind and lemon-juice, to flavour; orange-flower water, ½ gill.

SAW-BENCH. — A very useful addition to the machinery employed on farms and other large holdings, as it enables the timber to be cut in the most economical manner for all the purposes required on the estate, and sawing by hand is a very costly operation. Circular saw-benches are made either of iron or wood, and may be purchased of all agricultural machine makers; the saws are round plates of steel with the saw-teeth cut on their outer edges; they are made of various sizes, from a few inches to three or four feet. The teeth are cut of such dimensions and shape as will best adapt them to the work required to be done.

SCALD HEAD.—This disease—almost peculiar to children, and the consequence of a scrofulous condition of the body, or proceeding from an impure, salt, or too-long continued diet of one sort, as well as neglect and dirt is an eruptive pustular affection of the scalp, beginning in a cluster of small yellow pustules, which soon break, scab over, and, if neglected, become hard and thick; these groups, from being detached, become in time confluent, or run together, and at last spread over the entire scalp, changing the colour of the hair to a lighter shade, before it falls off in patches. Though different in its features, scald head may be called a severe condition of *ringworm*, and, like that disease, demanding the same rules and manner of treatment. *Treatment.*—The hair is to be cut off as close as possible, and a moist bran poultice, enclosed in a bag, applied all over the head for ten or twelve hours; re-wetting the poultice every hour. To subdue the inflamed state of the scalp the following lotion is to be applied frequently for twenty-four hours after the poultice. Take of

Sugar of lead	2 drachms
Sulphate of lime . . .	1 drachm.
Water	20 ounces.
Vinegar	4 ounces.

Mix. The following ointment should be applied, in addition to the poultice and lotion, every night, at bed-time, freely over the scalp, and in the morning carefully washed off in soap and water; the lotion being occasionally used in the day-time. After using No. 1 for three or four nights, it will be necessary to substitute No. 2 for the same number of times, continuing the lotion in the day time till the end.

Ointment, No. 1.—Take of

Citrine ointment . . .	2 drachms.
White precipitate . .	1 drachm.
Simple ointment . . .	2 ounces.

Mix thoroughly, and make a cerate.

Ointment, No. 2. Take of

Citrine ointment . . .	2 drachms.
Compound sulphur ointment	½ ounce.
Creosote	1 drachm.
Simple ointment . . .	1½ ounces.

Mix, and make a cerate.

Concurrent with these local means, it is necessary to give some constitutional remedies; for this purpose one of the annexed powders should be given every day; and twice a week in addition a tablespoonful or more of an infusion of senna and manna in the proportion of half an ounce of each to a pint of boiling water.

Alterative powders.—Take of

Precipitated antimony (sulphuret)	50 grains.
Grey powder	30 grains.
Scammony	36 grains.
Jalap powder	24 grains.

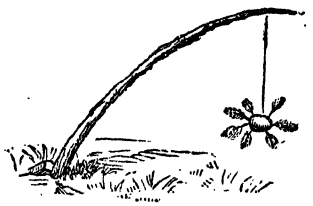
Mix, and divide into twelve powders, for a child between ten and twelve years, and give *half* a powder in all periods from three to eight years of age.

SCALDING PUDDING.—From a pint of new milk take enough to mix three large tablespoonfuls of flour into a smoothy batter. Set the remainder of the milk over the fire, and when it is scalding hot, pour in the batter, and keep it on the fire till it thickens. Stir it all the time, to prevent it burning, but do not let it boil. When of a proper thickness, pour it into a basin, and let it stand to cool. Then put in six eggs, a little sugar, and some nutmeg. Boil for an hour in a well-buttered basin.

☞ Milk, 1 pint; flour, 3 tablespoonfuls; eggs, 6; sugar, to sweeten; nutmeg, to flavour.

SCALDS.—Are any kind of injury inflicted on the body by means of hot or boiling liquids, or the steam engendered from them; *steam*, from the fact of its containing a larger amount of latent, or compressed caloric, causing more serious injuries than water even at a boiling point. Scalds, like burns, are most fatal when occurring over cavities, as in the head, chest, and abdomen, and are to be treated in precisely the same way, and, like them, instantly protected from the action of the air by *wool*, *wadding*, or *any substance* that will shut out atmospheric influence.—See BURNS.

SCARECROW. — A contrivance employed in fields and gardens for the purpose of frightening away birds from the growing crops and plants. A variety of figures are adopted for this purpose more or less effective; the one shown in our engraving is perhaps the simplest and



best, consisting of a ball stuck full of feathers, and dangling by a string from a stick.—See ROOK BATTERY.

SCARLATINA, OR SCARLET FEVER. — An eruptive febrile disease, which, though common to all ages of childhood, is not unfrequently found attacking adult life. Scarlet fever is preceeded by languor and lassitude, pains in the head and back, and a sense of weariness attended with cold chills; but the symptoms that specially define it from these, the general attendants of all febrile affections are, a hoarseness, difficulty of swallowing, and *sore throat*, attended with a peculiar *speckled appearance of the tongue*, which may be taken as an *almost certain* indication of the disease. On the third day, a small eruption, composed of several minute points congregated in patches, breaks out on the face, neck, and shoulders, gradually extending over the whole body, till the skin assumes the appearance of the shell of a boiled lobster. When the eruption comes well and freely out, the urgency of the symptoms subside, and about the seventh day, the cuticle begins to peel off, and the disease gradually declines about the tenth day from the commencement.

Treatment. Difficulty of breathing is, in the early stage, always a distressing characteristic of scarlatina, increased or modified by the facility with which the rash appears on the skin; and, as a desirable point to effect this is one of the most important events in the treatment, the first and most important step is, either to immerse the child up to the neck, in a hot bath, or suddenly asperse the body with cold vinegar and water, wrapping the child in a blanket instantly afterwards, and putting it to bed, till a reaction in the form of a perspiration sets in, bringing out with it a full and relieving crop of eruption. A hot bran poultice should be next applied round the patient's throat, and renewed as often as it becomes cold, till the difficulty of swallowing and soreness is abated or subdued. For the thirst and fever that usually attend the disease, the following mixture is to be used every four hours, and lemonade, cold tea, or any simple beverage given occasionally as a drink. *Mixture.*—Take of

Solution of the acetate of ammonia	1 ounce.
Spirit of nitre	2 drachms.
Antimonial wine . . .	1 drachm.
Syrup of saffron . . .	3 drachms.
Mint water	2 ounces.

Mix, and give from a dessert to two tablespoonfuls every four hours, according to the age of the patient. It is of absolute necessity, at the same time, to keep the bowels well acted on throughout the disease; and for this purpose an aperient powder should be given as early as possible, and repeated in a different form twice or thrice a day, as below.

Aperient powder.—Take of

Calomel	3 grains.
Jalap and scammony, of each	6 grains.
Cream of tartar . . .	20 grains.

Mix well. For a child of ten or twelve years. Half, two-thirds, or one-third of this powder, may be given to children of more tender years according to their age.

Fever powders.—Take of

Powdered antimony and calomel, of each . .	1 grain.
Ipecacuanha	1 grain.
Jalap	3 grains.
Powdered nitre . . .	2 grains.

Mix, and make twelve such powders; giving one to a child of ten or twelve years of age every six hours, and half of such a powder either every six, four, or three hours to children of fewer years.

Particular care should be taken to guard the child from cold at the time of the cuticle peeling off, and as the disease declines the bowels should be more actively acted on, either by the exhibition of one or two aperient powders, or by a dose of senna and manna tea. Attention to this rule will save the child from those secondary consequences of scarlatina which, in obstinacy and annoyance, are often more troublesome than the fever itself. Scarlatina sometimes assumes a typhoid or malignant form, when it becomes necessary to give wine, spirits, genuine and nutritious food; but, as this form of the disease is much more rare, the diet and regimen in this eruptive fever must be low, thin, and unexciting, and the body in all cases kept cool.

SCENT-JAR.—Gather rose-leaves on a very fine day, and if you have them prefer the damask roses; lay them in a large vessel and throw in a little common salt to every layer of roses; then of rosemary leaves, lavender flowers, and knotted marjoram, take two handfuls of each, with a few bay-leaves. Add any other sweet flowers approved, or make it entirely of roses. Put in about a quarter of a pound of bay salt pounded, one ounce of orris-root sliced, one pound of cloves, one ounce of cinnamon, one ounce of gum-benjamin and storax, and a quarter of a pound of angelica-root sliced; when the ingredients are mixed, cover the jar close; take off the cover when wanted, and then the scent will be exquisite.

SCHOOLS.—See EDUCATION.

SCHOTTISCHE.—The gentleman holds the lady precisely as in the polka. Beginning with the right foot, he slides it forward, then brings up the right foot to the place of the left, slides the left foot forward, and springs or hops on this foot. This movement is repeated to the right. He begins with the right foot, slides it forward, brings up the left foot to the place of the right foot—slides the right foot forward again, and hops upon it, the gentleman springs twice on the left foot, turning half round; twice on the right foot; twice again on the left foot, turning half round; and again twice on the right foot, turning half round. Beginning again, he proceeds as before. The lady begins with the right foot, and her step is the same in principle as the gentleman's. Vary by a reverse turn, or by going in a slight line round the room. Double, if you like, each part by giving four bars to the second part. The time may be stated as precisely the same as in the polka; but let it not be forgotten that the schottische ought to be danced much slower.

SCISSORS.—In the practice of horticulture scissors of various sizes are required by the gardener. A pair with very sharp and pointed blades is needed for cutting away the anthers of flowers in hybridizing, and for thinning grasses. Shorter pairs are used for removing flower-stalks, when the petals have fallen from roses, &c.—See PRUNING.

SCONES.—Flour, two pounds; bi-carbonate of soda, a quarter of an ounce; salt, a quarter of an ounce; sour buttermilk, one pint, more or less. Mix to the consistence of light dough, roll out about half an inch thick, cut them out to any shape you please, and bake on a girdle over a clear fire about ten or fifteen minutes, turning them to brown on both sides; or they may be done on a hot plate or ironing stove. A girdle is a thin plate of cast iron about twelve or fourteen inches in diameter with a handle attached to hang it up by. These scones are excellent for tea, and may be eaten either hot or cold, buttered or with cheese.

☞ Flour, 2 lbs.; bi-carbonate of soda, ½ oz.; salt, ½ oz.; buttermilk, 1 pint.

SCORCH MARKS, TO REMOVE.—If linen has been scorched and the mark has not penetrated entirely through so as to damage the texture, it may be removed by the following process:—Peel and slice two onions, and extract the juice by squeezing or pounding. Then cut up half an ounce of white soap, add two ounces of fuller's earth, and mix them with the onion juice and half a pint of vinegar. Boil this composition well; then spread it, when cool, over the scorched part of the linen, and let it dry on. Afterwards wash out the linen, and the mark will be found to have been removed.

SCORZONERA.—A hardy perennial, a native of Spain, the south of France, and Italy, and cultivated in this country for three centuries. The root is carrot-shaped, about the thickness of a finger, tapering gradually to a fine point. *For using it*, the outer rind is scraped off, and the root steeped in water, to abstract a part of its bitter flavour. It is then boiled or stewed in the manner of carrots or parsnips. The roots are fit for use in August, and continue good until the following spring. *In cultivating the plant*, sow every year to have an annual supply. The quantity of seed for a bed four feet and a half by ten feet, to be sown in drills fifteen inches asunder, is one ounce. Sow every spring, at the end of March or in April; follow with a secondary sowing in May. This root likes a light deep soil. Allot an open compartment. Sow either broadcast and rake in evenly, or in small drills twelve or fifteen inches asunder, and earth over half an inch or an inch deep. When the young plants are two or three inches high, then thin to six or eight inches distance. Clear out all weeds as they advance in growth. The plant having a free increase all summer, the roots will, some of them, be of a moderate size to begin taking up in August, others in September, but will not attain full growth till the end of October, when, and during the winter, they may be used as wanted; or some may be dug up in November, and preserved in sand under cover, to be ready when the weather is severe. The plants left in the ground continue useful all winter till the spring; then those remaining undrawn shoot to stalk in April and May, and become unfit for the table. To save seed, leave some old plants in the spring, which will shoot up in tall stems and produce ripe seed in autumn.

SCOTCH BROTH.—Set on the fire four ounces of pearl-barley, with three Scotch pints (or six quarts) of salt water; when it boils, skim it, and add what quantity of salt beef or fresh brisket you choose, and a marrow-bone or a fowl, with a couple of pounds of either lean beef or mutton, and a good quantity of leeks, cabbages, or savoys, or you may use turnips, onions, and grated carrots. Keep it boiling for at least four or five hours; but if a fowl be used, let it not be put in till just time enough to bring it to table when well done, for it must be served up separately. Or, take the chops from a neck of mutton, cut the remainder up in small pieces, and let it stew the whole day. Boil half a pint of Scotch barley till tender,

strain it dry; chop fine two large onions and turnips, which put with the barley and chops into a close stewpan, strain the broth into it, let it boil one hour and a half, and skim it well, seasoning it only with salt and black pepper. This will make a large tureen of broth, besides preserving the chops for table.

SCOTCH BUN.—Take four pounds of flour dried and sifted, two pounds of raisins stoned and cut, and two pounds of currants. Add six ounces of orange-peel, the same of citron and of almonds blanched and cut; mix all these together. Take one drachm of cloves, a large nutmeg, half an ounce of allspice, and the same of ginger; pound them, strew the spice on the fruit, and mix them well up. Make a hole in the flour, break in nearly a pound and a half of butter, pour warm water on the butter, to soften it a little; then work the flour and butter together, spread the paste, and pour in half a pint of good yeast; work it up very well until the paste is light and smooth. Cut off about a third part of the paste for the sheets, spread out the rest of the paste on the table, put the fruit on it. Pour about a gill of yeast over the fruit and paste, and work the fruit and paste very well together. Then make it up round; roll out the sheet which was reserved in a circular form, lay the bun on the middle, and gather the sheet round it; roll it out to the desired thickness, run a fork through in different parts down to the bottom, and pinch it on the top. Flour double grey paper and put the bun upon it, give it a cut round the side, put a binder of double paper round it, to keep it from running too thin in the oven. Bake in a moderate oven.

☞ Flour, 4 lbs.; raisins, 2 lbs.; currants, 2 lbs.; orange-peel, 6 ozs.; citron, 6 ozs.; almonds, 6 ozs.; cloves, 1 drachm; nutmeg, 1; allspice, ½ oz.; ginger, ½ oz.; butter, 1½ lb.; yeast, ½ pint.

SCOTCH CAKE.—Take a pound and a half of dried and sifted flour, the same quantity of fresh butter washed in rose-water, and the same quantity of loaf sugar finely powdered; six ounces of blanched sweet almonds, three-quarters of a pound of candied orange-peel, half a pound of citron, all cut into narrow strips; a nutmeg grated, a teaspoonful of pounded caraway seeds, fifteen eggs, the yolks and whites separately beaten; then with the hand beat the butter to a cream, add the sugar and then the eggs gradually; mix in the flour a little at a time, and then the sweetmeats, almonds, and spice; lastly, stir in a glass of brandy; butter the hoop or tin-pan, and pour in the cake so as nearly to fill it, smooth it on the top, and strew over it caraway comfits. Bake it in a moderate oven; it must not be moved or turned till nearly done, as shaking it will cause the sweetmeats to sink to the bottom.

☞ Flour, 1½lb.; butter, 1½lb.; sugar, 1½lb.; almonds, 6ozs.; candied orange-peel, ½lb.; citron, ½lb.; nutmeg, 1; caraway seeds, 1 teaspoonful; eggs, 15; brandy, 1 wine-glassful.

SCOTCH EGGS.—Boil five pullet's eggs quite hard; and, without removing the white, cover them completely with a relishing forcemeat, in which let scraped ham, or chopped anchovy, bear a due proportion. Fry of a delicate brown, and serve in a dish with good gravy.

SCOTCH KALE.—This dish is chiefly made of mutton, either fresh or salted; beef is only used when mutton cannot conveniently be had. Three or four pounds of meat should be put to a gallon of cold water, along with two ounces of pearl-barley, with leeks and onions, and allowed to stew until tender; if salted, put the meat into water one night, changing it once before boiling. Then have ready the hearts of two cabbages cut small, or greens if cabbages are not in season; put them into the broth, which must be allowed to boil up uncovered until reduced to two quarts. It should only be seasoned with pepper and salt, but will be much improved by the addition of a couple of onions fried in butter.

SCOTCH PANCAKES.—To a pint of cream beat up the yolks of eight eggs and the whites of six, a quarter of a pound of melted butter, a tablespoonful of flour, a nutmeg grated, three tablespoonfuls of white wine, and sugar to sweeten. When the butter is cool, mix all together into a batter; have ready a slow fire, and a small frying-pan no larger than a plate, tie a piece of butter in a clean cloth; when the pan is hot rub this round it, and put in the batter with a spoon, run it round the pan very thin, and fry on one side only; put a saucer into the middle of a dish, and lay pancakes over it till a little pyramid is formed; strew pounded sugar between each pancake, and garnish the dish with Seville oranges cut in small quarters.

☞ Cream, 1 pint; eggs, 8 yolks, 6 whites; melted butter, ½lb.; flour, 1 tablespoonful; nutmeg, 1; white wine, 3 tablespoonfuls; sugar to sweeten.

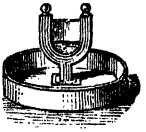
SCOURING DROPS.—Take one ounce of rectified oil of turpentine, and add to it as much oil of lemon-peel as will neutralise or overpower the smell. These drops do not affect the colour of any article. They should be rubbed on any stain with a piece of silk wetted with them.

SCRAP BOOK.—A very interesting collection of prints, paragraphs, &c., may be made by pasting these from time to time into a blank volume for that purpose. Such a collection habitually lying upon the table will afford infinite amusement not only to the possessor, but to any casual visitor who in the event of your absence when he calls is left to amuse himself in the best way he may.

SCRAP PIE.—Grease a flat dish, and make a common paste with dripping or the fat that has settled on the liquor of boiled meat; two pounds of flour and three-quarters of a pound of fat will make a large pie. The crust will be greatly improved by the addition of a teaspoonful of bread-powder or a little carbonate of ammonia. Having rolled out the crust, spread a thinnish layer carefully over the dish. Fill it with bits of cold

meat of any kind that have been collected from the plates or trimmed from a point, or in any other way. Chop them all up together, with a little parsley and thyme and an onion, and season it with pepper and salt. If there is not meat enough to fill the dish, cold potatoes may be laid at bottom, either mashed or cut in thin slices, or slices of vegetable marrow. A little cold gravy will be an improvement. Moisten the edge crust, that the top when laid on may adhere firmly. Cover and bake. When the top crust looks well done it is enough. This will turn out whole, and is excellent eating, either hot or cold. Or the same thing may be baked in a deep pie-dish, only lining the sides of the dish with crust, not the bottom. A larger portion of vegetables may be given—potatoes, carrots, and beef, or vegetable marrow, seasoning the same, and more broth or liquor for gravy.

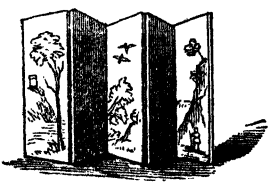
SCRAPER.—An ordinary adjunct to the doors of dwellings, and one which to ensure use should be placed in such a situation as to be easily seen. The variety of form is endless, from a single piece of iron hoop fixed across two uprights of any kind, to those of cast iron ornamented in various ways. They should always, if possible, have a receptacle for the dust to fall into.



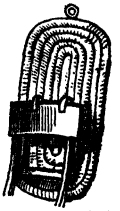
A portable scraper, as illustrated in the annexed figure, is useful, because it may be placed in any situation; as, for instance, in any part of the garden.

SCRATCHES.—These, though very trivial accidents, are often, from the place in which they occur, or the habit of body of the person at the time, very annoying and troublesome injuries. The desideratum in such cases is to close the disunited cuticle, and prevent a scabby seam along the injury; the best remedy to prevent the one and effect the other, is the extract of lead, which in its unadulterated state is to be applied on lint to the part, when, if it has been properly wetted, and secured from the air, it will in a few hours be perfectly reunited.

SCREEN.—A very useful contrivance for enhancing the comfort of an apartment, concentrating warmth, keeping off draughts, &c. They may be constructed in the simplest manner; a clothes horse, for instance,



covered with canvas, and decorated with engravings cut from books or journals, will answer every purpose. When, however, they are made especially, they have sometimes peculiar hinges, by which they can be folded both ways. Fire screens are very necessary where open fires are used. In dining rooms they are particularly suited, for those who sit with their backs to the fire; and various contrivances have been resorted to, to prevent the unpleasant effect of this situation. The simplest, and one that frequently answers the purpose, is a flat one worked of willow, that is hung on the back of each chair requiring such a defence. Fire screens for drawing rooms are less wanted than formerly; since from the great improvements in chimney fireplaces, it is not so necessary to sit very near the fire. When they are employed, they are made light and elegant, and are generally only large enough to screen the face. It is requisite that the base of all fire screens should be strong and solid, as well as somewhat heavy, that they may not easily overturn.



SCROFULA.—A peculiar condition of the body, in which the healthy vital energy is in a measure in abeyance, where the system is less strong, the body less perfect, the organization less harmonious, and the living power to resist accidents less perfect and capable of resisting those influences of time, air, contagion, and accident, ever at war on the frame of man, and which robust health may rebut and for a time defy, but before which the less perfect organization of scrofula ultimately succumbs. It is to this unnatural weakness of the constitution that we owe many of those diseases and ills that like a scourge afflict mortality; such as consumption, mesenteric disease of the bowels in children, rickets, goitre, cretinism, hare lip, white swellings, and many other local and constitutional maladies: all deriving their origin from this physical and specific weakness of the whole or a part of the human body. Any chronic swelling of the absorbent glands is denominated scrofula, as shown both by the wen in the throat and the white, shiny, and insidious swellings in the knee, yet neither of them is, correctly speaking, scrofula; but merely the local evidence of something we feel and know, but cannot define in the system, couched in the blood, reflected in the want of general nervous energy, and manifesting itself in some local character, to which science gives a name, and unprofessional wisdom assigns the disease. The chief characters by which a scrofulous diathesis is known or may be suspected, are a want of perfect bodily symmetry, small, thin, or crooked limbs, a round or pigeon-breast, excessive enlargement of certain organs, broad jaws, low forehead, long neck, and large occiput, great transparency of the skin, with a rosy tint of the cheeks; when the complexion is dark, it is of a dirty, grumous appearance, when fair, unnaturally clear; a bluish ring round the eyes, which though large, clear, and sometimes black,

are more generally light blue, with swollen or puffed eyelids, long lashes, upper lips thick and projecting, and the general expression of the countenance voluptuous ease, with want of decision and energy; the first teeth are small, subject to decay, and the second white, liable to split, and often become prematurely decayed. The treatment of the different local forms of scrofula will be found under their several heads.—See CONSUMPTION, GOITRE, NECK, AFFECTIONS OF, &c.

SCRUBBING.—After the white-washing, paint-cleaning, and window washing of each room has been completed, let the floor be scrubbed; first seeing that it has been well swept. For this purpose have a small tub or bucket of warm water; an old saucer to hold a piece of brown soap; a large thick towel-linen floor-cloth, and a long-handled scrubbing-brush. Dip the whole of the floor-cloth into the water, and with it wet a portion of the floor. Next, rub some soap on the bristles of the brush, and scrub hard all over the wet place. Then dip your cloth into the water, and with it wash the suds off the floor. Wring the cloth, wet it again, and wipe the floor with it a second time. Lastly, wash the cloth about in the water, wring it as dry as possible, and give the floor a final and hard wiping with it. Afterwards go on to the next part of the floor, wet it, scrub it, wipe it three times, and proceed in the same manner, a piece at a time, till you have gone over the whole; changing the dirty water for clean, whenever you find it necessary. For a large room, fresh warm water will be required four or five times in the course of the scrubbing. When the floor has been scrubbed, leave the sashes raised while it is drying. For scouring common floors that are very dirty, have by you an old tin pan with some gray sand in it; and after soaping the brush, rub it on some sand also.

SCURVY.—A disease affecting all the fluids of the body, attended by exhaustion, lassitude, fainting from the slightest exertion, pains in the limbs, back, and general weariness, soft, painful, and spongy gums, bleeding at the merest touch, while from the nose, mouth, and bowels, hæmorrhage follows from the slightest accident. Externally, the disease is characterized by livid spots of various size appearing over the body, general paleness and want of colour in the skin, mental apathy, fetid breath, and loss of animal spirits. Scurvy is caused by long living on one innutritious diet, accompanied with confinement and hard labour, and more especially by a long course of salt provisions; hence formerly, before steam was introduced in navigation, and the crews of ships were for many months, and on long cruises sometimes for years, confined with hardly any change to an exclusive dietary of salt-junk, pickled pork, and hard biscuits, from which all moisture was totally expelled, scurvy was a disease in both the national and mercantile marine of very common occurrence, attacking whole crews with the fatality of a pestilence. Since the nature of the disease has been better understood, and the sailor's comfort more charitably considered, scurvy may be said to have been expunged from the list of human afflictions, so rare is it that the disease now presents itself. As scurvy is engendered by living on hard and innutritious salt provisions, it seems natural to suppose that the only remedies required to cure this disease, would be fresh juicy foods, of a directly opposite character, and such indeed is the fact: the only remedies necessary to restore the worst case to health, if the vital energy has not been too greatly prostrated, are an abundant supply of fresh vegetables, even grass, in the absence of more agreeable articles, vinegar, and fresh beef or mutton. In bad cases, where the debility is great, the bleeding from the mouth, nose, or sores is excessive; the only medicine actually requsite is bark with wine or porter, and a gargle of alum and sage tea for the mouth, and a lotion of oak bark and alum to bathe the bleeding sores. Since the discovery of lemon or lime-juice as a specific for scurvy, the treatment of this disease has become very simple, resolving itself into a more judicious course of succulent animal and vegetable foods, with wine and bark, and a few spoonfuls of lime-juice three times a day. Among the most approved vegetables for cases of scurvy, are water-cresses, radishes, all kinds of cabbage, nettles, wormwood, ground ivy, and scurvy-grass. Oranges, lemons, cider, and vinegar are likewise beneficial. Sometimes the scaly eruption that has broken out all over the body, especially along the emaciated legs and arms, will obstinately remain, peeling off, and re-scabbing long after the system has rallied, and the patient in other respects is in an advanced stage of convalescence; thus causing much annoyance by the pain and debility in the part, and its continued proneness to bleed on the slightest irritation. In such cases, the patient must be placed under the following course of tonic and alterative medicines, continuing the nutritious diet, as much exercise as possible, and an occasional warm bath. Take of

Colombo bark	1 drachm
Cascarilla	2 drachms
Canella alba	2 drachms

bruise, and infuse for six hours, in twelve ounces of boiling water, strain and add

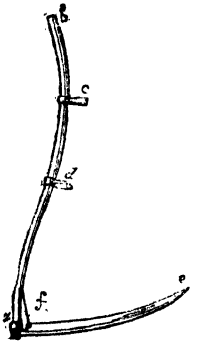
Quinine	10 grains
Sulphuric acid	40 drops.

Mix; and give one tablespoonful three times a day, either alone or in a little water. At the same time a Plummer's pill should be taken night and morning, and where the pain is considerable, or the patient is deprived of sleep, twenty-five drops of laudanum or a grain of solid opium should be given at bed-time, as long as the symptoms demand its use. In addition, to a part or the whole of these instructions, the only other means necessary are change of air and exercise, both most important adjuncts in the treatment. An occasional draught of sweet wort from a brewery will be found

of great advantage, and as a variety, for a beverage, copious drinks should be taken of whey, buttermilk, or cider.

SCURVY, IN THE HEAD.—A simple and effectual remedy is the following. Into a pint of water drop a lump of fresh quicklime, the size of a walnut; let it stand all night, then pour the water off clear from sediment or deposit; add a quarter of a pint of the best vinegar, and wash the head with the mixture, which is perfectly harmless; only wet the roots of the hair.

SCYTHE.—An implement used for cutting down grass, grain, &c. The annexed figure represents a patent scythe; the handle is



furnished with an iron ring at the end of *a*, to which the blade is attached; the projecting stud at the butt-end of the blade is embedded flush in the handle by taking away a portion of the wood; and the ring is then slipped over it, and held tight in its position by an iron wedge driven between the ring and the handle. The peculiar position which the blade bears to the handle is determined by setting off the length of the blade *a c* along the handle from *a* to *d*, which is the plane for the handle of the right hand, and the same length from *d* to *c* fixes the point of the scythe. The blade is still further secured in its position by the grass-nail *f*, which is hooked by one end into a hole in the blade, and nailed through an eye to the other end. The left hand handle *e* is placed to suit the convenience of the workman.

SEA PIE.—Make a thick pudding crust, line a dish with it, or what is better, a cake tin, put in a layer of sliced onions, then a layer of salt beef cut in slices, a layer of sliced potatoes, a layer of pork, and another of onions; strew pepper over all, cover with a crust, and tie down tightly with a cloth previously dipped in boiling water and floured; boil for two hours, and serve hot in a dish.

SEA-SICKNESS.—This distressing affection would appear to arise from the influence which the motion of the vessel has upon the brain and other organs. The best preventives seem to be the horizontal position, as near the centre of the vessel as possible. Exposure to the open air renders the liability less, the deck, therefore, is to be preferred to the cabin. Stimulants combined with sedatives, have considerable effect in alleviating the symptoms. A pill composed of four grains of cayenne pepper, with two or three of extract of henbane taken at intervals, will be found useful. Creosote is also an excellent antidote; and three or four drops, on a piece of loaf sugar, will be sufficient. Some persons find themselves less liable to sea-sickness if they take food freely; with others, the reverse is the case; the effect probably depends upon the state of the digestive powers of the stomach, temporary or permanent. If these are vigorous, the excitement of digesting food acts doubtless as a counter-agent to the cause of nausea. Sea-sickness of itself is rarely injurious, but it should be a subject of consideration with persons who are liable, or likely to be, to head affection, who are the subjects of rupture, prolapsus, &c., how far they should incur the risk of these being aggravated by the action of vomiting. Some persons who do not suffer from sickness while on the water, experience nausea and other uncomfortable sensations after landing—an effect doubtless due to a partial disturbance of the digestive organs, and probably to bilious disorder. One or two doses of compound colocynth or compound rhubarb pill, will generally remove the inconvenience. A girdle worn around the body above the bowels, would prevent sea-sickness. It is said to operate by keeping the intestines from pressing upwards against the diaphragm, when the ship descends from the top of a wave. The upward motion of the vessel does not cause the distressing nausea, but affords instantaneous relief.

SEA WATER, ARTIFICIAL.—There cannot be a question that by far the simplest plan would consist in the evaporation of the sea-water itself in large quantities, preserving the resulting salt in closely stopped vessels to prevent the absorption of moisture, and vending it in this form to the consumer; the proportion of this dry saline matter being fifty-six ounces to ten gallons of water, less three pints. The portion to be used is six ounces to the gallon of water, and stirred well until dissolved.

SEA WEED, TO COLLECT AND DRY.—First wash the sea-weed in fresh water, then take a plate or dish (the larger the better), cut your paper to the size required, place it in the plate with fresh water, and spread out the plant with a good-sized camel-hair pencil in a natural form; pricking out with the pin gives the sea-weed an unnatural appearance, and destroys the characteristic fall of the branches, which should be carefully divided; then gently raise the paper with the specimen out of the water, placing it in a slanting position for a few moments, so as to allow the superabundant water to run off; after which place it in the press. The press is made with three pieces of board, two sheets of blotting paper; on that lay the specimens; place straight and smooth over them

a piece of old muslin, fine cambric, or linen, then some more blotting-paper, and place another board on the top of that, and continue in the same way; the blotting paper and the muslin should be carefully removed and dried every day, and then replaced; at the same time, those specimens that are sufficiently dried may be taken away. Nothing now remains but to write on each the name, date, and locality. You can either gum the specimens in a scrap-book, or fix them in as drawings are often fastened, by making four slits in the page, and inserting each corner. This is by far the best plan, as it admits of their removal without injury to the page, at any future period, if it be required either to insert better specimens or intermediate species. Some of the larger algæ will not adhere to the paper, and consequently need gumming. The following is the best method of preserving them. After well cleaning and pressing, brush the coarser kinds of algæ over with spirits of turpentine in which two or three small lumps of gum mastic have been dissolved by shaking in a warm place; two-thirds of a small phial is the proper proportion, and this will make the specimens retain a fresh appearance.

SEALING CEMENT.—To secure letters and packages from being opened or tampered with, beat up some fine bean flour with the white of an egg, and make it into a paste. Use a little of it in the form of a wafer, close the letters, &c., with it, and hold the sealed part to the spout of a tea-pot containing boiling water. The steam will harden the cement to that degree that the letter cannot be opened without tearing it, and will thus prove more secure than gum, wafer, or wax.

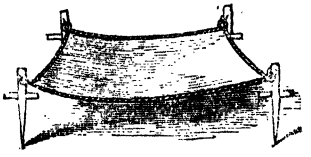
SEALING WAX.—Take four ounces of shell-lac, one ounce of Venice turpentine, and three ounces of vermilion. Melt the lac in a copper pan suspended over a clear charcoal fire, then pour the turpentine slowly into it, and soon afterwards add the vermilion, stirring briskly all the time of the mixture with a rod in either hand. In forming the round sticks of sealing-wax a certain portion of the mass should be weighed while it is ductile, divided into the desired number of pieces, and then rolled out upon a warm marble slab by means of a smooth wooden block like that used by apothecaries for rolling a mass of pills. The oval sticks of sealing-wax are cast in moulds with the above compound in a state of fusion. The marks of the lines of junction of the mould-box may be afterwards removed by holding the sticks over a clear fire or passing them over a blue gas-flame. Marble sealing-wax is made by mixing two, three, or more coloured kinds while they are in a semi-fluid state. From the viscidity of the several masses, their incorporation is left incomplete so as to produce the appearance of marbling. Gold sealing-wax is made simply by stirring gold-coloured mica spangles into the musk or other perfume. If one part of balsam of Peru be melted along with ninety-nine parts of the sealing-wax composition, an agreeable fragrance will be exhaled in the act of sealing with it. Either lamp-black or ivory-black serves for the colouring-matter of black-wax. Sealing-wax is often adulterated with rosin, in which case it runs into thin drops at the flame of a candle.

SEASONING.—This is a very important element in the art of cookery, and one which requires experience, judgment, and delicacy of taste. The precise quantities for particular dishes it is impossible to give, because tastes differ so materially that what is grateful to the palate of one person may be very disagreeable to that of another. In considering this subject, however, the following remarks on the various ingredients used in seasoning generally will scarcely be out of place. In the use of salt in cooking considerable judgment is required. The best rule is to employ as little as possible. It is easy to add salt afterwards if required: but when a dish is made too salt the fault is irremediable. Sugar may be applied with advantage in various dishes, but great care must be taken that in such preparations it should be employed to enrich, not to sweeten. The taste of sugar should not predominate, or even be recognised. Meat intended to be boiled or fried should be well peppered but never salted; salt renders it hard. In boiling vegetables, a certain portion of salt should always be put into the water. It should be well understood that pepper and all descriptions of spice require to be subjected to the action of heat to bring out their genuine flavour. In the use of spices it is important that the aroma which they give forth should not be allowed to evaporate or escape. Aromatic herbs used in seasoning should not be exposed to the open air, but excluded from it as much as possible. This may be partially effected by tying the dried herbs in paper-bags, but it is much better to reduce the leaves to a coarse powder, and confine it in well-corked bottles. Spices should be put into soups whole, allspice is one of the best for this purpose. Seville orange-juice has a finer and milder acid than lemon-juice; but both should be used with caution. Sweet herbs for soups or broths consist of knotted marjoram, thyme, or parsley—a sprig of each tied together. The older and drier onions are the stronger in flavour; in dry seasons also they are very strong: the quantity should be proportioned accordingly. Although celery may be generally obtained for soup throughout the year, it may be useful to know that dried celery-seed is an excellent substitute. It is so strongly flavoured that a drachm of whole seed will enrich half a gallon of soup as much as two heads of celery. Mushrooms are much used, and when they cannot be obtained fresh, mushroom ketchup will answer the purpose, but it should be used very sparingly, as nothing is more difficult to remove than the over-flavouring of ketchup. A piece of butter, in proportion to the liquid, mixed with flour and added to the soup when boiling, will enrich and thicken it. Arrowroot or potato-flour is well adapted for the thickening of soups in absence of flour. The fine flavouring ingre-

dients, as ketchup, spice, wine, juice, &c. should not be added till the soup is nearly done. Wine, especially, should always be added late in the making; as it evaporates very quickly in boiling.

SEDATIVE OINTMENT.—The violent local irritation which often follows the application of blisters to the surface of children, is a serious objection to their use, and requires that particular care be taken to lessen the liability of sloughing. Should, however, the ulcer be very irritable, the following ointment, thickly spread on lint, will be found serviceable:—Lime-water, oil of almonds, of each half an ounce; mix well together, then add prepared lard, one ounce.

SEED-CLOTH.—An article for the reception of light seeds, and of great use to the seed-grower. The cloth may be of any size; but one three or four feet wide, and ten or twelve feet long, will be found most convenient, when there is a great variety of seed to be dried. Sew the edges of the cloth



to a cord on all the four sides, and in an angle introduce a loop or ring. For every cloth have four pins, each having a hook near the top on which to hang the loop or ring; the pins are pointed at each end, that they may enter easily into the ground, and have a cross-piece about a foot from the top to prevent them from going in too far, and from being drawn too much on one side by the tension of the cloth.

SEEDS, TO PRESERVE.—Seeds of plants may be preserved, for many months at least, by causing them to be packed either in husks, pods, or in absorbent paper, with raisins or brown moist sugar; or a good way, practised by gardeners, is to wrap the seed in brown paper or cartridge paper, pasted down, and varnished over.

SEIDLITZ POWDERS.—These are usually put up in two papers. The large blue paper contains two drachms of Rochelle salt, and two scruples of carbonate of soda; in practice it will be found more convenient to mix the two materials in larger quantity by passing them twice through a sieve, and then to divide the mixture either by weight or measure. than to make each powder separately. When wanted for use, dissolve the contents of the blue paper in half a tumbler of cold water, stir in the other powder, and drink during effervescence.

SELTZER WATER.—An effervescing draught chiefly distinguished by the large amount of carbonic acid it contains in combination with alkaline carbonates, such as those of soda, magnesia, and lime; it also contains common salt. It is useful in some forms of dyspepsia, gravel, &c., and is an excellent restorative when the system has undergone any extraordinary exhaustion. To make it, take twenty ounces and a half of water impregnated by the usual apparatus with carbon c acid gas, and dissolve in it four grains of carbonate of soda, two grains of carbonate of magnesia, and twenty grains of common salt.

SEMOLINE PUDDING.—To a quart of milk put three tablespoonfuls of semoline; when the milk boils, stir it in gradually; then add one ounce of sweet almonds and two or three bitter almonds well pounded; sweeten to taste with white sugar; boil altogether forty minutes, put it in a mould wet with cold milk; let it stand till perfectly cold; turn it out and serve with preserved fruit.

SENNA CONFECTION.—Take of senna four ounces; figs, half a pound; cassia pulp, tamarind pulp, and the pulp of prunes, each four ounces; coriander seeds, two ounces; liquorice, one ounce and a half; sugar, one pound and a quarter; water, one pint and a half. Rub the senna with the coriander, and separate, by sifting, five ounces of the mixture. Boil the water with the figs and liquorice added, until it is reduced to one-half; then press out and strain the liquor. Evaporate the strained liquor in a pan by boiling until twelve fluid ounces remain; then add the sugar and make a syrup. Now mix the pulps with the syrup, add the sifted powder, and mix well. Use as a purgative.

SENSITIVE PLANTS.—A species of plant possessing an irritability of so marked a kind as to gain for them their peculiar name. The Venus fly-trap is one of these, having pointed leaves which are furnished

on their edges with a row of showy prickles Another of this sensitive tribe is the *Desmodium gyrans*, which has a spontaneous motion; and its leaves frequently move in various directions without order or co-operation.

SEPTEMBER, GARDENING FOR.—KITCHEN GARDEN. *Angelica*, sow. *Aromatic* and *potherbs*, finish gathering. *Artichokes*, break down. *Asparagus*, plant forcing-beds, weed,

&c. *Balm*, plant. *Beans*, earth up, &c. *Beet, red*, take up as wanted. *Borage*, sow, thin advancing crops. *Borecole*, plant. *Burnet*, plant. *Cabbage*, sow, plant, earth up advancing. *Cardoons*, earth up. *Carrots*, advance. *Cauliflowers*, prick out, draw earth to advancing. *Celery*, earth up, plant. *Chervil*, sow. *Coriander*, sow. *Corn salad*, sow. *Cress, American*, sow. *Cucumbers*, attend to, sow, ridge out. *Dill*, sow, earthing up attend to. *Endive*, plant, attend to, blanch, &c. *Fennel*, plant. *Finochio*, earth up. *Hoeing*, attend to. *Hyssop*, plant. *Jerusalem artichokes*, take up as wanted. *Kidney beans*, earth up advancing. *Leeks*, attend to advancing. *Lettuces*, plant out, sow. *Melons*, attend to, protect at night. *Mint*, plant. *Mushroom beds*, make, collect spawn. *Nasturtium berries*, gather as they become fit. *Onions*, sow, attend to advancing, gather for storing. *Parsley*, cut down. *Peas*, hoe, &c. *Pennyroyal*, plant. *Pot marjoram*, plant. *Potatoes*, take up for storing. *Radishes*, sow. *Rhubarb*, sow. *Sage*, plant. *Salading, small*, sow. *Savory*, plant. *Savoys*, plant. *Seeds*, gather as they ripen. *Sorrel*, plant. *Spinach*, sow. *Tansey*, plant. *Tarragon*, plant. *Thyme*, plant. *Turnips*, sow, hoe advancing.

General Remarks.—Earth up and store only in dry weather. Stick, stop, support, cut down, blanch, and thin where you see it necessary; no time is to be lost at this season. Remove all decayed leaves, haulm, stems, &c.; and the remains of all crops which have been taken, so as to preserve order and neatness; and make way for other crops or winter fallows. Destroy insects and vermin. Dress, sort, and put up seeds which have been well dried. Finish hoeing edible bulbs and potatoes.

FLOWER GARDEN.—Transplant in any moist or showery weather this month, the perennial and biennial seedlings to their allotted situations, with a ball of earth round their roots. Propagate fibrous-rooted plants by all the modes, but more especially from slips, rooted or unrooted, the stalky parts of herbaceous plants being now of a proper texture for this purpose. Prepare the spots where it is intended to deposit anemone and ranunculus roots any time during the month; and dig all beds and borders which are vacant, to prepare them for receiving roots and plants next month. Transplant peonies, flag iris, monkshood, fraxinella, and such like plants to part their roots and remove each root to its destined position. Transplant evergreens. Plant cuttings of honeysuckle, and other shrubs; hyacinth and tulip roots for early spring bloom; and box by slips or roots. Also crocus and other bulbs, and such autumn flowering bulbs as were omitted to be planted in the spring. Sow seeds of bulbous flowers, if not done in the preceding month. The seeds of most biennials and perennials may be sown in this month with advantage, provided protection can be afforded to them in the winter. On the whole, however, it is better to defer the business till spring, unless with a few sorts that sometimes lie a whole year before they come up when sown at that season. Among them may be enumerated colombine, agrimony, chelone, &c. If sown now, their seeds will come up the following spring, and they will flower the same season. If the end of the month be wet, hoop and mat such plants as will be injured by excess of moisture. Among these are the primular bulb and tender annuals planted in groups over the borders; also bulbs, as the tuberose and Guernsey lily, planted or plunged in the borders.

General Remarks.—Prepare the ground for florist's flowers. Trench and sift the earth where tulips and hyacinths are to be planted, at least three feet deep. Replace the more tender auriculas in their frames; but keep off the glasses except when it rains. Most of the greenhouse and hothouse plants will now be advanced; remove them to cold frames, or to the greenhouse or dry stove, according to their natures, to harden them gradually. Some may go directly to the stove. The beginning of this month is a fit time to repair, paint, glaze, and clean the flues of greenhouses. Replace some of the more tender plants from the open air at the beginning, and the whole in the course of the last week of the month. Remove all decaying flowers, that do not bear ornamental seeds or berries. Dress and mow turf and clean gravel.

SEPTEMBER, THINGS IN SEASON.—*Fish.* Barbel, brill, carp, cockles, cod, conger eels, crabs, dace, eels, flounders, gurnets, haddock, hake, herrings, lobsters, mullet, mussels, oysters, perch, pike, plaice, prawns, shrimps, soles, tench, thornback, turbot, whitings.

Fruit. Apples, cherries, currants, figs, filberts, grapes, hazel nuts, medlars, melons, peaches, pears, plums, quinces.

Meat. Beef, lamb, mutton, veal, venison.

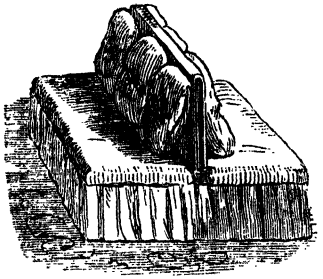
Poultry and Game. Chickens, ducks, fowls, geese, larks, leverets, partridges, pheasants, pigeons, plovers, pullets, rabbits, teal, turkey-poults, wheat-ears.

Vegetables. Artichokes, asparagus, balm, beans, cabbages, carrots, cauliflowers, celery, chervil, cucumbers, endive, finochio, garlic, herbs of all sorts, leeks, lettuces, mint, mushrooms, parsley, parsnips, peas, potatoes, radishes, salad of all sorts, shallots, turnips.

SERAGLIO CAKES.—Boil together for a moment in a little water, a small quantity of sugar, a quarter of a pound of butter, a little grated lemon-peel, a pinch of salt, and as much flour as will make a firm paste; shake the saucepan well over the fire, until the paste separates from the sides of it; then remove it, and while it is yet warm, add an egg well-beaten and mixed with the paste until it adheres to the finger; then remove it entirely from the fire, and add as many more eggs, one by one, as the paste will absorb, with pounded macaroons, orange-flowers cut fine, and some grated lemon-peel; form the cakes into any shape desired, and bake.

SETTEE.—A kind of lounging seat for drawing-rooms and other apartments, which are extremely convenient and agreeable, and

help to break the formality of the more important furniture. The settee seen in the

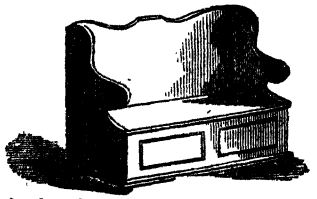


engraving is the best adapted for conversation, viewing pictures, and so forth.

SETTER.—A species of dog used in sporting. It is peculiarly adapted to those sportsmen who range widely and follow sporting throughout the season with great

ardour, particularly over moorlands, &c. The dash of these dogs, their superior speed, and little liability to become foot-sore, for the hairy padding of the foot enables them to go through vast fatigue without that shortening stroke and apathy in pursuit which will occasionally mark the progress of the fatigued pointer. The setter, in size, equals the usual run of pointers; in colour, he may be met with of almost every tint and marking common to hounds and spaniels. Although colour is not much of a criterion in the selection of this dog, still it is to be noticed that the most superior of them have a preponderance of the liver hue.

SETTLE.—An old-fashioned seat with a



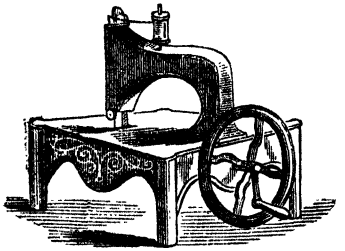
high close back, to defend those who sit thereon from cold and currents of air. They were formerly common in the corners of the large cottage chimneys, and the seat formed a chest for containing household articles. They may still be used with advantage in apartments that are more than usually exposed to the action of cold.

SEWING.—A female employment productive of the greatest benefit to the household, and calculated to pass the time profitably. Sewing by candlelight should be avoided as much as possible, especially articles of a black shade, but when engaged upon these, the eye will experience considerable relief if the black material is placed upon a piece of white calico. The precise meaning of the word sewing is the forming of two edges of cloth, calico, or other material together; if the edges happen to be good salvages, they require only to be placed evenly, and to be pinned at short distances, or tacked slightly to prevent puckering. Should the edges be raw, one edge must be turned down once, and the other must be turned down double the width for the purpose of being folded back again in the middle, to form what is called the fell. When the seam has been thus prepared, the cloth or other material should be held upright, firmly, with the thumb along the side of the first finger of the left hand, and supported with the second and third fingers. The needle should be pointed towards the chest; and the stitches must lie straight across the seam, and not be taken too deep. No knot should be made in the thread at the commencement, but one end of the thread should be left out, and sewn over for the first few stitches. The point at which the sewing is to be commenced, is along the side of the finger, about the beginning of the nail. When a fresh thread is required, an end of the thread in use should be left together with the same length of the new one; and both of them sewn over neatly and carefully. When the seam is finished, it should be flattened with the thumb-nail. The running and felling is then proceeded with, by laying the raw edge of one of the parts once down, in the same manner as the first fold of a hem; the other part should then be placed upon it, a thread or two below the double edge, and run together, making the stitches short, about three threads up, and three threads down. Then the seam should be laid down very smoothly and hemmed on the other side. For the double seam, or sewing and felling, a fold should be laid down in the same manner as for a run-and-fell seam; the seamstress turning it back again from her exactly at the raw edge of the turn, so that the fold may be double. Then a single fold should be laid down on the second piece, and the edges of both placed together, with the turns inside. These should be sewn neatly, and when finished, the seam laid down neatly, and the fold hemmed on the other side. Observe that the sewing must be on the right side, and the hem on the wrong side. Allied to sewing is another process, known as *stitching*. This is employed with the double intention of ornament and

strength. It is much used in the collars and wristbands of shirts, and for various other purposes. For stitching, the material must be double. In commencing, care should be taken that both ends of the article to be stitched are quite even; and then a fold laid down to stitch to. The depth of the fold must depend upon the distance from the edge at which it is intended to be stitched. The fold should exceed the stitching by some threads. A thread must then be drawn on the right side, and the work held in the same manner as for hemming. The needle must be passed in at the wrong side, between the double material, and brought out on the right side, where the seamstress must begin, so that the end of the thread may not be seen on the wrong side. The stitch is formed by first bringing the needle out two threads from the end of the wristband or collar; then to be put back two threads behind the thread on the needle, and brought out two threads before it. By taking two threads only, the stitches are always proportionate to the quality of the material, and do not require to be contracted by pulling the hems. When a new thread is required, the needle must be passed to the wrong side, and the thread fastened off neatly; then the new thread must be formed, and the needle passed out to the right side two threads before the preceding stitch; then proceed as before. When the row is finished, if the other side of the article have a raw edge, in most cases it is better to turn it down, but if there be a good salvage that is not necessary. In that case the salvage should be folded exactly in the middle, taking care that the ends are even, or that they correspond with each other, then the ends should be sewn neatly, or turned out the wrong side, and run and half-back stitched every two stitches, so as to make the work the stronger at a moderate distance from the edge. But if sewing be preferred to running, the right side of the article must be held towards the seamstress while sewing it, a double thread drawn on the opposite side of the wristband, at the same distance from the edge as on the first side, and the row stitched in a similar manner. The half-back stitch alluded to is accomplished by putting the needle back at every two stitches in the running. *Hemming* may be considered as the rudimentary process in needlework. In learning this art, a single yard of calico may be hemmed all round; then, the hems being cut off, the hemming may be renewed; and repeating the process of re-hemming and cutting off, one yard of calico will suffice to perfect the learner. If the piece of cloth or calico about to be hemmed be a square piece, and if the sides appear to be of *nearly* an equal length, the piece should be folded like a half-handkerchief, to ascertain if the sides are of *exactly* the same length. If this should prove not to be the case, a thread must be drawn out of the calico or cloth, and the material cut even by the open line thus made; then the raw edge must be cut straight and smooth. If the piece about to be hemmed have a salvage on one or two sides of it, those sides do not require hemming. The next process is to turn the raw edge down once, and then turn it down again the same width as at first. The work must be held upon the first finger of the left hand. The needle must be pointed from the seamstress, and the end of the thread turned under the hem, and drawn out till it nearly approaches the end; then the end must be neatly turned in under the hem with the point of the needle. When a new thread is required, the end of the thread in use must be cut off and turned under the hem; then the needle must be set in, pointed from the seamstress, and the new thread managed in the same manner as before. Turn threads left between every two stitches, well place them at a good distance. *Gathering* is another branch of needlework. It is a term used where a full part is to be set into a plain one; as the sleeve of a shirt into a wristband, or the upper part of a shirt into the collar. When the seamstress is about to put it together, and to fasten in gathers, care should first of all be taken that the loose edges are pared off, and the part about to be gathered cut perfectly even. It should next be folded into two parts, and then into four parts, and a mark made with a piece of thread at each quarter. Then a fold should be laid down, twelve or fourteen threads from the raw edge, creased, and turned back again. The running must be along the creased line, as it is improper to draw a thread. The side to gather on is the right one, taking up two threads on the needle, and missing three or more, according to the fulness of the article. Four or five stitches may be taken on the needle at a time, but the thread need not be drawn tightly, except at every finger-length; and if a fresh thread be required, it should be taken at a half or quarter only. When the gathering is finished, the fulness should be drawn up rather close, and the thread secured by twisting it round a pin; the gathers must next be drawn straight between the thumb and fingers, and traced or stroked down, one at a time, with a large needle. To do this neatly, the gathers must be placed side by side, and held down firmly and smoothly with the thumb upon the first finger, exactly as though they were being taken up on the needle separately. Then divide the plain part—that is, the collar or wristband — into four equal parts, and, having opened the gathers a little, pin the corresponding parts of each together, placing the edge of the wristband or collar exactly over the gathering-thread. Then draw the gathering-thread so that it may agree in length with the wristband or collar, and fasten the thread by twisting it round the last pin. The thread should never be cut until the fixing-in of the right side is finished. In doing this, the work should be held with the thumb upon the first finger of the left hand; the gathers, which should be distributed as little as possible, lying nearly from left to right, and equally disposed of. The end which is farthest from the seamstress must be commenced with, setting in the first stitches firmly and

neatly, pointing the needle almost along the gathers. One gather only should be taken up at a time. The wrong side of the material should be set with equal care; and the edge kept on that side, so as to agree precisely with the edge upon the right side. *The herring-bone stitch* is effected by working from left to right, and taking each stitch backwards, the thread being always kept behind the needle. In beginning the edge of the flannel it must be turned down once, and about two threads taken on the needle, close under the raw edge. The end to commence at is the contrary one to that at which hemming is commenced. The next stitch must be taken three or four threads back, near the top of the turning; and thus the edge is held down by the thread passing over it in a zig-zag manner. If the material is calico or muslin instead of flannel, and has four sides or edges, a fold must be turned down on each of the edges, and two threads drawn from each side, about twelve or fourteen threads asunder, and three or four from the double edge. The piece must then be folded in the middle, and two threads drawn, one on each side of it, so as to have the same number between them which was left at the edge. The material must be again folded at the quarters, and threads drawn in the same manner.

SEWING MACHINE.—A machine bearing this title has been invented within the last few years; the object of which is to perform the operation of sewing more

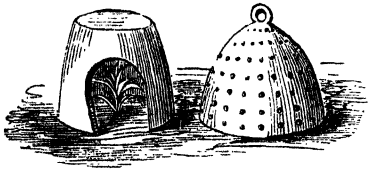


economically and expeditiously than can be accomplished by ordinary manual labour. A variety of these implements have been from time to time introduced, differing in details, but agreeing in the following general principles and application: The stitching is effected by two needles, each of which is supplied with thread from its own bobbin. One needle working vertically, and the other horizontally through the loops made by the first, a chain-stitch is produced which possesses great beauty as well as superior strength. The entire apparatus is about a foot in height, is actuated by a small heavy wheel, to which a handle is attached, and in very rapid work the handle is drawn by a treadle and link. Upon the shaft, at the end of which the driving wheel is keyed, is a cam-groove, in which the short arm of a lever terminating in a globe is made to work. The upper end of this lever receives a reciprocating motion from the continued action of the machine, and the length of stroke thus obtained is employed, together with a subsidiary arrangement, for giving motion to the vertical needle. A large arm rises from the apparatus at the back, and stands forward, its front extremity terminating in the apparatus which carries the needle. Immediately underneath the top plate of the machine, and so placed as to act upon the same point as the extremity of the vertical needle, is the horizontal needle. This instrument is of spiral form, the particular curve of which ensures the perfection of the work. It is mounted on a short vertical arbor, which carries a toothed pinion. A toothed arc gears into this, and the arc having a reciprocating motion imparted to it by a cam-grove apparatus upon the main shaft, participates in that motion. The bobbin for the vertical needle is placed vertically in a convenient situation at the top of the machine; by means of a tightening screw, the tension of the sewing thread is adjusted, and with it the tightness or looseness of the sewing. From the bobbin the thread is conducted through an eye fixed on the apparatus, and then through the eye of the needle, which is not far from the point, and finally returned upwards before the operation begins. The bobbin for the horizontal needle is mounted on a horizontal axle in a corner of the apparatus underneath the top plate. Its thread is laid in a small groove formed on the outside of the spiral, and is finally brought through an eye near the point. The cloth having the line of sewing creased or otherwise marked out, is laid upon the top plate, with the beginning of the line immediately under the vertical needle. If the machine be impelled slowly, it will be seen that the vertical needle is driven downwards through the cloth, and that immediately after it is drawn back the continuous action of the machine drives the horizontal needle through the loop which it leaves. Thus, the thread of the vertical needle embraces that of the horizontal one at the same time that the latter also enters the cloth. By the aid of another cam, a short stroke is given to a small platform having a surface cut into minute pyramids, so as to enable it to grasp the cloth firmly when pressure is made upon it from above, by means of a plate with a spiral spring re-acting against a fixed obstacle. The result of this simple contrivance is, that at the completion of each stroke of the needles the motion of the platform carries the cloth from under the vertical needle, and that needle at each successive stroke, and the horizontal needle also, works in new cloth. As the length of the stroke of the platform admits of adjustment at the pleasure of the operator, it follows that the stitching can be made as coarse or as fine as is desirable. The machine being thus rendered self-feeding, it is only necessary to guide the cloth in such a manner that the needles shall work upon the required line. By the aid of such a machine as this, sewing is effected with great rapidity, running off in something less

than a minute a line of stout sewing which an ordinary seamstress would scarcely overtake in the course of half an hour. By the hand, the machine may be driven at the rate of five hundred stitches a minute, by the foot at nearly twice that rate. The sewing performed is strong, close, and regular, and altogether such as it would require a very firm and well-practised hand to equal.

SHADDOCK.—A fruit of the citron species, cultivated chiefly for ornament. It has the handsomest leaf of the whole tribe, and the fruit is larger than the orange. When several sorts of oranges are presented at the dessert, it makes a striking addition to the variety. The juice is of a sub-acid sweetness, and is excellent for quenching thirst; and the fruit, from the thickness of its skin, will keep longer on sea voyages than any other of the citron species. The shaddock may be propagated in the same manner as the lemon,

SHADES, IN GARDENING.—These contrivances are usually made in the form of a flower-pot, as seen in the engraving, but with a section cut from one side to admit the air and light. This open side in the case of auriculas and alpine plants, is placed towards the north, and in the case of tender



plants to the the south, or other points. These utensils are exceedingly useful in transplanting tender plants, and in cultivating alpine plants. One species is entirely perforated with holes for shading ferns, mosses, and fungi. Common pots are often used for sheltering and shading newly transplanted articles with the greatest benefit.

SHADOWS ON THE WALL.—A variety of shadows of different objects may be thrown upon the wall for the amusement of children, by a dexterous management of the hands and fingers. *Fig.* 1 is intended to represent a fox. The operator should

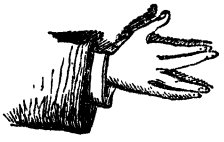


Fig. 1.

bark like a fox, while the fingers work to represent the action of the animal's mouth. *Fig.* 2 represents a rabbit, and the resemblance may be made all the more vivid by

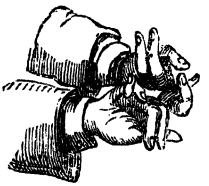


Fig. 2.

moving the fingers with an action similar to that used by rabbits in running. *Fig.* 3 is designed to show a bird feeding. The

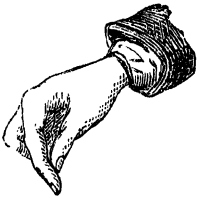


Fig. 3.

space between the first and second fingers is for the eye, and the bird may be made to appear as if eating, by means of the left hand, with a nut or piece of biscuit in it.

SHALLOT, CULTURE OF.—Of this esculent there are two varieties, the common, which puts forth long, slender, dark-green leaves, and the *long keeping* with larger bulbs and of dwarfer growth, and keeping good for nearly two years. In propagating the shallot, each offset will increase in a similar manner as its parent, and may be planted out either in the months of October and November or early in the spring from February to the beginning of April. Autumn is the best season for planting if the soil be dry. If planted in beds, let them be three feet and a half wide, and three or four inches higher than the alleys, and the surface of the bed a little arched. Set out the rows nine inches apart from row to row, and plant the offsets singly with the hand upon the surface of the bed, six inches apart in the row, just pressing each bulb down firm in the soil; see occasionally that they are not cast out of their places by worms or other vermin; or each bulb may be covered with either a tittle old tan or coal ashes in little ridges, along the rows, an inch and a half or two inches deep. When the bulbs are well established and growing, the covering should be removed with the hand; no other culture is required, except earth stirring. Take them up for storing when full grown, towards the end of June or July, as soon as the leaves begin to decay, spread them out to dry on boards in some airy situation.

SHALLOT SAUCE.—Put a few chopped shallots into a little gravy, boiled clear, and nearly half as much vinegar; season with pepper and salt; boil for half an hour.

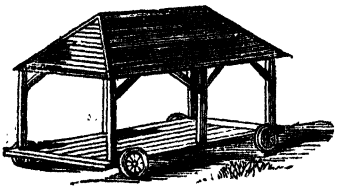
SHALLOT VINEGAR. — Split six or eight shallots; put them into a wide-mouthed quart bottle, and fill it up with vinegar. Stop it close, and in a month the vinegar will be fit for use.

SHAMPOOING.—A system of mechanical manipulation of the various parts of the body for the cure of disease. It is efficacious in rheumatic affections, sprains, &c., and is generally practised in connection with the bath by persons properly instructed in the art. Shampooing to a certain extent may be put in force by chafing the affected parts briskly and unremittingly, until the surface of the skin is in a complete glow.

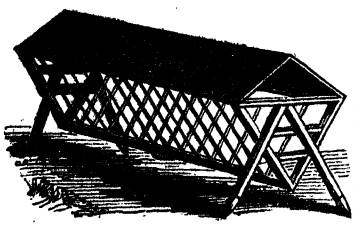
SHAVING.—This is a process which may be performed in a slovenly and bungling manner, or it may be done with great art and dexterity. In the first place, the hair should be softened by soaking it in water or a lather of soap, by which it is rendered much more soft and more readily cut. A strong lather of soap is usually applied; which, in the first place, acts as a softener from the water; next as a lubricating fluid it prevents the razor from sticking to the skin, or, as it were, stumbling over its asperities; and lastly, from its semi-solid consistence, it affords a support to the hair when opposed to the edge of the razor. The soap used should be of such a nature as to make a strong lather full of small bubbles, and it should be as free from all superfluous alkali as possible, to avoid irritating the skin. In applying it, it is better to wash the skin beforehand, then brush on the lather with the shaving brush, working it well into the skin, and let it remain to soften the hair for a few minutes, during which any other part of the toilet may be performed. Then apply another coat of lather, and at once proceed to take off the beard with the razor, warmed to the temperature of the skin, or rather above it. Most people find it better to stretch the skin by the other hand, but a very skilful shaver manages the act without this process. The razor should be drawn in a gently sawing manner across the beard not exactly at right angles to it, but nearly so; the art consisting in getting the two angles correctly, and in avoiding the chop instead of the proper sawing motion. By the two angles are meant that made by the surface of blade with the surface of the skin, and that between its edge and the axis of the hair. The angle with the skin should be as slight as possible, close contact causing adhesion, and thereby impeding the free play of the blade; but anything short of this is the proper mode of holding it. Practice here, however, is the grand point, and without it no one will ever succeed as a shaver. When the head is to be shaved it is better to remove the hair with the scissors to within half an inch, or even less, of the scalp, after which the razor may be used as for the beard, following the direction of the hair, and not meeting it.

SHEEP, MANAGEMENT OF.—The management of sheep varies much in different districts; according to the nature and extent of the farms on which they are kept, and the methods of farming that are adopted on them; but, under all circumstances, the constant endeavour of the sheep-owner is to preserve his flock in as good a condition as possible at all seasons. The best kind of food in general for sheep is nutritious grassy pasture growing on a dry and firm soil. In point of economy, the folding of sheep upon turnips during one half of the year, and on clover, tares, &c., during the other half, is preferable to the system of grazing at large, for by this management a due proportion of every arable farm is kept under green crops. The tendency which most sheep have to ramble, renders it necessary for them to be attended by a shepherd and his dog. The duties of a shepherd are very irksome, and require to be performed by a man of firm resolution, good temper, and discretion. To keep the flock within bounds may be troublesome, but much may be done in the way of preventive; and at all events the sheep must not be harassed and chased. Being naturally of a timid and gentle nature, the sheep ought to be treated with a degree of gentleness, and taught rather to regard their shepherd as a friendly protector than a tyrant. A dog should only be rarely and cautiously used. Much depends on the dog being of the proper breed, and well-trained to his duty. A good dog gives little tongue, he is seldom heard to bark: his great knack consists in getting speedily and gently round to the farther extremity of the flock, and then driving them slowly before him in the direction which his master has pointed out. A wave of the hand in a certain direction and the word "there," are usually enough as a sign. In those districts that are exposed to storms, it is important to afford shelter to the flocks. Where there are jutting or overhanging rocks or bushes, the sheep will crowd under their lee, and so far protect themselves from harm; but, when the country is bare, some protection will be necessary. For this purpose *sheep-folds* are employed. These are sometimes fixed, being constructed of any convenient sort of light material, so as to enclose a space in proportion to the number of sheep, which is kept constantly well littered with some dry substance, such as stubble, refuse straw, dry sand, &c., during the time the sheep are folded and foddered in them, in order that as much manure may be raised as possible. In some cases, also, for the more perfect protection of the sheep, they have sheds all round them, under which the sheep may lie without injury from rain, snow, or any sort of moisture. These usually are termed standing folds, and are either formed about the homestead or on some dry rather elevated situation on the farms, having the bottom well laid with some sort of material that is capable of keeping the sheep dry and clean. *Sheep-houses* are slight wooden buildings usually made low for the sake of warmth in the winter, being mostly a third part longer than they are wide; they should

also be sufficiently large for the number of sheep they are to contain. The side should



be lined with boards, and the bottom be laid in an even manner with stone or some other material, that the litter may be well impregnated. The sides exposed to the sun should be lined with moveable hurdles, that when it shines the whole may be laid open, to give due refreshment and afford the sheep an opportunity of feeding upon the pasture wherein they stand. They should be well and securely covered with some sort of proper material upon the tops. They are sometimes fixed in particular situations; but in other cases, which is the more improved method, so constructed as to be capable of being removed as they may be wanted. *Sheep-pens* are the divisions made by the small moveable gates or hurdles which are set up to keep sheep in some particular spot. They are usually formed on a dry place about the corners where different enclosures of the pasture meet, so as to be convenient for the whole. Pens are useful for examining and selecting the sheep, being divided so as to contain about three dozen sheep each, as by this means they are always at the command of the shepherd for any purposes he may have in view. The bottoms should be firm and dry, so that the sheep may not be soiled. In placing hurdles it is usual to fence off as much food as the flock will consume in one week, then a similar piece is fenced off at the end of the first, the sheep still having access to that which is partially consumed, another similar piece at the same end is again added, and so on until a slip of the field is eaten off; this slip should be set out in the direction of the longest side, or rather the line of the ploughing, so that when one slip is eaten off, the



plough may be immediately employed to turn in the manure and prevent its evaporating by heat, or being washed away by rains. During the time the sheep are consuming the root crops, more or less of other food should be supplied to them, the description and quantity being regulated by a variety of circumstances, which can only be determined by time, place, and season. Corn, oil-cake, linseed, hay, &c., &c., are occasionally given. Small frames called cages are used for supplying the hay, and the other food is given in troughs; a variety of ingenious racks and cages are made of wrought-iron, and well suited to the purpose. That represented in the engraving is a neat one of convenient form. The time for sheep-shearing will vary very much with the state of the animal and of the season. After a cold winter, and the animal having been neglected, the sheep will be ready at an early period, for the old coat will be loosened and easily removed. The operation should never be commenced until the old wool has separated from the skin, and a new coat of wool is springing up. The coldness or warmth of spring will also make a great difference. The usual time of shearing is about the middle of June, and the sheep-owner will very easily perceive when the fitting time has come. It is a bad practice to delay the shearing, for the old fleece will probably have separated, the fly will have longer time to do mischief, and the growth of the new fleece will have been stinted, or a portion of it will be cut away by the shears. A few days previous to shearing, the sheep should be washed. This is usually done in some convenient pool or running stream; the sheep are placed in a pen on the bank, and one by one plunged in. At least three persons should be in the water; the sheep is taken in hand by the first, and well sluiced aud plunged about; another then takes it and does the same; the next is most likely the shepherd, and he examines it carefully, and washes off any matter that may have been left by the other washers. The stream must be hurdled or netted across, above and below, to prevent the sheep escaping up and down stream. When the sheep are thus thoroughly washed, they must be placed in a dry, clean, pasture until shearing. The common method of catching the sheep in order to lay it on its back to be shorn, is by the hinder leg, drawing the animal backward with a crook to the adjacent shearing place; the hand holding the leg to be kept low; when at the place it is turned on its back, or the animal is moved bodily, or one hand placed on the neck and another behind, and in that manner walked along: the first or common mode is perhaps the best. Sheep fed on rich pastures, and fleshy, if handled roughly, are bruised, and the parts are liable to fatal mortifications. In performing the operation of shearing, the left side of the sheep is placed against the shearer's left leg, his left foot at the root of the sheep's tail, and his left knee at the sheep's left shoulder. The process commences with the shears at the crown of the sheep's head, with a straight cut along the loins, returning to the shoulder and working a circular shear around the off-side to the middle of the

belly; the off-hinder leg next; then the left hand holding the tail, a circular shear of the buttocks to the near *huck* of the sheep's hind leg; the two fore feet are next taken in the left hand, the sheep raised, and the shears set in at the breast, when the remaining part of the belly is sheared round to the near stifle; lastly, the operator kneeling down on his right knee, and the sheep's neck being laid over his left thigh, he shears along the remaining side. The sheep is subject to a great variety of diseases, the most formidable, and by far the most destructive of which, is the *rot*. Many causes have been assigned for this disease, but it is conjecture rather than certainty. The treatment of rot is seldom successful unless when it is commenced early, or when the attack is of a mild nature; a total change of food is the first indication, and of that to a dry wholesome kind; all the former are as good as the meals of wheat, barley, oats, peas, beans, &c. Carrots are suitable mixed with these: broom, burnet, elder, and melilot, have also been recommended; but it is necessary to observe, that there is seldom any ventral effusion but in the latter stages of the complaint. As long as the liver is not wholly disorganised, the cure may be attained by a simple removal of the cause; salt acts in this way, and thus salt mashes are good; salt may also be given in the water. In the more advanced stages of the disease, when the liver has become materially affected, it is prudent to rub the belly of each sheep with half a drachm of mercurial ointment every other day for a week; giving also the following every morning:—watery tincture of aloes, half an ounce; decoction of willow bark, four ounces; nitric acid, twenty-five drops. *Foot-rot* is a disease most prevalent in luxuriant meadows, and in all soft grassy lands saturated with moisture. The treatment of this disease essentially consists in paring away all loose and detached horn. All fungous granulations must either be cut away, or destroyed by the muriate of antimony, and the foot well washed with a solution of chloride of lime. The muriate of antimony must then be lightly applied over the whole of the denuded surface. This must be repeated daily until the whole of the foot is covered with new horn. The diseased sheep must not be permitted to join his companions until the cure is complete, for it is a very infectious disease, and may easily spread through the whole flock. *Scab* is an eruptive disease of an inflammatory nature, and a red appearance. It is a very troublesome disease, common in spring and summer. Sheep thus affected must be bound and shorn as closely as possible, and then well washed with warm water. Infusions of tobacco, hellebore, or arsenic, have all been used with good effect. In aggravated cases, an ointment composed of one part of mercurial ointment and seven of lime must be procured, and such a quantity of it rubbed in on every second day as the diseased parts seem to require. Another good receipt is a decoction of tobacco and spirit of turpentine, with a little soft soap and sulphur vivum. The only caution necessary to be given in the use of any of these remedies, is to take care that they be brought thoroughly in contact with every part of the skin of the affected sheep, lest any of the burrowed acari escape. All folds and sheds in which infected sheep have been confined, and all gates, posts, and other rubbing places, must undergo thorough purification. *Dysentery* is a disease commencing with violent discharges from the bowels of a green slimy mixture, which in progress of time becomes tinged with blood. *Diarrhœa* attacks young sheep, and is usually occasioned by too sudden a rush of grass in the spring, or from a sudden change from a scanty to an over-rich pasture. When such are the causes of diarrhœa, the mere change to a drier pasture will effect a cure. Dysentery attacks old sheep, and generally does not commence till June or July. The disease usually prevails in fouled pastures, and in seasons characterized by a peculiar state of the atmosphere, with regard to heat and moisture, a certain combination of which renders the disease fatal. In the treatment of this disease, bleeding is a proper remedy at an early stage; but if late, gentle purgatives alone must be used; Epsom salts or castor oil with twenty-five to thirty drops of laudanum will form a proper dose. *Trembling* is a disease caused by exposure to the cold and winds; a numbness and trembling seizing the body and limbs, owing to the heart being unable to send the circulation to the extremities. Copious bleeding in the first stage of the attack will often restore the balance of the circulation; but if the animal has been affected some time, it is often difficult to obtain a sufficient quantity of blood which has been thrown from the surface upon the heart, and other internal organs. In this state, the animal must be put into a tub of hot water at ninety-eight degrees, which will cause the blood to flow, and thus renew the action of the heart, and tend to restore the balance of the circulation. After a sufficient quantity of blood has been drawn, doses of Epsom salts dissolved in warm water, and followed with thin warm gruel, must be given till the bowels are freely opened. The prompt application of these remedies on the first appearance of the disease will in general be successful. *Inflammation of the brain* is ushered in by dulness and disinclination to move; but presently the eye brightens, and the animal attacks everything within its reach. Bleeding, physic, and low feeding will in most cases effect a cure. *Locked-jaw* is not an unfrequent disease among sheep. It commences with an involuntary spasmodic motion of the head, accompanied by grinding of the teeth, succeeded by rigidity of the jaws. The disease often runs its course in a little more than twelve hours. The principal cause is cold and wet. After an unusually cold night it is not uncommon to find several sheep lying lifeless Bleeding, aperient medicine, an opiate given an hour after the physic, and also a warm bath, are the most likely means of cure.

Ophthalmia is a very frequent disease among sheep. If any inflammation of the eye is detected, that organ should be frequently bathed with a weak solution of Gowland's lotion, to which a few drops of laudanum have been added. *Braxy* is an inflammatory disease to which those sheep in the highest condition are most subject. This disease may be excited by a variety of causes, such as drinking cold water in a heated state; any marked or sudden change of temperature; or feeding on soft damp grasses. The animal appears uneasy, often laying down and rising up, standing with its head down and its back raised, taking no food, but often drinking water; fever then ensues, when the pulse becomes strong and quick, respiration laborious and rapid, the skin hot and the wool clapped; the eyes are languid, watery, and half-closed; and the animal ceases to follow the flock. In this disease, the first and most effective remedy is prompt and copious bleeding from the jugular veins; this being effected, the constipation of the bowels must be removed; the best purgative for this purpose is Epsom salts, two ounces for a dose, dissolved in warm water, and followed by thin warm gruel. The best preventive of the disease in mountain sheep is skilful and attentive herding, by keeping the young sheep from fastening too much on succulent spots, and by causing them to graze regularly over every part of the pasture, being allowed, at the same time, perfect repose for rumination, undisturbed by the dog. Sheep are much infested in summer with flies. As a protection to the head against them, the simple cap or hood shown in the engraving, will be found effectual. It may be made of

stout linen, and fastened with four tapes tied crosswise under the chin, or of leather, and buckled at the same place. Leicester trips should not be without these caps in summer, especially when grazing near any woods; and as trips are addicted to butting each other, any skin that may be thereby abraded on the head will receive immediate and effectual protection from the air and the flies by the cap. Sheep are troubled with a small species of *bot*, which is supposed to deposit its eggs on the margin of the nostrils, and whenever it does so, the sheep lies down upon dusty bare spots, holding its head close to the ground. The warmth and humidity of the nostrils very soon bring the eggs to maturity, and the larvæ find no difficulty in making their way. *Blow-flies* are dangerous tormentors of sheep. When the animals are struck by them, they almost constantly hang their heads, sometimes turning them on one side as if in the act of listening; shake the tail with a quick jerking motion; run rapidly from one place to another, and in so doing stop suddenly and stamp with the fore-feet. A shepherd ought to be able to detect sheep that have been struck by the fly the moment he enters the field. Dogs may also be trained to single out the diseased animals, and run up to them, as if to intimate that they should be caught. The sheep should be carefully observed one by one when the flies are active, and being gathered in a convenient part of the field, the suspected ones should be caught with the crook, and examined, and every maggot removed by the hand. As maggots are not killed by being thrown on the ground, they should be collected in some vessel and destroyed, either by being crushed with some hard substance or by having boiling water poured upon them. Should the maggots have broken into the skin, rubbing the part with a strong solution of corrosive sublimate, or a strong decoction of tobacco-liquor and spirit of tar, will check a further attack on that part; and should the part affected be larger than is seen between the shreds of the fleece, the wool should be removed with the shears, and the corrosive sublimate applied upon, and around, and rubbed into the wound. Should the wound, on healing, indicate a dryness of the skin, in consequence of the application of the corrosive sublimate, an ointment of tar and lard will soften it, and keep off the flies. *Ked* or *tick* is another tormentor of sheep. It penetrates the skin, and buries the anterior part of its body in the flesh or fat of the sheep, where it continues to subsist and grow. Its tough skin renders it difficult to be killed by pressure; and when its body is bisected by the shears, the buried part instantly emerges, runs about quickly, and at length dies. The following remedy will be found effectual in ridding the affected animal of this pest:—Take two pounds of black sulphur, half a pound of hellebore; mix them together, and sprinkle the sheep from the head to the tail, with a dredging-box; or, take half a pound of powdered white arsenic, and four pounds, and a half of soft soap; beat these for a quarter of an hour, or until the arsenic is dissolved in five gallons of water. Add this to the water sufficient to dip fifty sheep.—See LAMBS, TO BREED AND REAR. Book:—*Gardener's and Farmer's Reason Why.*

SHEEP'S HEAD BROTH.—The sheep's head is hardly worth cooking in any other way than as broth. To make broth, get a fine head, and scald the wool off the same as the calf's head; then put it into a saucepan with a gallon of water, and let it boil gently for three hours; having put in with the head a carrot and turnip sliced, and an onion or two, the scum should be taken off five or six times, so as to get it perfectly free from grease; take out the

head, cut the meat from the bones into squares, and put them into the saucepan again with the liquor, leaving the turnips, carrots, and onions in also; season it with pepper and salt, add a little flour to thicken, and serve in basins with some toast cut into squares in the basins, and a little chopped parsley fresh. The scrag end of the neck, shank bones, or feet, will make broth as well as the head.

SHEEP'S PLUCK.—Boil the lights first, then chop them up, and put them to stew with a little broth or gravy, seasoning with pepper and salt. Thicken the gravy, and if not brown, add a little of the gravy from the frying-pan which, when the liver has been fried is made by adding some flour and water to the contents of the frying-pan. Fry the liver as for steaks or chops, then place the dish with the minced lights in the centre. The heart should be stuffed and roasted, to form a separate dish.

SHEEP'S TAILS.—When the sheep's tails have been stewed tender in stock, let them get cold; have some grated bread crumbs and strew them over the tails; then moisten them with the yolk of egg. Then again shake crumbs over them; fry, and serve with fried parsley. The tails may in in like manner be broiled, and served with some sauce piquante or sauce tartare.

SHEEP'S TONGUES.—Boil sheep's tongues in stock; when they are done enough, divide each in two and let them cool. Mix some fine herbs with butter, and season with pepper and spices; wrap up each piece after covering it with the seasoning in a buttered paper; broil or fry them, and serve them hot in the papers.

SHEEP'S TROTTERS.—Simmer six sheep's trotters, two blades of mace, a little cinnamon, lemon-peel, a few hartshorn shavings, and a little isinglass, in two quarts of water to one; when cold, take off the fat, and give nearly half a pint twice a day warming with it a little new milk,

SHEETS.—A portion of bedding of which a pair are ordinarily used; the top sheet is generally a coarser one than the bottom one, being made of linen and cotton respectively. Sheets should not be changed oftener than once a week, nor seldom less than once a fortnight.

SHELLS, TO CLEAN AND REPAIR.—When shells are perforated by sea-worms, or when any other accidental circumstance occurs to deform a choice specimen, it is desirable to use some means to improve it. For this purpose, a cement may be made of fine whiting, flour, and gum; the knobs or crevices to be filled up with this composition, and allowed to dry; it should always be a little above the surface, and cautiously scraped down with a knife, when ridges or strize can easily be imitated if necessary, with a file or graver. The parts thus mended may be coloured with ordinary water-colours, and then brushed; or if on a smooth shell, polished with the palm of the hand, and afterwards rubbed over with Florence oil, which should be well dried off with a piece of flannel. If this mode is judiciously managed, the blemish will not be discoverable. Many shells, when first obtained, are encrusted with extraneous matter; the best and safest means of removing this is, first to steep them in warm water, and then to scrape them with a knife or remove them with a graver. A little sand paper may also be used, but care must be taken not to scratch the shell. When as much of this crust has been removed as can be done with safety, recourse should be had to muriatic acid very much diluted with water; by applying this cautiously with a feather to the extraneous matter, it will soon become decomposed. Two minutes at a time is as long as it can be safely applied, but one moment's application often has the desired effect. The shell should be immersed in cold water, and the parts well scrubbed with a nail-brush and soap. Should the crust be not entirely removed, this process may be repeated, but the greatest care is to be used not to allow the acid to touch the inside, as it will instantly remove the fine enamelled surface. After the corrosion, the shell may be brushed over with emery or tripoli by way of polish. This may be done in cases where the polished insides happen to be touched with the corrosive fluid; but in all instances where the places cleared by the acid are of a white or chalky appearance, they should be washed over with Florence oil, and then rubbed hard with a piece of flannel and a nail brush. This mode gives the shell the appearance of nature, and at the same time stops the action of the acid, should any remain in the shell, and is of great use in preserving it from decay.

SHELLS, TO POLISH.—This may be done either by hand labour or by varnishing; in both cases, all the rough parts must be well rubbed down with emery and water. If they are to be polished by hand (which is the best and most lasting way), after they have received two or three courses of emery, of different degrees of fineness, they must be finished with buff-leather, dressed with rottenstone and oil.

SHERBET.—Sherbet, as it is generally prepared, is in fact weak spirits and water. First clarify the sugar, that is bring it to a clear syrup in the following ways: To two pounds of loaf sugar allow a pint of spring water, and the white and shell of one egg well beaten. Break up the sugar in large lumps, and set it over the fire in a preserving pan or brass skillet, with three-quarters of of the water and the egg. Stir till the sugar is dissolved and the syrup begins to get warm; but no longer; when it boils fast, pour in the remaining cold water, which will throw up the scum. When it again boils up, remove from the fire, and stand it aside to settle; then remove all scum, which place on a hair sieve or muslin strainer, but if the latter, do not squeeze it. What freely runs through is to be returned to the rest, which boils up once more, and again settle and skim. This quantity of sugar will be sufficient to sweeten from three to four gallons of sherbet, according as it is liked more or less sweet. To this, when

sold, may be added for flavouring one drachm or a drachm and a half of almond flavouring; bottle, cork close, and keep in a dry place. When the sherbet is to be made, to every quart of water allow six or eight moderate-sized sticks of rhubarb; if of the giant sort, three or four will be sufficient. Cut them up with a silver knife, boil them ten minutes, strain the boiling liquor on to the thin-shaved rind of a lemon, or if more convenient use pure essence of lemon; eight or ten drops will be sufficient. It may be added to the clarified sugar, of which four tablespoonfuls are to be stirred to the strained liquor. Let it stand five or six hours before using. The rhubarb may be sweetened and used for a tart.

SHERRY.—Wine-merchants distinguish several kinds of sherry, as pale and brown and there are various degrees of each. Sherry in general is of an amber colour, and when good it has a fine aromatic odour, with something of the agreeable bitterness of the peach kernel. When new it is harsh and fiery, and requires to be mellowed in the wood for four or five years. Sherry is much in favour in England, as being a light pleasant wine, and more suitable general drinking than any other. Amintellado sherry is highly esteemed, being, when genuine, entirely devoid of brandy, and equally free from acid.

SHERRY COBBLER.—Take some very fine and clean ice, break into small pieces, fill a tumbler to within an inch of the top, with it put a tablespoonful of plain syrup, capillaire, or any other flavour—some prefer strawberry—add the quarter of the zest of a lemon, and a few drops of the juice. Fill with sherry, stir it up, and let it stand for five or six minutes. Sip it gently through a straw.

SHINGLES.—A spreading inflammatory eruptive disease, generally attacking the trunk of the body, and preceded for two or three days by ordinary febrile symptoms, accompanied with a sense of scalding heat and tingling of the skin, and with sharp pains through the chest. The eruption consists of several red patches of an irregular form and at a little distance from each other, upon each of which there are numerous small elevations, which enlarge and become filled with a transparent fluid. These gradually increase in number, spreading in a straight line from the front to the spine, and, after the fourth day, break and form a dark-coloured scab, which on falling off leaves a series of small pits. Shingles are most prevalent in the spring, and generally attack young people between the ages of fifteen and twenty. The *treatment* is purely constitutional, and should embrace mild laxatives, and a cooling fever mixture, such as is prescribed below. No application is needed to the rash itself, as that can only be expelled by the use of the subjoined pills and mixture. Take of

Compound rhubarb pill, and compound colocynth pill, of each . .	½ drachm.

Mix, and divide into twelve pills, one to be taken twice a day. Take of

Liquor of acetate of ammonia and camphor mixture, of each . . .	2 ounces
Spirits of nitre and ipecacuanha wine, of each .	2 drachms
Water	1½ ounce

Mix. Take a tablespoonful every four or five hours. At the same time the diet should be low, and when much nausea attends the first stage, an emetic may be taken advantageously.

SHOES.—This article of wearing apparel as distinguished from boots, is best adapted for summer wear, or for those persons who have a great deal of walking. For the cleaning and preservation of shoes see BOOTS.

SHOOTING.—See SPORTING.

SHOP-TAKING, DIRECTIONS FOR.—Persons who are about to take a place of business, will find it to their interest, previously to doing so, to be guided by the following directions. *Small Capitalists.* In the case of a person who has no intimate knowledge of any particular trade, but having a very small capital is about to embark it in the exchange of commodities for cash, in order to obtain an honest livelihood thereby. It is clear that unless such a person starts with proper precaution and judgment, the capital will be expended without adequate results; rent and taxes will accumulate, the stock will be dead or become deteriorated, and loss and ruin must follow. For the least absorption acting upon a small capital will soon dry up its source; and it is needless to picture the trouble that will accrue, when the mainspring of a tradesman's success abides by him no more. *Larger Capitalists.* The case of the larger capitalist can scarcely be considered an exception to the same rule. For it is probable that the larger capitalist, upon commencing a business, would sink more of his funds in a larger stock—would incur liability to a heavier rent; and the attendant taxes, the wages of assistants and servants, would be greater; and, therefore, if the return come not speedily, unfortunate consequences must sooner or later ensue. *Localities.* Large or small capitalists, should upon entering on a shop-keeping speculation, consider well the nature of the locality in which they propose to carry on trade, the number of the population, and the habits and wants of the people living in the immediate neighbourhood, also the extent to which they are already supplied with that class of goods the new adventurer proposes to offer them. *New Neighbourhoods.* There is a tendency among small capitalists to embark their fortunes in new neighbourhoods, with the expectation of making an early connection. Low rents, also, serve as an attraction to these localities; it is however a pretty well ascertained fact, that the majority of shopkeepers in a new neighbourhood almost always fail. The shops are generally entered upon at the very earliest

moment that the state of the locality will permit—even while the streets are unpaved, and while the roads are as rough and uneven as country lanes. The consequence is, that as the few inhabitants of these localities have frequent communication with adjacent towns, they, as a matter of habit or choice, supply their chief wants therefrom; and the shopkeeper in the locality depends for support upon the accidental custom which forgetfulness, the state of the weather, or other fortuitous circumstances allow. Thus it occurs that while the new district is becoming peopled, the funds of the small shopkeeper are gradually eaten up, and failure overtakes him just at the time when a more cautious speculator steps in to profit by the connection already formed, and to take advantage of the now improved condition of the locality. It is, therefore, desirable for the small capitalist rather to run the risk of a more expensive rent, in a well-peopled district, than to resort to places where the demand is slow and uncertain; for the welfare of a small shopkeeper depends entirely upon the frequency with his limited stock is cleared out and replaced by fresh supplies. *Goodwill and Fixtures.* One plan of entering upon a shop, is to pay a certain amount for what is termed the goodwill of the business; that is to say, the new-comer is supposed to stand in the same position and have like prospects as the person relinquishing the shop, and has a connection with its attendant profits all ready made to his hands; the extent of the trade done regulating the value of the goodwill, and in many cases it is customary to give a large sum in this way, inasmuch as the profits derivable show a liberal percentage on the amount thus invested. In purchasing a business under these conditions, it is necessary to exercise the greatest caution and discretion in order that the in-comer may not be disappointed or deceived. When a person wishes to dispose of the goodwill of his business, he frequently exaggerates the amount of his takings, and will even go so far as to fabricate books and other plausible evidences of a flourishing trade; whilst under the fairest circumstances the out-goer naturally gives a high colour to matters, and reduces mere probabilities and contingencies to positive facts. When, therefore, a person is about to purchase the goodwill of a business, he should not content himself with an examination of the books, or the representations of the person who is about to dispose of the business, but he should judge for himself by watching the trade for a few days' (if possible unobserved), by prevailing upon friends to do the same, and by noticing the characteristics of the neighbourhood. It must also be observed that some connections appertain to the shop, and other connections to the shopkeeper; in the former case, the trade may be transferred from one person to another without diminishing; but in the latter case, from prejudice and predilection, and the exercise of personal like and dislike which it is impossible to control, the new-comer may find that the old customers drop off and trade sensibly diminishes. In all cases, a clause should be inserted in the deed of purchase, that the outgoing tenant shall not open a shop in the same line of business within a certain distance of his former premises, thereby preventing him from weaning away the patronage and custom from his successor. It would also be as well in such cases to retain a portion of the purchase-money, so as to meet any responsibility that may arise, as well as to exercise a wholesome restraint upon the outgoing tenant. With regard to fixtures, they are sometimes included in the goodwill, but it is always better to consider them as representing a distinct value, and to regard them as a separate item; if this be not done, it is probable that a great quantity of useless material may be purchased at an exorbitant price, to be afterwards sold at an enormous sacrifice, or to lie on the premises as worthless lumber. The fairer way is, for a respectable broker to be called in on either side, and any difference that may arise in their respective valuations to be mutually adjusted. Previously to this being done, however, the intending purchaser should claim the privilege of rejecting any articles of furniture or fittings which he may deem useless. This option is not always to be exercised; where the trade is a very good one and the profits large, the outgoing tenant takes up an independent position, and will listen to no accommodation; but in other cases, where moderate advantages exist, many privileges and immunities are to be secured by decision, firmness, and tact. *Nature of Articles sold.* When a person is about to invest a small capital as a shopkeeper, without having a precise knowledge of any particular branch of trade, and without having a predilection for one kind of business more than another, it becomes a question as to what class of goods he should stock his shop with, so as to ensure him the quickest return for his outlay. In taking this view of the case, it will be found that the *necessities* of life form the most reliable and readily saleable stock in trade. Thus people will become hungry and must have bread, which they have neither the time nor inclination to fetch from a distance; meat is also a daily want which must be supplied on the spot, and vegetables, unless easily obtainable, will in many cases not be purchased. Therefore, the baker, the butcher, the greengrocer, the beer-retailer, &c., are those who find their successes first established in new localities and recently-built shops. And not until these are doing well, should a shopkeeper venture on commencing business in such localities, with what may be termed the *superfluities* of life. *Manner and Address.* Success in business, especially with young beginners in a new neighbourhood, depends in a great measure upon the way in which the shopkeeper conducts himself towards his customers: a civil manner and obliging disposition are most essential under such conditions; they are certain to win their way, and to work a favourable impression

on behalf of the shopkeeper. On the other hand, a disobliging, pert, or sullen manner, will cause incalculable mischief, and if persisted in, must in nine cases out of ten result in failure. It is astonishing how much injury may be the consequence of a single word, look, or gesture, incautiously indulged in under the influence of irritation or impatience. Such circumstances, trifling as they may appear, will rankle for months or years in the bosom of the offended customer, and will cause him to deal at another shop at considerable personal inconvenience, rather than be subjected to what he considers indifference or insult. Attention to business is another material ingredient of success. Persons have naturally greater confidence in a shop which is conducted under the owner's immediate supervision, than in one which is left entirely in the hands of subordinates. Not only is civility ensured, but the chances are that the purchaser will more readily obtain the article desired, and at better value for his money. *Method, Regularity, Punctuality.* The observance of these three qualities is most important; and whether the business be large or small, they should never be lost sight of. The keeping of books, accounts, &c., should be carried out on some settled and definite plan, no matter how primitive it may be, so that the bookkeeper may find it easy of reference, and that every transaction appears to speak for itself in a clear and straightforward manner. Method should also be observed in the keeping of stock, and chiefly establishing some system by which any article that is getting low may be ordered at once, so that a customer may not be told that they are "out of it," and thus drive that customer to another shop, to which he may possibly transfer the whole of his future patronage. Regularity chiefly consists in doing one thing at a time, and never beginning a second until the first is despatched. Much of the confusion, and many of the mistakes in business undoubtedly arise from the foolish custom of attempting to do several things at once, the consequence being that not one is properly performed, and an immense loss of time and labour is entailed in rectifying the errors resulting from this loose method of conducting business. That which appears to be the longest and most tedious process in the transaction of business, is in the majority of cases the most expeditious, and it is astonishing how much real labour may be performed in the course of the day when done in this orderly, quiet, and methodical manner. The advantages of punctuality and the evils attending the non-observance of it are patent to everybody. Nothing is more irritating to the man of business than to have his arrangements thrown out, and his plans disorganized, owing to the disregard of punctuality on the part of some other person; and no character can be more fatal to a tradesman than that of his being sure *not* to keep his appointment when he has made one. On the other hand, a person who observes his engagements to the letter, and who can be relied upon with certainty is always held in high estimation and favourable regard. The fact makes itself felt that a man who is thus particular in keeping his word in slight matters, will be equally scrupulous in weightier affairs; and that, in short, he is actuated by a defined intention and a moral purpose to regard the convenience, the wishes, the feelings of others as well as his own. *Connection.* In provincial towns, and under sundry peculiar circumstances, "connection" has a great deal to do with the success of the shopkeeper. Thus, for instance, if a shopkeeper proposed to set up a rivalry against an old-established and respectable tradesman, he would act wisely to pause before he made the attempt. But if he felt confident that his own connection was sufficient to support him, then the objection to the venture might be overruled. Connections, however, must not be too implicitly relied upon. They are as a rule more exacting and less easily satisfied than the general public, and are open to the following special drawbacks:—Your "connection," of course, expects you to give credit. Your "connection" is surprised that you should be so importunate about your little account. Your "connection" reminds you of certain obligations that you are under. Your "connection" finds that your goods are neither better nor cheaper than those of any other tradesman. Your "connection" after a little while finds positive disparagement against your goods, comparing them with articles bought at another establishment by a friend. Your "connection" consequently goes over to that other establishment, too often forgetting to settle your little account, and when you venture to remonstrate, you lose your "connection." Connection, as applied to trade, is a term capable of being subdivided: thus there is the *Religious Connection.* These are naturally formed in small towns and villages where the instincts and habits of a man are known to his neighbours. But however much this may prevail, and whatever seeming advantage there may be attending it, a man should never seem to make a show of religion the means of worldly advancement; if he does so, he will assuredly fail. The truth will out at some time or the other, and he will be regarded as a black sheep; and having built up his expectations and regulated his expenditure with certain views of support, the moment that support is withdrawn down the whole superstructure will come. As with religion so with politics. An ephemeral political connection may be gained by the shopkeeper being guilty of some piece of time-serving, or disreputable traffic of opinion; but as a rule, he who discharges his duty as a good citizen consistently and conscientiously, will gain more permanent and lasting support, and will, at one and the same time, augment the profits of his business and enlarge the circle of his friends. *Treatment of Servants.* A shopkeeper may do himself a great deal of harm or of good by the manner in which he treats his servants. The true way is, by kind treat-

ment and adequate remuneration to endeavour to make those employed in your service feel conscious that your success is their own, and your advancement is theirs. By so doing, an identity of interests will be established, which of itself possesess the elements of success; besides, taking an every-day view of the matter, it must be understood that certain customers have a wish to be attended on by certain shop-assistants, and that when these leave one service and enter another they will follow them there.—Book: *The Shopkeeper's Guide*, 1s. 6d.

SHORT BISCUITS.—Half a pound of butter, half a pound of sifted sugar, one egg, a little ginger, and a few caraway-seeds, with as much flour as will make it into a paste; roll it out, and cut it into biscuits.

SHORT-BREAD.—Rub one pound of butter, and twelve ounces of finely-powdered loaf sugar into two pounds of flour with the hand, make it into a stiff paste with four eggs; roll out to double the thickness of a pennypiece, cut it into round or square cakes, pinch the edges, stick slices of candied-peel and some caraway comfits on the top, and bake them on iron plates in a warm oven.

SHORT-CAKES.—Rub half a pound of butter down into a pound of flour, and mix one egg, a quarter of a pound of sifted sugar, and as much milk as will make a paste. Roll this out thin, and cut out the cakes with any fancy shapes, or the top of a wine-glass; place on tin plates, strew over with sugar, or cover the top of each with isinglass, and bake for ten minutes.

SHOT-BELT.—When the shoulder shot-belt proves oppressive, it will be found convenient, and less burdensome, to have a

belt affixed to the waist as here represented, with numerous partitions arranged along it. Into each of these a charge may be thrust,

which being double, and the belt affording six or seven compartments, will afford stowage for nearly thirty charges.

SHREWSBURY CAKES.—Beat to a cream a pound of fresh butter; add the same quantity of well-dried flour, a pound of sugar, finely powdered, an ounce and a half of caraway seeds, and six eggs well-beaten in a little orange-flower water; add, last of all, half a wineglassful of ratafia, and mix the whole thoroughly together; make it into a paste, roll it to the thickness of a five-shilling piece, cut it into shapes, and bake on floured tins.

☞ Butter, 1lb.; flour, 1lb.; sugar, 1lb.; caraway seeds, 1½oz.; eggs, 6; orange-flower water, to flavour; ratafia, ½ wineglassful.

SHRIMP SAUCE.—Pick half a pint of shrimps, and mix them in a saucepan with as much melted butter (brought to the thickness of cream) as you may require, and a teaspoonful of essence of anchovies. For a family sauce the heads and skins should be boiled up in a separate saucepan, and the liquor which is strained from them mixed with the butter; but as it is apt to give too strong a flavour, if you wish to make a delicate sauce you had better not use it.

SHRIMPS, FRESH WATER.—Wherever these are found the weeds abound with them. Take plenty of this weed, and place it, shrimps and all, in a large wide-mouthed earthen jar. Just cover the weed with water, and tie a piece of cheese-cloth or something which will afford free ventilation over the top, and there is no doubt but they will travel a considerable distance. Of course the changing of the water a few times during the journey would promote the certainty of their arriving in good condition, as forty-eight hours is rather a long journey. Supposing them to arrive alive and healthy, it is better to keep them in some enclosed place for some time, where they could have fresh water, and keep it well supplied with fresh weed, until the stock had materially increased, so as to ensure a fair chance of their being finally introduced to the river in sufficient numbers to do well and increase. Some perforated zinc plates or fine wire-sieving let into the sides of a well-seasoned trough or box, and defended on the outside by something coarser, to prevent the choking up of the apertures, which, it is needless to say, must be kept clean and open, will answer for this purpose, if sunk in a tolerably clear and rapid part of the stream; and the stock may be kept up in the box to feed the river with.

SHRIMPS, PRESERVATION OF.—If these are kept from one meal to another, before putting them on the table they should be washed in a slightly warm water, which will restore their original firmness, and render them easy to separate from the shells. When they are kept until at all tainted, they are very unwholesome, and should be thrown away.

SHRIMP PIE.—Pick a quart of shrimps, if they are salt, season them with only mace

and a clove or two. Mince two or three anchovies, mix these with spice, and then season the shrimps. Put some butter at the bottom of the dish, and cover the shrimps with a glass of sharp white wine. The paste must be light and thin. They do not take long baking.

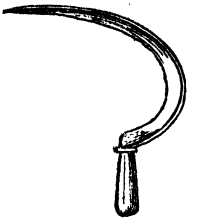
SHUTTERS. — Appendages of windows employed for the purposes of security, and for excluding light. The wooden shutter ordinarily used having been found extremely insecure, a new kind made of iron lath has been recently introduced. These are also raised and lowered upon a simple and convenient plan, and have the advantage of being perfectly impenetrable.

SIBERIAN CRABS.—Make a rich syrup with sugar, the juice and rinds of lemons, cloves, and a little brandy. A little red currant jelly improves the colour. When it boils, throw in the fruit, which must be quite ripe. Let it boil for a few minutes, and take it up, and let it cool. Boil again, and continue doing so until the crabs become quite soft. They must not be left long on the fire, or else the skins would break.

SICK CHAMBER, MANAGEMENT OF.— The room in which a sick person is confined should be of considerable size, lofty, and furnished with a fire-place. Well-ventilated rooms are in all cases of illness indispensable; yet ventilation should be so regulated that no current of air should pass immediately over the patient's bed or chair. It may always be supposed that draughts of air prevail in the direction of the fire-place, from any window or door; and hence, in such situations, the invalid should not be permitted either to lie or sit. In cases of fever especially, the ventilation of the sick-chamber demands attention, and will most materially expedite convalescence. As a general rule, the temperature of the sick-room should not be below sixty degrees of Fahrenheit. The kind of bedding of invalids is a subject of importance to their comfort. In some cases a well-stuffed feather bed is to be preferred to mattresses, which for fever or paralytic patients are not sufficiently yielding. By the constant pressure of any part of the body on the unyielding surface, the part becomes inflamed and a sore ensues. A feather-bed may, however, be too soft, and become easily disarranged; the patient may be too ill to admit of the bed being made daily, and in such cases it becomes lumpy and extremely irritating. The spring mattresses are the most unobjectionable of any; they give way easily to pressure, and spring up by means of their elastic stuffings, as soon as the pressure is removed. They require no daily making, and afford the patient much assistance from their elasticity, in turning from one side to the other. The water, or Arnott bed, is also another valuable contrivance for mitigating the sufferings and weariness of the victims to lingering, yet fatal diseases. In using it, the head and shoulders of the patient must be supported upon some fixed substance, otherwise, being heavier than the limb, the inclination of the body will be the reverse of that which is natural. On whatever bed a patient lies, it should be large enough to admit of his being removed from one side to the other, to admit of changes in the bed-linen, as well as to afford relief in posture to the sufferer; or if the bed be small, a second bed in the room answers the same ends, as well as admitting of daily exposure, for a short period, of the bed or bedding to the air of the room, when it may be again shaken well, and made and prepared for the invalid, to whom, when again carried, it will afford considerable relief and refreshment. One important thing in the management of a sick chamber is to keep it as still as possible; the least noise jars upon the acute sensibilities of the sufferer, and these disturbances, if frequently repeated, are liable to produce the worst consequences. To ensure perfect stillness, any defect of the furniture, such as the creaking of chairs, the rattling of boards, the shaking of windows, and the slamming of doors, should be at once remedied. The same precautions should be exercised when performing any little office, as poking the fire, filling and emptying vessels, moving articles from one place to another, all of which can with care be performed so as to be almost inaudible to the sick person. The furniture, hangings, and paper of a sick-chamber should be of a cheerful cast without being too glaring and conspicuous. The bed curtains especially, which meet the patient's eye the most, should be of a dark green colour, a shade most grateful to the sight. Every article of furniture that is likely to afford comfort and relief to the sufferer, should when possible be obtained. These need not in every case be purchased, but may be hired at a comparatively trifling cost. Much good may be effected by placing before a patient some pleasing and grateful object, thus a bouquet of fresh flowers, placed upon the table in the invalid's view is calculated to exercise a beneficial effect upon his susceptible and sensitive system. The sight of old and dear friends is also calculated to aid recovery, and if these visits can be managed impromptu as it were, without any parade or bustle, so much the better. When the patient is capable of sitting up, a seat contrived for him near the window, so that he may look out without fatiguing himself, will be very acceptable to him; and when he gets better still, and is just able to move about, the arm of a friend on either side to assist his steps across the chamber will be of material assistance and comfort to him. In a word, nothing that humanity can dictate, or experience suggest, should be disregarded in the management of the sick chamber; and no time or labour can be ill-bestowed in bringing to bear the numerous kind offices which the sick demand at our hands, and which it may be our lot one day to require. — See INVALID FURNITURE, NURSE FOR THE SICK, &c.

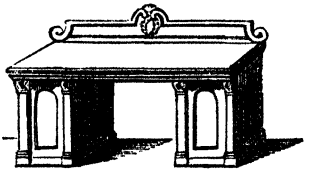
SICKLE. — A well-known agricultural implement, the varieties of which are confined to two very distinct forms, the toothed and the smooth-edged sickles. In the

formation of the sickle, the curvature of the blade is a point of great importance; for there is a certain curvature that will give to the muscles of the right arm the least possible cause for exertion, while there are other curves that if given to the blade of the sickle, would cause the reaper to expend a great amount of unnecessary exertion in the arm, and a consequent unnecessary fatigue would follow.—See SCYTHE.



SIDE, PAIN IN, REMEDY FOR.—At bed-time take a fresh cabbage-leaf, hold it near the fire till quite warm, and then apply it to the affected part, binding it tight with a cloth round the body; let it remain for twelve hours or more, when it will generally be found to have removed the pain. If not entirely removed, it will be well to repeat the application of a fresh leaf, allowing it to remain on the same time as the first.

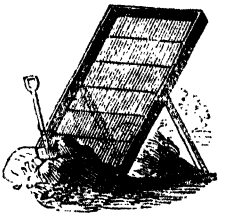
SIDEBOARD.—One of the most useful articles of furniture in a household, and particularly so when the room in which it is placed is destitute of a cupboard. The size of the sideboard should be proportioned to the dimensions of the room, otherwise it will by its extraordinary capacity dwarf the other articles of furniture by which it is surrounded. Sideboards are generally made of mahogany. The most convenient kind is that seen in the annexed figure, called a pedestal sideboard, having on each side



doors enclosing shelves or drawers for holding plate, liquors, and other articles; at the bottom may be a deep drawer with partitions. A wine-cooler may also be placed in the centre vacancy.

SIEVE.—A utensil employed in the various operations of the kitchen and the laboratory. They are variously made of wire-cloth, hair-cloth, or of open lawn or muslin. Pierced zinc is also used, and on emergencies, parchment strained over a frame and pierced with numerous holes with a hot iron answers tolerably well. In using sieves, the operation will be expedited by stirring the contents from time to time, so as to prevent the outlets from becoming clogged. When they are done with, they should be thoroughly washed and hung up to drain and dry; it will be also better to have two or three sieves in use, to prevent one mixture being impregnated with the disagreeable ingredients of a preceding one.

SIFTER.—A contrivance used for agricultural and horticultural purposes for fining or sorting earths, gravel, tanner's bark, &c. The sifter shown in the accompanying engraving consists of a wire frame with a jointed fulcrum, by which it can be placed



sloping to any required degree; the soil or other material requires to be dry, well broken, and then thrown loosely on the upper part of the screen. In gravel-sifters the wires are placed wider, according to the use to which the gravel is to be applied. In general, a quarter of an inch is the width for earth, and half an inch for garden gravel; but for gravel used in the highways, one inch is not too wide for excluding small stuff, nor two inches too narrow for admitting the small stones to be used. A mould-sifter, used for sifting mould for small pots, is a piece of cloth of wire firmly attached to a circular rim, the holes in which need not be above a quarter of an inch in diameter. Sifters are also required in gardening for cleaning seeds; and wooden sifters of different kinds, for airing or keeping fruit.

SIGHT, PRESERVATION OF.—Take care of your eyes. Most people may preserve good sight through their whole lives by taking care of it; and yet most people forfeit it by neglecting it. Among the rules for keeping the eyes sound and healthy, the following are some of the most important:—Avoid glaring lights; avoid abrupt, violent transitions from light to darkness, and from heat to cold; keep the eyes clean; wash them with lukewarm water. According to the old English proverb, "fasting spittle is good for sore eyes." Most animals heal their wounds by licking them with their tongues, for the saliva has great healing virtues; therefore, if you suffer from irritation of the eyes, moisten your finger with your saliva and gently apply it to the eyes. But do not rub or press your eyes at all roughly, unless you wish to injure them. Never allow dust or hairs to remain in your eyes; but if they get in, fill the eyes with lukewarm water, so as to set the encumbrance afloat, and gently draw your fingers across the eyes in the direction of the nose until the offending substances slip out at the corners. Do not put poultices over your eyes, lest, in attempting thus to draw out

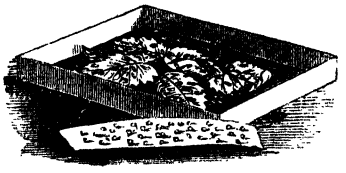
the inflammatory disease, you draw out eyes and all. In order to preserve your eyesight preserve your general health by air, exercise and temperance, and medicine when you require it. Accustom your eyes to moderate and varied exercise, but never strain them by too long persevering over a work which they are weary of. Weak eyes are more benefited by a green shade, or blue or green spectacles, or railway goggler (made of wire) and gauze, than by thick bandages. Avoid reading small print after dinner, especially if your dinner has been of the epicurean order, and do not read much by candle light, nor sew black clothes. As candles are apt to flare up and produce an undulating glare, use a ground glass or oiled paper lamp instead. Avoid exposing your eyes to an artificial draught of air. Do not roast your eyes by sitting too much before a bright fire. If your usual position exposes one eye more than another to a glare of light, protect the exposed eye by a green shade. Use double eye-glasses when you require them rather than single eye-glasses or even spectacles, and take care that their focus precisely suits your own. Choose apartments that are well and evenly lighted. Accustom your eyes to the natural influence of the atmosphere and solar light; those who live in dark and close rooms will produce a morbid weakness of the optic nerve. Beware of strong reflected lights, especially those from white walls, chalks, rock, for white hardly absorbs any ray, whereas the other colours absorb many. Accustom your eyes to view varied objects at near and remote distances, as by this means you will preserve their free play and flexibility; whereas if you direct your sight too exclusively to near objects, you will become near-sighted; let the colour papers of your rooms be rather mild and soft than brilliant or garish. View objects in oblique lights so as avoid their direct reflections, which often dazzle the eyes. The best colour for spectacles is pale blue. Do not let glaring lights fall on the paper while you read or write. Keep the eyes cool by temperance, and the feet warm by exercise. When the eyes are simply weak, a tonic wash, such as alum-water or green tea and brandy-water, is beneficial. When irritable, use weak goulard water, and produce defluxion from the nose by taking snuff.

SILK, TO CLEAN.—Grate two or three large potatoes, add to them a pint of cold water, let them stand a short time, and pour off the liquid clear; or strain it through a sieve, when it will be fit for use. Lay the silk on a flat surface, and apply the liquid with a clean sponge till the dirt is well separated. Dip each piece in a pail of clean water, and hang up to dry without wringing. Iron whilst damp, on the wrong side. Should the silk be of more than one colour, it is desirable to wet a small piece first, lest the dress should be spoiled by moisture causing the colours to run; but for self-coloured silks, the direction is an excellent one, and satinettes, even of light colours if not greased or stained, make up again nearly equal to new.

SILK, TO REMOVE GREASE FROM.—Upon a deal table lay a piece of woollen cloth or baize, upon which lay smoothly the part stained, with the right side downwards. Having spread a piece of brown paper on the top, apply a flat-iron just hot enough to scorch the paper. About five or eight seconds is usually sufficient. Then rub the stained part briskly with a piece of cap paper.

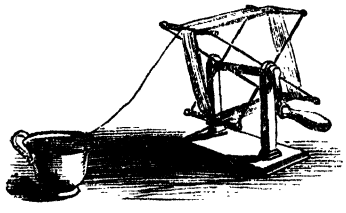
SILK, USES OF.—Silk is an agreeable and healthy material. Used in dress, it retains the electricity of our bodies; in the drapery of our rooms and furniture covers, it reflects the sunbeams, giving them a quicker brilliancy, and it heightens colours with a charming light. It possesses a cheerfulness of which the dull surfaces of wool and linen are destitute. It promotes cleanliness, and will not readily imbibe dirt. Its continually growing use by man, accordingly, is beneficial in many ways. Grace and beauty even owe something to silk.

SILK-WORMS, TO REAR.—The eggs of the silkworm are generally brought on slips of paper just as they were laid by the moth. They should be obtained about the latter end of April, and placed in trays made of stout cartridge or thin pasteboard of the form seen in the engraving, and this should



be covered over with thin gauze. The trays should have some young lettuce-leaves placed at the bottom, and may then be placed in a window facing the south, where they are fully exposed to the rays of the sun; there they should remain undisturbed till they begin to hatch, and as the young worms appear they should be removed into other trays, and fed with mulberry-leaves. The temperature should be kept at from sixty-six to seventy degrees, and the room should be well ventilated, and should be kept equally free from damp or too much dryness. The silkworms should be kept scrupulously clean, dead leaves and refuse cleared carefully away, and in lifting them from one tray to another they should not be touched by the fingers, but moved by threads of cotton passed under their bodies, or with a camel-hair pencil. The caterpillar has four moultings, which may be all accomplished in the period of four days each, if the heat of the room be increased from ninety-five to one hundred degrees. When the heat is regulated to a lower standard, the first moulting takes place on the fourth or fifth day after hatching, the second in four days more, the third in five or six days more, and the last in about eight days. Ten days more are

required after this moulting, so that in about thirty-two days after hatching the caterpillar has attained its full size. During all these changes the worm requires the nicest attention. At the end of the time mentioned above, the worm changes to a clear pink or flesh colour, and appears semi-transparent; they refuse their food, become restless, and prepare to spin or form their cocoon. At this time care should be taken to raise the sides of the trays in which they are kept, or the worms will climb over and so be lost or destroyed. What is called the cocoon nest should now be prepared, by forming a piece of writing-paper into the shape of a folded sugar paper. A number of these should be prepared, and affixed to the wall or in a warm aspect with their pointed ends downwards, and into each one a single worm should be placed when it quits its food and seems ready to spin; it will then dispose its web in such a manner as to leave a cavity within. Inside of this cocoon, or ball of silk, the worm passes into its chrysalis state. It remains thus for about fifteen days, and then comes forth in the form of a moth. In escaping from the cocoon, it will, if unchecked, destroy a portion of the silk. To prevent this, the silk must be wound off previous to the egress of the moth. When by taking up the cocoon it is found that the caterpillar has passed into the aurelia, or grub state, which may easily be known by shaking it, as then the aurelia, from its harder texture and being shrunken in size, will be heard to rattle—this is the time to wind off the silk. The cocoon is placed in a cup of warm water after the loose outward silk has been removed, and then an end



being taken, the whole continuous filament may be wound off on a piece of card. When the silk is wound off, the aurelia appears, and being put in a case by itself, it remains motionless for about twenty days, when suddenly it presents itself in the appearance of a pale yellow moth, with wings which seem scarcely adapted for flight. It crawls heavily about the place where it has been hatched, having a slight tremor in its wings, and eats nothing: the male speedily dies; the females hover about awhile, and lay their eggs on the slips of paper presented to them for that purpose, and then perish. The food upon which silk-worms thrive the best, and from which the best silk is produced, will be found to be the leaves of the mulberry tree. The best mulberry leaf of any species is that which is called the double leaf; it is small, not very succulent, of a dark green, shining, and contains little water, which may be easily ascertained in drying some of them. The greatest care should be taken that the leaf is not in a state of heat or fermentation, whether just picked or when kept, as in this state the nutritive substance of the leaf is deteriorated. The leaves ought not to remain long compressed in the sacks or baskets in which they are gathered. The leaves may easily be kept two or three days in cool, moist, sheltered places, such as cellars and ground-floor rooms, care being taken not to heap them up too much, and now and then turning them to air them. Silk-worms are subject to various diseases; one of these is the *scarlet*, so called from the more or less dark red colour which the skin of the silk-worm assumes when issuing, or immediately after issuing from the egg. The worms attacked by this disorder appear cramped, stupefied, and suffocated; their rings dry up, and the red colour becomes ashy and white. This disorder does not always kill the worm in the first moulting, nor in the second; and sometimes they do not die until after the fourth moulting. When they live so long, it becomes more difficult to distinguish, as the red colour assumes a less dark and remarkable hue, and they cannot so easily be separated from those that are healthy, and might be mistaken by the most practised eye. When this disease is detected, the safest plan is to remove the infected worms into a separate receptacle, and there tend them until they recover their natural state. Another disease is known as the *yellow*. When thus attacked, the head of the worm swells; the skin is drawn tight over the rings, and shines as if varnished; the rings swell; and the worm voids a yellow liquid, which may be seen on the leaves. The moment any worms appear to be attacked by this disease, they should be carefully examined, and where any doubt exists, they should be removed into separate places, and carefully tended until restored. As to those that are positively attacked by this disease, there is no expedient but throwing them away, or safer still, burying them, as that disease is known as the *glow*. Worms attacked by this disorder feed like the others, and grow in length exactly in the same proportion, but not in thickness. The disease is perceptible by the colour of the worm, which first appears of a clear red, and then changes to dirty white. If attentively observed, it will be seen to drop a sort of viscous humour from the silk-drawing tubes or spinners; and its body will also present a transparent or glowy appearance. The moment these are discovered, they must be removed.

SILVER.—A metal which, not being oxydized by the ordinary means, is perfectly harmless when made into vessels for preparing food. Also, not being acted on by the acetic acid, as iron is, it is suitable for cutting fruit, &c.

SILVER, TO CLEAN.—Silver should be washed with a sponge and warm soapsuds every day after using, and wiped dry with a clean soft towel.

SILVER, TO REMOVE INK STAINS FROM.—The tops and other portions of silver inkstands frequently become deeply discoloured with ink, which is difficult to remove by ordinary means. It may, however be completely eradicated by making a little chloride of lime into a paste with water, and rubbing it upon the stains. Chloride of lime has been mis-named "The General Bleacher," but it is a foul enemy to all metallic substances.

SIMNEL, TO MAKE.—One pound of flour, quarter of a pound of butter, quarter of a pound of lump sugar, one pound of currants, two ounces of candied lemon, a quarter of an ounce of carbonate of soda mixed with an *egg*, and a little milk; to be put in a tin mould and baked till enough.

SINK.—A provision made for the scullery and wash-house, and any other department of the household where needed. They are best hollowed out of a single piece of stone as in *fig.* 1, but are likewise made of wood lined with lead or zinc. It should be

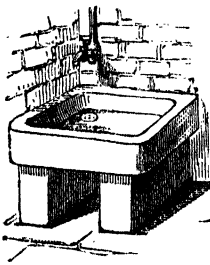


Fig. 1.

Fig. 2.

placed if possible in a good light, should be supplied by a tap with cold water, and if practicable with warm water also. The waste pipe should pass below into a drain, and there should be a bell stench-trap to prevent any unpleasant smell arising. The butler's pantry should likewise contain a sink placed in the corner, as in *fig.* 2; also one in the servants' hall, and if this is well furnished with a stop-cock and plug, it might serve occasionally for washing hands, &c. Sinks frequently become stopped up from neglect, and carelessly throwing down articles which cannot find a free passage down the pipe; a little caution may prevent this inconvenience and attendant expense. Sinks should be cleansed from time to time by setting the tap running for a few minutes, and so washing them out.

SIPPET PUDDING.—Cut a small loaf into extremely thin slices, and place a layer of them at the bottom of a dish, then a layer of marrow or beef suet, a layer of currants, and a layer of bread again, and so on till the dish is filled; mix four eggs well beaten with a quart of cream, a nutmeg, a quarter of a pound of sugar, and pour over it; set it in an oven, and bake it for half an hour.

SITUATION, TO OBTAIN.—The term situation is applied more especially to that class of employment given in offices, warehouses, shops, &c; and it is generally expected that a person applying to fill up a vacancy has been accustomed to that particular branch of employment. The best way, therefore, of obtaining a situation is, to apply at those establishments in the same line of commerce as the applicant has been accustomed to.—See ADVERTISEMENT, APPOINTMENT, EMPLOYMENT, &c.

SIZE.—A kind of soft glue made from skins, and which may be produced by boiling rabbit-skins, parchment, old gloves, &c., for some hours, then dissolving, straining, and again boiling to a jelly-like consistence. To make size for artists, dissolve over the fire in a pint of water, four ounces of Flanders glue, and four ounces of white soap; then add two ounces of powdered alum; stir the whole and leave it to cool.

SKATE BOILED.—The fish having been previously skinned, the flesh cut into slips about an an inch wide, and then immersed in salt and water for four or five hours, the pieces should be rolled, tied with a piece of string and boiled for about twenty minutes. The thinner parts not requiring so long, should not be put in until a short time after the water boils. Anchovy and butter sauce, or crab sauce should be served with it.

SKATE FRIED.—Prepare the fish as directed for boiled skate. Dip well in egg and bread crumbs, and fry carefully in plenty of dripping. Garnish with fried parsley, and serve with crab sauce, anchovy and butter sauce, soy or ketchup.

SKATING.—In this exercise, beginners should make their first attempt upon ice that is neither too smooth nor too rough. It is important in the first instance, to see that the skates are firmly fixed on, which may be ascertained by a few movements of the feet prior to commencing skating. For putting on the skates, the young beginner should kneel down and fasten the skates on one foot first, as in *fig.* 1. There are different kinds of skates, the two chief being the fluted and the plain. The fluted are the best for young beginners who can scarcely keep their footing, and who can travel over only a small surface of ice, because the groove or flute of the skate bites into the ice and obtains a certain hold, just as the point of a knife does in soft wood. But for rapid skaters the fluted skates are not suitable, as the grooves are apt to become filled with loose ice, and thus throw the wearer. In starting, strike out slowly with the right foot, bending a little forward, and learning upon the inner edge of the skate.

Fig. 1.

When the effect of the first step is lessening, strike out with the other foot, throwing your weight upon it gently, and again bearing on the inner edge of the skate. *Fig.* 2 shows the position to be taken at starting, and *fig.* 3 indicates the position into which the body is to be thrown when

Fig. 2.

Fig 3.

the skater desires to stop. The toes are to be raised, the body inclined gradually forward, and the arms employed to steady the body. On large pieces of ice which are much frequented, the beginner will have no difficulty in finding a person to instruct him, but where this cannot be obtained the

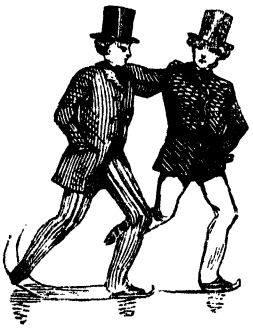


Fig. 4.

aid of a skilful friend, as in *fig.* 4, will be of much service. The novice in skating should content himself with plain or straight skating, before he attempts to form figures, and he should learn to use both sides of his skates. The hands are essential to aid the movements of the body, and impart grace to them. The right hand should be held towards the head in skating on the outside edge of the left skate, and the left hand should be raised when skating on the right outside edge, as represented in *fig.* 5 and *fig.* 6. The

Fig. 5.

Fig. 6.

most difficult movement is that of advancing by crossing the feet alternately, and throwing the body in a leaning position to the opposite side. This is one of the most graceful and agreeable movements in skating, and can only be accomplished after the learner has acquired some proficiency. Another motion called the "salute" is somewhat difficult. There is the salute in a curved line, and also in the straight line. That in the straight line is the most difficult. The salute in a right line is accomplished by, after having well struck out, throwing the feet in a horizontal line, and placing the arms in the position indicated at *fig.* 2. To perform the salute in a curved line, place the feet in a similar position, but so that the skates may describe the lines of a curve, and place the arms in the position indicated at *fig.* 7. To describe circles and

Fig. 7.

Fig 8.

curved figures is the chief accomplishment of the skater. The best way is to select a good piece of ice, in the centre of which a small object, a piece of stone or bit of broken ice is lying. Take a run proportionate to the number of circles you wish to

accomplish. To form a curve on the outside edge, strike out on that edge, and balance the body so as to turn in a curve round the adopted centre. Turn your head towards the centre, and elevate the outer arm, to guide the motions of the body, as in *fig.* 8. To perform a curve on the inside edge, you must, as in the former instance, select some object to indicate the centre, and, taking a sufficient run, strike out in the inner edge. The head and body should be in pretty nearly the position indicated in *fig.* 8; but the leg on which you are standing should be kept straight. The other leg should be held stiffly, with the suspended foot about eighteen inches from the other, *fig.* 9. Stopping in the formation of curves, circles, &c., is effected as in ordinary stoppings, as already explained, but it is considered more graceful to pirouette, by turning quickly round, and throwing the foot which is free over that on which you are skating. In skating backwards, the head and body should be inclined forward, and the feet struck out backwards, the heel of the skate being slightly raised. The feet being occasionally brought together will steady the movements and give confidence. *Fig.* 10 illustrates the position assumed in

Fig. 9.

Fig. 10.

Fig. 11.

skating backwards. Backward circles can only be performed by persons of some experience. *Fig.* 11 indicates the position in making backward movements, *fig.* 12 and *fig.* 13 indicates the variations of those positions. In skating backwards, the oblique stop is frequently adopted. It is accomplished by setting down the raised foot in an oblique direction, and stiffening the leg. This may be done with either foot. Turning round is effected by bringing one heel behind the other, and giving the body a twist in harmony with the position of the feet. The *fig.* 8 is effected by crossing the legs, and striking from the outside. It is accomplished by forming a perfect circle with one foot, then crossing the legs and forming the other circle. The *fig.* 3 is formed by striking out on the inner edge backwards, and gradually inclining sideways. Other figures which may be formed are the spiral, the kite, the fish, the oval, the maze, the lover's knot, &c., &c. The following precautions should be attended to in skating. Never venture on the ice until you are certain that it is able to support your weight; and

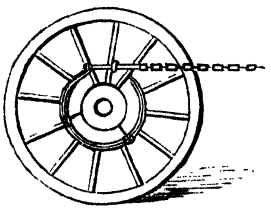
Fig. 12.

Fig. 13.

Fig. 14.

avoid the parts where numbers of people congregate. Select those places for skating where the water is not very deep; keep a sharp look-out for loose objects lying upon the ice, so that you may not be tripped up. If you are unlucky enough to fall in where the water is deep, spread out your arms over the broken ice, and keep as still as possible, waiting for assistance. For skating, the clothes should fit rather closely without being too tight. Long skirted coats and loose trousers will be found very inconvenient.

SKID.—An implement used for attaching to the hind-wheel of a vehicle when about to proceed down hill, with a view of regulating its momentum. No carriage or other vehicle should be without this convenience, as it is rarely applied, is never in the way, and prevents accidents and damage. An implement acting on the same principle as



the skid, and known as a stop-drag, consists of five or more pieces of wood, united on the outside by a strong jointed iron hoop, the wood pressing on the nave of the wheel. The annexed figure shows a wheel on a declivity, the chain drawn tight by the pressure of the breeching on the horse; the brake closely surrounding the nave, and forming an effectual drag.

SKIN, PRESERVATION OF.—The important functions vested in the skin of the human body, sufficiently indicate the necessity of keeping it in a state of cleanliness and freedom from obstruction. This is best accomplished by frequently bathing the body in cold fresh water, and by rubbing it briskly afterwards with a rough towel or the flesh brushes. A periodical change of under-clothing is also essential. With regard to the soap used in ablutions, the plain yellow sort is the best, and as a general rule all scented and fancy soaps should be avoided. By the same rule, washes, powders, lotions, &c., are not to be recommended; and when the skin does not present a healthy appearance, the better way is, instead of having recourse to such nostrums, to observe ordinary care in diet and regimen, and an improvement is certain to take place. —See ABLUTION; BATHING; FACE, AFFECTIONS OF; FLESH BRUSH; TOWEL, &c.

SKINS, TO PREPARE.—The ordinary mode practised by tanners and furriers in the preparations of skins, with the wool or hair left on the outside, is to soak them for a short time in water to cleanse and soften them, and afterwards to thin them inside by scraping, if they require it. They are then placed for three or four days in a bath, made by mixing two pounds of bran in one gallon of water, the whole quantity being of course regulated by the number of skins to be soaked. Next, a paste made with one pound of alum and three ounces of common salt moistened with water and worked together, is spread on the inside of the skin, and left for about eighteen hours, when they are hung up to dry with the fleece or hair outermost, and if possible in the sun. After this the inside is smoothed with pumice-stone, and sometimes a warm iron is passed over it, and then with a switching or brushing of the outside the operation is complete.

SKINS, TO PREPARE WITH WOOL ON.—Pulverize and mix well together a spoonful of alum and two of saltpetre; after sprinkling the powder on the flesh side of the skin, lay the two flesh sides together, leaving the wool outside; fold up as dry as possible, and hang in a dry place. In two or three days take it down and scrape it with a blunt knife till clean and supple; this completes the process. Other skins with fur or hair on may be cured the same way.

SKULL, FRACTURE OF.—This is an accident that may occur to any of the six bones that properly constitute the skull-cap, as it is called, or the head proper; yet some of these, from their remarkable thickness and situation, require so large a degree of force to fracture them, that they may almost be regarded as out of the category of accidents of this nature. The bones most exposed and liable to be broken, are the frontal and parietal, or the forehead bone and those side ones that form above the temple the dome and walls of the cranium. Nature has so admirably constructed the human head by building it of many pieces, each with a kind of wall or neutral demarcation between it and its neighbour, that an injury inflicted on one bone, or in plainer words, a crack, can in general extend no further than the bone injured, this line of demarcation checking the progress of the injury, and stopping it from extending to the next; as in a window, the stiles of the framework prevent the crack of one pane running into another, which, if the casement had no demarcation, would involve the injury of the entire sheet of glass. These separating media are called "sutures," and are the seams or joints by which the bones are dove-tailed or attached to each other, and but for which a fracture inflicted on one bone would spread all over the skull. Fractures of the skull are either simple, which is in reality like a crack in glass, and which with repose and ordinary care unite and heal of themselves; or they are compound, attended with laceration of the scalp, depression of a part of the bone injured, with diverging lines of fracture extending from the indented portion. Such accidents are the result of a great force, as a blow from a hammer; and as the depressed portion presses on the brain, and produces total insensibility, the consequences are serious. To restore consciousness, remove the dangerous pressure from the brain, and give the patient a chance of life; it is necessary to remove or elevate the depressed bone; but as this is purely a surgical operation, and can only be effected by skilful hands, it will be only needful here to observe that this is achieved by removing, through the aid of a small circular saw, like the top of a patent corkscrew, a piece of the indented bone, and with a lever elevating into its proper place the remainder; this operation is called *trephining* or *trepanning*. The moment

the pressure is removed the patient opens his eyes and becomes conscious, when ordinary care, with adventitious aids, most frequently restores the sufferer to health.

SLEEP, NATURE AND PROPERTIES OF.—This state of being may be defined as that condition of natural consciousness in which the involuntary powers are in a state of insensibility, whilst the involuntary functions of nutrition, secretion, &c., are going on increased, diminished, or unaltered, according to circumstances. The end which Nature has in view in assigning this condition to the human body, is to restore to it that strength and vigour which it has parted with during the waking hours. The precise amount of sleep which each person requires is difficult to be ascertained. Some need more than others, either from age, constitution, or other circumstances; as a general rule, however, eight hours is deemed to be an interval sufficiently long to restore the animal economy, and sleep indulged in beyond that period is apt to be injurious rather than beneficial. The time of retiring to rest has a great deal to do with the refreshing powers of sleep. The best time is between ten and eleven o'clock, the common axiom being that two hours sleep before midnight is worth four hours after it. Sleep should be rarely indulged in during the day, except on extraordinary occasions of fatigue, weariness, &c. The custom of sleeping after a heavy meal is especially injurious, not only in its immediate consequences, but as calculated to produce apoplexy, paralysis, and other serious disorders. In order to ensure comfortable sleep, it is necessary that sufficient exercise be taken in the day; that the food, particularly in the evening, be moderate in quantity and easily digested; the bedchamber freely ventilated; the bed-clothes moderately light, and the mind free from much disturbance. The use of the flesh-brush on going to bed, and keeping the body cool and the feet warm, are grand means of promoting sleep.

SLUGS, TO DESTROY.—Take a quantity of cabbage-leaves, and either put them into a warm oven, or heat them before the fire till they get quite soft; then rub them with unsalted butter, or any kind of fresh dripping, and lay them in places infested with slugs. In a few hours the leaves will be found covered with snails and slugs, which may then, of course, be destroyed in any way the gardener may think fit.

SMALL POX.—This, the most serious of all the eruptive diseases, though having many symptoms in common with other affections of this inflammatory class, has some peculiar to itself, and which, carefully observed, will always accurately define the disease, and point out small-pox from every other analogous affection. These distinctive features are the *greater heat of the skin*, the *nausea* and *sickness* that from the first attend it, and the fact that the rash appears on the *fourth* day of the illness, and not on the third, as in other eruptive diseases. Small-pox usually commences with shivering, pains in the back and head, heat, thirst, nausea, often sickness, a general feeling of languor and debility, quick full pulse, great heat and dryness of the skin, and a white furred tongue. This state continues with the usual febrile symptoms and nightly exacerbations till the fourth day, when a fine papillary rash, like grains of millet seed, breaks out in the face, neck, arms, and breast; in a few hours more extending over the rest of the body. On the fifth day the rash has become more distinct, each papille has become larger and filled with a transparent fluid, changing its form into that of a vesicle, which as the disease advances enlarges with a *flat head* and *depressed* centre, the fluid passing from a transparent lymph into a yellowish matter. While this change is taking place, the extremities and the head swell, the head and face often becoming immensely distended, closing the eyes, and giving to the countenance a deformed and unnatural appearance. About the eighth day the maturation of the pustules is completed, and from thence to the eleventh day the declension of the eruption takes place, the pustules burst, the matter is effused, scabs are formed, and the dead cuticle begins, from the twelfth day, to peel off or disquamate, leaving pits in the skin, the consequence of the suppuration having destroyed the fatty matter beneath the cuticle. As the different stages of the disease are advancing, corresponding changes are taking place in the constitution of the patient; the heat and thirst increase, the pain, restlessness, and anxiety are augmented; the inflammatory and febrile actions keep advancing, rendering the slightest noise intolerable, and causing delirium and a chain of the most dangerous symptoms. *Treatment.*—The inflammatory nature of small-pox renders what is called the antiphlogistic mode of treatment, in all its details, a duty of imperative importance. For this purpose, the room in which the patient is placed should during the disease be kept dark and cool, and at least once a day thoroughly ventilated by means of a fire in the grate, for a short time night and morning, but especially at the latter period. The room also should be frequently purified by sprinkling the floor with chloride of lime, or by the burning of vinegar on a heated shovel As the stomach is the first organ sensibly affected, and continues more or less disturbed during the whole disease, the treatment should begin by giving the patient an emetic, composed, if an adult, of twenty grains of ipecacuanha and one grain of tartar emetic; and as soon as that operation has ceased, the following powders and saline purgatives are to be employed, giving the mixture every *two*, and the powders every *four hours*.

Take of

Epsom salts	1 ounce.
Mint water	8 ounces.
Antimonial wine . .	3 drachms.
Spirits of nitre . . .	2 drachms.
Syrup of saffron . . .	2 drachms.

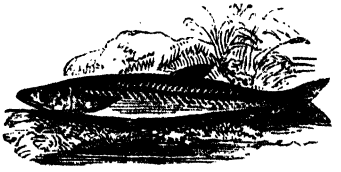
Mix, and give to an adult two tablespoonfuls for a dose, and to children, according to their age, from a dessertspoonful upwards.

Take of

Calomel	3 grains.
Powdered antimony . .	2 grains.
Rhubarb	3 grains.
Jalap	10 grains.

Mix, and make a powder. Give *one* of such a strength, every *four hours* to an adult till the bowels are *well* acted on, when they are to be discontinued; but the mixture is to be persisted in, though less frequently, or in half the dose. For a child from nine to twelve years of age, *half* of one of the above powders is to be given every *four hours*, till the same result is effected; and for younger children, each powder of the above strength is to be divided into *three parts*, and administered as the others. For an ordinary drink, in which the patient should on no account be stinted, lemonade, thin gruel, or cold tea is to be used; all solid food or nutritious aliment must be withheld, the patient kept low, his head cool, and the feet hot. When the fever runs high, and the head symptoms are severe, it may be necessary to bleed, but if not, a blister is to be laid on the nape of the neck, and perhaps two small ones behind the ears, to relieve the tumefaction of the eyes, and where the want of sleep demands it, a draught at bed-time, composed of fifteen grains of nitre dissolved in two ounces of water, with twenty-five drops of laudanum, or to children from three to ten drops in a little gruel according to their ages. Such, in mild or *distinct* small-pox, is generally all the treatment needed; and even in the aggravated *confluent*, till the time of disquamation, often no other means are necessary. In cases, however, where the rash, after showing favourably, suddenly recedes from the skin, or only partly comes out, the patient must be put into a warm, or rather hot bath for three or four minutes; and when the pulse falls, and becomes small and feeble, as it becomes absolutely necessary to bring back the rash to the skin, hot wine and water must be given, together with soups, tonics, and stimulants, till the invigorated constitution has power to re-act. Should this not have been called for, a system of careful feeding, aided with wine and bark, must be commenced at the period when nature begins to throw off the dead eruption. The great object to be observed in the treatment of small-pox, is to keep the patient cool, and on the lowest regimen, till the disquamation begins to act freely on the bowels, and allay fever by cooling drinks. As soon as the patient is convalescent, the diet should be light, and composed chiefly of farinaceous foods, puddings, custards, &c. The body should be bathed once a week, and the cuticle excited by dry rubbing with a towel, and especial care taken for some weeks to keep children from the contact of the patient, who should for that time take an aperient every three days. To prevent the face and neck from being pitted, each pock in that neighbourhood should be lightly wetted with a weak solution of lunar caustic, at the period when the pustules are filled with a transparent fluid, while they are yet round, and before suppuration has set in or the tops of the vesicles grown flat—or in other words, at the end of the second stage.

SMELT.—Of this fish there are two varieties, one not exceeding the length of three or four inches, the other arriving at the general length of six, eight, or nine inches, and sometimes even attaining twelve or thirteen. They are met with throughout the year in the seas that wash our coasts, and seldom go far from shore, except when they ascend the rivers, which they do with the tide; and in certain rivers it is remarked that they appear a long time before they spawn, being taken in abundance in the Thames and Dee in November



and the two succeeding months, in other rivers not until February. In March and April they spawn, and are very prolific; after which they all return to the salt water, and are not seen again in the rivers until next season. Smelts are to be met with in considerable numbers in the mouths of many of our rivers, estuaries, and harbours; and are usually fished for with a paternoster line, which should be fitted up with bristle. They vary in their depth of swimming, but in general lie about seven or eight feet from the surface, and still lower in very deep water. The baits for smelts are various; the best appears to be a small shrimp or part of a large one; small pieces of eel will also lure them. Gentles likewise prove an efficient bait; and when other baits fail, small portions of their own species will answer the purpose.

SMELTS BROILED.—When the smelts are well cleaned, slit them down the sides, and lay them in oil with salt and pepper for a little while; then put them on a grid-iron over a clear fire, and broil them; when done, serve either with caper or tomato sauce.

SMELTS FRIED.—Scrape the fish clean, cut off the tails and fins, clean and wash them, then replace the livers; slit them down the sides, flour and fry them of a pale brown colour. Drain them and sprinkle salt over them. Serve them on a napkin.

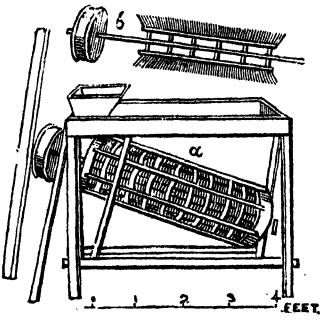
SMELTS PICKLED.—Wash, clean, and gut two dozen smelts, take half an ounce of nutmeg, a quarter of an ounce of mace, half an ounce of saltpetre, half an ounce of pepper, a quarter of a pound of common salt, all beaten very fine; lay the smelts in rows in a jar; between every layer of smelts, strew the seasoning with some bay-leaves; boil a sufficient quantity of red

wine to cover them; pour it boiling hot over them; cover the jar with a plate, when cold tie it down very close, and set it by in a cool dry place.

☞ Smelts, 24; nutmeg, ½oz.; mace, ½oz.; saltpetre, ½oz.; pepper, ½oz.; salt, ½lb.; bay-leaves, to flavour; red wine, sufficient.

SMELTS POTTED.—Draw out the insides of the fish, season with salt and pounded mace and pepper, lay them in a pan with butter on the top, bake them; when nearly cold, take them out, lay them upon a cloth; put them into pots, clear off the butter from the gravy, clarify, and pour it over them.

SMUT.—A disease affecting almost every species of corn, the grains of which become filled with a fetid black powder, instead of containing farinaceous matter. Wet seasons, animalcula, organic weakness, and other circumstances have been assigned as the primary causes of this disease. It has been ascertained from experiment that washing the seed is effective in preventing the communication of the disease to the crop to which it gives birth. A solution of lime-water is the best for this purpose; and it may be prepared by mixing a pound of fresh lime with three gallons of boiling water; the liquor then to be poured off and immediately used. In this liquor the wheat should be soaked for twelve hours, stirred twice or thrice during the time, and then mixed upon a floor with a powder made by pouring three gallons of boiling water upon five pounds of lime. A machine for cleaning infected grain from smut has been invented, which

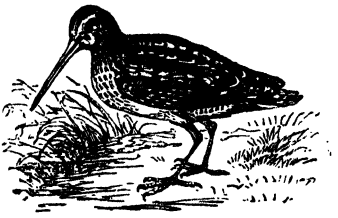


consists of a cylinder perforated with small holes, in the inside of which are a number of brushes, which are driven round with great rapidity. The corn infected with the smut is put into the cylinder by a hopper *a*, and the constant friction caused by the rapid motion of the brushes *b*, effectually separates the smutty grain, which is driven through the holes of the cylinder.

SNAILS, TO DESTROY.—Snails are particularly fond of bran; if a little is spread on the ground, and covered with a few cabbage-leaves or tiles, they will congregate under them in great numbers; and by examining them every morning, and destroying them, their numbers will be materially decreased.

SNEEZING.—A convulsive or spasmodic effort, the result of reflex action, originating in irritation of the lining membrane of the nostril, by which air is forcibly sent through the passage so as to expel any cause of irritation. Sneezing is one of the first symptoms of cold, of influenza, of measles, and of diseases which involve the air-passages. Continual sneezing is a spasmodic affection, and may be relieved by emetics.

SNIPE.—A bird found in all parts of the globe. In winter they are universally spread over Great Britain, and are more particularly



to be met with in low marshy grounds. In spring they disperse themselves to higher and more airy situations, and then inhabit our mountains and moors. Snipe-shooting affords excellent diversion; but those who attempt it should be possessed of a strong constitution, and considerable fortitude and energy; wet and dirt must not be cared for, nor must the coldness and severity of the weather be heeded. Snipes are difficult to hit when on the wing, owing to the irregular twistings of their flight; but this difficulty is soon surmounted if the birds are allowed to reach to a certain distance, when their flight becomes steady and easy to traverse with the gun; there is no reason to be apprehensive of their getting out of the range of the shot, as they will fall to the ground if struck but slightly with the smallest grain. Snipes like many other birds always fly against the wind; therefore, the sportsman by keeping the wind at his back, has this advantage of the bird when it rises, that it presents a fairer mark. These birds are scarcely good until November, when they get very fat. In severe weather, snipes resort in numbers to warm springs, where the rills continue open and run with a gentle stream; these, on account of their long bills, are then the only places where they can hunt for food. Snipes lie better in windy weather than in any other, and as they then usually make a momentary halt or hanging on, that is the time to fire. When they cross, also, by firing well forward, they seldom escape. Snipes are among the most inconstant of birds: a frosty night will send away the whole of a flight that had been there the day before; and again in two days' time they may return, if open weather

and a dry wind succeed. A regular snipe locality should be tried not only every day, but twice a day, so uncertain are snipes in fixing themselves even for a day. The localities for snipe-shooting are the Essex Marshes, Cambridgeshire, Lincolnshire, and Northamptonshire. Scotland also presents them in plenty on its moors and around its lochs; both North and South Wales also furnish good sport; while in all parts of Ireland, these birds plentifully abound.

SNIPE PIE.—Take three snipes, bone them, and fill them with light forcemeat, adding the trails and truffles pounded to it; place the birds in a deep dish, with a little forcemeat all round; cover with puff paste; egg and ornament it, then place it in an oven. When three parts baked, remove the crust, and pour in some rich gravy, a wineglassful of madeira, and season with cayenne and lemon-juice, according to taste; then put on the crust, and finish baking.

SNIPE, TO CARVE.—The carving of snipe consists simply of cutting the bird in two, lengthways.

SNIPES, TO DRESS.—They should be tied on a small bird spit, and put to roast at a clear fire; a slice of bread is put under each bird to catch the trail, that is the excrements of the intestines; they are considered delightful eating; baste with butter, and froth with flour; lay the toast on a hot dish, and the birds on the toast; pour some good gravy into the dish, and send some up in a boat. They are generally roasted from twenty to thirty minutes.

SNOW POSSET.—Boil a stick of cinnamon and a quarter of a nutmeg, with a quart of new milk, and when it boils, remove the spice. Beat the yolks of ten eggs well, and mix gradually with the milk until thick; then beat the whites of the eggs with sugar and canary wine into a snow. Put a pint of canary wine into a saucepan, sweeten to taste, set over a slow fire, and pour the milk and snow into the saucepan, stirring the whole of the time it is over the fire; when warm, remove from the fire, cover close, and set aside a short time before partaking of it.

☞ Cinnamon, 1 stick; nutmeg, ½ of 1; milk, 1 quart; eggs, 10; sugar, to sweeten; canary wine, 1 pint.

SNUFF TAKING, INJURIOUS EFFECTS OF.—This habit is extremely injurious, and a common cause of dyspepsia. It is a pretty well ascertained fact, that where snuff is taken in large quantities, a great portion enters the stomach, and as a matter of course seriously impedes the functions of that organ. Some snuffs produce more injurious effects than others, and this is the case with the highly perfumed, and damp heavy kinds. The least injurious kind is probably what is called the high-dried Irish or the Welsh snuff, for in the roasting of these, some of the narcotic principle is destroyed; therefore, a few pinches occasionally will not do much harm. But, however desirable it may be for a person to wean himself from this habit, still the confirmed snuff-taker should be cautious not to abandon the indulgence all at once, but to lessen the quantity gradually until it is finally abandoned. The reason for this is, that the system, after being so long accustomed to its stimulant, might flag under the withdrawal of it, and occasion serious illness. There are other reasons why snuff-taking should not be indulged in; it is an offence against cleanliness; it is disagreeable to other persons with whom the snuff-taker may be brought in contact; and it occasions a great waste of time.

SNUFFERS.—A kind of scissors constructed to cut off the superfluous wick of the candle during combustion. Snuffers are very frequently defective, either working so stiffly as to prevent their proper application, or opening and closing so loosely that no hold can be retained on the wick. To obviate these defects, a patent snuffer has been designed, which, by the rising and falling of a steel slide or cutter, hides and retains the snuff in the box. Snuffers will sometimes not act, owing to their becoming clogged with snuff; they should therefore be cleaned out every day, to secure their efficiency.

SOAP.—A substance used for cleansing purposes, and made in a variety of forms. Yellow soap is the best for ordinary domestic purposes, mottled soap for the scrubbing of very dirty and greasy boards, soft soap for cleaning paint; and curd soap for washing the skin with. Scented and fancy soaps are generally speaking deleterious in their effects upon the skin, and should be avoided. These soaps are for the most part, made from the refuse left in the manufacturing of ordinary qualities, and are thus sophisticated to disguise their grossness.

SOAP LINIMENT.—This is sold ready prepared by the chemists; it is used in chronic rheumatism, neuralgia, &c., and as a vehicle for other more active rubifacients.

SODA, USES AND PROPERTIES OF.—This well-known and extensively-used alkali is now manufactured from common salt, which is a muriate of soda. Soda is best known in the form of its carbonate or sub-carbonate, and bi-carbonate; the former being largely used domestically, the latter medicinally, and for some domestic purposes. The sub-carbonate of soda, being more irritant and not so pleasant as the carbonate, the latter is generally employed in medicine, and is usually sold in the form of white power. Bi-carbonate of soda is largely used for making the effervescing soda powders. Many dyspeptic persons take it habitually as an antacid. The habitual use of soda internally, even in comparatively small quantities, is highly pernicious; it exerts a most debilitating effect upon the stomach, and also upon the system at large. The usual dose as an antacid, is from ten to twenty grains in solution.

SODA CAKE.—Take one pound of flour, half a pound of moist sugar, and rub in half a pound of butter, lard, or dripping. Then take four eggs well beaten, a teacupful of milk a little warm, and half a teaspoonful of soda dissolved in the milk. Mix all together, and put it into the oven

immediately; two hours will bake it in a quick oven.

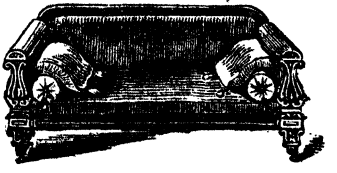
☞ Flour, 1lb.; sugar, ½lb.; butter, lard, or dripping, ½lb.; eggs, 4; milk, 1 teacupful; soda, 1 teaspoonful.

SODA WATER, PROPERTIES OF.—The water properly so called, contains about twenty grains of bi-carbonate of soda to the half-pint, and strongly impregnated with carbonic acid gas, but a good deal is made without the addition of soda at all. When used simply as a drink, this omission is unimportant, but not so when it is required as an antacid. As a drink in febrile disorders, soda-water is often beneficial and very grateful, but should not be given in too great quantities at once, otherwise the gas may produce unpleasant sensations. In such cases a small portion may be poured out, and the bottle after being opened, should be re-corked as speedily as possible; the cork should be secured by tying, and the bottle inverted in a jug of cold water; in this way the gas is preserved. Soda-water is an excellent vehicle for conveying milk to the stomach charged with acid, and consequently liable to feel oppressed by milk alone. The mode of application is, to heat nearly to boiling, a teacupful of milk, dissolve it in a teaspoonful of refined sugar, then put it into a large tumbler, and pour over it two-thirds of a bottle of soda-water.

SODA WATER POWDERS.—A pleasant, cooling summer drink. The blue paper contains carbonate of soda, thirty grains; the white paper, tartaric acid, twenty grains. Dissolve the contents of the blue paper in half a tumbler of water, stir in the other powder, and drink during effervescence. Soda powders furnish a saline beverage, which is very *slightly* laxative, and well calculated to allay the thirst in hot weather.

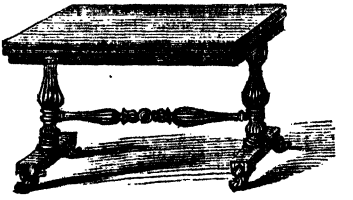
SODA WATER, TO MAKE.—Dissolve six drachms of dried carbonate of soda in a quart bottle of water, and four drachms and a half of tartaric acid in another bottle of the same size; pour out a wineglassful from each bottle, and throw them at the same time into a tumbler, when it will immediately effervesce. It should be drunk in this state. This is a good soda-water, and a dozen glasses thus prepared will not cost more than one shilling and threepence or one and sixpence. If ten drops of the muriated tincture of iron be put into the tumbler, a most excellent and agreeable tonic mineral water is produced, which strengthens the tone of the digestive organs in a very remarkable degree.—See GAZOGENE.

SOFA.—An article of furniture not to



be regarded as a luxury only, but as an essential comfort. In cases of partial illness, when a person is not bad enough to keep his bed, nor yet well enough to sit, a sofa affords great relief. A sofa is a more convenient article than a couch where the choice is confined to one of them, because it admits of a person lying at either end. In purchasing sofas, low-priced ones should be avoided, and this caution is all the more necessary, as the sofa appears to be a favourite article upon which dealers in worthless furniture practice their nefarious art.

SOFA TABLE.—An article of furniture designed for use by the side of the sofa, and of especial service to invalids, elderly persons, and fatigued students. The table seen in



the engraving is well adapted for the purpose indicated.

SOLDERING.—Cut out a piece of tin-foil the size of the surfaces to be soldered. Then dip a feather in a solution of sal-ammoniac, and wet over the surfaces of the metal, then place them in their proper position, with the tin-foil between. Put it so arranged on a piece of iron, hot enough to melt the foil. When cold they will be found firmly soldered together.

SOLES BAKED.—Prepare the soles as if for frying; mix a piece of butter with some flour, fine herbs, shallots, and mushrooms chopped fine, salt and pepper on a silver dish, place the soles on it, and cover them with the remains of the seasoning; moisten them with some melted butter and a little white wine, and let them stew slowly in an oven. If you have not an oven, you can dress them between two plates.

SOLES BOILED.—The largest soles are usually chosen for boiling. After they have been well cleaned, rub them over with lemon-juice, and set them in cold salt and water on the fire. When they begin to boil, skim the water, and then simmer them only, from ten to fifteen minutes, according to their size. Serve with anchovy sauce, and garnish with parsley.

SOLES, COLLOPS OF.—Choose some small soles, and marinade them in the juice of two lemons, with salt, pepper, and sweet herbs shred; when they have remained sufficiently long in the above, drain them: then stuff the fish with some crumb of bread boiled in milk, and beat up with the yolks of two eggs; sprinkle them with flour, and fry them of a clear gold colour. Serve them on fried parsley.

SOLES, FILLETS OF.—Have a flat silver dish or tin baking-pan, and spread a piece of fresh butter over it. Mince very finely, parsley, shallots, and mushrooms; season with pepper and salt, fry the herbs, and lay them on the buttered dish. Place the fish neatly cut and trimmed over this, and cover with fine bread crumbs. On the top of this put a few pieces of butter; moisten with a little white wine; cook under a furnace with a few embers, that the fry may get crisp. Squeeze lemon over it, and serve very hot.

SOLES FRICASSEED.—Fry them a nice brown, drain them, and make a few balls with a small sole boned and chopped, a little grated bread and lemon-peel, parsley chopped, pepper, salt, nutmeg, yolks of egg, a piece of butter; fry these; thicken some good gravy (and some port wine, not too much) with a little flour, boil it up; add ketchup, and lemon-juice; lay in the fish and balls, simmer them a few minutes, garnish with lemon.

SOLES FRIED.—Skin them and cut off the fins, roll them in a cloth, dredge them with flour, rub them over with the yolk of an egg, shake bread crumbs over them, and fry them in boiling fat.

SOLES STEWED.—Cut the soles into fillets, and let them steep in marinade for two hours in vinegar and water; then take them out, and dry them with a cloth; put them into a stewpan with half a pint of white wine, a quarter of a pint of coulis, some sweet herbs, a clove of garlic, and a shallot; stew the soles in this till done enough; keep them hot. When you strain the gravy, thicken it with a little potatoe flour; boil it up, and serve over the fillets. A few oysters and a truffle may be added.

SOLES STUFFED.—Make a force with whiting or perch, minced very small, and mixed with butter and sweet herbs, kneaded together by yolks of eggs, and seasoned with pepper, salt, and nutmeg. Having skinned and cleaned the soles, stuff them with this mixture, rub them with butter, strew them with bread crumbs and bake them.

SOLES, TO CARVE.—When large, soles may be served as turbot; but when small, they should be sliced across.

SOLES, TO CHOOSE.—To be good, soles should be thick and firm, the belly of a fine cream colour; if they incline to a blue white and the body flabby, they are not good. Soles should be boiled in salt and water. Serve with anchovy sauce.

SOLES, WITH MUSHROOMS.—Put a quart of milk into a stewpan or fish-kettle, with the same quantity of water, a piece of butter, a sprinkling of salt, and a little lemon-juice; then put in the soles, and set the stewpan over a moderate fire, letting them simmer very gently, till done; then take them up, place them on a cloth or napkin, to imbibe all the liquor from them; lay them in a dish, and pour over them a good mushroom sauce.

SORREL A LA BOURGEOISE.—Pick and wash as much sorrel as may be required, drain and squeeze all the water from it, put it into a saucepan, and set it over the fire; when the sorrel is dissolved, if there be too much water, pour it into a cullender; then fry it lightly in a little butter. Put two spoonfuls of flour into a basin, beat up an egg with it, then add another egg; and when that is well beaten with the flour, pour in a glass of milk, and then mix it with the sorrel, set it over the fire, and stir it, until it has boiled for a quarter of an hour; dish it, and serve with either poached or hard eggs.

SORREL, CULTURE OF.—This plant is a very useful kind of spinach plant, as it may be gathered the whole year round. It is readily increased by division of the roots, and should be planted in rows at least two feet apart, on strong loamy soil, where it may always have abundant moisture. It requires no further attention, a moderate number of plants affording sufficient leaves for a gathering at almost all times, and continuing good for many years.

SORREL OMELET.—Pick, wash, and blanch some sorrel, cut it in pieces, and fry it lightly in a little butter, with shred parsley; then put the sorrel into a saucepan, with a little cream; season, and let it boil slowly; in the mean time make an omelet in the usual way, lay it on a dish, thicken the sorrel with the yolks of two eggs; pour on it the omelet, and serve it very hot.

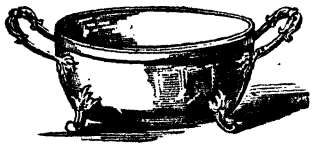
SORREL PURÉE.—Pick and wash the quantity of sorrel required in several waters; then add to it a handful of chervil and some white beet; squeeze the water out and scald for a minute in boiling water; then put it into cold water, to keep it green; again squeeze out all the water, and chop it fine; put it in a saucepan with a piece of butter, some salt and pepper, with the yolks of three eggs, which must be added by degrees; then arrange it on a dish, and serve it round meat, or with hard-boiled eggs on it, according to taste. To vary the flavour, stock may be sometimes added instead of the eggs.

SORREL SAUCE.—Wash and clean a large handful of sorrel, put it into a stewpan that will just hold it, with a bit of butter the size of an egg. Cover it close, set it over a slow fire for a quarter of an hour; press the sorrel with the back of a wooden spoon through a hair sieve. Season with pepper, salt, and a small pinch of powdered sugar; make it hot, and serve up under lamb, veal, or sweetbread. Cayenne, nutmeg, and lemon-juice are sometimes added.

SORREL SOUP.—Take two handfuls of sorrel, some sweet herbs, a large carrot, and one onion, and stew them in stock, or water, if for maigre-day; when quite tender, rub through a tamis, and add the yolks of three eggs.

SOUFFLÉ.—The lightness and delicacy of a well-made soufflé render it generally a very favourite dish. It may be greatly varied in its composition, but in all cases must be served the very instant it is taken from the oven. A common soufflé pan may be purchased for a few shillings, but those

of silver or plated metal, such as seen in the engraving, are, of course, more expensive.



A plain, round, cake-mould, with a strip of writing-paper six inches high, placed inside the rim, will answer on an emergency to bake a soufflé in. The following receipt will serve as a guide for the proper mode of making it; the process is always the same whatever the ingredients may be. Take from a pint and a half of new milk or of cream sufficient to mix four ounces of flour of rice to a perfectly smooth batter; put the remainder into a very clean, well-tinned saucepan or stewpan, and when it boils, stir the rice briskly to it; let it simmer, keeping it standing all the time, for ten minutes, or more, should it not be very thick; then mix well with it two ounces of fresh butter, one ounce and a half of pounded sugar, and the grated rind of a lemon (or let the sugar which is used for it be well rubbed on the lemon before it is crushed to powder); in two or three minutes take it from the fire, and beat quickly and carefully to it by degrees the yolks of six eggs; whisk the whites to a very firm solid froth, and when the pan is buttered, and all else quite ready for the oven, stir them gently to the other ingredients; pour the soufflé immediately into the pan, and place it in a moderate oven for a quarter of an hour. When the soufflé has risen very high, is of a fine colour and quite done in the centre, which it will be in from half to three-quarters of an hour, send it instantly to table.

☞ New milk, or cream, 1½ pint; flour of rice, 4 ozs.; butter, 2 ozs.; sugar, 1½ oz.; eggs, 6; salt, a few grains; lemon rind, 1.

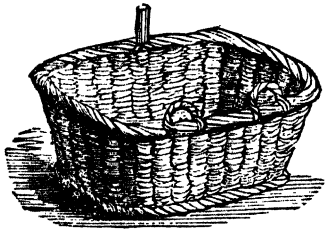
SOUFFLÉ PUDDING.—Take a pint of new milk, put half into the stewpan, and mix the other half with five spoonfuls of fine flour. Let the milk be scalding hot; then stir in the other milk and flour. Let it all scald five minutes, stirring it all the time. Then take five eggs, stir in the yolk. Beat the whites to a froth, and when cold mix them altogether. Sweeten to taste, flavour with anything you like; strain it; stick the mould with any dried fruit. Put a buttered paper under the cloth. Boil it an hour and a half, and take it off five minutes before it is wanted.

SOUP MAIGRE.—Melt half a pound of butter in a stewpan, shake it round, and throw in half a dozen sliced onions. Shake the pan well for two or three minutes, then put in five heads of celery, two handfuls of spinach, two cabbage lettuces cut small, and some parsley. Shake the pan well for ten minutes, put in two quarts of water, some crusts of bread, a teaspoonful of pepper, and three or four blades of mace; a handful of white beet-leaves, cut small, may be added. Boil it gently for an hour. Just before serving beat in the yolks of two eggs, and a tablespoonful of vinegar.

SOUPS.—See ASPARAGUS, BEEF, CABBAGE, CALF'S HEAD, CARROT, EEL, GIBLET, HARE, JULLIENNE, MACARONI, MOCK TURTLE, OX TAIL, PEA, RICE, SAGO, SORREL, SPINACH, SPRING, TURTLE, VERMICELLI.

SOWING.—In considering this process, a few practical instructions will in the first instance be given respecting sowing as applied to the garden. Let all sowing be done in drills. For small seeds such as lettuce, cabbage, &c., the drills may be sunk by pressing the handle of the hoe into freshly dug soil; but for larger seeds, as parsnips, beet, and onions, the drills must be struck with the hoe. Almost all sowing should be performed in dry weather, more particularly all early sowing in winter and spring; but in hot weather, in summer and autumn, it may often be eligible to take advantage of sowing immediately after a shower or moderate rain. The drills being at equal distances from one another, not only admit the sun, air, and rain more effectually to the plants, and give them a greater scope than such as are sown broadcast, but admit more readily the hoe between the drills to cut down weeds and loosen the soil. The general method of forming drills for the reception of seeds, is with a common drawing hoe, sometimes with a large hoe, and sometimes with a middling or small hoe, according to the size of the drill required, and the size and nature of the seeds; drawing the drill sometimes with the corner of the hoe, especially for larger seeds, and sometimes with the edge of the hoe flatwise or horizontally; large seeds, such as peas, kidney beans, many of the nut kinds, and other large seeds both of trees, shrubs, and herbaceous plants, require a deep angular drill, drawn with the corner of the hoe, turning the face or edge close to the line, and drawing the drill along with an angular bottom evenly the depth required, the earth remaining close along the side of the drill, ready for turning in again over the seeds; but when flat or shallow drills are required for smaller seeds it may, in many cases, be more eligible to draw the drill with the hoe flatwise, holding the edge in a horizontal position. In *bedding the sowing*, the ground is first dug and formed in four or five feet beds, with alleys a spade in width or more between bed and bed, and the earth being drawn off the top of the bed with a rake or spade, half an inch or an inch deep into the alleys, the seed is then sown all over the surface of the bed, which being done, the earth in the alleys is immediately drawn or cast over the bed, again covering the seeds the same depth, and the surface is finally raked smooth. The method of bedding in sowing by sifting is sometimes practised for very small or light seeds of a more delicate nature, which require a very light covering of earth when sown. In order to bury them as shallow as possible, cover them by sifting fine earth over them out of a wire sieve. *In sowing*

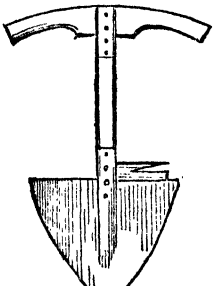
large pieces of ground, the sower is habited in a peculiar manner—he puts on a sowing sheet. The most convenient form of one is that of the semi-spheroid, made of linen sheeting, having an opening large enough along one side of the mouth to allow the head and right arm of a man to pass through, and the portion passed under, rests upon his left shoulder. On distending its mouth with both hands, and on receiving the seed into it, the superfluous portion of the sheet is wound tightly over the left arm, and fastened under it into the left hand; by which it is firmly held, while the load of seed is thus securely supported by that part of the sheet which passes over the left shoulder across the back, and under the right arm. The right arm which throws the seed, finds easy access to the corn from the open side of the mouth of the sheet, between the left hand and the breast of the sower. A square sheet knotted together in three of its corners, and put on in a similar manner, is sometimes used as a sowing sheet; but one formed and sewed of the proper shape, and kept for the purpose, is a much more convenient article. Linen sheeting makes an excellent material for a sowing sheet, and, when washed at the end of the season, will last many years. The difficult point is to make the sowing sheet fit the sower on the top of the left shoulder, where the greater part of the weight of the seed rests; and in attempting this, the principal thing to be considered is to make the strap, which goes over the shoulder, broad enough, and take the slope off the top of the shoulder from the neck downwards. The gatherings of the cloth on each side of the shoulder-top should be as neatly executed as in a shirt, and a couple of tapes should be drawn through a short hem, to be tied tight in front of the sheet across the breast. A basket of wicker-work such as



een in the engraving, is also sometimes sed for the sowing of seed. It is suspended by girths, fastened to the two loops shown on the rim of the basket, by passing the girth from the left-hand loop over the left shoulder, behind the back of the other loop, or from one loop to the other round the back of the neck; and the left holds the basket steady by the wooden stud on the other side of the rim. Both these utensils for sowing seed are intended for the use of one hand only, but some sowers throw the seed with both hands, and then the instrument must be made to suit the practice Such a one is a basket, or box made of thin deal, the nearest side carved to suit the front of the body. It is suspended by girths fastened to loops on the side next the sower, and passed round the back of the neck. A strap and buckle fastens it round the body, and the further side is suspended by straps slanting to the shoulders of the sower, and fastened to the strap buckled round behind his body. A more simple form of sowing sheet for both hands is a linen semi-spheroidal bag, attached to a hoop of wood or of iron-rod, formed to fit the body, buckled round it, and suspended in front in the manner just described. Both hands are then at liberty to cast the seed. In sowing with one hand, the sower walks on the third and fourth furrow-slices from the open furrow, which he keeps on his right hand. Taking as much seed as he can grasp in his right hand, he stretches his arm out and a little back, with the clenched fingers pointing forward, and the left foot making an advance of a moderate step. When the arm has attained its most backward position, the seed is begun to be cast with a quick and forcible motion of the hand forward. At the first instant of the forward motion, the forefinger and thumb are slightly relaxed, by which some of the seeds drop upon the furrow brows, viz., the open furrow; and while still further relaxing the fingers gradually, the back of the hand is so also turned upwards, until the arm becomes stretched before the sower, by which time the fingers are all thrown open, with the back of the spread hand uppermost. The motion of the arm being always in full swing, the grain, as it leaves the hand, and partaking of its momentum, receives such an impetus as to be projected forward in the form of a figure corresponding to the sweep made by the hand. The forward motion of the hand is accompanied by a corresponding forward advance of the right foot, which is planted on the ground the moment the hand casts forward the bulk of the seed. The seed ought to be cast equally over the ground. If the hand and feet do not move regularly, the ground will not be equally covered, but a strip left almost bare between the casts. The arm should always be well thrown back and stretched out. If the hand is opened too soon, too much of the seed falls upon the furrow-brow, and the crown will receive less than its proportion. If the hand is brought too high in front, the seed is apt to be acted upon by the wind, and tossed in a different direction from that intended. In casting high, the hand is elevated from the ordinary level of the elbow, whereas it should always sweep below that line. The hand should be kept low, the arm stretched out, and the seed made to fly off in a curve in front, by a sharp turn up of the back of the hand, and a free issuing of the fingers near the end of that action, the nearest parts of the seed fully within two paces of the sower. Seed, when so cast, will be little affected, even by a strong wind.

SOY.—A soy for fish, &c., resembling the Indian soy, may be made as follows:—Pound very small some walnuts when fit for pickling, in a marble mortar: squeeze them through a strainer; let the liquor stand to settle, and then pour off the clear. To every quart of liquor put a pound of anchovies, and two cloves of shallot. Boil it till the scum rises, and then clear it well. Add two ounces of Jamaica pepper, a quarter of an ounce of mace, and half-a-pint of vinegar. Boil it again until the anchovies are dissolved and the shallot tender, and let it stand till next day; then pour it off, and bottle it for use. Strain the sediment through a sieve, and put it by separately. *When used for fish, put some of it to the* usual mixture of anchovy and butter, or to plain butter.

SPADE.—A well-known agricultural implement, of which there are several varieties, according to the use to which it is to be put. Spades are usually manufactured with a flat blade; but perforated blades are sometimes prized as cleaning or freeing themselves better from earth in adhesive soils; semi-cylindrical blades are also preferred as entering the soil more easily, because gradually, and in effect as if a flat spade, with a pointed or shield-like curved edge were used. Spades with curved edges or pointed blades, are easiest thrust into the earth in hard or stiff soils, and clean themselves better; but they are more apt to leave more untouched parts in the bottom of the trench than the common square-mouthed spade. They are the best kind for new ground work, but are not well adapted for culture. The under-foot spade, as seen in the engraving, should be made very



strong, the shaft, or handle, square, with the angles rounded off, and strongly plated over where it is joined to the cup-angle at the top, and to the blade below. The blade is about fourteen inches across, and twelve inches deep; quite perpendicular, with sharp cutting edges, and a hilt or piece of iron riveted on for the feet. For the stubbing of hedges, taking the top sods off drains, and for various uses where strength is wanted, this spade will be found a most powerful instrument. The turf spade consists of a cordate or shield-form blade, joined to a handle by a bent iron shank. It is used for cutting turf from old sheep-pastures, with a view to its being employed either for turfing garden-grounds, or being thrown together in heaps, to rot into mould. It is also used in removing ant-hills and other inequalities in sheep-pastures, in parks, or rough lawns. A thin section often is first removed, then the protuberance beneath it is taken out, and the section is replaced, which having been cut thin, especially on the edges, readily refits; and the operation is finished by a gentle pressure by the foot, back of the spade, brake, or roller. Another implement of this nature is known as the *Flemish spade. It has a long handle—in* some cases six or eight feet; but no tread for the foot of the operator. The long handle forms a very powerful lever; when the soil is easily penetrated, it may be dug with

greater ease with this spade than with any of the forms in common use; and carts may be filled with earth, and earth thrown to a greater distance by this implement, for the same reason.

SPANIEL.—The varieties of the spaniel are numerous. The cocker spaniel, as seen in the engraving, is used for sporting,

especially woodcock shooting. His ears are usually long and well-feathered, as are also his legs and tail. His hair is remarkably waved and curly. When the spaniel is intended for sporting purposes he should be taken out very early to the field, as at four or five months old, when he ought to be allowed about and hunt every moving thing; and the signal for breaking should not be made until he has evinced a predilection in choosing the objects. As soon as he begins to hunt fowls in preference to other living objects, as rats, &c., immediately commence his training lessons, the first of which is, that now he is to chase at your command only, and that the animals he hunts should be such as you will habituate him to, and not those he might choose for himself. Having been thus thoroughly initiated in this subserviency to your sporting pursuits, he is next to be taught to fetch and carry;

and that, in doing this, he shall not tear or spoil his game, or whatever he may have in his mouth.

SPANISH CAKE.—Sift half a pound of flour into a broad pan, and sift a quarter of a pound separately into a deep plate, and set it aside. Put the milk into a dish. Cut up the butter, and set it on the stove, or near the fire, to warm; but do not let it get too hot. When the butter is very soft, stir it all through the milk, and set it away to cool. Beat the eggs very light, and mix the milk and butter with them all at once; then pour all into the pan of flour. Put in the spice and the rose-water; or, if you prefer it, eight drops of essence of lemon. Add the yeast, of which an increased quantity will be necessary, if it is not very strong and fresh. Stir the whole very hard. Add the sugar gradually. If the sugar is not stirred in slowly, a little at a time, the buns will be heavy. Then, by degrees, sprinkle in the remaining quarter of a pound of flour. Stir all well together; butter a pan, and put in the mixture. Cover it with a cloth, and set it near the fire to rise. It will, probably, not be light in less than five hours. When it is risen very high, and is covered with bubbles, bake it in a moderate oven about a quarter of an hour, or more, in proportion to its thickness. When it is quite cool, cut it in squares, and grate loaf sugar over them. This quantity will make twelve or fifteen buns.

SPANISH CREAM.—Boil, in half a pint of water, an ounce of isinglass till dissolved; strain and mix it with a quart of cream or good milk - if cream, not so much isinglass; stir it over the fire till it comes to a boil; when a little cooled, add gradually the beaten yolk of six eggs, and a glass of white wine. Pour it into a deep dish, sweeten with pounded loaf-sugar, stir it till cold, and then put it into a shape. Or, in lieu of the glass of wine, rub a lump of sugar upon the peel of a lemon to extract the flavour, and add it to the cream.

☞ Cream or milk, 1 quart; water, ½ pint; isinglass, 1 oz.; eggs, 6 yolks; white wine, 1 glass; sugar, to sweeten.

SPANISH FLUMMERY.—Scald a quart of cream with a little cinnamon or mace. Mix this gradually into half a pound of rice flour, and then stir it over a gentle fire till it acquires the thickness of jelly. Sweeten it to taste, and pour it into cups or shapes. Turn it out when cold, and serve it up. Cream, wine, or preserves, eat well with it; or it may be eaten alone, as preferred. Oatmeal may be used instead of rice.

SPANISH FRITTERS.—Cut the crumb of a French roll into square pieces, of the thickness of the finger; add nutmeg, sugar, pounded cinnamon, and an egg. When well soaked, fry the fritters of a delicate brown, and serve with butter, wine, and sweet sauce.

SPANISH PUFFS.—Put into a saucepan half a pint of water and a quarter of a pound of butter; stir it till it boils, and mix in four tablespoonfuls of flour; stir it well together, and add six yolks and four whites of eggs, two at a time; let it cool, and, with a dessert-spoon, drop it into boiling clarified dripping or lard. To make ginger puffs, a teaspoonful of pounded ginger may be added.

☞ Water, ½ pint; butter, ¼lb.; flour, 4 tablespoonfuls; eggs, 6 yolks, 4 whites.

SPANISH SAUCE.—Dissolve a couple of ounces of good butter in a thick stewpan or saucepan; throw in from four to six slices of shallots, four ounces of the lean of an undressed ham, three ounces of carrot, cut in small dice, one bay leaf, two or three sprigs of parsley, and one or two of thyme; but these last must be small; three cloves, a blade of mace, and a dozen corns of pepper. Add part of a root of parsley, if it be at hand, and keep the whole stirred or shaken over a moderate fire for twenty minutes; then add, by degrees, one pint of very strong veal stock or gravy, and stew the whole gently from thirty to forty minutes; strain, and skim off the fat, and it will be ready to serve.

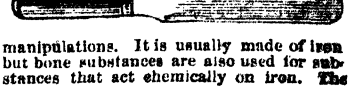
☞ Butter, 2 ozs.; shallots, 4 to 6; lean of undressed ham, 4 ozs.; carrots, 3 ozs.; bay leaf, 1; little thyme and parsley, in sprigs; cloves, 3; mace, 1 blade; peppercorns, 12; little parsley-root; strong veal stock or gravy, 1 pint.

SPASM.—By this word is understood a violent and involuntary contraction of one or more muscles, generally attended with great pain. Spasm is a species of convulsion, or eclampsia, with this difference, that either of the above are attended with an alternate contraction and relaxation, with longer or shorter intervals, as exemplified by the opening and shutting of the hand: but a spasm is one rigid and continuous lock or retraction of the muscular fibres, as in cramp, which suffers no intermission till the cure is effected. When spasm occurs in the limbs or muscles, it is called cramp; which see. When it takes place in a vital organ, as in the heart or lungs, it is frequently the closing symptom of a long train of diseased action, in an impaired constitution, and often proves fatal before relief can be obtained, or danger is apprehended. When occurring in the stomach, the patient, if possible, should be placed in a hot bath, or failing this, heated bricks or bottles of boiling water applied to the feet, the stomach fomented with hot water, in which some mustard has been mixed, and the following draught given every ten minutes till the contraction is overcome:—

Brandy . . .	1 dessertspoonful.
Sal volatile . .	20 drops.
Laudanum . .	10 drops.
Camphor water	3 dessertspoonfuls.
Ether	15 drops.

Mix in a wineglass, and drink immediately.

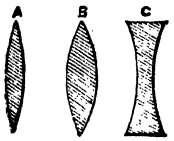
SPATULA.—A blunt flexible knife used by the apothecary, and in various medicinal



manipulations. It is usually made of iron but bone substances are also used for substances that act chemically on iron. The

most convenient size of spatula for a domestic chest, is one with the blade about three and a half inches, and the handle three inches long.

SPECTACLES.—As age advances, every one experiences a difficulty in reading when the book or paper is held at the usual distance, and a similar imperfection of vision in discerning objects generally. In reading, especially, the evil increases until a distinct vision cannot be had but at a much greater distance, and at last this distance becomes so great, that the apparent size of the letters is too much diminished to discern them. This defect, the natural consequence of old age, is owing to the convexity of the eye having diminished; and it is to be remedied by using spectacles, the glasses of which are what is termed by opticians *double convex*, of which A and B in the annexed illustration are sections, showing that they are ground thicker at the middle than at the edges.



When defective vision is first experienced, glasses with a slight degree of convexity will do, as A, which opticians call the first sight; but as, after a few years, the eyes become still flatter, glasses more convex, as B, are necessary to enable a person to see to read distinctly at the usual distance; and on every increase of a few years, it will be required to have them more and more convex, or what is termed older sight. The more convex the glasses, the more they magnify, or the larger they make objects at the same distance appear. In general, when the eye is perfect, six or eight inches is the usual distance at which we hold small objects to view them, such as a book; but this distance is not exactly the same for all persons. To choose spectacles when the eyes are beginning to be defective through age, begin by trying glasses that magnify best, or what is called the youngest sight; if these enable a person to read at the usual distance, they are the kind to be employed; but if vision be still indistinct, try a higher magnifying power, and so on until the proper spectacles are found: but be careful not to use a higher magnifying power than is really necessary, otherwise the evil of age may be brought on prematurely. Many persons whose sight is defective, postpone the use of spectacles from too nice a regard to appearances; the folly of such a proceeding is obvious; but overtasking the vision, already weak, an injury is done to the eyes frequently beyond the reach of remedy, or the contrivances of art.

SPECULATION GAME.—A round game of cards at which several can play, using a complete pack of cards, bearing the same import as at whist, with fish or counters, on which such a value is fixed as the company may agree. The highest trump in each deal wins the pool; and whenever it happens that not one is dealt, then the company pool again, and the event is decided by the succeeding company. After determining the deal, &c., the dealer pools six fish, and every other player four; then three cards are given to each, by one at a time, and another turned up for trump. The cards are not to be looked at except in this manner; the eldest hand shows the uppermost card which is a trump; the company may speculate on, or bid for it, the highest bidder buying and paying for it, provided the price offered be approved of by the seller. After this is settled, if the card does not prove a trump, then the next eldest is to show the uppermost card, and so on—the company speculating as they please, till all are discovered, when the possessor of the highest trump, whether by purchase or otherwise, gains the pool. To play at speculation well, a recollection only is requisite of what superior cards of that particular suit have appeared in the preceding deals, and calculating the probability of the trump offered proving the highest in the deal then undetermined.

SPERMACETI OINTMENT.—Take a quarter of a pint of fine salad oil, a quarter of a pound of white wax, and half an ounce of spermaceti; melt these ingredients over a gentle fire, and continue stirring the ointment till it is cold.

SPICE, SPIRITS OF.—Take an ounce of black pepper, and an ounce of allspice, both fine and powdered, and a quarter of an ounce of grated nutmeg; infuse these ingredients in a pint of spirits of wine, then strain and bottle for use.

SPIDERS, TO DESTROY.—The species known as the red spider is very injurious and destructive to the different sorts of plants and fruit-trees, especially in forcing houses. It is found particularly so to those of the French bean, melon, peach, vine, cherry, currant, and some other kinds. The generation and production of this insect are greatly favoured by the dry warm heat which is constantly kept up in the houses which contain these sorts of plants and trees, and there are many other circumstances which combine in bringing it forth. Constant daily watering or washing the trees, will have the power of starving these insects, but in doing this, care must always be taken that every part of the leaves are watered, otherwise the insects hide and save themselves in the dry part, and are preserved from the effects of the water. Throwing weak lime-water in a plentiful manner on the under side of the leaves, where the insects are mostly found, will soon destroy them. In the hot summer months, and when dry heat prevails, melon plants are very liable to be infected with the red spider, and the appearances of it may constantly be long noticed before the insects can be seen with the naked eye, by the leaves beginning to curl and crack in the middle parts. Whenever they are discovered to be in this condition, and there is fine warm sunny weather, the watering of them all over the leaves, both on the under and upper sides, is advised. The work should be performed about six o'clock in the morning, and the plants be shaded with mats about eight, if the sun shine with much power, shutting

the frames down closely until about eleven, and then admitting a small quantity of fresh air, letting the mats remain until about three in the afternoon, when they should be wholly taken away. The shade which is thus afforded by the mats prevents the leaves of plants from being scorched or otherwise injured by the action of the heat of the sun while they are in a wet cooled state. Where a southerly breeze prevails, watering them again about three in the afternoon is recommended, shutting them up close as before to keep the heat in, which causes a strong exhalation of the moisture, and is extremely destructive to the spiders. In all these waterings, the water is to be thrown as much and as finely on the under side of the leaves, where the insects mostly lodge; the vines or stems of the plants being gently turned to facilitate the operation. When these waterings are finished, the vines or stems of the plants are to be carefully laid down again in their former position. And if the day be sunny, the mats may remain as already directed, until the leaves of the plants become perfectly dry, on being admitted according to the heat that may be present at the time. It is further advised as a precautionary measure, that previously to the frames and lights which are to contain plants of this sort being employed, they should be well washed both inside and out, first with clean water, and then with a mixture of soapsuds and chamber lye; a brush or woollen rag being made use of in the operation; as by this method the eggs of the spiders that may have been deposited on them in the preceding season, may be cleared away and destroyed. These washings should never be performed in cold frosty seasons; and the soft or rain water should always be made use of.

SPINACH A LA FRANCAISE.—After picking, boiling, straining, and pressing, put the spinach into a pan of fresh water, and when it is cold make it into balls, and squeeze them in your hands until all the water is expelled; chop fine on a board with a wooden spade; then melt an ounce of butter in a stewpan, put the spinach into it, mix well for ten minutes, lightly dredge with a tablespoonful of salt, add gradually a quarter of a pint of boiling cream, or the yolks of two well beaten eggs, in which case omit the flour; two tablespoonfuls of velouté or strong white stock, and a teaspoonful of pounded sugar; mix well and serve in a hot dish with light brown sippets of fried bread or puff-paste, baked in fanciful devices.

SPINACH BOILED.—Pick the spinach leaf by leaf, then take off the stalks and thoroughly wash the leaves in five or six waters, or they will be, as is too often the case when carelessly prepared, gritty. When you are sure that every particle of mould is removed, drain in a cullender, and put the leaves into a large saucepan with a tablespoonful of salt and a pinch of soda sprinkled over them, then add a quart of boiling water, press the leaves down, and boil quickly ten minutes, stirring frequently. When done, strain and press carefully, as this vegetable retains the water more than any other. This is the plain, and in general, the best way of sending spinach to table, as it preserves the true flavour of the plant; but if you wish to make it richer, after straining and pressing, put the spinach on a board, chop it fine, and place it in a stewpan with an ounce of butter, half a teaspoonful of pepper and salt (in equal quantities), stir well until the butter is absorbed, turn into a hot dish, cut the pulp into small squares or diamonds, and serve with poached eggs and slices of fried bacon; garnish with sippets of fried bread.

SPINACH, CULTURE OF.—The varieties of spinach, being annuals, must be grown from seed. The leaves are required during the whole of the year, therefore successive sowings become necessary. A small sowing may be made in January, if the weather is mild, a larger sowing in February, and a still larger one in March. Sow afterwards once in three weeks, till the beginning of May, then every week till the end of July. Three sowings should be made in August, for winter and spring use, say during the first, second and third week. The seed vegetates in from ten to fifteen days, according to the season; therefore it may be advantageously sown between rows of newly-planted peas, beans, cabbage, or the like, as it will be fit to cut off for use before they either injure it, or it prove an impediment to their growth. And when so sown, the drills should be made nine inches wide and the seed thinly sprinkled in them, to give the plants greater room than if sown in the ordinary manner. The germination of the seed may be hastened by steeping it in water three or four hours previous to sowing; and in sowing during the heat of summer, when the ground is dry, the drills should be soaked with water before the seed is sown. It should always be sown in drills two inches deep and eighteen inches or two feet apart for principal winter crops, the plants being, after they come up, thinned to a foot apart in the line. As the object is to have large succulent leaves, the ground cannot be too highly manured. One ounce will sow a hundred and fifty feet of a single drill. The summer crops should be abundantly supplied with water during dry weather, the plants only moderately thinned, as their duration is short. In November it will be well to thin the plants intended for a winter and spring crop, to clear the ground completely of weeds, and to cover the spaces between the rows with finely sifted coal-ashes, to counteract damp and to render the ground more comfortable to tread upon during the process of gathering the crop. This also saves the large lower leaves from being splashed with mud during heavy rains. In light sandy soils spring crops come into use soonest, but they equally soon shoot up to seed and become useless. In strong retentive soils they are later and continue longer. In medium good garden soils, abundantly manured, the crops succeed best; and it is of importance, particularly for crops to come in during winter and to continue on till spring, that the

situation chosen be open and well exposed. *In taking the crop*, the larger and lower leaves should be gathered first, and then should either be cut off with a knife, or pinched off between the finger and thumb close to the bottom of their footstalks. The summer crops, as they grow so rapidly, may be cut close to the ground with a knife preparatory to being dressed, the footstalks of the leaves should be cut off and the leaves sorted, removing all the flower-stalks, should any exist, and rinsing the whole in fresh water, placing them afterwards in a clean basket to allow the water to drain from them. *In sowing seed*, as soon as the flowering is past, the male plants, which will then have performed their office, should all be removed, to admit air and light to the female plants to enable them to perfect their seeds. The seeed ripens in August and September, and, after being dried for a week or so in the straw, should be thrashed out. Birds are extremely fond of spinach-seed, so much so as to render it expedient to cover the seed crop, if upon a limited scale, with netting, from the time the plants come into flower, until the seed is ripened. The seed retains its vegetative properties about four years.

SPINACH PUDDING.—Scald and chop some spinach very fine, together with four ounces of biscuit soaked in cream, the yolks of eight eggs beat up, a quarter of a pound of melted butter, a little salt, and nutmeg, and sugar to taste; beat it up all together, and set it over the fire till it is stiff, but do not let it boil. Cool it and bake it in puff-paste; or butter a basin and boil it.

SPINACH SOUP.—Shred two handfuls of spinach, a turnip, two onions, a head of celery, two carrots, a little thyme and parsley; put all into the stewpan with an ounce of butter, and a pint of veal stock, or the liquor in which meat has been boiled; stew till tender, pulp through a coarse sieve, add a quart of fresh water, salt and pepper, and boil all together. Make some small suet dumplings the size of a walnut, put them into the tureen, and pour the soup on hot.

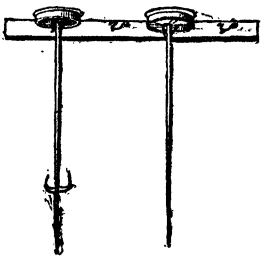
SPINAL AFFECTIONS.—Though the symptoms of this class of diseases appear extremely complex and numerous, there are in reality but *two* diseases affecting the spinal column, that in this work call for any special observation, and these are, a distortion forwards, or *anterior curvature*, in which the back-bone bends inward, leaving a considerable hollow in the back; and a distortion to the side—generally to the right—and known as *lateral curvature*, in which the back-bone becomes more or less doubled on itself, as in the shape of the letter S, or, more frequently like the italic *f*. The anterior, or forward curvature, is the result of a diseased condition of the vertebræ, or the intervening cartilage, which in consequence, no longer able to support the weight of the body, is forced out of the perpendicular, and pressed inwards; shortening the stature and deforming the chest and back. Such a disease is the result of a scrofulous habit or an hereditary constitutional taint; and either develops itself in infancy and childhood, or it makes its appearance at the age of puberty. The most effectual treatment for this form of spinal disease, is a system of counter-irritation, local and general tonics, change of air, rest, and mechanical support. The application of moxa every month or six weeks, for two or three times; a succession of blisters, or a seaton, are the means by which the first intention of the physician is obtained; accompanied by perfect rest, a generous diet, and quinine and wine, and as the strength and capability for motion returns, sea-air, salt-water bathing, and a pair of properly fitting stays. Lateral curvature proceeds from general debility, especially from a loss of muscular power in the back, from long sedentary habits, and often from tight and injudicious lacing; for this form of diseased spine is far more frequent in females than in males: it is also very often induced by rickets, or makes its appearance in weakly constitutions, after an attack of measles or scarlet fever. The first observable indication of a curvature, is an enlargement of the breast; appearing when contrasted with the other to be deformed, or else the *right* shoulder assumes a marked disproportion, and seems to stand out from the spine. Concurrent with one or other of these effects, is a gradual distortion of the *left* hip, which grows outward, and becomes as far removed from the line of the spinal column on that side, as the opposite shoulder is from that; the consequence of this displacement of the hip, is, that the leg appears shorter, while the vertebræ of the neck sinking, gives a one-sided and constrained position to the carriage of the head and neck.

Treatment.—In this disease, or more properly affection, a moral and physical course is more absolutely indicated than a medical one; for if taken in time many of those afflicted may be permanently cured. The first and most imperative obligation, is a well-regulated system of exercise, which by calling into play the opposite set of muscles may serve by their action, in the first place, to arrest the further advance of the disease, and secondly, to draw back into their natural position, the displaced members. Before, however, exercise is adopted, and continuously through the whole course of treatment, a stimulus must be applied to the weakened muscles of the diseased parts: this stimulus is friction, or in other words, rubbing. Twice a day—for at least ten minutes each time—the back, shoulder, and hip, must be rubbed with an embrocation of either common olive oil, or one part of turpentine to three of olive oil, rubbed in with energy and continued with zeal. This, with country air, a good and nutritious diet, and the exhibition of steel wine, and tonics, is to be adopted for some time prior to resorting to exercise; the patient reclining on a hair mattress till a sufficient degree of strength has been obtained, when in addition to these means must commence the following system of graduated exercise:—The patient to draw frequent and deep inspirations, while

seated; to do the same standing, the arms elevated over the head; the same with the arms down, and then extended horizontally. The patient sitting, to move the feet up and down, next, deep and slow inspirations while lying on the left side, on the elbow; rising and lowering the body several times in this position; then walking slowly across a well ventilated room, and drawing full inspirations. Fixing the weak hand above the head and bending slowly, carrying a light weight in the weak hand, declaiming a set piece, or singing a song in an erect position, without moving. Using the weak arm, by imitating mechanical work, as sawing, hammering, or planing. Drawing upon a spring with the weak hand, and accustoming it to grasp and resist. Finally, lifting the body from the bed by the assistance of the arms, and using the body to sit up without any aid from the hands. These several evolutions—allowing a few minutes to each—should be gone through in regular order, *twice* every day, in a large well-aired room, the inspiration being drawn slow, deep, and steady. When the strength has improved, and the physical tone warrants the change, a system of out-of-door exercise, muscular and progressive, is to be adopted, till the health is restored and the growing deformity corrected.

SPIRITS, ADULTERATION OF. — See BRANDY, GIN, &c.

SPIT RACK.—In the culinary department this is a contrivance to hang spits



upon after they are cleaned and are ready for use.

SPITTING OF BLOOD.—This, though a serious symptom, is often productive of more alarm, than is justified by the amount of blood ejected, which, as is sometimes the case, comes from some minute vessel in the lining membrane of the trachea; though in general the blood spit from the mouth, proceeds from the lungs, and is distinguished from that discharged from the stomach, in being smaller in quantity, and more bright and frothy than the other. Spitting of blood frequently occurs after some strong muscular exertion, or results from a blow on the chest, and when not a sequent of long and severe cough, or occurring in a narrow-chested or weakly constitutioned person, need create but little apprehension. Spitting of blood, is often preceded and accompanied by pain, and a sense of constriction in the chest, with a quick, sharp pulse, flushed cheeks, and an irritating cough. In any case, absolute rest is necessary, the patient should lie on his back, and while the feet are kept warm, the hands and upper part of the person should be preserved cool, the patient taking from fifteen to twenty drops of the elixir of vitriol in a little water every two or three hours; and if the spitting continues, a dose of Epsom salts are to be taken, and one of the following pills every two hours, accompanied with frequent draughts of vinegar and water, lemonade, or buttermilk:—

Take of	
Sugar of lead	15 grains.
Ipecacuanha	4 grains.
Opium powder	3 grains.
Extract of henbane, enough to make into a mass,	

which is to be divided into six pills. In severe cases it may be necessary to bleed, and apply a bladder of ice to the chest, and possibly a blister.—See BLOOD.

SPLEEN.—This organ, known as the milt, and always referred to as the seat of a pain in the side, from running or any violent exertion, has never yet had a proper use assigned to it. The Romans, believing it prevented a runner's speed in the gladiatorial course, were in the habit of extracting it from their *athletæ*; but, with what result, is not known. It has long been the prejudiced opinion to attribute the peevish, irritable disposition of men to this organ; but till we know—which as yet we do not—what function the spleen performs in the human economy, it would be more just to attribute a man's ill temper to the fault of his disposition, than to an organ, whose use in the animal body is still a mystery. The spleen, like the neighbouring digestive organs, is subject to inflammation, enlargement and softening, and its treatment in each is of the same nature and order.—See LIVER.

SPLINTERS, TO EXTRACT.—When splinters are extracted immediately, bad consequences seldom ensue. But the more certainly to prevent any ill effects, a compress of linen, dipped in warm water, may be applied to the part; or it may be bathed a little while in warm water. If the splinter cannot be extracted immediately, or if any part of it be left in, inflammation will probably ensue, and nothing but timely precaution will prevent it coming to an ulcer. A portion of shoemaker's wax, spread upon leather, draws these punctures remarkably well. When the splinter does not make its presence known until inflammation is felt, and no advice can be procured, the steam of water should be applied to it at first, and then a poultice of bread and milk, with a few drops of Peruvian balsam. The injured part should also be kept in an easy position.

SPONGE.—A marine production, chiefly brought from Turkey. The finest quality is imported from Smyrna. Another, called West Indian or Bahama sponge, is much less esteemed, being coarse, dark coloured, and very rotten. When sponge first comes over, it has often a great deal of sand in it, which must be carefully cleaned out. The great use of sponges for bathing and fomenting affected parts of the body is well known; but the sponge used should be of the finest description, and entirely freed from any gritty particles. When sponges are done with, they should be squeezed dry and placed in an oiled silk bag made to receive them. By this means they will last much longer, and in better preservation than when suffered to lie carelessly about, with the water in them. Good sponge is an expensive article, and a high price must not be begrudged for a piece of superior quality and size. Above all, purchasers should beware of buying cheap pieces of sponge of street vendors; such pieces frequently having done duty in stables, and being capable of communicating diseases with which the horses have been affected.

SPONGE BISCUITS.—Beat together, for half an hour, four well-beaten eggs, and half a pound of finely-powdered loaf sugar; then mix in lightly, six ounces of dried and sifted flour, and the grated peel of a lemon, or a teaspoonful of essence of lemon, with a tablespoonful of rosewater. Flour the pans, fill them half-full, and sift pounded sugar over them. Bake them in a quick oven. Potatoe flour may be substituted for wheat flour.

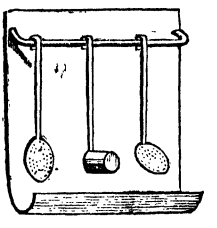
☞ Eggs, 4; sugar, ½ lb.; flour, 6 ozs.; lemon-peel, 1; rose-water, 1 tablespoonful.

SPONGE CAKE.—This cake may be made in the following ways:—1. Take sixteen ounces of finely-powdered loaf sugar, eight eggs, and twelve ounces of dried and sifted flour; then whisk the eggs, yolks and whites, nearly half an hour; beat in the sugar with a horn spoon, and, just before it is to be put into a buttered tin, stir in the flour lightly, adding a few caraway seeds. Bake it for one hour. 2. Take the juice and grated rind of a lemon, twelve eggs, twelve ounces of finely-pounded loaf sugar, the same of dried and sifted flour, then with a horn spoon beat the yolks of ten of the eggs, add the sugar by degrees, and beat it till it will stand when dropped from the spoon; put in at separate times the two other eggs, yolks and whites, whisk the ten whites for eight minutes, and mix in the lemon-juice, and, when quite stiff, take so much as the whisk will lift, and put it upon the yolks and sugar, which must be beaten all the time; mix in lightly the flour and grated peel, and pour it all gradually over the whites; stir it together, and bake it in a buttered mould or small tins. Do not more than half-fill them. 3. Three-quarters of a pound of loaf sugar, a quarter of a pint of water, boil the sugar and water, skim it well; six well-beaten eggs, pour in the sugar boiling hot, whisk it till cold; seven ounces of flour well dried, mixed in gradually with the grated peel of a lemon. The above should be put into a cake tin, well buttered and lined with buttered paper. It must be immediately put into a moderate oven, and baked three-quarters of an hour. This sponge cake will keep moist and good for weeks. 4. Take one pound of dried flour, three-quarters of a pound of finely-pounded loaf sugar, seven eggs, the yolks and whites beaten separately, the grated peel and juice of a lemon, a tablespoonful of rose-water, and one of brandy, and half an ounce of caraway seed, dried and pounded; beat all for an hour with the hand; butter a tin, line it with paper also buttered, put in the cake, and sift pounded sugar over the top. Bake it for an hour. Potatoe flour may be substituted for wheat flour in this and the other sponge cakes.

☞ 1. Loaf sugar, 1lb.; eggs, 8; flour, 12 ozs.; caraway seeds, a few. 2. Lemon, 1; eggs, 12; sugar, 12 ozs.; flour, 12 ozs. 3. Loaf sugar, ¾ lb.; water, ½ of a pint; eggs, 6; flour, 7 ozs.; lemon-peel, 1. 4. Flour, 1 lb.; loaf sugar, ¾ lb.; eggs, 7; lemon, 1; rose-water, 1 tablespoonful; brandy, ½ tablespoonful; caraway seeds, ½ oz.

SPONGE, TO CLEAN.—Immerse it in cold buttermilk, let it soak for a few hours, and wash it out in clean water; it will be perfectly clean and soft.

SPOON-DRIPPER.—This belongs to kitchens and sculleries. It is used for hanging large spoons and ladles on, with a



trough below to catch the drippings, that they may not soil tables if laid on them. It is made of tin, and fixed against the wall.

SPOONS.—These well-known domestic utensils are made of various sizes and in every material. In addition to the ordinary teaspoons and tablespoons, it is always well to have other spoons applicable to certain uses, such as wooden ones for mashing vegetables, iron ones for basting, horn ones for condiments, spices, &c.

SPORTING.—Under this general term is to be considered chiefly the practice of shooting in connection with field sports. *The choice of a gun* is an important consideration. In making the selection, the following principles may be safely acted upon. The length of the barrel should be from twenty-eight to forty inches; and if either above or below these dimensions the range of the shot will begin to fail. The fowling-piece to be recommended for general use is a double-barrelled detonator, weighing about eight pounds, the barrels thirty to thirty-two

inches in length, sixteen gauge, and made of twisted stubs. Single-barrels for general use, may be thirty-four inches long, and fourteen gauge. If selected for partridge-shooting only, the barrels should be thirty-inches long, and sixteen gauge; or a single barrel, thirty-four inches and fourteen or fifteen gauge. If selected for cover-shooting only, the barrels should not exceed twenty-eight inches by sixteen gauge; a single barrel, thirty-two inches and fifteen gauge. The stock of the gun should be exactly fitted to the shape of the shooter. On putting a gun to the shoulder, there should be no straining of the neck to take aim. When the eye is fixed upon a distant point and the gun raised to the shoulder, the object aimed at, the sight at the muzzle, the centre of the breech, and the eye should all be in a direct line without further adjustment. To ascertain whether or not the shape of the stock is that best adapted for the shooter, he should in this manner frequently raise the gun to his shoulder, and take aim at a distant point with both eyes open; then, closing the left eye, he will perceive whether or not he has mechanically taken a correct aim. If, with the left eye closed, he does not see the object, the stock is too crooked; if he sees all the rib, it is too straight; and if his line of arm is not along the centre of the breech, but from the left corner of it, the stock is not properly cast off. Should the line of aim be along the right side of the breech, the stock is too much thrown off. With a gun properly fitting, the aim is instantaneous; and the sportsman, if not naturally a good shot, is greatly assisted in the field. A gun of the proper shape may be chosen among others very easily by the above simple means of ascertaining that it carries a correct aim to a given object with both eyes open; and with such a gun, the shooter will acquire a practical dexterity in the field otherwise quite unattainable. When a stock is too much bent, the muzzle is depressed, and it is therefore preferable to have the stock rather straight; and it is a safe rule that in looking along the rib you distinctly see one-third of the whole length next the muzzle, as well as the sight. This gives the shot elevation and increases the range. The wood of the stock should be hard and tough: walnut is the best. The mounting and locks should be carefully fitted into the wood. In shape, the stock should be thin and well suited to the grasp, immediately behind the locks, where it is termed the handle. From that it should rapidly swell backwards, and acquire its greatest thickness immediately behind where the butt succeeds to the handle. The fore-end of the stock should be broad and full, wide at the end of the lock plates, and may be chequered or not in the same manner as at the handle. The lock is an essential part of the gun; it should be as simple as possible in its construction, but filed in all its parts to perfection. The main-spring should be lively in action, and depend less upon quantity of metal for its strength than upon width of expansion when released from its confinement, and great care in tempering. The tumbler and sear should be carefully bound down by the bridle, and be justly fitted to each other. To test a good lock, draw up the striker with the thumb, and observe that there is no grating or roughness—that it rises freely with decreasing power—and that it "speaks" well, with a clear sound at half and full cock. Draw the trigger, retaining the thumb upon the striker, and observe that it goes down freely, with increasing force, as it approaches the nipple. The trigger should be long and well curved, affording a good hold for the finger. The edges should be rounded, so as not to cut the finger in firing, and they should be set well separate. For nervous persons who have any hesitation, under the excitement of shooting, in choosing the proper trigger, the right-hand one may be chequered, thus giving a distinguishing mark. The guard of the trigger, termed the bow, should be rounded and somewhat thick at the edges, and have no improper projection likely to injure the middle finger in firing.

The most marked improvement in the construction of fire-arms for sporting purposes, is that known as the *breech-loading gun*. The advantages of this invention are the extreme facility, quickness, and great additional safety in loading, the increased rapidity or sharpness and strength of shooting, absence of foulness, recoil, and less liability to be affected by wet or damp. The principle upon which this gun is constructed is as follows:—The barrels are united to the stock by the main pin (a stout screw, which does not require to be removed in taking the gun to pieces), forming a kind of hinge, and held in their proper place by a bolt, connected with the lever, which fits into a stout steel socket, forged on to the barrels, and holds them firmly in their place when ready for firing. By turning the lever a quarter turn to the right, the bolt is released from the steel socket, and the barrels being set at liberty (turning on the main pin), drop with their own weight. The cartridges are put in the barrels raised; the lever turned back into its place, and the gun is ready for firing. The cartridge, which in itself contains all the requisites for the gun's discharge, is a thick paper cylinder, about two inches in length, and exactly fitting the bore of the breech, closed by an impermeable brass or copper capsule, in the middle of which is a small brass chamber, firmly supported in its place by a roll of paper about an eighth of an inch in thickness. A brass pin passes into the capsule and chamber, and holds the cap in the same way as a common nipple, and when placed in the barrel receives the blow of the striker, and explodes the charge. The rapidity of loading may be imagined, when twelve shots can be fired in a minute; and no foulness accumulates—the remains of the burnt powder being driven through the barrel with every succeeding shot, as the thick elastic wad which fits in the breech end is two sizes larger than the muzzle; and, consequently, after the thousandth round the barrels are as clean and free from lead as they were

after the first discharge. In using the breech-loading gun, place the stock under the arm, and with the right hand pull the lever back, and ease down the barrels with the left hand. Take out the exploded cartridges with the thumb, or should they be rather tight (which is rarely the case), tap the pin with a loaded cartridge, or draw them out with the small instrument made expressly for the purpose. When loading, pour the powder and shot into a basin. Use the small brass measures, and first put in a measure of powder, then a felt wadding, next the shot, and a card wadding, and turn the end of the paper over, to secure the wadding, with a screw-press socket. For cleaning, on returning from shooting, wipe out the barrels with dry tow, then grease them slightly with an oiled rag, taking care not to bruise the breech end of the barrels by placing them on stones, as the nicety of fitting may be destroyed. The barrels need not be taken off the stock in cleaning. Mr. Joseph Lang, the eminent gun maker of 22, Cockspur Street, London, has done more than any other person to enforce the superiority of the breech-loader upon the attention of the sporting public. We have shot with a breech-loader of his make, and can testify to its killing effectiveness at an unusual range; and that for safety, quickness, cleanliness, and execution, no gun can compare with the breech-loader.

The various processes in the practice of shooting may now be summed up. No small portion of success in shooting depends upon the method of *loading a gun*. All general rules on the subject must be laid down with several qualifications and reservations. It is recommended to squib off the gun at the commencement of each day, that it may dry and warm the barrel, and absorb any moisture that may be collected in it. Having drawn up the cock and removed the broken cap, or wiped the edge of the flint, if that is used, hold the gun upright, and in that position pour in the powder, striking the butt-end of the piece against the ground, to carry down such grains of powder as may be lodged against the sides of the barrel, and also to settle the mass. Next, pass the powder-wad down until it reaches the powder, on which it ought to be pressed as tightly as possible. This done, pour down the shot, and give a shake or two to settle them evenly and solidly in their bed. Place over them wadding of sufficient substance and elasticity to maintain the shot steadily in their position, for which purpose, give a pressure to the wad, but do not ram it hard. The first charge, however, may be pressed a little harder than the subsequent ones. It may be proper when the powder is wadded, to observe whether it makes its way into the nipple by the pressure of the confined air, made in passing down the wad. It does not always follow, that if the powder is not seen on the pivot, it will not explode; it is, nevertheless, more satisfactory to see it there; and when it cannot be seen, the breech should be slightly tipped, to introduce the powder further up to the touch-hole. The last act of gun-loading is that of putting on a fresh cap, and letting the cock down very gently to fasten on the nipple. In charging the flint gun, it is also prudent to squib it first, and then introduce the powder and shot into the barrel. If a double gun be employed, it will be optional with the sportsman to load both barrels alike, or to give a somewhat heavier charge to the second barrel, be it left or right, that the gunner usually fires on the longest shots. If the quantities of powder used are the same in both barrels, the size of the shot may at least be somewhat larger for the second barrel. When a gun has been discharged, it is a good practice to load it immediately, while the barrel is still warm; for when allowed to cool, and moisture begins to settle on its inner surface, it catches some of the finer particles of the powder-charge, and either decomposes them there, or prevents them falling to the bottom; and in either case the detention diminishes the projectile force which is to act on the shot. *In order to obtain a complete mastery over the gun*, the young beginner should proceed in something like the following order:—Let the handling and shouldering of the gun be expertly acquired in its unloaded state, taking care to regard its height, length of arm, and inclination of shoulder of the pupil. This practice should be gone through for an hour or two at a time for some days, until complete familiarity with all the required movements is attained. He should be expert at raising or depressing his gun to every kind of level, and taking an aim at various objects. To hold the gun firmly to the shoulder is an important consideration. It is likewise recommended to place the left hand close, or nearly so, to the trigger, as this prevents, in a great measure, any danger from the bursting of the piece. *To cultivate a steady and decisive mode of walking and standing*, is very advantageous for successful shooting. Anything like trepidation and an indecisive gait are inimical to successful sport. A firm placing of the limbs greatly assists the arms in readily and gracefully elevating and presenting the gun. The gun should be carried barrel upwards, and sloped towards the left arm, the lock being clasped by the hand of that side, the fingers embracing the stock, which allows the arm, though supporting the gun, yet to do it with readiness and ease, and to be placed with facility within the grasp of the hand previous to the meditated elevation. In the act of cocking, the forefinger should quit the front of the trigger, and extending itself sloping forward through the guard, only feel the side of it with a gentle pressure. The body, by this action of throwing out the butt, combined with the step-out of the left leg in taking form, will be brought with its weight principally upon that limb; a position assumed as more immediately called for, when the flight is nearly in a line from the gunner, or to the left, which will comprise four out of five of all the shots. Again, when the word *present!* is used either audibly or mentally, the following directions are given. Let the

barrel at this moment, inclined over the left shoulder, be swept in a circle forwards with a smart motion, the forefinger of the right hand (moving as directed above) being as it were the centre of motion upon which the gun turns during the sweep; by which action, the butt should be raised nearly to its full height, and then bring it back with a sharp motion into its place within the shoulder; whilst at the same time, an increased grasp with the left hand, which till now has kept its hold very loosely, combines with that of the right hand upon the gripe of the stock, to keep it firmly there. *The direction of barrel to the mark*, or what may be termed the line of level to be taken, in the first instance, is a little below what, as already drawn by the eye to the object, may be distinguished by the name of the line of sight. The latter should be firm and immoveable, to which a precise adjustment of the line of level must be firmly made by an easy flexure of the upper part of the body altogether, but without any loosening or twisting of the butt from its firm hold within the shoulder; and on the instant that these two lines are brought into contact, bear direct upon the object. Before an object crossing, the aim should be full high for a bird rising up or flying away very low, and between the ears of hares and rabbits running; it should be straight away; all this in proportion to the distance; the shooter rarely erring by firing at the crossing bird when at forty yards, at least five or six inches before it. As the barrels of double guns usually shoot a little inwards at long distances, there is so far a preference in favour of the right barrel for an object crossing to the left, and *vice versâ*. Till the pupil is fully master of these intricacies, he will find great assistance from the sight, which he should have precisely on the intended point when he fires; he will thus by degrees attain the art of killing game in good style, which is to fix his eyes upon the object, and fire the moment he has brought up the gun. The shooter should accustom himself not to take his gun from his arm till the bird is on the wing, and never to vary his eye from the very one it first fixed upon. Another good rule is, that as soon as the eye bears on the object to be fired at, provided that the muzzle of the gun does the same, then it is proper to fire; for when the eye dwells too long, the distance becomes increased, and the sight is impaired. To kill birds flying across either to the right or the left, allowance must be made by the shooter not only for the distance he is from them, but also for the strength of the birds and the velocity of their motion; thus, it must be taken into account that the flight of a partridge in November will be greatly accelerated to what it was two months before. It may also be mentioned that in a cross-shot to the right, the difficulty is very much increased if the right leg is first when the birds rise; the gun cannot then be brought but a very trifling way beyond a straight line to the right. When dogs point, or when game has been marked and expected to spring, the walk should be with short and easy steps; the body can then be easily turned upon the legs, as if on a pivot, and the range of the bird commanded even if it should fly quite round the sportsman. The science of aiming accurately, however, will be of little service, except the gun be held steady from all starting or flinching in the act of firing. *Shooting in company* has given rise to a code of laws for the government of sportsmen. All birds that cross should be considered as belonging to the gunner to whose side their heads are pointed, unless a previous understanding is come to, that either party may take an after-rise and go away fair from either party, it may be proper to have it previously understood that such should be taken alternately by each shooter. The following *precautionary observations* should also be attended to:—A gun should always be held with the left hand, and close to the guard; all the requisite standing for taking aim, and even of motion, in following the flight of a bird can be obtained in this manner, if the piece be of the heaviest description. With double-barrelled guns, the shooter, when he fires one barrel, should uncock the other, previous to re-loading. The carrying of a gun in a safe position, cannot be too strongly insisted on. The subjoined *items of advice in connection with sporting generally*, will be found useful. If you or your dog should at any time receive a severe blow, foment the injured part instantly with water, as hot as it can be borne, for at least half an hour. If you burn yourself in shooting or otherwise, wrap the part affected immediately in cotton. If you should take cold, and the inflammatory process appears rapid, bathe your feet in hot water; and add salt, or bran, or both, if procurable. Get into a warm bed, and take some whey, or other drink promoting perspiration. Never fast too long, and avoid, if possible, excessive fatigue. Never venture out with an empty stomach, particularly in the morning. Should you wish to rise early before any of the household are stirring, you can have a crust of bread or biscuit, with a glass of milk set aside for you over night. Avoid having recourse to the excessive use of spirits; a little taken occasionally will not, however, prove hurtful. Never sit down with wet feet, nor with wet clothes on any part of your body; if a change cannot be procured continue walking about, or, what is better, go to bed until some dry clothes can be procured; or, if you wish to start again, after taking refreshment, first wet your feet with spirits or essence of mustard, and take your refreshment as quickly as possible. To keep the body warm, dry, and comfortable is the surest plan of increasing sporting pleasures, and of making them really conducive to health.

The comfort of the head in shooting is a very great consideration. The "Sportsman's Cap," manufactured by Mr. Joseph Birkhead, 4, Cheapside, London, is a *multum in parvo*. It is made of horse-hair, and is light and cool; in fine weather the front

tippet may be turned down, forming a peak to shade the eyes; in dull weather, and in close cover, the peak may be turned up, and be out of the way. In wet weather the lappets front and back may be turned down, to keep the rain from the face and neck. It may be worn in the style of the Scotch cap, the pointed ends being front and back; or of the French cap, the ends being at the sides. In a railway train, it forms a good lounging cap, and at the opera it may be doubled up in the pocket, or be sat upon without injury or inconvenience. Mr. Birkhead forwards these caps free by post in return for six shillings' worth of postage stamps. — See BLACKCOCK, GROUSE, GUN, GUNPOWDER, PARTRIDGE, PERCUSSION CAP, PHEASANT, PIGEON, POINTER, POWDER FLASK, SETTER, SHOT-BELT, SNIPE, SPANIEL, WADDING, WILD-FOWL, &c.

SPRAINS AND STRAINS.—These two words, in a medical sense, have exactly the same interpretation, and mean precisely the same thing. A violent contortion, straightening or wresting of the tendons, sinews, or leaders of the muscles from their natural state, caused by some sudden accident, and accompanied by considerable pain, and often discoloration and swelling. Sprains or severe stretching of the sinews, may occur in the course of *any muscle*, though they chiefly take place *over joints*, such as at the shoulder, wrist, knee and ankle, and are produced by any cause that completely or partially dislocates the joint, or preternaturally elongates the muscle. For severe sprains attended with swelling, if over a joint, it will be necessary to apply from six to twelve leeches, and encourage the bleeding by a hot poultice continued for the space of an hour, after which time, a lotion made as follows, and used hot, should be applied frequently or every two or three hours, till the swelling is reduced and the part assumes a mottled and yellowish appearance. Take of—

Sal-ammoniac	½ oz.
Sugar of lead	½ oz.
Dissolve in	
Camphor water	20 ozs.
And add	
Vinegar	4 ozs.

Mix. Make hot, and apply by means of a napkin, or fold of flannel. When the swelling has been subdued and only a stiffness of the joint and weakness remains, the part must be rendered supple and strengthened by repeated friction with the hand, and any simple substance, such as oil or lard, rubbed well into the part two or three times a day. If this should not be sufficient, and as sometimes happens, a thickening of the part remains, an embrocation of the following ingredients is to be employed. Take of—

Camphoretted oil	2 ozs.
Oil of amber	½ oz.
Hartshorn	½ oz.

Mix. To be used two or three times a day For milder cases of sprain, a simple fomentation of chamomiles and poppy heads, may be employed in the first place for a few hours, till the pain is subdued, and the part afterwards rubbed with sweet oil or opodeldoc. Sometimes it is advisable to use the sugar of lead lotion, cold, and again alternated with it made hot, but as a general rule, over joints, it is best to use heat, and cold lotions to other parts.

SPRATS BOILED.—Put the sprats on a gridiron over a clear fire, sprinkle a little flour and salt over them, then turn, in a couple of minutes, when the other side is brown take them from the fire, put them in a hot dish, and serve them up with melted butter.

SPRATS FRIED.—Clean and dry them thoroughly in a cloth, fry them plain, or beat an egg on a plate, dip them in it, and then in very fine bread-crumbs that have been rubbed through a sieve; the smaller the fish the finer should be the bread-crumbs. Biscuit powder is still better; fry them in plenty of clean lard or dripping; as soon as the lard boils and is still, put in the fish; when they are delicately browned, they are done; this will hardly take two minutes; drain them on a hair-sieve placed before the fire, turning them till quite dry.

SPRATS PICKLED.—Boil the sprats without taking off the scales in just enough liquor to cover them, do not over-boil them; when the fish is done, lay it slantingly to drain off all the liquor; when cold, pack it close in barrels or jars, fill them up with equal parts of the liquor the sprats were boiled in (having first well strained it), and good vinegar, let them rest for a day, fill up again, then head them down as close as possible.

SPRATS STEWED.—Wash and dry the sprats and lay them as level as you can in a stewpan, and between every layer of sprats, put three peppercorns, and as much allspice, with a few grains of salt, barely cover them with vinegar, and stew them one hour over a slow fire; they must not boil; a bay-leaf is sometimes added. Herrings or mackerel may be stewed in the same way.

SPRING SOUP.—Cut an equal quantity of carrots, turnips, onions, and leeks, stand them in some good stock; add some French beans, peas, beans, cucumbers, asparagus, lettuces, sorrel, and chervil, add a little bit of white sugar: let them reduce nearly to a glaze, then add to them some stock, thickened with green peas rubbed through a tamis.

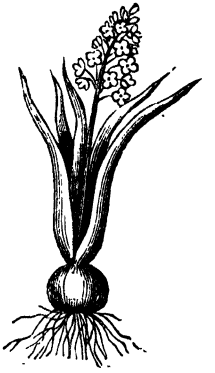
SPRING VINEGAR.—Dry cress, tarragon, pimpernel, chervil, &c., in the sun, and then put into a pitcher with six cloves of garlic, as many shallots and onions, a handful of mustard seed, some cloves, coarse pepper, and a lemon cut in slices with the peel on; the pitcher, which should be large enough to contain five or six gallons, is then to be filled with cold vinegar, and stopped close; expose it for about a fortnight to the heat of the sun, then filter it, and bottle and cork it for use.

SPRUCE BEER.—Pour four gallons of cold water into a nine-gallon barrel, then add four gallons more, quite boiling, and six pounds of molasses, with about eight or nine tablespoonfuls of the essence of spruce,

and on its getting a little cooler, the same quantity of good old yeast. Shake the barrel well, then leave it with the bung out for three days; bottle in stone bottles, cork well, wire carefully, pack in sand, and it will be fit to drink in two weeks.

SQUAB PIE.—Prepare apples as for other pies, and lay them in rows with mutton chops. Shred some onion, mix with brown sugar, and sprinkle among them, then add a little pepper and salt, pour in a teacupful of water; having previously lined the dish as usual, bake it well.

SQUILLS.—This herb is a stimulant, a diuretic and expectorant. It is employed as an expectorant in coughs of long standing, bronchitis, and the advanced stages in whooping cough. As a diuretic it is given

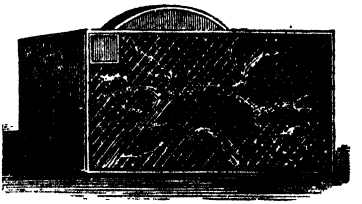


in dropsies, combined with small doses of camomile, or blue pill; it should not, however, be given in dropsies, if there be any disease of the lungs or kidneys existing at the same time. As a diuretic it is generally given in the form of pills. In the form of oxymel of squills it is given to children labouring under whooping cough, in doses of from one to two teaspoonfuls, three or four times a day; in powder the dose is from one to ten grains; if to act as an emetic, from ten to twenty grains are administered.

SQUINTING, OR STRABISMUS. — An affection of the eye, by which persons see objects in an oblique manner from the axis of vision. The cause of this distorted position of the eye, is owing to an unnatural contraction of a certain set of muscles, that move the eye-ball, and which being in a state of permanent spasm or contraction, draw the eye from its proper axis of sight. Modern science, among other benefits to mankind, has discovered a perfect cure for this very unpleasant deformity, and that by simply dividing the minute muscle, whose contraction caused the obliquity, when the opposing muscle at once draws the orb into its proper axis. As this is a strictly surgical case, in which professional aid is imperative, it is unnecessary to say more in this place on a disease that can only be cured in adult age by the surgeon. When, however, it occurs in infancy, a cure is sometimes effected by making the child wear *goggles*, a kind of wooden spectacles, like the snow-eyes of the Esquimaux; or by tying up the sound eye, and compelling the child to look in an opposite direction for everything it requires, a cure is sometimes obtained; but with the assistance of chloroform, and the moral certainty of a cure by cutting the muscle, no one need now endure the annoyance of an obliquity of vision.

SQUIRREL.—This is one of the prettiest and most engaging of all domestic pets. The

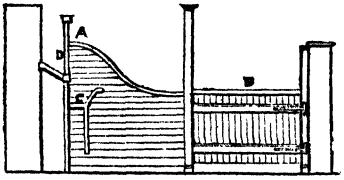
cage in which it is confined should be at least six feet long and four feet high; it should also be provided with perches like the branches of a tree. There should be a sleeping-box, opening with a door behind, for the purpose of cleaning it; let there be also a food-box and water-pan, nicely adjusted. The edges of the cage should be covered with tin, or the animal will soon set himself at liberty with his teeth. The moveable or turn-about cage, so much in vogue, is an unnatural habitation, and conduces neither to the



animal's health nor recreation. Squirrels may be fed on all kinds of fruits, particularly those of the nut kind, such as filberts, wood nuts, walnuts, almonds, acorns, beech-nuts; and they are very fond of the cones of the fir-tree. They will also sip milk, and eat bread and milk with avidity. Some squirrels are very difficult to tame; and when this is attempted, they must be taken from the nest at a very early age. With care, attention, and method, the squirrel may be brought to know, love, and obey his keeper, and to come at his call. They may be also taught a number of entertaining tricks.

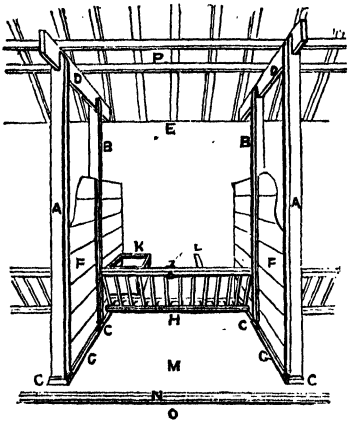
STABLE MANAGEMENT.—The stable is an important building, as its selection, convenience, and general management greatly influence the health of the horse. The situation of the stable should always be on dry, firm, and hard ground, that in winter the horse may go out and come in clean; and, where possible, be built rather on an ascent, so that the refuse matter may run off and be easily conveyed away by drains for the purpose. The horse delights in cleanliness, and dislikes unpleasant odours; on this account no hen-roosts, pig-styes, or other nuisances should be near the stable. The walls of a stable ought to be of brick rather than stone, and should be made of a moderate thickness, two bricks or a brick and half at least, or the walls may be built hollow, not only for economy, but for the sake of warmth in the winter, and to keep out the heat in the summer. The windows should be proportioned in number to the extent, and made on the east or north side of the building, that the north wind may be admitted to cool the stable during summer, and the rising sun all the year round, especially in winter. They should either be sashed or have large casements, for the sake of letting in air enough; and there should always be close wooden shutters, turning on bolts, that the light may be shut out at pleasure. Sometimes the whole of the stable is paved with stone, but occasionally that portion on which the horse has to lie, is boarded with oak planks, which should be laid as even as possible, and cross-wise rather than length-wise; and there should be several holes bored through them, to carry off the refuse underneath the floor by gutters into one common receptacle. The ground behind should be raised to a level with the planks, and be paved with small pebbles. The depth of a stable should never be less than twenty feet, nor the height less than twelve. The width of a stall should not be less than six feet clear. But when there is sufficient room it is a much better plan to allow each horse a space of ten or twelve feet, where he may be loose and exercise himself a little. This will be an effectual means of preventing swollen heels, and a great relief to horses that are worked hard. With respect to the rack and manger, the former is preferable on the ground, rising three feet high, eighteen inches deep from front to back, and four feet long. The manger eighteen inches deep, eighteen inches from front to back, and five feet in length. The rack should be closed in front, as it is better adapted for saving hay. The back part of the rack should be an inclined plane, made of wood, gradually sloping towards the front, and terminating about two feet down. The advantages of this rack are numerous: in the first place, the hay is easily put into it, and it renders a hay-loft over the stable unnecessary. All the hay that is put into this manger will be eaten, whereas in the common rack it is well known that a large portion of the hay is often pulled down upon the litter and trodden upon, whereby a considerable quantity is often wasted. It prevents the hay-seed or dust from falling on the horse, or into his eyes. A great saving is also made in oats by fastening the horse's head during the time of feeding, that he cannot throw any of them out of the manger. This kind of rack and manger, from being boarded up in front, will effectually prevent the litter from being kept constantly under the horse's head and eyes, by which he is compelled to breathe the vapours arising from it. It will also prevent him from getting his head under the manger, as sometimes happens, by which means the poll-evil is frequently produced. The length of the halter should only be four feet from the head-stall to the ring through which it passes,—this will admit of his lying down with ease, and that is all that is required. The ring should be placed close to that side where the manger is, and not in the centre of the stall. The side of the stall should be sufficiently high and deep to prevent horses from biting and kicking each other. When the common rack and manger are preferred, the rack-staves should be perpendicular, and brought nearly down to the manger, and this may easily be done without the necessity of a hay-loft, and the manger may be made deep and wide, as described. The window of the stable should be at the south-east end, and the door at the opposite end. The window should be as high as the ceiling will admit of, and in size proportioned to that of the stable. In one of twelve feet high, it need not come down more than four feet; it will then be eight feet from the ground, and out of the way of being broken. The frame of the window should be moveable upon a pivot in the centre, and opened by means of a cord running over a pulley in the ceiling, and fastened by means of another cord. With a window of this kind in a stable of three or four horses, no other ventilation will be required. A stable thus constructed will be found conducive to the health and comfort of the horses, and will afford an inducement to the horse-keeper to attend to every little matter that can contribute to cleanliness. Neither dogs, fowls, nor goats, should ever be permitted to enter a stable; and the manure heap should be kept at a distance from it. A good contrivance for cleaning horses is to have two straps, one on each side of the stall, about a yard from the head of it. By these the horse may be fastened during the time he is being cleaned, by which he will be effectually prevented from biting the manger or the horse-keeper; and being kept back in the stable, the man will be better able to clean the front of his fore legs, chest, and neck, and be able to move round him. In Scotland, farm stables are constructed in such a manner, that all the horses stand in a line with their heads towards the same side-wall, instead of standing in two lines, fronting opposite walls. Those lately erected are at least sixteen feet wide within walls, and sometimes eighteen, and the width of each stall upon the length of the stable is commonly five feet. To save a little room, stalls of nine feet are sometimes made to hold two horses; and in that case, the manger and

the width of the stall are divided into equal parts by what is called a half-travis, or a partition about half the depth of that which separates one stall from another. By this contrivance, each horse, indeed, eats his food by himself; but the expense of single stalls is more than compensated for by the greater ease, security, and comfort of the horses. The travises or partitions which divide the stalls, are of deal, two inches thick and about five feet high, but at the heads of the horses the partition rises to the height of seven feet, as shown in the engraving at A, and the length of the stall is usually from seven to eight feet. In many



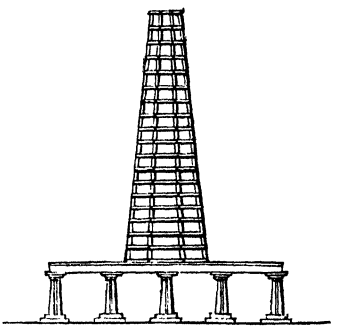
cases the end stall has a door, or frame of boards, to fit in between it and the back wall, in order to enclose food of any kind, a sick horse in foal, &c. The manger is generally continued the whole length of the stable. It is about nine inches deep, twelve inches wide at top, and nine at the bottom, all inside measure, and is placed about two feet four inches from the ground. Staples or rings are fixed on the breast of the manger, to which the horses are tied. The rack for holding their hay or straw, is also commonly continued the whole length of the stable. It is formed of upright spars, D, connected by cross-rails at each end, and from two feet to two and a half feet in height. The rack is placed on the wall, about a foot and a half above the manger, the bottom almost close to the wall, and the top projecting outwards, but the best plan is to place it upright (C D A). The spars are sometimes made round, and sunk into the cross-rails, and sometimes square. Immediately above the racks is an opening in the hay-loft, through which the racks are filled. When it is thought necessary, this may be closed by boards moving on hinges. Behind the horses and about nine feet from the front wall, is a gutter, having a gentle declivity to the straw-yard. Allowing about a foot for this, there will remain a width of eight feet to the back wall, if the stable be eighteen feet wide; a part of which close to the wall is occupied with corn chests and places for harness. The temperature of the stable is a circumstance that requires particularly to be attended to. In general, there is a predilection for warm stables. Well-bred horses require a warm and genial temperature in the stables, supposing of course the air to be pure, to ensure the glossiness of coat, so essential to the beauty of the animal. But although it has this effect, a very glossy coat in winter is not desirable; nature has a tendency to proportion the degree of fineness of the coat to the season, making it a little rougher in winter than in summer. The glossiness of the coat should be more the result of careful grooming than of unnatural warmth. The bad effect of hot stables is evident from the diseases frequently occasioned by taking horses out in the open air, particularly in cold weather, when the temperature is thirty or forty degrees below that of the stable. This is often the cause of rheumatism, catarrh, or inflammation of the lungs, when horses are kept standing long in the cold, notwithstanding that exercise keeps them warm for a time. It is also generally known that a sudden return to hot stables is nearly as dangerous as the change from a heated atmosphere to a cold and biting air. No horse in the stable should sweat under his clothing; by so doing he is rendered highly sensible to external impressions from alternation of temperature, producing a morbid irritability of skin, and consequently a greater susceptibility to many diseases; it also proves a relaxant. The heat of a well-regulated stable in summer should not vary from between sixty and sixty-five degrees; nor in winter much from fifty. Some have even found the advantage of accustoming horses to a cooler atmosphere by keeping them much in the open air. It is essential to learn to distinguish between merely heated and foul air; both of these being frequently confounded under the term *close*. But air may be warm without being in the least unwholesome, and may be cold and yet very foul; the wholesomeness for respiration not depending upon the temperature, but upon the gases which compose it, and the noxious vapours with which it may be contaminated. The temperature should be ascertained by a thermometer kept in the stables. The bad effect of hot stables is now pretty well understood, but still many do not know the difference between common and simply heated, and one heated and mixed with other noxious gases. It is easy to understand that the air which we breathe, becomes unfit for the support of life, when deprived of its vital principle through the act of respiration. It is necessary, therefore, to get rid of this foul air, so that it shall not be respired again, and to introduce fresh air that possesses the property so essential to life. The air of stables is not only deteriorated by the breathing of the animals, but it is further contaminated by emanations from the body, as well as by the noxious ammoniacal vapours, arising from the refuse. These vapours are hurtful to the lungs of the horse, and still more particularly to its eyes, and are frequently the source of blindness and other diseases. The most effectual mode of managing the ventilation of stables is by having large trunks or tubes of board, about a foot square, to pass through the ceiling and roof into the open air, leaving their tops covered in such a way, that the heated air can go out, but no rain can come in. If it is impossible to send them out through the middle of the ceiling, they may be carried out just beneath

it through the wall; and it will be best if there be a tube to each stall; or windows with luffer-boards, to be opened or shut as may be required, and placed at convenient situations. It is to be observed that no air can go out except an equal quantity be admitted to supply its place, as the stable must at all times be equally full of air; therefore, apertures for the admission of fresh air should be made somewhere at the lower part of the stable, where the draught will be least prejudicial. In a small stable, the bottom of the door will do for this, if a board be placed below the aperture in it



slanting, so as to direct the current of air that enters upwards, instead of it coming horizontally, which might strike upon the legs of the horses. In larger stables, where more fresh air is required, numerous small apertures are better than one large one, placed in such a manner that the air cannot reach the horses in cold currents, which may be injurious to them; they should also be so contrived that the air admitted may soon mix with the rest. The light of stables requires regulating, so that the horse is not plunged in gloom on one hand, nor dazzled by the light on the other. Windows should be placed high up in the stable, that the light may not come into the horses' eyes; and the glass should be in imitation of ground glass, to keep out the direct rays of the sun. When opened in summer, a net should be kept across the opening, to keep out the flies from annoying the horses. White-washing or lime-whiting the walls and ceiling of the stables is very proper on account of cleanliness; but, except the stable is rather dark, it is best not to make the walls quite white, but with a tinge of brownish yellow or stone colour, this being less glaring for the horses' eyes. For night, the best lights are candles, or lamps in lanterns. The gas-lights which are sometimes employed to burn continually in stables, are extremely prejudicial, as they consume much of the vital part of the air, and sometimes suffer the carburetted hydrogen to escape unhurt, which is very injurious. The annexed engraving gives a view of the particulars of a *stable for work-horses*, fitted up with wooden travis-posts, which is yet the common method; A A are the strong hind-posts; B B, the head-posts, both sink into the stone blocks C C C C, and fastened to the battens D D, stretching across the stable from the wall E to the opposite wall; F F, are the travis-boards, let into the parts A A by grooves, and passing between the two divisions of the posts B B; the boards are represented high enough to prevent the horses worrying one another; G G are curb-stones set between the hind or fore posts A and B, to receive the inside of the travis-boards in grooves, and thereby secure them from decay by keeping them above the action of the litter; H is the sparred bottom of the hay-rack, the upper rail of which holds the ring I for the stall collar-shank; K is the corn-manger or trough; L the bar across the rack, to prevent the horse dragging out the fodder; M the pavement within the stall; N the freestone gutter for conveying away the refuse to one end of the stable; O the pavement of the passage behind the horse's heels; P are two parallel spars fastened over and across the battens, when there is no hay-loft, to support trusses of straw or hay, to be given as fodder to the horses in the evenings of winter, to save the risk of fire in going at night to the straw-barn or hay-house with a light.

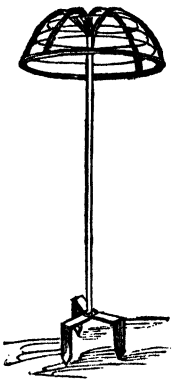
STACK-FUNNEL.—This contrivance in connection with the building of hay-stacks



may be formed of a few poles placed on a circular, square, or angular base, and having a few short spars nailed across, or a straw-rope wrapped round.

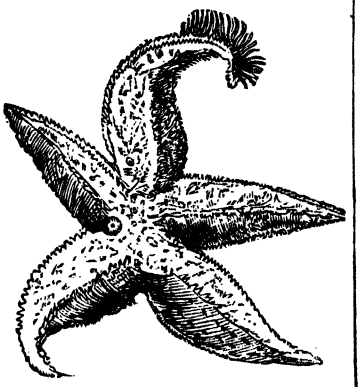
STAKE.—In horticulture, an implement employed for giving support to trees, shrubs, and plants. Iron stakes are of great variety, and are made of both cast and malleable metal. Flat wrought iron stakes and wires are used for the support of peas and other annual plants. Iron stakes for roses are

sometimes formed with expanding heads, as seen in the engraving. When fixed in

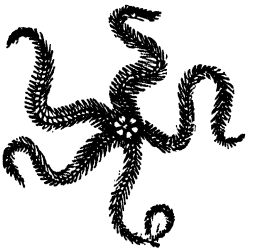


the ground, these stakes should stand an inch or two higher than the stock on which the rose is grafted. The branches of the graft may then be trained regularly to the spreading head of the stake.

STAR FISH.—These are among the most striking objects of the sea-shore, their curious and symmetrical forms attracting and inviting the attention of all observers of nature. The true star-fishes are either star-like, or angular, in form. They are covered with a tough leathery integument, which is more or less strengthened by a net-



work of calcareous plates, and in most species, with strong spines, variously arranged. Among and on the spines in many species, are curious pincer-like bodies. The under surface of the body presents the mouth in the centre, and deep grooves radiate from it. These grooves contain extensive suckers, capable of adhering to the surfaces of the bodies by the means of a terminal disc. The usual number of rays is five; but there are various other numbers, from three to nine. In some the rays are long and slender, in others short and obtuse; sometimes covered with spines, or otherwise with smooth or



granulated plates. The brittle star-fish is one of the handsomest specimens, displaying in addition to its curious form, vivid hues, arranged in beautiful patterns.

STARCH, TO PREPARE.—Put two or three tablespoonfuls of starch into a bowl, and mix it gradually with just enough of clear cold water to convert it into a thin paste, pressing out all the lumps with the back of the spoon till it becomes perfectly smooth; then pour it into a clean pipkin or skillet. Have ready a kettle of boiling water, and, by degrees, add some of it to the starch, stirring it well. A pint or a quart of the hot water may be allowed, according as it is desired that the starch should be thick, thin, or of a moderate consistence. Set it on hot coals, and boil it thoroughly for half an hour. If not well boiled, it will fail to be glutinous. When it has boiled for about fifteen minutes, stir it a few times, for a moment each time, with the end of a spermaceti candle. This will prevent it becoming sticky. If a spermaceti candle is not at hand, sprinkle in a little salt, about a teaspoonful to a pint of starch, or throw in a piece of loaf-sugar. Finish by stirring it vigorously with a spoon. Strain the starch through a white cloth into a large pan, and squeeze into it a very little blue from the indigo bag; but it must be very little.

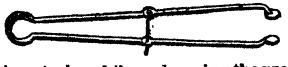
STARLING.—This is an amusing bird to keep; it may be taught various entertaining tricks, and even instructed to repeat short phrases, or to whistle tunes with great exactness. They should be taken from the nest when about ten days old, put into a basket with some clean straw, and kept warm. Whatever is desired to be taught them should be whistled or repeated to them at feeding time. In feeding them, the same food may be used as for the blackbird; they should be given five or six pieces at a time, about the size of a horse-bean. When they

can feed themselves, the food of the wood-lark, and a little flesh meat will, from

time to time, be necessary. To keep them in health, they should occasionally be given a spider or a meal-worm, and have a little saffron put into the water.

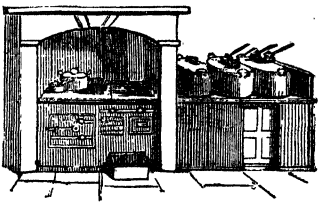
STARVATION.—Though this term implies death from either hunger or cold, it is in the former sense only that it is now popularly understood. As the human body can resist the ravages of hunger and thirst for a considerable time, the decay of vital energy is gradual, and always accompanied by a corresponding waste of the physical frame; consequently, the body of a person who has lost his life from a deprivation of sustenance, always bears upon it such characteristic appearances of gaunt emaciation, attenuated limbs, sunken eyes, and hollow temples, as leaves no doubt on the mind of the beholder as to the cause of death. In cases where, from long deprivation from food, a person is reduced to a state that might have eventuated in dissolution, great care is needed in administering nourishment, which in all such cases must be looked on as a medicine, and given in small and guarded doses; for the greater has been the exhaustion, the more prone is the patient to suffer from the re-action, that, sometimes, from a state of powerless prostration, rouses in a few minutes to delirious fury; the patient often sinking under the means necessary to pull down the feverish excitement induced by the means used to save him. Thin gruel, or mutton broth, slightly thickened with crumbs of bread, given in a few tablespoonfuls at a time, and repeated every ten minutes, is the best restorative and nourishment that can be given to a person long debarred from food. Even this must be withheld when the face flushes, and the pulse rises suddenly. Conjointly with the above form of nourishment, hot water must be applied to the feet, and sometimes a hot fomentation is necessary to the stomach.

STEAK-TONGS.—For turning and removing steaks while undergoing the process

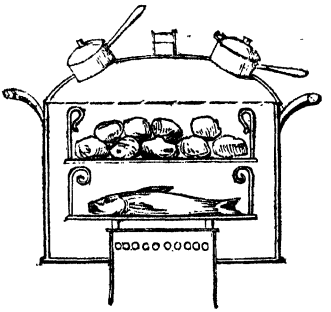


of cooking, steak-tongs, as represented in the engraving, are best adapted, as the size of the ordinary fork suffers the juice of the meat to escape.

STEAMING.—The application of steam to culinary purposes has much to recommend it, especially in large establishments, which may be so fitted up with the apparatus as to admit of the process being conducted on an extensive scale, with very little trouble to the cook. Steaming may be conducted on a small scale, with a common saucepan or boiler, fitted with a simple tin steamer. By means of a kettle fixed over it, the steam of the boiler in the kitchen-range may be made available for cooking in the manner shown in the engraving, which



exhibits fish, potatoes, and sauces, all in progress of steaming at the same time. In the apparatus especially designed for the purpose, the meat is placed in a kettle with a valve to it, and without water. Steam is introduced; and, according to the pressure of the valve, will be the temperature at which it is steamed. If there is no valve, it will not rise above two hundred and twelve degrees; but with a very slight weight upon a common metal plug, it soon rises to two hundred and forty degrees, or even higher. There is much less waste in this way, both of heat and of the pieces of the meat; and, in point of economy, there-



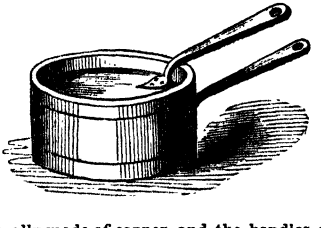
fore, the plan is a very good one. The steam kettles may be placed at any moderate distance from the fire, and the pipes being

furnished with stopcocks, the steam is either admitted at the full or partially, and under pressure or not, a waste-pipe being also fitted. Vegetables steamed in this way, are particularly tender, but not of quite so good a colour as in boiling. When it is desirable to boil water by steam for the purposes of cooking, as for some of the vegetables, soups, &c., it is only necessary to fill any of the above steam kettles with water, and then turn on the steam as usual. The water is soon heated to the boiling point, and then acts exactly as if placed on an ordinary fire.

STEEL, PREVENTION OF RUSTING.—Dissolve half an ounce of camphor in a pound of hog's lard; take off the scum; mix as much black-lead as will give the mixture an iron colour. Iron and steel goods rubbed over with this mixture, and left with it on twenty-four hours, and then dried with a linen cloth, will keep clean for months. Valuable articles of cutlery should be wrapped in zinc-foil, or be kept in boxes lined with zinc. This is at once an easy and most efficient method.

STEREOSCOPE.—Books:—*Ingleby's Stereoscope and Binocular Vision*, 1s.; *Brewster's Stereoscope*, 5s. 6d.; *Lomi's Stereoscope*, 1s.; *Ackland's How to take Pictures*, 1s.; *Lane's Art*, 1s.; *Dictionary of Useful Knowledge*, article *Stereoscope*.

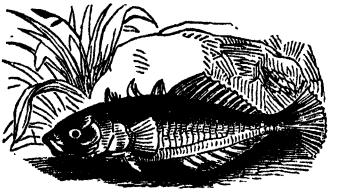
STEWING.—A wholesome, convenient, and economical mode of cookery. One of its great recommendations is the small amount of fuel consumed to sustain the gentle degree of ebullition required. The common cooking stoves employed in the country are not very well adapted for the exact regulation of heat which stewing demands. The stoves used in France are admirably suited for this purpose, as are also the hot plates or hearths with which the kitchens of well-appointed houses are also furnished; but when these conveniences do not exist, the stewpans must be placed on trivets high above the fire, and be constantly watched and moved, as occasion may require, nearer to, or further from the flame. Thick, well-tinned iron saucepans will answer for stewing, provided they have tightly-fitting lids to prevent the escape of the steam. The enamelled stewpans, which have lately superseded the old-fashioned metal ones, are peculiarly well suited for this culinary process. They should always be filled with water immediately after being emptied, and will then merely require to be well worked and rinsed with more boiling water. In order to produce a good stew, there should be prepared a sufficient quantity of sweet and rich stock. The different ingredients of which the stew is composed should also be well mixed. Meat, in stewing, is apt to stick to the bottom of the vessel. To prevent this, it is desirable to place across the stewpan some skewers, a little way from the bottom; or an inverted soup-plate may be used for the same purpose. If vegetables are old, they should be blanched or parboiled before they are added to stews, otherwise they will give to the meat and gravy too strong a flavour. Care should be taken that the various kinds of thickening should be added at the proper time, and in a proper manner. Whole grain or seed, such as pearl-barley or rice, should be put into stews when they are at boiling heat. When bread is used for thickening, a similar rule must be observed, and care should be taken not to break it; but let it boil whole till it becomes a pulp, and incorporates itself with the liquor. All thickenings of flour or meal should be stirred with a cold liquid till it is perfectly smooth; it should then be stirred into the general mass. In spicing stews, great judgment is required, so as not to displease the general taste. It is better to use whole spice than that which is pounded. If dried after using, it will serve for several stews. The fat which covers stews when they are cold should not be broken if they are intended to be kept. By thus excluding the external air from the stew, it will prevent the mass from fermentation and consequent decay. The quantity of water used in stews should be double the weight of the meat, that is, a quart of water to a pound of meat, which leaves a pint of liquid stew. Salt should be used in sufficient quantity to separate the blood from the meat, and to cause it to rise in the shape of scum, which carefully remove. When the scum is raised by brisk boiling, and got rid of, let the stew simmer very gently, till all the nourishing, flavouring, and colouring properties of the meat, &c., are thoroughly incorporated with the liquor. The ordinary stewpan, as seen in the engraving, is



usually made of copper, and the handles of the cover are placed as shown herein. Copper stewpans should be kept well tinned on the inside, to prevent the unpleasant flavour and the injury like to result from the impregnation of copper. In a dietetic point of view, stews are conceded to be more digestible and nutritious than meats otherwise cooked, inasmuch as the nutrient portions of the first are presented in a form most readily assimilated by the system, whilst, at the same time, not a particle of that nutriment is wasted. Book:—*Housewife's Reason Why*, 2s. 6d.

STICKLEBACK.—A dark-coloured little fish, found in ditches and ponds. They are best caught with a small hand-net, and are used as bait for perch. These fish may also be put into a vase, and kept easily for a considerable time. Where they exist in any

great numbers, they may be given as food to poultry, to which they prove very nutri-

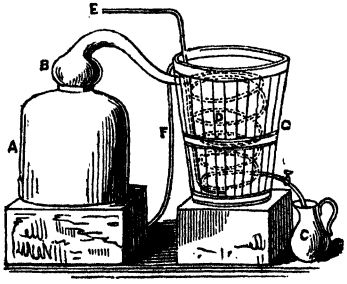


tious, and, it is said, render them peculiarly prolific by their stimulating qualities.

STILE.—A contrivance for persons to pass over or through fences, without the risk of admitting the larger quadrupeds. There are many forms of stiles: as by steps over a wall; by a zig-zag passage, formed by stakes, through a hedge or paling; a turning-bar or turnstile, &c. The stile of falling bars, as seen in the engraving, is

chiefly used in pleasure-grounds, or between paddocks; it consists of bars light at one end and heavy at the other, with concealed joints or pivots, in an upright post placed nearer one end of the bars than the other. Thus, while the weight of the short ends of the bars keeps them in a fencible position, a slight pressure on the other end will form a passage which any one may easily step across.

STILL.—A vessel or apparatus employed for the distillation of liquids. The forms of stills and the materials of which they are made, vary according to the purposes for which they are intended, some being exceedingly simple, while others are equally elaborate and complicated. The engraving



represents the most common and useful apparatus of this kind; A, is the body of the still; B, the still head or capital; C, the worm tub; D, the worm or refrigerator; E, the cold water pipe; F, the waste pipe; G, the receiver. After the fluid is put into the still, the head is placed on, and connected with the worm tub or refrigerator, and the joints are all securely luted. For ordinary liquids, a stiff paste made with linseed-meal and water, to which a little chalk may be added, answers well for this purpose. For corrosive liquids nothing is better than elastic bands or rings interposed between the joints, which are then "brought home" with screws or clamps. Heat is next applied, and the worm-tub is supplied with cold water in sufficient quantity to preserve its contents at a proper temperature; the application of the heat being so regulated that the liquid may drop from the end of the refrigerator, quite cold and unaccompanied with vapour.

STILTON CHEESE.—Take fifteen gallons of milk, warm from the cow; put twelve pints of sweet cream in a small tub, and pour on it a kettleful of boiling water, stir it till it be well mixed, and then put it into the cheese-tub with the milk, when it is at ninety degrees, add the rennet; when it has coagulated, break the curd a little, put a thin cloth over it, and take the whey off through it; when as much has been taken off, as will come easily, put the curd into a bag or net, and let it hang till it gives over dripping, then cut the curd in pieces, and lay it in as much cold water as will cover it; let it lie an hour, and as the pieces are taken out, strew a little salt upon them, and put them into the vat, first breaking the top a little, to make it join with the next piece; then lay a small weight upon it, so as not to occasion the whey to come off white. It must be turned every three hours the first day, and three times a day, for three days, changing the cloth every time it is turned in the vat, and keeping it under a moderate pressure; it is then taken out of the vat, swathed tight till it begins to dry the bandage, which must be changed every twenty-four hours; it ought to be rubbed with a little salt before it is bandaged, and for a considerable time wiped and turned every day. The best season for making this cheese is from July to October.

STIMULANTS, ALCOHOLIC.—Although, in a general sense, water is undoubtedly the purest and most wholesome beverage that can be drunk, still there exist exceptional cases where an alcoholic stimulant becomes a medical agent, and is accordingly had recourse to. It must also be observed that in the administration of this agent the greatest care must be observed as to the quantity that is applied. The effect of a moderate quantity of diluted spirit, or of wine or malt liquor, is very different from that of poisonous irritant doses of alcohol. When a moderate quantity of diluted alcoholic fluid, such as wine or malt liquor, is swallowed by a person in health, there generally ensues a feeling of warmth in and around the stomach, which is gradually diffused over the whole body, and is accompanied with a slight increase of nervous

and muscular energy, the functions generally being more actively performed, and the mental power increased. Such may be called the salutary effects of a moderate quantity of the stimulant. If the bounds of moderation be passed, the stimulation is increased, the pulse quickened, the cheek flushed, and the mind excited in excess: if the quantity of stimulant is still further increased, a degree of torpor is induced, both mental and bodily; perception is blunted, there is a general languor, giddiness, and obscurity of vision, incoherence of ideas, and incapability of exercising volition. The amount of stimulation caused by alcoholic fluids varies, of course, according to the strength of the dose, but also in some degree according to the habits of the individual; for there is no question that those who habitually drink strong wines or spirits derive little, if any, stimulation from the weaker alcoholic drinks; moreover, some conditions of the system modify greatly the stimulant power of alcohol. In spasm, in fainting, in depressed states of the system, from fever or other such causes, persons often take, with scarcely perceptible effect, doses of wine or spirit, which at other times would put them in a state of intense intoxication. Although, however, habit enables individuals to consume alcoholic drinks in greater quantity, and of greater strength, it by no means follows that this is done with impunity: if excess be habitually indulged in, the mucous membrane of the stomach becomes diseased, as the effect of a continued low state of inflammation, and even the other coats of the organ undergo changes of structure and indurations, which occasionally degenerate into cancer; at the same time the muscular and nervous systems, and the secreting organs generally, are apt to suffer seriously. In considering the effect of alcoholic stimuli on the system, due attention must always be given to the form in which they are taken. It is certain that ardent spirits will exert a much more irritating effect upon the nervous system, both locally in the stomach, and at large, than the fermented liquors. It is well ascertained, that a certain amount of wine, exerts less intoxicating effect than the spirit in the same quantity of wine would do, were it separated by distillation, and then diluted with water; and moreover, that different wines, although containing the same absolute proportion of spirit, will be found to vary very considerably in their intoxicating powers. The broad assertion that alcoholic liquors do not form a necessary part of the sustenance of man is correct so far as *healthy* men are concerned. Equally certain is it that there are persons whose functions are so debilitated and depressed, that they require alcoholic stimulants to maintain their digestive and other powers. The requirement may be artificial, but not more so than any other medicine administered under the various phases of disease. There are also accidental circumstances in which every one may at times be placed, and in which the question arises, whether the assistance of alcoholic stimulation may be had recourse to with benefit or not. Exhaustion by long exertion in extreme heat is one of these—the skin acting powerfully, discharges immense quantities of fluid, which must be compensated for. As long as the energies remain unimpaired, the compensation should be made by unstimulating drinks; by these the strength is every way better preserved; but when the energies flag, if exertion must still be made, a small quantity of diluted alcoholic stimulant may be taken with advantage. Under continued exposure to the effects of intense cold, especially if symptoms of torpidity supervene, the use of *undiluted* spirit may save human life. In such cases, however, the caution must not be forgotten, that the spirit should not be had recourse to early, and not, if possible, till it is used to stimulate to the last effort, to gain the place of safety. Other cases occur in which persons are compelled by circumstances to make continued exertions, involving loss of the usual rest; in these, after a time, the moderate use of the stimulant is highly beneficial. The necessity for the use of alcoholic stimuli, under the various external circumstances which tend to depress or exhaust the bodily powers, is, of course, greatly modified by the constitution, hereditary or acquired, of the individual. Some individuals there are who, from their birth upwards, are always at a low ebb, who have no power of endurance. Such persons generally require stimulants habitually, to enable them to keep up to life's duties at all; still more do they require such aids when exposed to conditions of depression or exhaustion.

STINGS, REMEDY FOR.—In this country the bee, wasp, spider, scorpion, and viper, are the only insects or reptiles that are at all likely to produce injury to the body. And these, though painful, seldom produce any serious harm, unless the sting has been inflicted on the throat, over the organ of voice, or in the mouth near the pharynx, or fauces. In these cases, the symptoms of suffocation that follow the sting, demand leeches to the throat, hot fomentations, cordials, and an opiate. But in all other parts of the body, whether the sting has been extracted or not, all that is needed is to wet the part freely with the extract of lead, and keep it covered with a rag wetted with the extract. It is customary to touch the affected part with hartshorn, and when nothing better can be procured, it may be used; but nothing is equal to the lead.

STOCK, CULTURE OF.—Of this favourite flower, the double species is the most highly esteemed for the beauty and deep tints of the flower, and for its delightful odour. Of the common or ten week stock, and the smooth-leaved there are not less than one hundred varieties, generally called German stocks. The single or Brompton stock is a biennial, of which there are also several varieties. The ten week stock in order that it may flower the same year, should be raised in a hot-bed, and transplanted as early in the spring as the state of the weather will permit. The Brompton, on

the other hand, should not be encouraged to flower till the second season, and on this account may be sown in the open air in

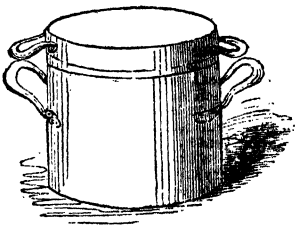
April or May, and transplanted in July to the situation where it is destined to remain. It is of importance that all the species of this genus should be transplanted when they are very young, because, having fusiform roots, and fine side fibres, they seldom recover from the check which they receive from being transplanted, after they are two or three months old. The chance of double plants is often very precarious. It is said that those seed plants which have more than the usual number of petals, that is, six or seven, instead of four, generally produce double flowers when the seed is again sown. It would be well, therefore, for the florist to mark such plants and preserve the seed to be sown separately.

STOCK EXCHANGE TERMS. — The technical terms made use of in the Stock Exchange are almost peculiar to its members; that peculiarity often shows itself in the abbreviation of words. Amongst the terms frequently made use of are the following:—*Consols* is an abbreviation of the term consolidated annuities, the prices of which rule, in a great measure, those of most other public securities. The annual interest is three per cent. *Omnium* is a term which signifies the whole of the stocks, of which a government loan consists, when two or more descriptions are given for £100 in money; and which may be made up of consols, reduced annuities, and long annuities, or of other descriptions of stocks. *Scrip* is an abbreviation of the term subscription, and is applied to each of the stocks given in exchange for a loan, as consol scrip, reduced scrip, &c., and may be sold separately as such, until all the instalments of a loan are paid up, when the term is no longer applied to them. The members of the Stock Exchange are called jobbers and brokers. The jobber is the dealer, who makes the price at the market value. The broker is the one who buys or sells to the jobber, for his principal, and takes his commission for transacting the business. A *bull* is one who buys to sell again at a higher price. A *bear* is one who sells to buy back at a lower price. Hence the constant use made of the phrases *bull* and *bear* transactions; or in other words, speculations for the *rise* and *fall*. A *stag* is one who is not a member of the Stock Exchange, but deals outside, and is sometimes called an *outsider*. These gentlemen not unfrequently write in a fictitious name for shares, and sell the letters of allotments. *Contango* is the sum paid per share, or per cent., for carrying over such shares for a longer period than they were originally bought for, which is from one account to another. *Backwardization* is when a party who has sold shares or stock, without having them in his possession to deliver, pays so much per share, or per cent. for not being compelled to do so until the following account: the price of the shares or stock in either case being fixed at the market value at that time. *Options* are dealt in with almost every description of stock and shares, but more generally in consols, and may be either a *put* AND *call*, or a *put* OR *call*. A *put* and *call* is when a person gives so much per cent. for the option of buying or selling so much stock, on a certain fixed day, at a price fixed the day the option money is given. A *put* is when a person gives so much for the option of selling so much stock, at a certain time, the price and date being fixed at the time the option money is given. A *call* is when a person gives so much for the option of buying stock, at a certain time, the price and date being fixed at the time the option money is given.

STOCK GRAVY.—A culinary preparation which forms the basis of all sorts of soup and sauce, whether brown or white. What is termed "fresh stock," is made as follows:—Wash a leg or shin of beef very clean; crack the bone in two or three places, and extract the marrow; add meat trimmings, and heads, necks, gizzards, feet, &c., of game and poultry; cover them with cold water; watch and stir up well, and the moment simmering commences skim it very clear of all scum. Then add some cold water, which will make the remaining scum rise, and skim it again. No fat should enter into this composition, and the stock should be perfectly clear and limpid. When the surface of the broth is thoroughly clear, put in carrots, turnips, celery, and onions, according to the quantity. After the vegetables are added, cover it close, and set it by the side of the fire, and let it simmer very gently, for four or five hours, or more, according to the weight of the meat. Strain it through a sieve into a clean, dry, stone pan, and put it on a cold place for use. Second stock may be made from the meat left after straining the first stock off, by covering it with water, and by letting it continue boiling for four or five hours. This stock will produce good glaze or portable soup.—See BROWNING, CONSOMME, GLAZE, STOCK, &c.

STOCK POT.—No house, however small it may be, should be without a stock-pot. It is the save-all of the establishment, and there is nothing in the shape of meat that is sweet and wholesome that it may not receive. Bones, trimmings of cold meat should go into the stock-pot; egg-shells may

also be put in, as they tend to clear the stock. Hard crusts of dry bread may also



be put in; they gather the scum, which should be taken off three or four times a day. Ham, beef, veal, mutton, lamb, pork, bits of poultry, game, in fact the bones or remains of any kinds of meat, should go into the stock-pot. Cold carrots and parsnips, or the remains of onion-sauce or gravy, the outside stems of celery, thoroughly cleaned and cut up, should go into the stock-pot. The pot itself should be made according to the engraving. The tap should not be quite at the bottom, which allows room for the sediment, and the stock may thus be drawn off perfectly clear.

STOCKINGS, TO WASH.—*To wash silk stockings*, cut in thin bits some white soap, and boil it in soft water; pour a little of it into cold soft water, and wash the stockings first upon the inner side; repeat the washing with fresh suds and water, till they are washed quite clean; turn the outside the last time of washing, and if the foot part be very dirty, rub a little of the boiled soap upon them, but not upon the legs. If the stockings are to be coloured, mix the dye with a little clean suds, and dip in the white stockings; draw them out smooth, and lay them upon a sheet on a bed, with the window open, and when almost dry, lay them upon a piece of flannel, and with another bit rolled up, rub them hard and quickly one way till they are dry. *To wash thread stockings*, first soap them well, and then put them into a lather of cold water, and boil them; afterwards put them into a fresh cold lather and boil them again; when, on taking them out, they will require little more than rinsing. *To wash cotton stockings*, lay them in cold water at night; next day boil them in a copper with some soda and soap; stir them well about, and they will become quite clean without any rubbing; rinse them well in cold water, and bleach them; when nearly dry, draw them smooth, folding them straight over the instep. Place them under a heavy weight, or iron them.

STOMACH, DISORDERS OF.—Those functional disorders of the stomach, which originate within the organ itself, and are independent of the general system, are either acute or chronic, and, in very many cases, the only medicine required to effect a cure in either condition is a well-arranged system of diet, and a properly administered food, which is both aliment and medicine, and while being the most agreeable, is by far the most permanent means of cure. In all *acute* affections of the stomach, the diet should be free from all substances that can irritate the coats of the organ; consequently, a farinaceous regimen is to be adopted, consisting of gruel or arrow-root, sago, tapioca or semolina puddings, with a rigid exclusion of everything solid, whether animal or vegetable. In *chronic* cases, though the restriction is by no means so imperative, care should always be taken never to allow any hard or irritating substance to pass into the stomach; and though both animal and vegetable substances may be employed in this form of disease, everything should be so completely masticated, and thoroughly softened with saliva, as to be, as nearly as possible, when it reaches the stomach, of the same bland and unoffending nature as the farinaceous food in the former case. All condiments and heating spices must be rigidly excluded, the stomach never allowed to remain longer than four hours without food, and liquids never taken without a certain proportion of solid food, and that thoroughly masticated. Another necessary point to be attended to, is to regulate the diet according to the age of the patient; this is especially necessary with regard to children and persons advanced in life. An aperient, such as the compound rhubarb pill, may be sometimes necessary; but, generally, functional affections of the stomach may be treated safely by the patient himself, if he will only reduce his dietary to a system, observe what has been said above, and study to adapt his food to his feelings and the actual condition of his stomach.—See DYSPEPSIA.

STOMACHICS.—Under this head are comprehended certain remedies employed when the stomach is wanting in tone and vigour. The following may be taken with advantage. Take twenty grains of powdered rhubarb, and dissolve it in three ounces and a half of peppermint-water, then add sal-volatile and compound tincture of gentian, each a drachm and a half. *Dose*, from one ounce to an ounce and a half; or, beat apricot kernels to a paste, and put it into spirits of wine, in the proportion of an ounce of kernels to half a pint of spirit. Infuse for a fortnight, then filter, or pour off carefully. Persons of weak digestion may take a teaspoonful of this twice or thrice a day in water. In some cases of nervous indigestion, this is a most valuable remedy. The dose may be extended to a tablespoonful by degrees.

STONE CREAM.—Put three tablespoonfuls of lemon-juice, and the grated peel of one, some preserved apricots or any other sweetmeats, into a glass or china dish. Boil a quarter of an ounce of isinglass in a little water, till dissolved, add it to a pint of cream, sweetened well with pounded loaf sugar; boil it and stir it all the time; pour it into a jug, stir it now and then till milk-

warm, then pour it over the sweetmeat round and round. It may be made the day before being served.

☞ Lemon-juice, 3 tablespoonfuls; lemon peel, 1; apricot or sweetmeat, sufficient; isinglass, ¼ oz.; cream, 1 pint; sugar, to sweeten.

STONE STAIRS AND HALLS, TO WASH.—These should not be often washed, but dry rubbed with a blue or gray stone, then wiped with a coarse flannel, and swept; thus all greasy spots will be removed. A common brick may be used instead of the stone.

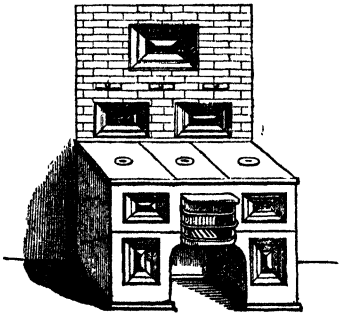
STOPPERS OF BOTTLES, TO LOOSEN.—If the stopper is firmly fixed by means of the salts contained within the bottles, do not attempt to strike the stopper, but add as much citric acid to water as it will take up, thus making what chemists term a saturated solution; or else, pour some vinegar into a tumbler, and immerse the bottle in the solution or vinegar. In the former case, a citrate of ammonia will be found, and in the latter case, an acetate of ammonia. After the bottle has remained in the tumbler a short time, remove it to a basin of warm water, and it will soon be released.

STORAX.—A tree indigenous to Italy and the Levant. It produces a fragrant resin which readily melts with heat. There is also another kind which exists in masses, very light and bearing no resemblance to

the former, as it seems almost wholly composed of dirty saw-dust, merely coked together with resinous matter, and though much less esteemed than the purer kinds of storax, yet when freed from the woody part, it is said to possess more fragrance, and is superior to the other. It is readily dissolved in rectified spirits; it imparts to water in which it has been infused a deep yellow colour, a slight odour, and balsamic taste; by distillation it gives out more of its fragrance, but does not yield an essential oil. The pure resin distilled without addition yields a portion of benzoic acid, similar to the flowers of benzoin.

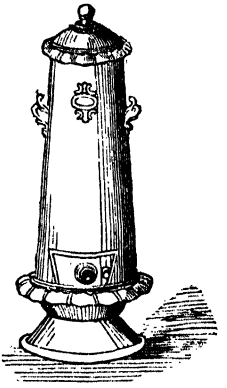
STOVE.—The construction of a stove is of great consequence to the warmth and comfort of rooms. They are of every shape, and size, and pattern, and must depend greatly upon the taste and purse of the purchaser; but it is advisable to regard the good qualities of a stove rather than its form and finish. Some stoves give very much more heat than others, and these are not always such as to attract the eye; but this point should be most considered. It is generally admitted that stoves give more heat when seated low than they do when placed high in the chimney. Bright steel stoves are very effective, and are often preferred; but in small establishments they are not desirable, because they give so much additional work to the housemaid. The common iron grates, when neatly and handsomely constructed, and properly cleaned, are sufficiently good for persons of moderate means and simple tastes. It is a very good plan to have the whole of the iron-work painted black; it looks better when cleaned, and there is less trouble in polishing it. If the back and sides of fire-places are made of stone or brick, much more heat is given out than when they are constructed of iron, which absorbs more heat than it throws into the room; while stone and fire-brick, on the contrary, throw out more than they absorb. To give the greatest amount of heat, the sides of the fire-place should not be at right angles to the front, because the heat would not then be thrown so forward as it would be if the sides were *covered*, or in other words, the corners cut off. Fire-bricks, when used as cheeks, are apt to break from excessive heat, and require removal; but they will last a long time, and the trouble and expense of replacing them is trifling. The advantage of hobs is by no means to be overlooked, by those whose domestic arrangements necessitate the keeping of food and fluids warm. The present fashionable stove, which consists only of an iron bottom or front attached to sides of brick or stone, may be rendered more convenient by having small, round, flat slabs of iron, fixed in the corners on the outside, between the upper bar and the side. If the slabs are perforated like open work, and neatly finished, they are very ornamental also, even in a drawing-room. The size of a stove must be judiciously adapted to the size of the room. A large stove in a small room, or a small grate in a large room, are equally incongruous, and fuel is wasted in both cases either by overheating or underheating the apartment. Small stoves are best for bed-rooms, which should never be overheated; nothing being more unwholesome or prejudicial to rest, than too great an amount of heat in a sleeping-room. Small stoves for small bed-rooms are simply and cheaply made by covering the sides of the chimney, and fixing bars in the brickwork to form the front and bottom of the grate. If a flue runs up the side of a room which contains no fire-place, this simple contrivance may easily be adopted at a cost of a few shillings; as ventilation is essential in sleeping-rooms, it may thus be secured very cheaply. The width of the fire-

place may be proportioned to the size of the room. The registered stove as at present constructed, consists of a framework of iron fitting into the space left in the brickwork, and containing an open basket of iron bars in which the fire is made. It is usual to make this framework into two portions, one being a square, fitting into the mantel-piece, the other projecting back from this on each side as well as at the top, at an angle of forty-five degrees, and containing within it the grate itself. This last may either consist simply of bars which line it at the bottom and front, or it may also be backed with a fire-brick tile. At the top, the bevelled boundary is pierced by an oblong square aperture, to allow the escape of the smoke, and set on this is a trap-door, which may be lowered entirely when a fire is not wanted, as in the summer months, by which precaution the fall of soot is guarded against. The sham register is a very cheap and economical stove, both in the original cost and in the saving of heat; it consists merely of a front and bottom of iron bars, which are set in the brickwork bevelled in the form of a register stove; the place for the fire is formed by building up the sides and back with fire-brick. The bottom grate is from five to seven inches deep from front to back, according as the front bars are straight or curved; and the brick-work at the back slopes upwards for about twelve inches from the bottom grate, and is thence carried up with the covings as high as the centre of the arch over the chimney opening. The objection to this form of stove is its want of neatness and artistic form, and the disposition which the bars have to become loose, from the constant expansion and contraction to which they are subject. For warming cottages, the kind of stove seen in the engraving is admirably adapted. It is fitted with two ovens, or an oven and hot closet. It comprises an open fire-place in the centre, a



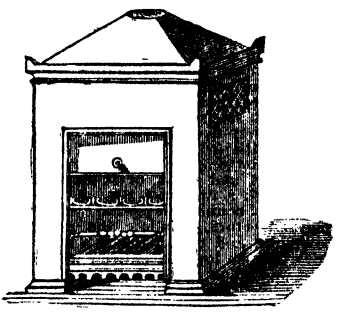
draw-shelf at the bottom of the grate, a drop-shelf at the top, which, when raised, forms a blower, a hot plate forming an ironing-stove, an opening at the top for the emission of warm air, an oven, hot-closet, damper, and sweep-door, and a boiler. In the flange of the oven and closet are side doors, for the purpose of admitting a brush when sweeping is required. The oven has a flue all round it, and is equally heated. When cooking is over, a fire made up of small coal, cinders, and ashes, well saturated with water, will last for several hours. The room is heated to an agreeable extent by a continual supply of pure warm air drawn in from without through a drain or pipe to the hot air chambers at the back and sides of the fire-place, and emitted through the aperture at the top of the stove.

Closed Stoves are intended to afford heat by warming the air in contact with them; but without any direct radiation of heat from the fuel itself. The radiant heat of the fire within the stove is absorbed by the material



of which the stove is made, and generates warm air. This warmed air rises upwards towards the ceiling, and is succeeded by fresh air to be warmed in its turn, and so on, until the whole of the air in the apartment has received an increase of temperature. The common German or Dutch stove, used in this country, is as economical and effective as any stove whatever, for warming an apartment. It consists merely of a cylinder of sheet iron, furnished with a grate in the interior for the fuel, a door for the fire, and another for the ashes, with a pipe to carry off the smoke into the chimney flue, which pipe may be lengthened when much heat is required. Here no air passes up through the chimney, except that which has come through the fire, and has served for the purpose of combustion, being rendered unfit for respiration; and the whole of this is carried off. All the rest of the heat, over and above what thus passes off with the smoke, is communicated to the iron, and by that to the air of the room in contact with it, at the same time that a great deal of heat in a radiated form is given out by the iron itself, when much heated. As this stove may be

placed at a distance from the wall by lengthening the pipe, it is very effectual in producing a great deal of heat, while it occasions neither disagreeable draughts, smoke, nor dust. But the inconveniences are, that there being no regulator for the draught of air, the iron is apt to become red hot, and then it is extremely dangerous if placed near anything combustible; and as the fire is not seen except when the door is opened, it is very difficult to regulate it. Another circumstance which renders its use inconvenient is, that the iron, being generally much heated, a disagreeable effect is produced upon the air of the apartment. Many stoves of this kind, of cast-iron, and of elegant and convenient forms, are to be met with in halls and staircases, where it is considered the bad effect upon the air is less noticed, fresh air being more frequently introduced by the opening of doors. Although closed stoves afford the most economical means with respect to fuel, as well as the most effectual way of warming the interior of dwellings, yet they are liable to the serious objection that with them it is difficult to change the air in apartments, or, in other words, to procure that ventilation so essential to health. When the door of the fire is in another room, and the windows and doors of the apartment made tight, there can be very little change of air in the room, and, consequently, the inhabitants must live in an atmosphere vitiated by a mixture of the portion that has been exhaled. With a close stove, therefore, whatever may be the construction of it, there is usually an accumulation in the apartment, more or less, according to circumstances, of gases and effluvia unwholesome to breathe. It is true that the foul air may be generally made to escape by keeping the upper sash of the window open an inch or two. But this will not act except the ingress of as much cold air can be provided for somewhere at the lower part of the room. If this be not done, the air will come in at the top sash to supply the stove, instead of going out. The chief difficulty here is to restrain the ingress of cold air, so that it may not occasion inconvenience. This is best effected by numerous small apertures in places where they will be least inconvenient, and by preventing the stream of air from coming in directly, but turning it aside by some methods, which must vary according to circumstances. It should be known that all stoves which profess to heat apartments without a flue, must be in the highest degree pernicious, and even dangerous, since it is quite impossible that combustion can go on without generating noxious gases. A stove of any kind, therefore, in an apartment without a flue, cannot fail to be injurious to health, and sometimes suddenly fatal. Iron stoves are frequently made with flues to descend below the level of the floor, for the purpose of getting rid of the smoke without the inconvenience of a pipe crossing the apartment. They are extremely useful in warming shops and other places where there is a considerable circulation of air, and where the effects of heated air are not perceived so much as in confined places. The air stove, seen in the engraving, is also much used for this pur-



pose; but, in this case, the fire-place is lined with brick or fire-stone, which prevents the air being overheated, and the warmed air comes out through the gratings at the sides. A sliding plate at the upper part of the opening acts as an occasional blower. The American stove, for burning wood only, is an excellent contrivance, particularly for airing rooms, which it does effectually in two hours. It is made of sheet iron, and stands upon four tall, light legs, which render it perfectly safe when placed upon a floor or carpet, without there being any necessity for putting an iron plate beneath the feet. Before the door of the stove a sheet of iron is fixed, very much in shape like a dust-pan with raised sides, to prevent any litter falling on the floor. A short piece of pipe is affixed to the back, to which pipes of any required length can be added, with the elbow resting on the top bar of a fire-place; but the length of pipe containing the regulator must always be next the stove. The whole apparatus is so light that it can be carried about like a basket. The size which will be found to draw the best measures fourteen and a half inches in depth, the same in breadth, and the same in the length of the leg, while the length of the body is twenty inches. As this stove will only burn wood, it is useful only in particular situations; but where wood can be obtained at a cheap rate, it will be found extremely convenient. Gas stoves are becoming very generally introduced as a means of heating halls, shops, &c. The gas is simply burnt in an iron chamber, the results being either suffered to escape into the apartment, or else carried off in the ordinary way by a flue.—See ARNOTT'S STOVE, GRATE, KITCHEN RANGE, &c.

STOVE-HOUSE.—This is a glazed structure, differing from a green-house chiefly in requiring a higher temperature to be sustained within it, either for forcing fruits or for growing plants from tropical climates. The management of stove plants depends a great deal on the kind of house in which they are grown; but there is little difficulty in growing them well, if the house can be

kept up to a proper heat, and a sufficient quantity of air given when required. In the construction of stove-houses, close glazing is to be preferred; either the lights should be leaded or the laps stopped with putty, so that a sufficient quantity of air may be always given, and the house kept to a more regular heat. When the laps of the glass are left open, a great deal of air is admitted, which is often injurious, particularly on cold windy nights. The thermometer should never be allowed to be below sixty degrees of Fahrenheit; if it reach above seventy on a fine day, a little air may be given, which should be taken away early, and the house shut up warm; it then requires less fire to keep up the heat through the night. If the house is heated in the common way by flues, and the plants are plunged in tan, care must be taken not to give them too much bottom heat, as it will injure their roots; nor too much water in winter, as it is apt to rot them. Particular caution is necessary for watering in winter not to wet the tan, as it makes the worms very troublesome; they often destroy young plants by throwing the mould out of the pots. Some hot dung or tan may be still kept in the pot to throw up a little warmth, on which should be put a considerable thickness of sand or gravel for the pots to stand on, and the plants will thrive much better than when plunged in tan. If the houses are heated by steam, no tan is required. The plants may be set on stages, or in any way that is most convenient. Some of them may be planted out in the house, where they will grow in greater perfection, and flower and ripen fruit better than when confined in pots. Flues are best built of bricks set on their edges, and the top formed of a shallow iron trough for the purpose of holding water, and thus keeping the air moist as required. At night, for retaining the heat, pantiles may be placed along within the trough. Hot water in a tank is superior to the same source of heat in pipes, because it is not liable to freeze; and it is preferable to steam, because its heating power continues until the whole mass of water is cooled down to the temperature of the house, whereas, steam ceases to be generated as a source of heat, the moment the temperature falls below two hundred and twelve degrees. If steam be employed, the following are the rules for calculating the surface of pipe, the size of the boiler, the quantity of fuel, and the amount of ventilation for a house thirty feet long, and twelve feet wide, with the glass roof eight feet, length of the rafters fourteen feet, and height of the back wall fifteen feet. The surface of glass in this house will be seven hundred and twenty feet, superficial, namely, five hundred and forty feet in the front and roof, and one hundred and eighty feet in the ends. Now, half the vertical height, seven feet six inches, multiplied by the length in feet, and added to one-and-a-half lines, the area of glass, is equal to the cubic feet of air to be warmed in each minute when there are no double doors. That is, $7{\cdot}5 \times 30 + 1\frac{1}{2} \times 720 = 1305$ cubic feet. But in a house with wooden bars and rafters, about one-tenth of this space will be occupied with wood work, which is so slow a conductor of heat that it will not suffer a sensible quantity to escape, therefore 130 feet may be deducted, being the quantity to be warmed per minute = 1175 cubic feet. To ascertain the surface of pipe required to warm any given quantity of air, multiply the cubic feet of air to be heated per minute, by the difference between the temperature, and at which the house is to be kept, and that of the external air, in degrees of Fahrenheit's thermometer, and divide the product by 2·1, the difference between 200, which is the temperature of the steam pipes and the temperature of the house; the quotient will be the surface of cast-iron pipe required. In the house, the dimensions of which are above given, if the lowest temperature in the night be fixed at fifty degrees, and ten degrees are allowed for winds, and the external air is supposed to be at zero or 0 of Fahrenheit, then 1175 multiplied by 60°, and the product divided by 2·1, the difference between 200 and 60, will give the quotient 236 = to the surface of pipe required. The house being thirty feet long, five pipes of that length and five inches in diameter will be about the proper quantity. If hot water be employed instead of steam, the following proportions may be adopted. In a span-roof propagating house, forty feet long, thirteen feet broad, seven feet high in the centre, and four feet high at the two fronts, being a superficial surface of glass amounting to 538 square feet, there should be a tank eighty-three feet long, running round three sides of the house, four feet wide and about eight inches deep, and consequently capable of containing nearly three hundred cubic feet of hot water. The mean temperature of a hot-water tank will never be much above a hundred degrees.

STRAINER.—An indispensable utensil in culinary operations, employed in sepa-

rating the sediment or deposit of liquids, as the grits of gruel, the shreds of gravy, &c.

STRAMONONIUM. — This plant is a native of America, and is a common annual in this country, growing in waste places and among refuse. It has strong narcotic qualities, and if taken in the stomach, produces all the effects of poison. The smoke of the dried root and stem has been much used for the cure of asthma. For this purpose, the root and lower parts of the stem are to be dried quickly, and cut into pieces, and then beat so as to divide the fibres. Part of them are put into the bowl of a tobacco pipe, and the smoke is first taken into the mouth, and then inhaled into the lungs. This excites a heat in the chest,

followed by copious expectoration. It frequently gives relief when a pipe is thus

smoked, upon a paroxysm being threatened, or even after its commencement. The patient generally falls asleep, and awakes relieved. In some cases a perfect cure is effected, but more commonly, according to the predisposing cause, the relief is only temporary.

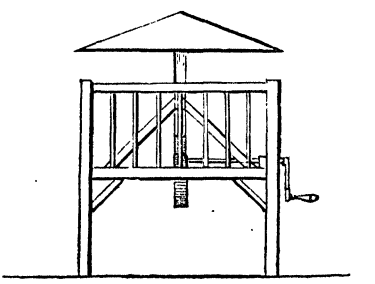
STRANGULATION.—Whatever prevents the entrance of air into the lungs, by causing a constriction of the throat, produces strangulation, as in the case of hanging. The general appearances caused by hanging, or a cord drawn tightly round the throat, are, a swollen and blackened face, protruding eyes, the tongue between the teeth, pallid lips, and a livid mark or line round the throat. *Treatment.*—The first step is to remove the cord, and bleed immediately from the jugular vein, to the extent of ten or twelve ounces of blood. Artificial respiration is next to be established, by inserting the pipe of a pair of bellows up one nostril, and while an assistant closes the mouth and other nostril with his hand, inflate the lungs, expelling the air again immediately by removing the hand from the mouth, and pressing on the pit of the stomach; and in this manner inflating and expelling the air in gradual succession, till natural respiration is restored, or all hope of effecting it is passed. If electricity can be obtained, directly after bleeding isolate the body, and pass a few shocks through the chest and down the spinal column.—See DROWNING.

STRAW, USES OF.—The purposes for which straw is employed vary according to the nature of the straw. *Wheat straw* is used for stuffing horse-collars, and it is also useful in thatching houses or stacks. It forms an admirable bottoming to the littering of every court and lay-stall of the steading. As litter, wheat straw possesses superior qualities. It is not so suited for fodder, its hardness and length being unfavourable to mastication. Wheat straw is also used for stuffing mattresses and other articles of furniture. *Barley straw* can only be used as litter, and in this respect is very much inferior to wheat straw, either as regards cleanliness, durability, or comfort. *Oat straw* is commonly used as fodder, being considered too valuable to be applied to litter. It makes a sweet soft fodder, and, when newly thrashed, has a refreshing odour. It is very clean, raising little or no dust. Sheep are very fond of oat straw, and will prefer it to indifferent hay. Of the different sorts of oat straw, that of the common oat is preferred, being softer, sweeter, and more like hay than that of the potato-oat. When oats are cut slightly green, the straw is much improved as fodder. *Rye straw* is not fit for fodder, but it forms a beautiful thatch. It is also in great request by brick-makers. *Pea and bean straw* it is sometimes difficult to preserve, but when kept in proper condition, no kind of straw is so great a favourite as fodder with all kinds of cattle.

STRAW BONNETS, TO BLEACH.—Wash them in pure water, scrubbing them with a brush; then put them into a box in which has been set a saucer of burning sulphur. Cover them up, so that the fumes may bleach them.

STRAW BONNETS, TO CLEAN.—They may be washed with soap and water, rinsed in clear water, and dried in the air. Then wash them over with white of egg well beaten. Remove the wire before washing. Old straw bonnets may be picked to pieces, and put together for children, the head part being cut out.

STRAW-RACK.—These contrivances for courts, farm-yards, &c., are made of various forms. On farms of light soils, where straw is usually scarce, a rack of the form seen in the engraving will be found serviceable in preserving the straw from rain, having a sparred bottom inclined upwards to keep the straw always forward to the



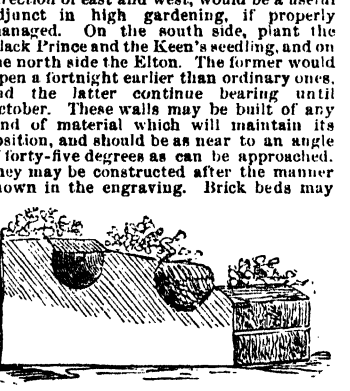
front of the rack in the reach of the cattle. The shank supporting the moveable cover, which protects the straw from rain, passes through the apex of the bottom. The shank with its cover is moved up and down, when a supply of straw is given, by the action of a rack and pinion, worked by the handle. The rack is made of wood, five feet square, and five feet in height to the top of the corner posts, and sparred all round the sides as well as the bottom, to keep in the straw. A more common kind of rack is

wooden one of square form, sparred round the sides and bottom, to keep in the straw. The cattle draw the straw through the spars as long as its top is too high for them to reach over it, but afterwards they get at the straw over the top. Another kind of rack is one made of malleable iron, to supply the straw always over its top; it is rodded in the sides, to keep in the straw. It remains constantly on the ground, and is not drawn up, as with other racks.

STRAWBERRY CREAM.—Take about a quart of strawberries, picked, washed and drained; mash them in a marble mortar; boil a quart of cream with a quart of milk, sweeten it to taste, let it reduce one half, and when cool mix the strawberries with it; add also about the size of a coffee-grain of rennet; when the milk is lukewarm pass it through a tamis, and put it into a pan which will stand the fire; put this on warm cinders on the top; when it has set put the dish in a cool place, or on ice, till you serve.

STRAWBERRY, CULTURE OF.—This well-known berry has received the name of *fragraria* from its delightful flavour. No vegetable production of the colder latitudes, or which can be ripened in those latitudes without the assistance of artificial heat, is at all times comparable with the strawberry in point of flavour; and if the soil and situation be properly adapted to it the colder the climate, and the more bleak, and elevated the situation, the more delicious is the berry. The best kinds of strawberries for cultivation are the Black Prince; Keen's seedling; British Queen; Elton; old pine; Alpine; Ritely's Goliath; Eliza; Eleanor. For hardy heavy crops none can exceed the Keen's; for size, the British Queen and Goliath; for earliness, the Black Prince probably takes the lead; for very late purposes, the Elton and Alpines; and for forcing, the Keen's and the British Queen. Strawberries are propagated by seed when the raising of new varieties is desired, and for heightening the culture of the Alpine class; but the more general mode of propagation is by young plants formed on the runners at almost every joint, or sometimes, but rarely, from suckers taken from the sides of the established plants. In the *cultivation by seed*, the seed should be taken from the finest specimens of the fruit, when it has attained its fullest degree of ripeness. The pulp should be bruised down with the hand into a vessel containing water, and as the pulpy matter is reduced the seeds will separate from it; and thus, by repeated washing, the seed falling to the bottom, they may be collected, dried, and preserved in paper bags till spring. About the middle of March a slight hot-bed should be prepared of leaves in a state of moderate fermentation, over which a bed of rich soil should be laid to the depth of nine inches, rendered as level and smooth as possible, upon which the seeds are to be thinly sown, and covered with very firm fine mould to the depth of an eighth of an inch; the frames of glass-lights should then be placed over the whole; very slight watering should be administered until vegetation commences, and the water applied in a tepid state. When the young plants appear above ground, ventilation must be attended to; and if they come up too thick, they should be immediately thinned, for it is of great importance to obtain stout stocky plants, which never can be the case with any seedlings, if crowded too thickly at first. From the end of June till the middle of August the plants will be in a proper state for transplanting, and the situation best adapted for them is a northern border with a rich and moist soil. They should be planted in rows two feet asunder, and a foot distant in the line. The Alpines come into bearing at a much earlier age than most others, nor is it found that they continue to be productive so long; and hence this rearing from seed is exceedingly well adapted to them, besides continuing the season of the fruit to a much later period. The wood strawberries are in character very similar to the Alpines, and, like them, are best reared from *seed*, only the process of sowing should take place as soon as the fruit is ripe, choosing a bed of rich soil; and when the plants are so large as to be fit to be handled, they should be transplanted into another bed, to gain strength and stand over the winter. The March following, they should be transferred to the ground where they are to come to maturity, and be set in rows two feet apart and fifteen inches asunder in the line—thus, having three rows in a bed, with a three-feet alley between, to admit of the crop being gathered without treading on the fruit. The soil should be trenched two and a half feet deep, placing manure near the bottom of the trenches, for their roots will descend to that depth, and derive nourishment from it. *In propagating by runners*, the young plants which spring from the joints of the runners should be carefully preserved from the time they make their appearance, until they become rooted and fit for removal from the parent plant. On securing well-rooted plants as early in the season as possible depends much of the success of the cultivation of the fruit. As soon as the young plants are sufficiently rooted, they are cut off from the parent plant, and the roots carefully extracted by loosening the soil with a fork. They are then transferred to nursery-beds, prepared by deep digging, and four feet broad, the plants being set at distances apart according to the size of the foliage—thus, the Black Prince, which is the smallest in foliage of modern varieties, is set six inches apart, plant from plant, while the British Queen and similar strong-growing kinds are allowed nine inches. These remain in such beds till the month of October, when the ground is prepared for them in which they are to remain till they perfect their fruit. This ground is prepared by trenching from two and a half to three feet in depth, placing undecayed manure in the bottom of the trench, which bottom is previously torn up by a pick; manure is again applied when the trench is about half-full, and again when within nine inches of the surface. The plants of the large growing sorts are carefully taken up with a trowel, retaining as much of the soil as possible about the roots, and are

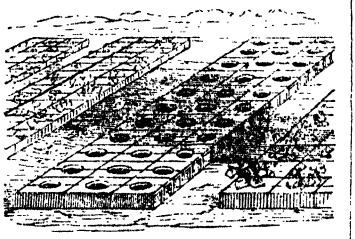
planted in lines two feet apart, and eighteen inches in the line, leaving a three feet alley between each three rows. By this process abundant crops will be secured the following season. After the beds are planted they should be kept as clear of weeds as possible, and no crop should be planted between the rows. As the runners grow, they are cut when necesssary, that is usually about three times in the season. In the autumn the rows should be dug between, as this refreshes the plants materially; and when it is convenient, straw should be scattered in the spring very lightly between the rows; it serves to keep the ground moist, enriches the strawberry, and forms a clean bed for the trusses of fruit to lie upon, and thus, by a little extra trouble and cost, a more abundant crop is obtained. A short time before the fruit ripens, the runners should be cut off, to strengthen the root; and after the fruit is gathered, all fresh runners that have been made should be taken off with a reaping-hook, together with the outside leaves around the main plant; after which, the beds should be raked, then turned, and raked again. In the autumn, unless the plants appear very strong, some dung should be dug in between the rows, but if they are very luxuriant, this is not required; for in some rich soils it would cause the plants to turn nearly all to leaf. The duration of the bed must be determined by the produce of the plants, which varies much according to the different sorts; it also varies with the same sort in different soils, so that the precise time of the renewal of the bed must be regulated by the observation of the cultivator in each particular case. As regards *the soil and situation* for strawberries, they should be placed in a compartment of the garden by themselves, and it should be one which is freely exposed to the sun and air. A good loam of some depth is best adapted to high culture; therefore, loose and sandy soils must be mixed with marls or clays, and clayey soils must be rendered open, by applying sand, road-scrapings, cinder ashes, burnt or charred material, &c. Boggy or peaty soils will require consolidation by burning, or the application of sound soil, and by thorough draining, if wet. In old garden soils, the strawberry is seldom found to do well; indeed, in some it refuses to grow, while, in land newly broken up into cultivation, of sufficient depth and staple, and moderately enriched, they as invariably do well. As such conditions, however, cannot often be provided, recourse must be had to deep trenching, or burying the old soil, and bringing towards the surface that which has either not produced strawberry crops at all, or has been for some years lying undisturbed. In light sandy soils, strawberries are short-lived, and produce small fruit. In strong clays some varieties refuse to grow. Depth of soil is an essential point, for then roots will descend to the depth of two-and-a-half or three feet; manure, therefore, should be deeply buried, so as to be placed within reach of the spongiolets. Where the inclination is considerably towards the south, the fruit will be earlier produced; and not only are such situations frequently chosen, but artificial banks have been thrown up, presenting an angle of even more than forty-five degrees towards the meridian. Strawberry walls or banks, made up with brickwork or masonry, to form reservoirs for water, as well as alleys between the beds, sloping banks covered with stones, placed between the plants, and various other contrivances have been recommended, and are, doubtless, very serviceable in heightening the flavour of the fruit. A strawberry wall, in the direction of east and west, would be a useful adjunct in high gardening, if properly managed. On the south side, plant the Black Prince and the Keen's seedling, and on the north side the Elton. The former would ripen a fortnight earlier than ordinary ones, and the latter continue bearing until October. These walls may be built of any kind of material which will maintain its position, and should be as near to an angle of forty-five degrees as can be approached. They may be constructed after the manner shown in the engraving. Brick beds may



also be contrived with advantage for the culture of strawberries. The beds are flat upon the ground, as seen in the engraving, and about three feet wide; and between these are trenches, each about nine inches wide, and four-inch walls of brick on each side of the trenches, B, to keep up the earth

on the sides of the beds. The trenches are about the depth of two or three courses of bricks laid flat, without mortar, and are intended for the purpose of holding water, which is to be supplied whenever the ground is dry, while the plants are in fruit. By this method a much greater crop of fruit is obtained, and the plants continue bearing much longer than in beds where there are no trenches for water. The reflected heat obtained from strawberry walls, and which is so essential in perfecting the fruit, may also be secured by placing along the sides of the rows a course of tiles, or narrow slates, just as the blossom is beginning to appear; and on these the trusses of fruit will be quite dry, secured from the splashing of mud during heavy rains, the moisture will

be retained at the roots at the time it is most required for the plants, and all the advantages of increased heat will be secured to the fruit, which more cumbrous and expensive means can afford. As soon as the crop is gathered, these tiles or slates should be removed, as being no longer useful. A refinement on this mode is shown in the accompanying illustration, representing a



bed of young strawberry plants, with the tiles placed around them. These tiles have a semicircular hole cut out of their inner sides respectively, so that, in placing them around the plant, the leaves being carefully held up, one tile is placed on one side, and another on the other side. Another advantage these tiles have over paving tiles or slates is, that they stand on flange-like edges, thus allowing a circulation of air to act under them, and preventing the cold and damp affecting them, as to some extent would be the case were they laid flat on the ground. In regard to the preservation of the fruit during its growth and ripening, some have recommended laying tiles painted black around the plants; but this can have little effect in increasing heat, as the foliage will cover the tiles and prevent the direct rays of the sun from falling on them. Long narrow boards are sometimes laid along the rows. This precaution has its advantages, as has, also, laying twigs of birch, branches of furze, and heath. These, while they support the fruit from the ground, afford less shelter to snails and slugs, and keep the fruit drier. Some support the trusses of fruit by sticking in a row of small twigs on each side of the row, keeping the fruit-stalks in an upright position. This is a direct violation of the natural habit of the plant, the fruit of which, except the bush and common alpine, lies close to or reclining towards the ground. *The gathering of the fruit* should be performed when the plants and fruit are dry, more especially such fruit as is intended for preserving, and these should have the fruit gathered without any portion of the calyx or foot-stalk being left attached. With such fruit as are to be served up for dessert, the foot-stalks should be scrupulously preserved, and cut off with a pair of scissors to the length of an inch, or an inch and a quarter, according to the size of the variety. Those who gather them should put gloves on their hands, and if not, the hands ought to be washed clean.

The strawberry is forced in every description of forcing-house and also in the pinery. When they are forced in large quantities, it is a good method to apply a pit to their sole cultivation. The choice of suitable sorts, and planting them as early in the summer as young plants can be got, forms the first feature in the operation. The strawberry being a native of temperate and even cold climates, submits unwillingly to a high temperature; and when they are suddenly subjected to such, the effect becomes apparent by the slender appearance of the leaves and foot-stalks, and the absence of flowers. The sorts most suitable for forcing are the Black Prince, Grove End scarlet, Keen's seedling, and British Queen. They are put into a state of low excitement about the beginning of December, in the order in which they are named above. As early in summer as the young plants begin to show themselves upon the runners, three-inch pots should be plunged in the soil between the rows up to their brims; the runners are drawn over these pots, so that the young plant shall be placed in the centre of the pot, and kept in their places by means of small hooked pegs, and sometimes by placing a small stone upon them. The pots are filled with strong, rich, turfy loam, but not drained. They soon begin to make roots, and in about ten or fifteen days the pot will be full of them, at which time the plants are cut from the runners, and with the pots are removed to an open warm space, where they are shifted into the fruiting-sized pots, turning them out with the balls entire. In the case of the Black Prince which is a very small grower, the pots used measure four and a half inches in diameter; with the Grove End scarlet, five-inch pots are used; and with Keen's seedling and British Queen, which are both strong growers, six and a half inch pots are used. One plant only is placed in each pot. The soil used is fresh turfy loam, as strong as can be procured, but not entirely clay. The pots are well drained, and the soil rammed pretty tightly around the roots. No manure is used in the soil unless it is poor, but in the bottom of each pot should be placed two inches of rotten cow-dung, to be watered frequently with liquid manure. When the plants are potted, which they will be progressively, as young ones are procured, though no time should be lost, as the earlier they are potted the better, they are set upon a dry flooring of sifted coal-ashes, well soaked with lime-water for the destruction of worms, in beds of a convenient breadth, the pots standing quite close together, and each size arranged by itself. They are watered freely overhead with clean water applied through the rose of a watering-pot, and kept in this position till the frosts begin to set in, when they are placed in cold pits and covered with glass. Where the extent of pit sufficient for these operations does not exist, triangular banks may be thrown up, and the pots plunged lying on their sides, with their mouths upwards; or the pots may be built up against a wall, facing any aspect but the north, the uppermost course

being protected by boards laid along. The usual way, however, is to plunge the pots in a bed of soil; but the plants will root less freely in this way; and if plunged at all, nothing is better than sifted coal-ashes. The strongest runners should be taken, as early in the season as they are pretty well rooted in the soil between the rows, and planted in small pots, placing them in cold pits or frames until the roots have filled the pots, and then shifting them into pots of a size suitable to the variety. Old plants may, however, be taken up carefully with their roots entire and placed in a tanked pit pretty closely together, working in soil between the balls. The operation should be performed early in October, and a very slight degree of bottom-heat applied till the end of November, when they will be found well-rooted and in a condition to commence growth upon the application of an increased degree of warmth from the tank. The object of this is to give the roots the start of the leaves; and to ensure this, while the roots are enjoying a temperature of fifty-five to sixty degrees, the tops should be kept at forty or forty-five degrees, and this can readily be done by abundant ventilation, even to the extent of keeping the lights off altogether during the mild weather, and only setting them on when the atmospheric temperature falls below these points. Where the convenience of tanked pits, or those having pipes in a vault below, is not at hand, then the pots may with great propriety be plunged in some material, such as tan, or leaves, undergoing a steady fermentation. When they have been thus root-excited, they may then be removed to the structure in which they are to fruit, beginning with a temperature by day of fifty-five degrees, and at night falling to forty-five degrees, by fire-heat, admitting of a rise during sunshine of ten or fifteen degrees, for an hour or two only. In such a temperature and under such root-exciting principles, the plants will push strongly, and throw up vigorous flower-stalks, if kept sufficiently near the glass. As one set of plants is removed to the fruiting structure, another should take their place on the bottom-heat, to be preparing for their final removal. Strawberries, forced so as to ripen in April, and when the fruit has been gathered, planted out, not unfrequently produce a fair crop late in the autumn; and should they not begin to show their flower-buds, till so late as to prevent a chance of the fruit coming to perfection, if carefully lifted and planted in large pots, and brought progressively into a top temperature of from forty-five to fifty-five degrees, will often yield an excellent crop of fruit through the early part of winter, and before those heated in the usual way could be got sufficiently advanced. A bottom-heat of sixty degrees should be maintained, and the glasses kept shut close down until the roots have begun to grow, when air should be more abundantly supplied, particularly during their flowering period, at which time the atmospheric temperature should be gradually raised to sixty degrees during the day by fire-heat, falling during the night to fifty-five degrees. When the fruit is fairly set and swelling, a degree or two more should be allowed, and ten or twelve degrees during sunshine for a few hours daily. As soon as they begin to throw up their flower-trusses, all the weakest parts of the plants should be removed as well as those that show no flower-buds. If plants be thus carefully taken up, and not subjected to too high a temperature, or deprived of sufficient air, they will produce excellent crops at much less expenditure of labour in watering, &c., than when grown on suspended shelves in the usual manner. Great care must, however, be taken to preserve the roots as entire as possible, for at the lifting-season they are charged with organisable matter for the nutrition of the plant when its growing season arrives; if, therefore, they are destroyed to any extent, so much of this nutrition is withdrawn from them. In placing strawberries in forcing-houses, they should be set upon shelves suspended from the roof, and as near the glass as possible, even should their leaves almost touch it. The feeders under the pots should be half-filled once a week or so with weak liquid manure, and as soon as the fruit is set, the trusses should be supported erect by sticking small twigs in the soil for the fruit to recline upon; without this support the weight of the fruit would cause the fruit-stalks to bend downwards over the edge of the pots, and hence greatly interrupt the free ascent of the sap at a time when the plants require it in greatest abundance. Strawberries on suspended shelves require a sufficient supply of water, but excess must be guarded against. The smallest and worst formed fruit should be carefully cut away with a pair of sharp-pointed scissors as soon as they show themselves; the nutriment which would be wastefully taken up by them will thus be directed to the larger and more perfect specimens. The strawberry is liable to the attacks of a variety of insects. The aphis sometimes attacks the plants in the open garden, but more frequently in the forcing-house. In the former case, dusting the crop over with finely powdered hot lime before the bloom appears is the remedy; in the latter, the usual recourse must be had to tobacco fumigation, but this should not be attempted after the blossom begins to expand. The red spider and the thrip also attack them in forcing-houses—a pretty clear indication of too high a temperature, and too limited an amount of humidity in the atmosphere of the house. The remedies already noticed should be attended to. The slug and snail are, however, the great enemies of the strawberry in the open garden, but a good watering with lime-water, or dressing the ground between the rows with hot lime just before the flowers begin to open, will in most cases secure the crop from their attacks. The larvæ of St. Mark's fly are sometimes found in strawberry beds to the number of a hundred or upwards in one group. They seem, however, to prefer long undisturbed spots; hence their unwelcome appearance is much less to be dreaded when the one or two

years' system of planting is adopted, thus when the plantation is allowed to stand for several years. The larva which is of a dark brown colour, is to be found in October, in form somewhat cylindrical, flattened underneath, and nearly linear; head small, deep brown, and occasionally chesnut or light brown, very shiny. It has no feet. The mouth is furnished with indented jaws, palpi-jointed, as are also the lips and maxilla. The length of the full-grown larva is about three-quarters of an inch. It changes in March to a pupa of a pale ochreous colour. The face is heart-shaped; the antennæ short, brown, and curved; the abdomen cylindrical, terminated by two small spines. They remain in the pupa state for nearly five weeks, the males appearing about the end of April, and the females towards the middle or the end of May. The perfect insect, throughout the whole of this extensive genus, as regards males and females, is very dissimilar both as to size and colour. The head is longer in the male than in the female, and the wings are much lighter and smaller. The male is black, shining, covered with long soft hairs; the head and eyes large: antennæ short and nine-jointed; thorax round; abdomen long, tapering, the point blunt, armed with forceps; legs long, especially the hinder ones, as well as the thighs, which are broad and compressed. The eggs are deposited in May, but are not hatched before August. The eggs are laid in the earth, and also in the dung of horses and cows. They perforate the earth in manner similar to a honey-comb, and in this state live on the roots of the strawberry. Above the spot where the colony in its larva state is located, fine earth will be found turned up to the surface. When such is observed, the nest should be dug up, and the larvæ searched for and destroyed.

STRAWBERRY FOOL.—Bruise a pint of strawberries and a pint of raspberries, pass them through a sieve, and sweeten them with half a pound of fine sugar pounded, add a spoonful of orange-flower water, then boil it over the fire for two or three minutes; take it off, and set on a pint and a half of cream, boil it and stir it till it is cold; when the pulp is cold, put them together, and stir them till they are all well mixed; serve the mixture in glasses or cups.

STRAWBERRY ICE.—Take the pulp of two pounds and a half of strawberries and of half a pound of red currants, rubbed through a sieve, and a pint of water in which the sugar has been dissolved; mix these well together, and put them into the freezing pail. If strawberry cream be required, take the juice of the fruit, strain it, and add it to the cream with a little lemon-juice; whisk the whole with the sugar, and set out to freeze.

STRAWBERRY ISINGLASS JELLY.—Boil together quickly for fifteen minutes, one pint of water and three-quarters of a pound of very good sugar; measure a quart of ripe richly-flavoured strawberries without their stalks; the scarlet answer best, from the colour which they give; on these pour the boiling syrup, and let them stand all night. The next day, clarify two ounces and a half of isinglass in a pint of water, drain the syrup from the strawberries very closely, add to it two or three tablespoonfuls of red currant juice, and the clear juice of one large or two small lemons; and when the isinglass is nearly cold mix the whole, and put it into moulds. The French, who excel in these fruit jellies, always mix the separate ingredients when they are almost cold; and they also place them over ice for an hour or so after they are moulded, which is a great advantage, as they then require less isinglass, and are in consequence much more delicate. When the fruit abounds, instead of throwing it into the syrup, bruise lightly from three to four pints, throw two tablespoonfuls of sugar over it, and let the juice flow from it for an hour or two; then pour a little water over, and use the juice without boiling, which will give a jelly of finer flavour than the other.

☞ Water, 1 pint; sugar, ¾ lb.; strawberries, 1 quart; isinglass, 2½ ozs.; water 1 pint (white of egg, 1 to 2 teaspoonfuls); juice, 1 large or 2 small lemons.

STRAWBERRY JAM.—Bruise very fine the strawberries gathered when quite ripe, and add to them a small quantity of red currant juice. Beat and sift sugar equal in weight to the fruit, which strew over them, and place the whole in the preserving pan; set them over a clear slow fire, skim them, and then boil for twenty minutes, and put into glasses.

STRAWBERRY JELLY.—Put the fruit into an earthen pan, squeeze them well with a new wooden spoon; mix an equal weight of sugar, in large lumps, with the fruit; and let them infuse for an hour, that the sugar may draw out the juice; next pour on a little water. If the strawberries are too ripe, squeeze in the juice of two lemons, put all this into a jelly-bag nearly new; mix some melted isinglass with the juice, but the whole must be very cold. The proportion of isinglass before melting should be at the rate of an ounce to four pounds of fruit.

STRAWBERRY MARMALADE.—Crush two pounds of fine strawberries, and pass them through a sieve; then mix them with a strong syrup of two pounds of sugar, and stew the whole in a pan till properly done.

STRAWBERRY SOUFFLÉ.—Stew the strawberries with a little lemon-peel, sweeten them, then lay them pretty high round the inside of a dish; make a custard of the yolks of two eggs, a little cinnamon, sugar, and milk. Let it thicken over a slow fire, but not boil. When ready, pour it into the inside of the strawberries. Beat the whites of the eggs to a strong froth, and cover the whole. Throw over it a good deal of pounded sugar, and brown it of a fine brown. Any fruit made of a proper consistence does for the walls. Strawberries when ripe are delicious.

STRAWBERRY TARTLETS.—Take a full half-pint of freshly-gathered strawberries, without the stalks; first crush, and then mix them with two ounces and a half

of powdered sugar; stir to them by degrees four well-whisked eggs, beat the mixture a little, and put it into patty pans lined with fine paste; they should be only three parts filled. Bake the tartlets from ten to twelve minutes.

STRAWBERRY VINEGAR.—Take the stalks from the fruit, which should be of a highly flavoured sort, quite ripe, fresh from the beds, and gathered in dry weather; weigh and put it into large glass jars, or wide-necked bottles, and to each pound pour about a pint and a half of fine pale white wine vinegar, which will answer the purpose better than the entirely colourless description sold under the name of distilled vinegar. Tie a thick paper over them, and let the strawberries remain from three to four days; then pour off the vinegar and empty the bottles into a jelly-bag, or suspend them in a cloth, that all the liquid may drop from them without pressure; replace them with an equal weight of fresh fruit, pour the vinegar upon it, and three days afterwards repeat the same process, diminishing a little the proportion of strawberries, of which the flavour ought ultimately to overpower that of the vinegar. In from two to four days drain off the liquid very closely, and after having strained it through a linen or a flannel bag, weigh it and mix with it an equal quantity of highly refined sugar, roughly powdered; when this is nearly dissolved, stir the syrup over a clear fire, until it has boiled for five minutes, and skim it thoroughly; pour it into a clean stone pitcher, or into large china jugs; throw a thick folded cloth over it, and let it remain until the next day. Put it into pint or half-pint bottles, and cork them lightly with new velvet corks, for if these be pressed in tightly at first the bottles will sometimes burst. In four or five days, they may be closely corked and stored in a dry and cool place. Damp destroys the colour and injures the flavour of these fine fruit vinegars. A spoonful or two in a glass of water affords an agreeable summer beverage. They make also admirable sauces for puddings. Where there is a garden the fruit may be thrown into the vinegar as it ripens, within an interval of forty-eight hours, instead of being all put to infuse at once, and it must then remain in it a proportionate time; one or two days in addition to the period specified will make no difference to the preparation. The enamelled stewpans are the best possible vessels to boil in; but it may be simmered in a stone jar set into a pan of boiling water, when there is nothing more appropriate at hand, though the syrup does not usually keep so well when this last method is adopted. Raspberries and strawberries mixed, will make a vinegar of very pleasant flavour; black currants also will afford an exceedingly useful syrup of the same kind.

☞ Strawberries, 4lb.; vinegar, 3 quarts; vinegar drained, and poured on fresh strawberries, 4lb.; 3 days drained again on to fresh fruit, 3 to 4lb.; 2 to 4 days to each quart of the vinegar; 1lb. of highly refined sugar, boiled 5 minutes, lightly corked, 4 to 5 days.

STRAWBERRY WATER.—Put some very ripe strawberries into a linen cloth, and press out the juice. Transfer this into a wide-mouthed bottle, leaving the mouth open, and hang it up in the sun until the juice has become clear; then pour it off gently into another vessel, taking care not to disturb the sediment, and beat it up in the proportion of half a pint of juice with a quart of water, and a quarter of a pound of sugar; then strain through a jelly-bag.

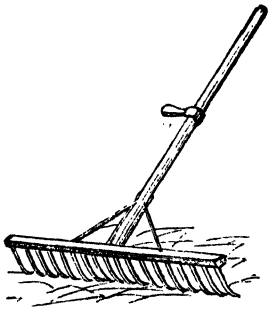
STRAWBERRY-WATER ICE.—One large pottle of scarlet strawberries, the juice of a lemon, a pound of sugar, or one pint of strong syrup, and half a pint of water. Mix, first rubbing the fruit through a sieve, and freeze.

STRAWBERRY WINE.—For making this wine, equal quantities of water and of juice are required. The fruit must be thoroughly bruised, and in order to do this properly, small portions should be squeezed at a time; then add the water, mix it well, and allow it to stand for forty-eight hours; the mixture must then be pressed through a sieve into the fermenting tub, the juice and water measured, and any deficiency in quantity made up, by putting as much water upon the refuse of fruit as is necessary. The fruit must again be squeezed, and the juice strained into the former quantity. Two days before casking, sixteen pounds weight or more of strawberries, must be tied up in a piece of thin muslin, and put in the fermenting tub, in order to impart to the wine a flavour of the fruit. As the process of fermentation in a great measure dissipates this flavour, the more fruit employed in this way, the higher will be the aroma of the wine. Should more fruit be used than sixteen pounds, it would be better to tie it up in two separate parcels. Immediately before casking, the fruit should be taken from the muslin and the juice, and squeezed through the sieve into the *must*. The after-treatment is the same as for currant wine.

STRAWBERRIES, MODE OF EATING.—Take off the stalks from as many strawberries as will form one layer at the bottom of a dish, sift some fine sugar over them; then place another layer and sift again; each layer will be found smaller than the preceding. When there are five or six layers, cut a fresh lemon, and squeeze the juice all over them. Before they are served out, let them be gently disturbed, that they may have the benefit of the lemon-juice and sugar. They may thus be eaten heartily of without apprehending any danger, and are greatly to be preferred to the usual method of eating them with cream.

STRAWBERRIES, TO PRESERVE ENTIRE.—Take an equal weight of fruit and pounded loaf-sugar; lay the former in a large dish, and sprinkle over them the sugar; give the dish a gentle shake, in order that the sugar may reach the under part of the fruit; next make a thin syrup with the remainder of the sugar, and add one pint of red currant juice to every three pounds of strawberries. In this, simmer them till sufficiently jellied. Choose the largest strawberries, not over-ripe.

STUBBLE RAKE.—The gleanings of the stubble are an object of considerable value in reaping; and to secure them for the benefit of the farmer, different methods are employed. The principal and the most effectual of them is the stubble rake, as shown in the annexed figure. The teeth are of iron,



seven inches in length, and set at four inches apart, but formed in the lower portion so that the bend rests on the ground, preventing the points of the teeth penetrating and mixing the earth with the gleanings. The best method of fixing the teeth is by a screw-nut, as they are thereby easily removed, in case of being broken, without risk of injuring the head.

STURGEON.—A fish that migrates from the sea to fresh water; but never going any distance from land, and only growing to its usual size in large rivers. It is occasionally taken in the Thames, but is to be found in its primest condition in the rivers Eske and Eden. Its flesh is much esteemed, being delicate, firm, and white as veal, which it so much resembles.

STURGEON BOILED.—Having cleaned a sturgeon well, boil it in as much water as will just cover it; add two or three pieces of lemon-peel, some whole pepper, a stick of horseradish, and a pint of vinegar to every half-gallon of water. When done, garnish the dish with fried oysters, sliced lemon, and horseradish, and serve it up with melted butter and anchovy.

STURGEON BRAISED.—Put some slices of sturgeon into a braising-pan, with slices of veal and rashers of bacon, half a pint of white wine, a bunch of sweet herbs, two or three onions, a seasoning of salt and pepper, and a little good stock or gravy, which serve with the fish.

STURGEON BROILED.—Divide the fish into cutlets; rub each cutlet over with the yolk of an egg well beaten; cover with chopped parsley, some grated bread crumbs, pepper and salt; wrap them in buttered paper, and broil them. Serve with melted butter and oyster sauce.

STURGEON FILLETS.—Cut the fish into small thin slices; lay them on a fire-proof dish, with a slice of butter, a little salt and pepper, and put them over a very slow fire; when the slices of fish are done on one side, turn them; when quite done, which will be in about twenty minutes, take them out of the dish, and add to the sauce a little flour, which mix well with the butter, also three or four shallots, and a little parsley chopped fine; put the fish again into the sauce, and set it over the fire, but do not allow it to boil; serve with the sauce thrown over the fish, and the dish garnished with sippets of bread, fried brown in butter and drained.

STURGEON ROASTED.—Cut the fish into slices, place them on a spit securely, and roast them. Keep it continually basted with butter, and when nearly done, dredge with bread crumbs. When the flakes begin to separate, it is done. It will take about half an hour before a brisk fire. Serve with good gravy, thickened with butter and flour, and enriched with an anchovy, or glass of white wine, and the juice of half a lemon may be added.

STURGEON STEWED.—Take enough gravy to cover the fish; set it on with a tablespoonful of salt, a few corns of black pepper, a bunch of sweet herbs, two onions, scraped horseradish, and a glass of vinegar. Let this boil a few minutes, and set it aside to become partially cool; then add the fish; let it boil gradually, and stew gently till it begins to break. Take it off immediately; keep it warm; strain the gravy, and thicken it with a good piece of butter; add a glass of port or sherry, a little nutmeg and lemon-juice. Simmer, till it thickens, and then pour it over the fish. Serve with anchovy sauce.

STYPTICS.—Applications, usually of an astringent character, which possess the power of arresting a flow of blood. Oak-bark decoction, and gall-nuts in powder or infusion, which owe their efficacy to the tannin they contain, are used as external styptics. Matico and turpentine are styptics derived from the vegetable kingdom; also, the organic fungus, popularly known as the "fuz-ball," which is frequently applied to bleeding wounds, and with apparent benefit.

SUCKERS, PROPAGATION OF. — The season for taking up and transplanting suckers of trees and shrubs, is any time in open weather from October till March, being careful to dig them up from the mother-plant with as many of the root-fibres as possible, trimming them ready for planting, by shortening the long straggling fibres, and cutting off any thick-knobbed part of the old root that may adhere to the bottom, leaving only the fibres arising from the young wood. Preparatory to planting them out, the stems of the shrub and tree-suckers should likewise be trimmed occasionally by cutting away all the laterals; and any having long, slender, and weak tops, or such as are intended to assume a more dwarfish or bushy growth, may be shortened at top in proportion, to form about half a foot to one or two feet in length, according to their nature or strength; and others that

are stronger, or that are designed to run up with tether stems, may have their tops left entire, or shortened but little. When thus taken up and trimmed, they should be planted out in rows in the nursery, the weak suckers separately in close rows, and also the shortened and stronger plants, each separately in wider rows, so that the rows may be from one to two feet asunder, in proportion to the size and strength of the suckers; and after being thus planted out, they should have the common nursery culture of clearing from weeds in summer, and digging the ground between the rows in winter, &c., and, in from two to three years, they will be of a proper size for planting out, where they are to remain. Some kinds of trees and large shrubs produce suckers strong enough in one season to be fit for planting where they are to remain, as well as some sorts of roses, and numerous other flowering shrubs; also, some plants of the strong shooting gooseberries, currants, raspberries, and similar kinds. It may be generally observed of such trees and shrubs as are naturally disposed to send up many suckers, that by whatever method they are propagated, whether by seeds, suckers, layers, or cuttings, they commonly still continue their natural tendency in this respect. When, therefore, it is desired to have any sorts to produce as few suckers as possible, not to overrun the ground or disfigure the plants, it is proper, both at the time of separating the suckers or planting them off from the main plants, and at the time of their final removal from the nursery, to observe if, at the bottom part, they show any tendency to emit suckers, by the appearance of prominent buds, and if so, they should be pared down as closely as possible. As, however, many sorts of trees and shrubs are liable to throw out considerably more than may be wanted, they should always be cleared away annually at least; and in such as are not wanted for increase, it is proper to eradicate them constantly, as they are produced in the spring and summer seasons. Numerous herbaceous and succulent plants are also productive of bottom offset suckers from the roots, by which they may be increased. In slipping and planting these sorts of offset suckers, the smaller ones should be planted in nursery beds, pots, &c., according to the nature of growth and temperature of the different sorts, to have the advantage of one summer's advanced growth; and the larger ones to be set at once where they are to remain in beds, borders, pots, &c., according to the different sorts or descriptions of them. The suckers of many of the finer kinds of flower plants, as the auricula and others, may be separated or taken off from the parent plants any time between the months of February and August, as they become of a proper size, or are wanted for increase; but if they are not required for this use, they should not be suffered to remain. They can often be slipped off by the fingers, or a sharp piece of wood, without removing much earth, or the plants from the pots; but when they are large, and cannot be thus separated with a sufficient number of fibres to their bottom parts, they may be taken out of the pots, and be removed by the knife without danger, which, perhaps, is the best way, as affording most fibres. The suckers of such old flower-plants, when they are wanted to blow strong, should always be taken off without disturbing the plants in the pots, especially when they are few. The suckers, in all cases of this sort, should constantly be planted as soon as possible after they are slipped, in appropriate small upright pots, giving a slight watering at the time, with suitable temporary shade. They should be placed in proper situations, away from the droppings of trees, and they will thus soon become rooted. The suckers of such flower-plants must, however, never be removed after the litter of the above-named periods, as they have then finished shooting, and have become inactive.

SUÉDOISE OF PEACHES.—Pare and divide four fine ripe peaches, and let them simmer only from five to eight minutes in a syrup made with the third of a pint of water and three ounces of white sugar, boiled together for fifteen minutes; lift them out carefully into a deep dish, and pour about half the syrup over them, and into the remaining half throw a couple of pounds of quite ripe peaches, and boil them to a perfectly smooth, dry pulp or marmalade, with as much additional sugar in fine powder, as the nature of the fruit may require. Lift the other peaches from the syrup, and reduce it by very quick boiling more than half. Spread a deep layer of the marmalade in a dish, arrange the peaches symmetrically round it, and fill all the spaces between them with the marmalade; place the half of a blanched peach-kernel in each, pour the reduced syrup equally over the surface, and form a border round the dish with macaroons; or, in lieu of these, with candied citron, sliced very thin, and cut into leaves with a small paste-cutter. A little lemon-juice brings out the flavour of all preparations of peaches, and may be added with good effect to this.

☞ Peaches, 4 large, and 2 lbs.; sugar, ½ to ¾lb.; lemon-juice, 1 tablespoonful; citron or macaroon, as required.

SUET.—To have fresh suet is an essential point, for, should any portion be at all musty, it will entirely destroy the pie or pudding. Beef is the best, veal the next, especially for making crust; but mutton is the lightest for dumplings. The best method for keeping suet is to wipe the piece carefully, sprinkle a little salt or flour over it, and hang it up in a cool place. If the pieces are too small to be hung up, put them on a plate carefully, and add a little fresh flour or salt

SUET CRUST.—Mix together while dry three-quarters of a pound of beef suet, chopped fine, and a pound of flour with a little salt; then make into a stiff paste with cold water or lukewarm milk; work it well, rolling it out two or three times, and in the intervals beat it with the rolling-pin, if for pies; or omit this for puddings, as it will then be lighter.

SUET DUMPLINGS.—Make as for suet puddings, and drop into boiling water, or into the boilings of beef; or they may be boiled in a cloth.

SUET DUMPLINGS, WITH CURRANTS.—Take a pint of milk, four eggs, a pound of suet shred fine, and a pound of currants well cleaned, two teaspoonfuls of salt, and three teaspoonfuls of ginger; first take half the milk, and mix it to the consistence of a thick batter, then put in the eggs, the salt, and ginger, then the remainder of the milk by degrees, with the suet and currants, and flour enough to make it into light paste. Make the dumplings of about the size of an apple, flatten them a little, put them into boiling water, move them softly to prevent them sticking together, keep the water boiling, and, in rather more than half an hour, they will be done.

☞ Milk, 1 pint; eggs, 4; suet, 1 lb.; currants, 1 lb.; salt, 2 teaspoonfuls; ginger, 3 teaspoonfuls; flour, sufficient.

SUET DUMPLINGS, WITH EGGS.—Mix together a pint of milk, two eggs, three-quarters of a pound of beef-suet shred fine, a teaspoonful of ginger, and flour enough to convert the whole into a moderately stiff paste. Make the paste into dumplings, roll them in a little flour, and put them into boiling water. Move them gently for a short time, to prevent them sticking together. If the dumplings are small, three-quarters of an hour will boil them; if large, the time must be proportioned to their size. They will boil best in cloths, which keep the outsides drier.

☞ Milk, 1 pint; eggs, 2; suet, ¾lb.; ginger, 1 teaspoonful; flour, sufficient.

SUET PUDDING.—Shred a pound of suet; mix with a pound and a quarter of flour, two eggs beaten separately, a little salt, and as little milk as will make it boil four hours. It eats well next day cut in slices, and broiled. The outward fat of loins or necks of mutton finely shred, makes a more delicate pudding than suet.

SUET PUDDING, WITH EGGS.—To a pound of beef suet chopped very fine, add six tablespoonfuls of flour, a teaspoonful of grated ginger, and a teaspoonful of salt. Gradually mix with these ingredients a quart of milk, and four eggs well beaten. Boil the whole three hours in a buttered basin, or two hours and a half in a cloth well floured.

☞ Suet, 1lb.; flour, 6 tablespoonfuls; ginger, 1 teaspoonful; salt, 1 teaspoonful; eggs, 4.

SUET, TO CLARIFY.—The kidney fat of beef, mutton, or veal, must be cut into small pieces, and be put into a water-bath, or in a cool oven; or on a very cool hot-plate or stove; the slightest increase of temperature more than sufficient to liquefy the fat gives a taste of burning which is not pleasant. If there is no water-bath at hand, an earthenware jar immersed in a saucepan of water, and covered all over with a saucepan-lid, answers every purpose. Whichever plan is adopted, the process must be very slow, as the cells in which the fat lies take a long time to empty themselves. When the lumps have shrunk almost to nothing, strain the whole through a sieve, and increase the heat a little for the remaining portion, the water-bath not being sufficient to extract all the fat. Keep this last part separate, as it is only fit for frying, and not for pastry; tie down the jar when cold, and either suet or lard will then keep a long time.

SUET, TO PRESERVE.—Select the firmest part of suet, and free it from skin and veins. Set it beside the fire in a delicately clean saucepan, and regulate the heat so that it may melt without frying, or it will acquire an unpleasant flavour. When melted, pour it into a pan of cold water. When in a hard cake, wipe it very dry, fold it in fine paper, then in a linen bag, and keep it in a dry cool place. When used, scrape it fine.

SUFFOLK DUMPLINGS.—Make a very light dough with yeast, as for bread, but with milk instead of water, and with salt added. Let it rise for an hour before the fire. Twenty minutes before the dumplings are to be served, have ready a large stewpan of boiling water, make the dough into balls the size of a medium dumpling, throw them in, and boil them for twenty minutes. To ascertain when they are done enough, stick a fork into one, and if it come out clear, it is done. Before serving, tear them apart on the top with two forks, as they become heavy by their own steam. Serve with bread and butter, or sugar, or salt.

SUGAR, ADULTERATION OF.—The adulteration of sugar chiefly consists in the mixing together, in various proportions, of sugars of different qualities and prices, none of which are very pure and some highly impure; an article is thus prepared presenting a tolerable appearance to the eye, but which is really one of very great impurity, and rarely what it professes to be. The impure sugars are dark coloured, imperfectly crystallized, heavy and clammy, readily caking into masses: examined with the microscope they are found to contain fragments of cane, woody fibre, grit, &c. Nearly all the brown sugars imported into this country, contain a large amount of impurity, but in general the sugar procured from the grocer does not alone contain this same amount; but it is increased, sometimes doubled and trebled, by the use of variable proportions of other sugars still more impure, in fact, the most impure that can be purchased; so that, in the state in which it reaches the public, it is very unfit for use. Sugar is sometimes adulterated with flour. This is used partly to improve the colour of very dark and bad sugar, and partly to cause the absorption of the water of the treacle with which dark-coloured sugars are in general contaminated. Pieces of woody fibre, and stony particles, or grit, are also commonly found in sugar. The impurities and adulterations of sugar may be detected by the appearance of the sugar, by the touch, by the effect of its contact with paper, by the microscope, and by chemicals. *By the appearance*—A pure sugar

is light-coloured, highly crystalline, and very dry. Impure sugars are dark-coloured, imperfectly crystalline, small grained, often presenting an earthy appearance, damp, and heavy. *By the touch*—A good sugar should be perfectly dry to the touch, and should not feel in the least sticky or clammy when pressed between the fingers; on the other hand, a bad sugar, when treated in the same way, feels moist and sticky. *The effect of contact with paper*—The thick sugar paper is generally employed by grocers on account of its absorbent power. When the quantity of moisture is very great, owing to the admixture of grape-sugar, treacle, &c., the thick sugar-paper absorbs a portion of the fluid, and becomes wetted and stained; the extent of the discoloration, and the state of the paper as respects moisture, affording a very good criterion as to the quality of the sugar. This is a very simple and excellent method of ascertaining, in many cases, the quality of sugar, which, in addition to staining the paper, if impure from admixture with treacle and grape-sugar, will also become hard and caked; in doubtful cases, the sugar should be allowed to remain in the paper for two or three days. The quantity of this water present in many sugars is so great, that it adds very considerably to the weight; for every drachm of water to the pound of sugar there must be just so much less of pure cane-sugar; so that as a question of economy merely, putting aside all ideas of purity, cleanliness, and health, it is very doubtful whether the buyer becomes a gainer by the purchase of the cheaper, less pure, and much heavier sugars. *By the microscope*—By means of this instrument the presence of the sugar acari, the sporules of fungus, fragments of cane, wood, and starch granules, may be ascertained, and the adulteration by means of flour, &c., determined. By absolute test the fact has been arrived at that the brown sugars of commerce are, in general, in a state wholly unfit for human consumption, and the inferior sorts should be especially avoided. Lump sugar is free from the greater part of the impurities and adulterations by which brown sugar is so largely contaminated and deteriorated; it does not contain acari, fungi, grape-sugar, albumen, or grit, the chief impurities consisting of starch granules, and microscopic chips, or fragments of woody fibre. The general use of refined or lump sugar is, therefore, to be recommended. The quality of the lump sugar is comparatively a secondary consideration, as the worst lump sugar is infinitely more pure than the best brown sugar that can be obtained.

SUGAR BISCUITS.—Cut some butter into flour. Add sugar and caraway seeds; pour in the brandy, and then the milk. Lastly, put in pearl-ash; stir all well with a knife, and mix it thoroughly, till it becomes a lump of dough. Flour a paste board, and lay the dough on it. Knead it very well; divide it into eight or ten pieces, and knead each piece separately. Then put them all together, and knead them very well into one lump. Cut the dough in half, and roll it out into sheets, about half an inch thick. Beat the sheets of dough very hard on both sides with the rolling-pin. Cut them out into round cakes with the edge of a tumbler. Butter iron pans and lay the cakes in them. Bake them of a very pale brown. If done too much, they will lose their taste. Let the oven be hotter at the top than at the bottom. These cakes kept in a stone jar, closely covered from air, will continue perfectly good for several months.

SUGAR-BROWNING. — Pound, very finely, six ounces of the best refined sugar, and put it into a small and very clean frying-pan, with a glass of water. As it dissolves, mix well with a wooden spoon, and withdraw the pan from the fire when the fluid begins to boil fast; stir, and keep it thus till it has acquired the rich dark brown colour desired. It may be seasoned either with pepper, salt, cloves, ketchup, &c., or not, but is generally more useful plain. When cold, skim the browning, and bottle it in vials for use.

SUGAR CAKES.—Take half a pound of dried flour, the same quantity of fresh butter, washed in rose water, and a quarter of a pound of sifted loaf sugar; then mix together the flour and sugar, rub in the butter, and add the yolk of an egg beaten with a tablespoonful of cream; make it into a paste, roll, and cut it into small round cakes, which bake upon a floured tin.

☞ Flour, ½lb.; butter, ¼lb.; loaf sugar, ¼lb.; egg, 1 yolk; cream, 1 tablespoonful.

SUGAR CANDY.—Clarify four pounds of lump sugar, which must be allowed to simmer with a little water, over the fire, until, by taking up a little on a spoon, and blowing it, it flies off in small flakes; then, having skimmed it well, take it off the fire; throw into it a quarter of a wineglassful of good spirits of wine, and pour the whole out into an earthen dish; cover it over, and put it into an oven for eight days, taking care to keep it of an equal temperature. At the end of that time, drain off the syrup, and the candy will remain attached to the dish, which must be warmed in order to allow the candy to be more readily detached.

SUGAR, DIETETIC PROPERTIES OF.—As an article of diet, sugar is the representation of the saccharine principles which include gum, starch, &c.; its nutritive properties are very great, and it appears to form the basis more or less of all those vegetable and farinaceous substances which give the greatest support to human life. With regard to the digestibility of sugar by different individuals, there is considerable variation. Some persons cannot consume it, even in small quantity, without being disordered and suffering from acidity, while others seem to digest their food more readily when an amount of saccharine is mingled with it. As a general rule, persons whose digestive powers are feeble should not indulge extensively in the use of sugar; but for persons in ordinary health a moderate proportion of this pleasant aliment is a wholesome article of nutriment.

SUGAR NIPPERS.—This implement is extremely convenient for breaking up loaf-

sugar into pieces of any size desired; their application is self-explanatory.

SUGAR PLUMS.—Under this general head are included the whole variety of articles of this kind sold by the confectioners, from the common sugar-plum to the almond and other kernels, covered with sugar, and also the compound paste of fruit and sugar. They are made in the following way:—Take a copper pan or basin, in the form of a stewpan, having two holes through which it may be suspended by cords from a ceiling, and a kind of handle from the middle, to facilitate the frequent agitation by the hand; let this pan be suspended about four inches from a brazier of charcoal, and having put the articles which are to be covered with sugar into the pan with some strong syrup, shake the pan, so that every part of the contents may be covered, and keep agitating them till the sugar is dry; then add more sugar and agitate again till dry; continuing to do this until the desired thickness is attained. If blanched almonds, or other nuts be put into the pan in this way, they will acquire any thickness of sugar required, and their original shape will be preserved.

SUGAR RUFFS.—A pound of powdered and sifted sugar, beaten well with the whites of three eggs, and flavoured with oil of cinnamon, lemons, or orange-flower water, and baked in the same way as the meringues, served in a napkin or used to garnish dishes of preserves.

☞ Sugar, 1lb.; eggs, 3 whites; flavour with oil of cinnamon, lemons, orange-flower water.

SUGAR, TO BOIL.—To every pound of sugar, allow half a pint of water, stir it over the fire till the sugar be entirely dissolved; when it first boils up, pour in a little cold water, and when it boils a second time, take it off the fire, let it settle ten minutes, carefully skim it, and boil it for half an hour, or a little longer, and then put in the fruit.

SUGAR, TO CLARIFY.—To every three pounds of loaf sugar, allow the beaten white of one egg, and a pint and a half of water; break the sugar small, put it into a nicely-cleaned brass pan, and pour the water over it; let it stand some time before it be put upon the fire, then add the beaten whites of the eggs; stir it till the sugar be entirely dissolved, and when it boils up, pour in a quarter of a pint of cold water, let it boil up a second time, take it off the fire, and let it settle for fifteen minutes; carefully take off all the scum, put it on the fire, and boil it till sufficiently thick, or if required, till candy high, in order to ascertain which drop a little from a spoon into a small jar of cold water, and if it becomes quite hard it is then sufficiently done; or dip the spoon into the sugar, plunge it into cold water, draw off the sugar which adheres to the spoon, and if it be hard, and snaps, the fruit to be preserved must be instantly put in and boiled.

SUGAR VINEGAR.—Put nine pounds of brown sugar to every six gallons of water, boil it for a quarter of an hour, then pour it into a tub in a lukewarm state, put to it a pint of new barm, let it work for four or five days, stir it up three or four times a day, then turn it into a clean barrel iron-hooped, and set it full in the sun. If you make it in February, it will be fit for use in August. You may use it for most sorts of pickles, except mushrooms and walnuts.

SULPHUR.—The form and colour of roll-sulphur is sufficiently well known; it is made by simply fusing the sublimed sulphur, and casting it in the form of sticks. The "flowers of sulphur" is made by sublimation. In medical practice, sulphur is variously employed, its best known application, however, being for the cure of itch, in the form of ointment. In various skin diseases sulphur may be taken with benefit. It is also useful when mild laxatives only are required. For the latter purposes it is advantageously mixed with three or four times its weight of cream of tartar, or with its own weight of magnesia. The flowers of sulphur is the form in most common use but the precipitated or milk of sulphur is rather a more elegant preparation. One very serious objection to the use of sulphur is the unpleasant odour it imparts to the person, particularly to the insensible perspiration. The dose of sulphur as a laxative is, alone, two drachms; when mixed with cream of tartar or magnesia, from half a drachm to a drachm.

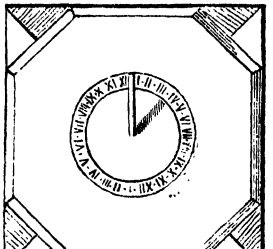
SULPHUR OINTMENT. — Mix four drachms of sublimed sulphur, two ounces of lard, and two drachms of sulphuric acid together. This is to be rubbed into the body.

SULPHURIC ACID.—This is applied in fixed rheumatic pains and old sprains, as an ointment, thus:—One drachm of the acid to one ounce of hog's lard. In itch, half a drachm of acid to one ounce of hog's lard. *Acidum sulphuricum dilutum* — dilute sulphuric acid. This is made by adding, gradually, three drachms by measure of the strong acid to four ounces of water. It is employed as a tonic, an astringent and cooling medicine. It is given in indigestion, spitting of blood, eruptions of the skin, putrid sore throat, hectic, recoveries in fevers, to stop salivation, and to strengthen the digestive organs. The dose is ten to forty drops, largely diluted. It must be sucked through a quill, and the mouth well rinsed after each dose. If it causes a griping pain in the bowels, add to it a little syrup of poppies. When employed as a gargle, three drachms of acid to eight ounces of water. In skin diseases, as the summer rash, chronic nettle rash, and for relieving a distressing itching and tingling of the skin, no remedy is more serviceable than a weak lotion of this acid, and also in those forms of indigestion connected with an alkaline state of the

stomach. Half a drachm of saltpetre, and two ounces of sulphuric acid placed on a saucer, and heated over a small fire or lamp, is used to fumigate rooms, vessels, &c., after fever or other contagious diseases.

SUNBURNS.—Very frequently the redness apparent upon the face after exposure to the sun, arises from a disturbed digestion, and if there are such symptoms as headache, crusted tongue, irregular bowels, &c., the fact is established, and means of cure should be adopted. If, however, the skin is so sensitive as to be readily tanned by exposure, the following remedy may be made use of: Take two drachms of borax, one drachm of Roman alum, one drachm of camphor, half an ounce of sugar candy, and a pound of ox-gall. Mix and stir these ingredients well together for ten minutes or so, and repeat this stirring three or four times a day for a fortnight, till it appears clear and transparent. Strain through blotting paper, and bottle for use.

SUN DIAL.—The sun dial forms a very appropriate ornament for gardens, pleasure-grounds, &c. It may be made in a variety



of styles, the accompanying figure shewing one of a very simple and inexpensive kind.

SUNFLOWER.—The perennial or American sunflower is at present much cultivated, particularly near large towns, where it bears the smoke well, and produces fine, yellow, double flowers. This sort rarely produces seeds in this country, and must, therefore, be propagated by parting the roots. In some parts of the United States

it is extensively cultivated, and turned to a very valuable account in a variety of ways. One acre of ground will produce from forty to fifty bushels of seed—sometimes much more. Good seed will produce a gallon of oil to the bushel, and the oil has been sold at a dollar and a half. The seed being of a farinaceous oily quality, is given as a cheap, substantial, and nourishing food for neat cattle, sheep, swine, and all sorts of poultry, and may be used either in the mealy state or that of cake, after it has been expressed or manufactured into oil. The flower affords very superior pasture for bees. The large stems and roots may be used for lighting fires. The refuse from one acre after the oil has been extracted produced 1500 lbs. of oil-cakes; the stalks, when burnt for alkali, gave ten cwts. of potash. They may also be bruised and steeped like flax, and made into packthread and bags. A whitish brown paper is made from the heads after the seed is taken out. The plant thrives in an open situation on any soil, and, as it derives most of its nourishment from the atmosphere, having small roots, it serves rather to improve than exhaust the soil. The seed should be drilled into the ground, the distance from row to row eighteen inches, and the plants should be thinned out to thirty-six inches from plant to plant. The number of plants at this distance would be about 14,500 per acre; at eighteen inches from plant to plant 25,000 per acre. Keep clean from all sorts of weeds, and when the plants are well up work with a single-horse hoe plough between the rows, and with a hand-hoe close to the plants. Prune when small heads appear out of the sides of each leaf. The flowers appear in succession for a considerable period. Harvest in baskets as the heads ripen.

SUNSTROKE.—When the heat becomes very intense, particularly if there be direct exposure to the rays of the sun, the brain is apt to be affected by what is termed sunstroke. The affected person falls insensible, the face is flushed and swollen, and the blood-vessels beat violently. The most efficacious remedies are the pouring of cold water on the head, and the administration of a small quantity of stimulant, ammonia or brandy.

SUPPER-EATING, CAUTIONS RESPECTING.—Although, generally speaking, the eating of suppers is unwholesome, still, much depends upon circumstances. In ordinary cases, animal food once a day is sufficient for most persons; if, therefore, an individual for whom it is enough, after a hearty meat dinner adds a superfluous meat supper, the chances are that he will pay the penalty in disturbed sleep, and rise in the morning with a furred tongue and a feeling of languor. This is especially the case if the superfluity be indulged in after a dinner made in the latter part of the day. If dinner is eaten early, if much exercise is taken between that and the evening meal, and if supper is not eaten at too late an hour, many persons may take with benefit a moderate proportion of animal food. It is undoubtedly better not to eat a meal heavy, either in quantity or quality, before a period of inactivity and sleep so prolonged as that of the night; but there is no doubt that much of the bad character of supper as a meal arises from its being too often one

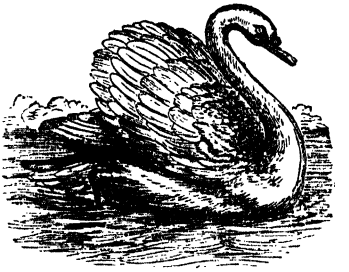
of superfluity. Those to whom suppers are the most injurious are the plethoric, or such as suffer from head symptoms. Some persons, however, especially dyspeptic invalids, do themselves harm by abstaining from suppers of every kind, even after the principal meal has been taken early in the day. This abstinence is adopted under an erroneous impression that all suppers are bad, and the consequence is that the stomach suffers from uneasy sensations during the night, and a sense of exhaustion ensues in the morning, both of which may be prevented by a moderate supper of light food, such as is generally found to agree the best; thus many a dyspeptic subject will find his morning meal better digested after a light supper, than without one.

SUPPERS, TO PREPARE.—The ingenuity of a housewife is often taxed to contrive a satisfactory supper, especially if it be demanded upon an emergency. Economy, good taste, and neatness can, however, do much, where the chief organ to be propitiated is the eye; for the lateness of modern dinner-hours has now almost universally changed suppers from a solid meal into a light showy refreshment. Thus, the gratification afforded by the supper, mainly depends upon the beautiful shapes and arrangements of china, glass, linen fruits, foliage, flowers, colours, lights, or ornamental confectionery, and all the other natural and artificial embellishments of the table. When a formal substantial supper is set out, the principal dishes are understood to be roasted game and poultry, meats, sliced ham, tongue, collared and potted things, grated beef, Bologna sausage, highly-seasoned cold pies of game, &c., with occasionally soup — an addition to modern suppers which, after the heat and fatigue of a ball-room or large party, is found particularly grateful and restorative. Minced white meats, lobsters, oysters, collared eels, and craw-fish dressed in various forms; sago, rice, the more delicate vegetables, poached eggs, scalloped potatoes, are all suitable articles of the solid kind. To these are added ices, cakes, tarts, possets, creams, jellies in glasses or shapes, custards, preserved or dried fruits, pancakes, fritters, puffs, tartlets, grated cheese, butter in little shapes, and sandwiches; and for convivial suppers, the entire catalogue of the more stimulating dishes, as anchovy toasts, grilled bones, toasted cheese, roasted onions, salmagundi, slices of smoked sausages, &c. A supper table should neither be too much crowded, nor too much scattered and broken with minute dishes. Any larder moderately stored will furnish a few substantial articles for supper on an emergency; and a few sweet things, readily prepared or purchased, with patties, shell-fish, and fruits, will make up the rest, if the effect of contrasted colours, flavours, and forms be understood, and that light and graceful disposition of trifles which is the chief art in setting off such entertainments.

SUSSEX CAKES.—To two pounds of well-dried flour mix three-quarters of a pound of powdered loaf-sugar, four ounces of sweet, and one of bitter almonds, pounded in a little orange-flower water, and a pound of fresh butter beaten to a cream; mix these well together; bake in small tins well floured, or drop on floured tins.

☞ Flour, 2lbs.; sugar, ¾lb.; sweet almonds, 4ozs.; bitter almonds, 1oz.; orange-flower water, sufficient; butter, 1lb.

SWANS, TO BREED AND REAR.—Tame swans are never kept except there be a piece of water for them to swim in, to which they are a great ornament; and it is necessary that the water should be clear, towards keeping it in which condition they assist. Its food is very similar to that of the



goose. The swan lays early in the spring only once a year, and has seldom more than three eggs. The male assists in hatching. They require little attention in breeding, except the appropriation of a small house for their young, for they usually build their nests in some secluded spot near the water, and prefer an island, if there is one. The cygnets are dark-coloured when first hatched, and do not become white till their second year. Their bringing up is left to the mother, and they may or may not have food supplied, according to the locality.

SWAN'S DOWN, TO CLEAN.—White swan's down may be washed in soap and water; after washing, shake it out, and when the down is somewhat raised, dry it before a clear fire.

SWAN'S EGGS BOILED.—Take as much water as will cover the egg or eggs well in every part; let it boil quickly, then take it from the fire, and as soon as the water ceases to move, put in the eggs, and leave it by the side of the fire, without allowing it to boil, for twenty minutes, and turn it gently once or twice in the time; then put on the cover of the stewpan, and boil it gently for a quarter of an hour; take it quite from the fire, and in five minutes put into a basin, and throw a cloth once or twice folded over it, and let it cool slowly. It will retain the heat for a very long time, and as it should be quite cold before it is cut, it should be boiled early if wanted to serve the same day. Halve it evenly with a sharp knife lengthwise, take out the yolk with care, and prepare it for table.

SWAN'S EGGS FORCED.—Boil gently for twenty minutes in plenty of water, that they may be entirely covered with it, five or six fresh swan's eggs, and when they are done, lift them into a large pan of water to

cool. By changing the water once or twice they will become cold more rapidly, and they must not be used until they are perfectly so. Roll them in a cloth, pressing lightly on them to break the shells; clear them off, and halve the eggs evenly lengthwise. Take out the yolks with care, and pound them to a smooth paste in a mortar, with an ounce and a half, or two ounces at the utmost, of pure-flavoured butter to the half dozen, a small half-teaspoonful of salt, a little finely-grated nutmeg, and some cayenne, also, in fine powder, a little mace. Blend these ingredients thoroughly, and add to them by degrees one raw hen's egg slightly whisked, and the yolk of a second, or a dessertspoonful or two of sweet rich cream. One common egg is sufficient for four of the swan's egg yolks. Beat up the mass, which will now be of the consistence of a thick batter, well and lightly, and proceed to fill the whites with it, having first cut a small slice from each half to make it stand evenly on the dish, and hollowed the inside with the point of a sharp knife, so as to render it of equal thickness throughout. Fill them full and high, smooth the yolks gently with the blade of a knife, arrange the eggs on a dish, and place them in a gentle oven for a quarter of an hour. Serve them directly they are taken in.

SWEET BISCUITS.—One pound of flour, half a pound of butter, the same quantity of finely-pounded sugar, and two eggs, without being beaten; make it all into a very stiff paste with cold water; roll it out, and to form the biscuits roll a bit of the paste into a ball about the size of the yolk of an egg, flatten it a little, and place them upon tins to bake.

☞ Eggs, 2; flour, 1lb.; butter, ½lb.; sugar, ½lb.

SWEETBREAD CROQUETS. — Mince some cold sweetbreads, which have been dressed, and boil them in a sauce velouté; when quite cold form them into balls or into rolls about two inches long; fry and serve them with fried parsley in the middle. Or make the croquet meat into a rissole. Roll out a piece of thin puff-paste, enclose the meat in it, brush it over with a beaten egg, and strew over it grated bread; fry it of a light brown colour.

SWEETBREAD CUTLETS.—Boil the sweetbreads for half an hour in water or veal broth, and when they are perfectly cold, cut them into slices of equal thickness, brush them with yolk of egg, and dip them into very fine bread-crumbs seasoned with salt, cayenne, grated lemon-rind, and mace, fry them in butter of a fine light brown, arrange them in a dish, placing them high in the centre, and pour under them a gravy made in the pan, thickened with mushroom powder and flavoured with lemon-juice, or sauce them with some rich brown gravy, to which a glass of sherry or Madeira has been added. When it can be done conveniently, take as many slices of a cold boiled tongue as there are sweetbread cutlets, pare the rind from them, trim them into good shape, and dress them with the sweetbreads after they have been egged and seasoned in the same way, and place each cutlet upon a slice of tongue when they are dished. For variety, substitute fried bread stamped out to the size of the cutlet with a round or fluted paste or cake cutter. The crumb of a stale loaf, very evenly sliced, is best for the purpose.

SWEETBREAD FRICASSEE.—Cut the sweetbreads in rather thick slices, boil them till half done in a little more water than will just cover them. Add a seasoning of salt, pepper, and mace. Then put to them some butter, the yolks of four eggs beaten, with a little white wine, and some lemon-juice. Keep this over the fire, shaking it well, till the sauce is properly thickened. Serve it up with the juice of an orange squeezed over it. If it is to be a brown fricassee, fry the sweetbreads first in butter till the outside is browned. Then pour off the butter, put water to the sweetbreads, and boil and finish them as before. An onion or a clove of garlic may be added to the water; or if broth be used instead of water, it will make the fricassee more savoury.

SWEETBREAD FRIED. — Cut sweetbreads into long slices, beat up the yolk of an egg, and rub it over them with a feather. Make a seasoning of pepper, salt, and grated bread; strew this over, and fry them in butter. Garnish with crisped parsley, and small thin slices of toasted bacon.

SWEETBREAD LARDED.—Scald them in several waters, to disgorge the blood, and let them whiten a quarter of an hour in boiling water. Lard them, put them in a stewpan, with the larded side uppermost; molsten with stock, and season them; stew them slowly. When the sauce is reduced, and the sweetbreads a nice colour, serve them on stewed sorrel, chicory, or with a tomato sauce, pouring first over them the sauce in which they were stewed.

SWEETBREAD RAGOUT.—Cut the sweetbreads into pieces about sufficient for a mouthful, wash them thoroughly, and dry them in a cloth, brown them in fresh butter, and, pouring into the stewpan as much rich brown gravy as will just cover them, let them simmer gently, and add a seasoning of pepper, allspice, salt, and mushroom ketchup. Thicken the sauce, and dishing the sweetbreads very hot, pour the sauce over them through a sieve.

SWEETBREAD ROASTED. — Trim a fine and particularly fresh sweetbread; parboil it for five minutes, and throw it into a basin of cold water. Roast it plain, or beat up the yolk of an egg, and prepare some fine bread crumbs. When the sweetbread is cold, dry it thoroughly in a cloth; run a lark-spit or a skewer through it, and tie it on the ordinary spit; egg it with a paste-brush; powder it well with bread crumbs, and roast it.

SWEETBREAD, WITH HERBS. — Chop fine parsley, shallots, and mushrooms; mix with them a piece of butter and some white pepper. Put the sweetbread into a saucepan, with some strips of fat bacon at the bottom, add half a glass of white wine, the same quantity of stock, and let it stew

slowly; when they are well done, take them out, skim the sauce, and add a little coulis or stock if too much reduced, and pour it hot over the sweetbread when you serve.

SWEETBREAD, WITH MUSHROOMS.—Choose sweetbreads, large and white. Soak and blanch them in boiling water till they are firm. Cut them into pieces, and stew them in some good stock with mushroom sauce. Take them up. Boil down the sauce, and, when well reduced, thicken with the beaten yolks of eggs, and season with a little blanched parsley, delicately minced, and a little lemon-juice.

SWEET CAKES.—To a pound and a half of well-dried flour add the same quantity of fresh butter, washed in orange-flower water, and half a pound of powdered and sifted loaf-sugar; mix the flour and sugar together, rub in the butter, and add the yolks of three eggs beaten with a little cream; make it into a stiff paste, roll it to the thickness of a five-shilling piece, cut it into shapes, and bake on a floured tin.

℄ Flour, 1½lb.; butter, 1½lb.; orange-flower water, sufficient; sugar, ½lb.; eggs, 3 yolks; cream, sufficient.

SWEETMEAT FRITTERS.—Cut small, any sort of candied fruit, and heat it with a bit of fresh butter, some good milk, and a little grated lemon-peel; when quite hot, stir in enough of flour to make it into a stiff paste; take it off the fire, and work in eight or ten eggs, two at a time; when cold, form the fritters, and fry, and serve them with pounded loaf sugar strewed over them.

SWEETMEATS, DIRECTIONS FOR MAKING.—In preparing sugar for sweetmeats, let it be entirely dissolved before it is put on the fire. If it is dissolved in water, allow about half a pint of water to a pound of sugar. If the sugar is boiled before the fruit is added to it, it will be improved in clearness by passing it through a flannel bag. Skim off the brown scum all the time the sugar is boiling. If sweetmeats are boiled too long, they lose their flavour and become of a dark colour. If boiled too short a time, they will not keep well.

SWEET SAUCE.—Put a little melted butter and half a pint of water in a sauce-pan; let it boil; add a little flour, to thicken it, and an ounce of butter, a wineglassful of brandy or sherry, and sweeten to taste with loaf-sugar. Serve in a tureen or butter-boat.

SWEET WILLIAM.—The sweet-william is one of the most easily grown flowers of the borders; and it is only when desired to perpetuate a particular variety that any difficulty is created. The seed may be sown in March or April, and the bed kept very clear from weeds, until the plants are large enough to plant out, about nine inches apart, in good rich soil of almost any kind. When they bloom, we have only to observe if any of the plants are worth propagating. The shoots at the bottom of the plant may be torn down, and planted under hand-glasses, or they may be layered like carnations. But these, as in all other flower-seeds promiscuously obtained or purchased in the ordinary way, rarely give very good varieties. It is better to procure a few choice plants and save our own seeds. Double sweet-williams are to be purchased, and they yield seed which will generally give a further choice of double kinds, and usually better than their originals. The flower requires great perseverance before it will be produced in a superior state. The edges are naturally serrated very much, and the colours of many descriptions are speckled and indistinct, but there are varieties with smooth edges, thick petals, and of a good colour, extremely small; nevertheless, they are susceptible of much improvement. The side shoots are, when rooted, planted out in the same way as seedlings, whether they are larger or struck under glass, although the plant has been set down as a biennial. If we discover among our seedlings any one a better colour than usual, or a thicker or smoother petal, or singularly marked, or with any other point deserving notice, it should be propagated by the bottom shoots for itself, and the seed should be carefully sowed for the chance of more improved varieties; but we should invariably pull up and throw away everything that is common as soon as a single flower opens to show its character, because, if we allow a bad one to remain, it will, in all probability, spoil a good bed of the seed. There is no obstacle to the sweet-william becoming a very grand show-flower, there is nothing to limit the size or the brightness of the colour, and perhaps the perfection, which would be scarlet and black: and these have already been seen approaching very closely in ill-shaped varieties.

SWELLINGS.—Swellings are of two kinds; first, those which are the result of blows, falls, or bruises, in which the injured part, from the rupture of a small vessel beneath the cuticle, instantly puffs up; and secondly, a slowly increasing tumour, the result of inflammation, and attended with heat, redness, and pain, and after a time, with a sense of fluctuation; this is an abscess. There are other kinds of swellings, as of the glands, all having different names; but these belong to the order of tumours. The *treatment*, for the first-named description of swelling, consists in applying a piece of lint soaked in the extract of lead to the part, and continuing the application till the swelling subsides. For the second-named swellings, the first object is, if possible, to suppress the swelling, and promote absorption; for this purpose the annexed lotion is to be applied cold, on rags constantly wetted. Take of

Sugar of lead	½ oz.
Sal ammoniac	2 drachms.
Camphor water . . .	20 ozs.
Vinegar	4 ozs.

Dissolve, and make a lotion. When, in spite of the cold application, the swelling enlarges and the heat and throbbing increase, the lotion must be set aside, and hot poultices or fomentations substituted, till the abscess is fit to open.

SWIMMING.—The first thing is to conquer timidity. The whole success of swimming mainly depends upon confidence. Let it be understood that water is much more buoyant than the atmosphere, and that this quality tends to support the body, to raise it rather than to let it sink. Take a bladder filled with air, and try to thrust it into the water; the resistance will be very great. Within the body of every swimmer there is a similar air-distended vessel, which acts in the same manner under like circumstances; so that the first sensation experienced by a person going into the water is the tendency to re-appear upon its surface. Timid boys often walk into the water. The best way is to get an elder friend to take hold of you, with your full consent, of course, and dip you over head and ears. You will soon find out how easy it is to come up again. A sloping descent should be chosen, without holes or irregularities, so that you may choose your own depth. Dr. Franklin's advice upon this point is as follows:—"Choose a place where the water deepens gradually, walk coolly into it until you are up to your breast; then turn round your face to the shore, and let an egg be thrown into the water; the circumstance of the egg not being broken in its descent to the bottom, will prove to you what is asserted of the buoyancy of the water between the swimmer and the shore. The egg must lie in the water so deep that you cannot reach to take it up except by diving for it. To encourage yourself, in order to do this, reflect that your progress will be from deep to shallow water, and that at any time you may by bringing your legs under you and standing on the bottom, raise your head far above the water; then plunge under it with your eyes wide open. They must be kept open before going under, as you cannot open the eyelids afterwards, from the weight of water above you. Now turn yourself towards the egg, and endeavour by the action of your hands and feet against the water to get forward, till within reach of it. But in whatever way you (at first) enter the water, it is advisable to wet the head and neck either previously or immediately afterwards. This is for the purpose of equalizing the temperature of the body. A common method with beginners is to walk or run boldly in, and when in to plunge the head and neck beneath the water. But let not the tyro be ashamed, though he may be seen at first timidly to dip one toe in, and shiveringly withdraw it." We advise young practitioners, when they cannot obtain the personal assistance of some friend proficient in the art, to procure a set of cork floats, which may be easily made. Any cork-cutter will supply you with material enough for less than a shilling. Six or eight cylindrical pieces are strung together with a piece of rope, or a thong of leather; the length of this rope or thong may be regulated by your fancy or taste. Their use need scarcely be pointed out; passing under the armpits, the young bather lies upon them, and throwing up his legs, begins his familiarities with the limpid element. As a support to the head and shoulders, they are undoubtedly efficient, but, of course, they interfere with the progress forward, and it is therefore best, as soon as the slightest confidence in the water has been obtained, to discard the corks altogether. It has been objected to their use that they induce a lazy reliance upon an artificial aid, and obviate the necessary exertion which, while it would support the body without them, would be very beneficial to the limbs; but a more valid objection is, that they sometimes get shifted out of their place, and tend to send the legs upwards instead of the head. In the swimmer's first attempt, his head should be a little thrown back, his chest gently pressed on the water, resting, as it were, his chin upon its surface; his hands joined palm to palm, or thumb to thumb, either will do, the fingers and thumb of each hand brought close together, like the webbed feet of ducks; let him spring forward from the ground, at the same time throwing out his arms before him to their greatest reach; the legs at the same moment should make a motion corresponding to that of the arms. *Fig.* 1 shows the kind of attitude the

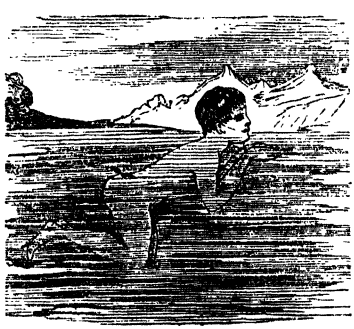


Fig. 1.

body should assume at the commencement of the stroke. After the spring forward, the hands should turn, with the palms outwards, the fingers and thumbs close together, and the latter downwards; scoop the water, and describe an arc of ninety, of which the shoulders form the centre. In bringing them to the first position, they are swept to the sides as low as, but at some distance from, the hips; the arms are brought close to the sides, the elbows bend upwards, and the wrists downwards, so as to let the hands hang momentarily down. This will suffice to send the body forward, and it will only be necessary to repeat the action in order to continue its progression. Do not let the hands or feet cut the surface of the water; keep them beneath it, the feet about a foot or a foot and a half, and the hands a few inches. It is with swimming as with most other things, whether arts or sports, the best practitioners make

the least splash. There is a difference between *diving* and *plunging*. The former is for deep water, the latter is for shallow streams, and gradual descents. *Fig.* 2

Fig. 2.

exhibits the proper attitude for diving. In this case the head is brought down towards the chest; the arms stretched forward as in an intensely supplicating position, the hands forming a point; the legs and thighs make an angle of ninety degrees, and the knees touch the shoulders. The plunge must then be made fearlessly; but care must be taken that a somersault is not the consequence. When the diver has gone as deep as he intends, or wishes, he may, by raising and depressing the arms, rise to the surface. This practice is, of course, only fit for experienced swimmers. In the *shallow water plunge*, *fig.* 3, the

Fig. 3.

learner must throw his body as far forward into the stream as he is able. When he reaches the water he must raise his head, straighten his back, and take the first position described above; see *fig.* 1. But there is a good method of going into the water, called the feet foremost plunge, which should be practised, as it may often happen that that method of jumping into a stream may be the most desirable, as, for instance, in attempting the rescue of a playmate. The young swimmer, therefore, should endeavour to become accustomed to it. In this case, the legs, arms, and head are to be kept perfectly stiff and immoveable, and in no case to throw the limbs into any other attitude. It will very soon be found that nothing can prevent the diver returning to the surface almost immediately. In *hand over hand* swimming, the body appears to be gracefully running; see *fig.* 4. The right hand is raised from the water behind, describes an arc in the air to the extent of its capacity, and re-enters the water edgewise; immediately it is turned palm downwards, and continuing the circle beneath the water, acts like a paddle in propelling the body; simultaneously the body is turned upon the right side, and the right leg kicked backwards to its full extent. When the right hand has reached a point near the thigh, which it evades by a slight turn, the swimmer commences to turn on his left side; the left hand and body then do what the right hand and foot have done, and so hand over hand swimming is accomplished. *Swimming on the side* is often adopted as a relief

Fig. 4.

to the swimmer, when fatigued with the ordinary swimming motion. To do this, elevate the left shoulder, thrust forward the right arm along the surface, and with the palm hollowed, scoop the water towards the chest, raising the left and right hand alternately with the thumbs downwards, in the manner of an oar. The feet are struck out in the usual way. *Balancing.*—Let the head fall gently back till the chin is just upon a level with the surface, and the whole back of the head immersed. The arms, and even the legs, may be crossed (see *fig.* 5), and the swimmer is "balancing." To perform this feat, coolness is required; the water should be smooth and unruffled by any cause, as any wave, however trifling, may send the water into the nose and eyes of the performer, and disturb his balancing; since all feats of floating are dependent upon the natural truth that the air within the cavity of the chest, is sufficient, rightly managed, to support the body in the water. If the balancer stretches out his arms at their full length, and brings them in a line behind his head, his legs and feet will rise to the surface of the water—his toes will appear above it, and he will lie like a plank upon the water for any length of time he pleases. This is the result of the

fact that the lungs have now become the centre of the body, the head and arms at one end balancing the legs and feet at the other. *To swim on the back, feet first.*—Proceed as described at the commencement

Fig. 5.

of the directions for *balancing*, allowing the head to fall gently backwards; press the hands downwards and backwards, with the palms slightly hollowed. The feet will immediately rise to the surface, when the hands may be used to press the water exactly as oars; propel the body forward by successive strokes, the hands being raised edgewise, and passed gently along the sides till they descend for another stroke. *To swim on the back, head first.*—This is to be done in several ways. Method the first: Throw your head gently back, as seen in *fig.* 6, bringing your feet to the surface; let your arms lie close down by your sides, moving your hands in the same manner as when sculling, with a quick thrusting

Fig. 6.

motion towards the feet, returning edgewise, thumbs first, by bending the arms, and pushing again towards the feet, by straightening the arms close to the sides. By this plan a very quick progress through the water may be effected, and it may be continued for a long time. Method the second: Throw yourself round on your back, without stopping (we will suppose that you are swimming in the manner first described), and you will retain some of the impetus already acquired. Then let both arms and hands describe segments of circles in a backward direction, like the paddle-wheels of a steamer; or you may vary this, but letting the arms circulate alternately, as in the hand over hand swimming. Method the third: Both hands and arms are used, as in the last method, but in addition, the feet and legs are used in a thrusting action. The motion with the legs takes place while the hands are in the air. *Treading water.*—To do this, allow your feet to descend perpendicularly on the water, and by an action similar to that of stepping up a ladder, you will be able to keep your head and neck above the surface. The hands may be made to assist materially by a kind of pawing motion, the back upwards in the downward stroke. In regaining their position they turn sideways. By the union of the powers of the hands and feet, treading water may be continued for a length of time. By inclining the body to the left or right, you may advance in any direction you choose although the progress will be but slow. There are a variety of feats to be performed in the water which, when you have conquered your first timidity, you may easily do: such as trimming the toe-nails, holding one leg out—which may be best learned from the observation of other and older swimmers.

SWISS CREAM.—Flavour with lemon-peel one pint of cream (leaving out a little to mix with two teaspoonfuls of fine dried flour to a smooth batter); add six ounces of lump sugar; put the cream and sugar into a saucepan, and, when boiling, add by degrees the flour; simmer four or five minutes, stirring all the time; pour it out, and, when cold, mix with it by degrees the juice of two lemons. Take a quarter of a pound of macaroons, put part of them in a dish, and pour over them a glass of white wine, then part of the cream, then macaroons and cream again; ornament with sliced citron. It should be made some hours before wanted.

SWISS PUDDING.—Butter a pie-dish, and put into it a layer of bread crumbs, then a layer of sliced apples, sprinkle over moist sugar, then a layer of bread crumbs, next of apples and sugar, and so on till the dish is filled, finishing with a thick layer of crumbs; melt fresh butter and pour over it. Grate in a little nutmeg, and bake an hour.

SWOONING.—A gradual fainting away, with a complete or partial loss of consciousness.—See FAINTING.

SYLLABUB, LEMON.—To a pint of cream put a pound of refined sugar, the juice of seven lemons, grate the rinds of two lemons into a pint of white wine and half a pint of canary; then put the whole into a deep pot,

and whisk it for half an hour. Put it in glasses the night before it is wanted. It is better for standing two or three days; but it will keep a week if required.

☞ Cream, 1 pint; sugar, 1lb.; lemons, juice of 7, rinds of 2; white wine, 1 pint; canary wine, ½ pint.

SYLLABUB, SOMERSETSHIRE.—Put into a large bowl a pint of port wine and a pint of sherry; sweeten to taste. Then fill the bowl up with milk, and, after letting it stand for twenty minutes, cover it well with clouted cream; grate nutmeg over all, add pounded cinnamon, and strew thickly with nonpareil comfits.

☞ Port wine, 1 pint; sherry, 1 pint; sugar to sweeten; milk and clouted cream, sufficient; nutmeg or cinnamon, to flavour.

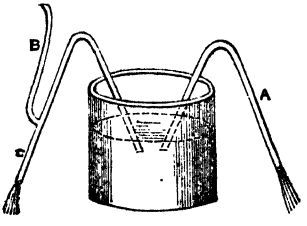
SYLLABUB, STAFFORDSHIRE.—Put a pint of cider into a bowl, with a wineglassful of brandy, some sugar and nutmeg. Pour a quart of new warm milk into it from a jug held up high, and moved in a circular direction. Grate nutmeg on the top, or strew with nonpareil comfits.

☞ Cider, 1 pint; brandy, 1 wineglassful; sugar, to sweeten; nutmeg, to flavour; milk, 1 quart.

SYLLABUB, WHIPPED.—Make a strong whip, as for trifle. Mix a pint of cream with half a pint of sweet wine, sugar to taste, and flavour with the juice and grated peel of a lemon and a little cinnamon. Stir this briskly, and fill the glasses within half an inch of the brim. With a spoon, lay a little of the whip lightly on the top of each.

☞ Whip, as for trifle; cream, 1 pint; sweet wine, ½ pint; sugar, to sweeten; lemon-juice, rind, and cinnamon, to flavour.

SYPHON.—This implement is frequently found convenient for transferring beer or other liquor from one vessel to another, as by its aid the liquor may be decanted without disturbing the sediment; and, also, the liquor can be thus transferred without making any aperture in the lower part of the vessel. For ordinary purposes, such a syphon as that seen in the engraving will



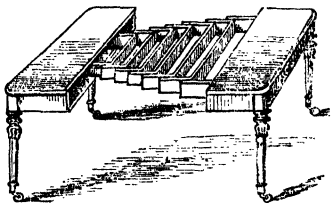
do. To use it, the short end must be placed in the liquor to be decanted, and by sucking with the mouth or other method, through the other end, it must be raised in the tube so as to run out; and it will then continue to run of itself until the vessel is emptied. But, as sucking by the mouth is on many accounts inconvenient, the same effect may be produced by inverting the syphon, and filling it with the liquor; then keeping the two ends stopped with the finger, or otherwise, introduce the short end into the liquor, unstop the ends of the syphon, and the liquor will flow. In the syphon it is essential that the leg through which the liquor flows shall be longer than the other, as the whole action depends upon this; for it is the greater weight of the fluid in the longer leg that overbalances that of the shorter leg. Small glass syphons are sold of both forms A and B, and are found extremely useful for decanting many liquids, where it is desirable to draw the fluid from the top instead of the bottom, and where any disturbance would be injurious.

SYRUP.—A saturated, or nearly saturated, solution of sugar in water, either simple, flavoured, or medicated. In the preparation of syrups, care should be taken to employ the best refined sugar, and either distilled water or filtered rain water; by which they will be rendered much less liable to spontaneous decomposition, and will be perfectly transparent without the trouble of clarification. When inferior sugar is employed, clarification is always necessary. This is best done by dissolving the sugar in the water, or other aqueous dissolvent, in the cold, and then beating up a little of the cold syrup with some white of egg, and an ounce or two of cold water, until the mixture froths well. This must be added to the syrup in the boiler, and the whole whisked up to a good froth. Heat should now be applied, and the scum which forms removed from time to time with a clean skimmer. As soon as the syrup begins to slightly simmer, it must be removed from the fire, and allowed to stand until it has cooled a little, when it should be again skimmed, if necessary, and then passed through clean flannel. When vegetable infusions or solutions enter into the composition of syrups, they should be rendered perfectly transparent by filtration or clarification before being added to the sugar. The proper quantity of sugar for syrups will, in general, be found to be two pounds to every imperial pint of water or thin aqueous fluid. These proportions, allowing for the water that is lost by evaporation during the process, are those best calculated to produce a syrup of the proper consistence, and possessing good keeping qualities. In the preparation of syrups, it is of the greatest importance to employ as little heat as possible, as a solution of sugar, even when kept at the temperature of boiling water, undergoes slow decomposition. A good plan is to pour the water, cold, over the sugar, and to allow the two to remain together for a few hours, in a covered vessel, occasionally stirring, and then to apply a gentle heat (preferably that of steam or a water-bath) to finish the solution. It is erroneously thought by some persons that a syrup cannot be properly prepared unless it is well boiled; but if this method be adopted, the ebullition should only be of the gentlest kind, and should be checked after the lapse of one or two minutes. When it is necessary to thicken a syrup by boiling, a few fragments of glass should be intro-

duced, in order to lower the boiling point. To make highly transparent syrups, the sugar should be in a single lump, and by preference taken from the bottom or broad end of the loaf; as, when taken from the end, or if it be powdered or bruised, the syrup will be more or less cloudy. Syrups are judged to be sufficiently boiled when some taken up in a spoon pours out like oil; or, a drop cooled on the thumb-nail, gives a proper thread when touched. When a thin skin appears on blowing the syrup, it is judged to be completely saturated. The practice of completely saturating the water with sugar is a bad one. Under ordinary circumstances, a syrup with a very slight excess of water keeps better than one fully saturated. In the latter case, a portion of sugar generally crystallizes out on standing, and thus, by extracting sugar from the remainder of the syrup, so weakens it, that it rapidly ferments and spoils. This change proceeds at a rapidity proportionate to the temperature. Saturated syrup, kept in a vessel that is frequently uncorked or exposed to the air, soon loses sufficient water, by evaporation from its surface, to cause the formation of minute crystals of sugar, which, falling to the bottom of the vessel, continue to increase in size at the expense of the sugar in the solution. On the other hand, syrups containing too much water also rapidly ferment, and become acescent; but of the two, this is the lesser evil, and may be more easily prevented. The preservation of syrups is best promoted by keeping them in a moderately cool, but not very cold place. They are better kept in small rather than in large bottles, as the longer a bottle lasts the more frequently it will be opened, and, consequently, the more it will be exposed to the air. By bottling syrups while boiling hot, and immediately corking down and tying the bottles over with bladder, perfectly air-tight, they may be preserved, even at a summer heat, for years without fermenting or losing their transparency. The crystallization of syrup, unless it be over-saturated with sugar, may be prevented by the addition of a little acetic or citric acid. The fermentation of syrups may be effectually prevented by the addition of a little sulphite of potassa or of lime. Fermenting syrups may be immediately restored by exposing the vessel containing them to the temperature of boiling water. In making the above additions to syrup, care must be had not to mix incompatible substances. Thus, in general, the two methods referred to cannot be practised together.

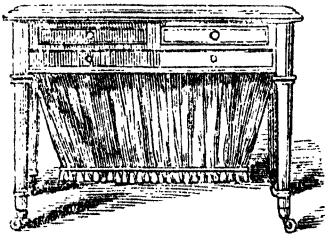
T.

TABLE.—A well-known article of household furniture, made in a variety of forms, according to the use to which it is to be put. *Dining-tables* are necessarily of various sizes and shapes, to suit the apartments, number of guests, and other circumstances. Numerous methods have been contrived for increasing the size of tables on occasion, and of causing them to occupy less space when out of use. One of the most usual is the common dining-table made of mahogany, with a fixed centre part, and folding leaves or flaps, supported by fly-rails and legs to draw out or put back when the table is placed at the side of the apartment. These tables may be square or round. One kind of them, called a cottage dining-table, has the fixed centre not above eighteen inches wide, to take up as little room as possible when put away. A square table may be increased to an oblong one by having fly-brackets on which may be laid loose flaps. These flaps are fixed in their places by pegs that drop into holes in the brackets; and they may be strengthened by projecting iron straps let into the table below the top. A thin rail may be put on, with hinges to fold down, and conceal the flaps when the table is to be square. When a very long dining-table is required, the usual method is to have the table that generally stands in the centre of the dining room, whether square or round, so contrived that it separates

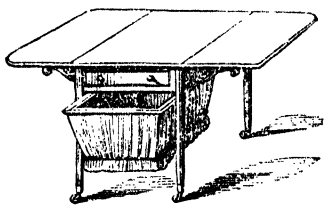


in two as in the annexed figure, and having loose flaps placed between, supported by slides called lopers, that draw, forming a series of joists, the whole still resting only upon four legs of the original table; this method is extremely convenient, as it prevents any more legs coming in the way of the guests. In this manner a table may be made nine feet long, and without requiring any additional support; and one advantage of this construction is that it obviates the inconvenience which frequently arises when the feet are numerous, and the floor not perfectly level. The flaps, when not used, are kept in cases made on purpose, and placed in an adjoining room, or a receptacle may be contrived for them in a sideboard. It is essential that the case in which they are kept should have openings to admit a free circulation of air, otherwise the flaps are apt to warp or decay; and slips, lined with green baize, should be fixed on the case, to prevent the flaps rubbing against each other, or being stretched on taking out or putting in. *Pembroke tables* are well-known convenient furniture, frequently used as small breakfast or dining-tables; it is requisite that they should be made of well-seasoned mahogany, otherwise, from the lightness of their structure, they soon

become rickety; on this account frequently they can be most depended upon after they have been used for some time. *Dressing tables* are most useful pieces of bedroom furniture. The one shown in the engraving



is especially so. It is provided with two upper drawers, and a frame resembling a drawer externally, of the length of the table beneath. To this frame a bag of fluted silk is attached, tapering downwards, and reaching within six inches of the floor, leaving just enough of space to allow room for the feet and knees when the lady is sitting before the table. This bag pulls out like a drawer, and has a wooden bottom, to which may be fixed stands, on which to place bonnets; and hooks may be attached to the inside of the wooden frame from which the silk bag hangs, on which to place caps. *Pier tables* are those which are placed against the piers between the windows; the tops are generally formed of some precious marble or scagliola. When a slab of the pier table is supported by what is termed in architecture a *console*, it is called a console table. Pier tables are likewise supported by short columns or grotesques, and sometimes they contain cabinets or bookshelves. Frequently, ornamental vases or other objects of vertu are placed upon them. If there are mirrors in the apartment, they are best placed over the pier tables, because the light from the windows coming full on the face is reflected in the mirror. *Card tables* were formerly made with the top to fold, one half of which was supported by two of the legs, which were made to turn out. They are now made upon an improved construction, by which they can likewise have the top to fold, but may stand upon a single pillar. The folding top is made to revolve upon the frame, until it comes at right angles to its former position, when it exposes a well in the frame, in which the cards, &c., are kept; and it is then opened, being supported by the frame, which it entirely covers. These card-tables are, therefore, capable of every kind of embellishment as well as any occasional tables, and there is nothing in their appearance to distinguish them particularly from other tables. *Library tables* require to be made very firm and solid. The top is usually covered with leather for writing on, and they are furnished with large convenient drawers for holding portfolios, &c. A table of this kind, termed the pedestal library table, is one of the most convenient. The table itself rests upon a nest of drawers placed at either end, and leaving a space in the centre to admit of the legs. Part of the top may be made to lift up as a desk to write on, and a shallow drawer may pull out in the right to hold ink, pens, &c.; and also a shelf may be made to draw out on the left, to increase the size of the top on occasions. It would be a convenient addition, though not usual, to have a cover hinged to the back, so as to shut over the top entirely, for the purpose of securing everything on it occasionally with a lock, without disturbing or putting them away, and this cover, when laid back, would be useful to give more room for holding papers. This table might likewise be made with doors to cover all the drawers, in which case one lock and key would serve the whole, or one side might be fitted up for portfolios, or large books, maps, &c. *Ladies work-tables* are small tables for holding the lighter articles of their work, and are generally fitted up with convenient places for cottons, needles, pins, scissors, &c. They are sometimes plain, of mahogany, with small drawers, or with a



silk bag fluted with a fringe, as in the annexed figure. A work-table may also be combined with one for writing or drawing, and to contain, besides the usual bag, a desk, to raise up, for reading, with convenient places for writing or drawing materials, with a sliding shelf at the side.

TABLE-COVERS, TO WASH.—A bright windy day is best for this purpose. Having first taken out all the grease spots and stains, put the table-cover into a tub with clean suds of white soap and clear water, warm, but not too hot (in which have been mixed about two tablespoonfuls of ox-gall), and wash and squeeze it well. Then wash it through a second lather, somewhat weaker, of soap, but without any gall in it. Afterwards rinse it through light lukewarm suds, just tinged with soap. Instead of wringing (which will shrivel it) press out as much of the water as you can with your hands, then fold it up in a tight long fold, and roll and press it hard with both hands on a clean ironing-table, having set a tub to catch the water that drips from it during the process. Roll it always from you, towards the end of the table. When the water ceases to come from it, shake and stretch it well, and dry it as soon as possible; but not by the fire. Go to it

frequently while drying, and stretch and shake it. While it is yet damp, take it in, spread it on an ironing-sheet, and iron it on the wrong side, pressing it hard.

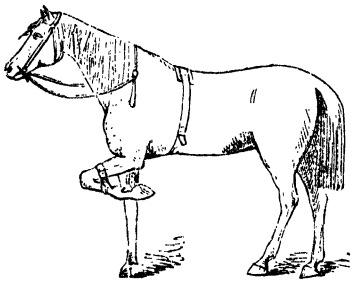
TABLE, LAYING OUT OF.—The laying out of the table for the various repasts of the day, is as follows: *For breakfast*, a white cloth is spread over the table, and as many cups and saucers of a large size are arranged upon it as there are persons to partake of the meal. For greater convenience, the lady who presides at the breakfast-table sometimes prefers having all the cups and saucers placed at her left hand. There must also be placed the tea-pot or coffee-pot, or both, as may be required; a milk jug, with hot milk in it for the coffee, and another with cold milk for the tea; a slop-basin, spoons, sugar-basin and tongs, small plates and knives and forks, egg-cups and egg-spoons, saltcellars, mustard-pot, &c. A clean bright kettle, filled with boiling water, must be set on the hob. An uncut loaf on a plate, with a knife; a butter-dish and knife. If cold meat be taken for breakfast, it should be placed at the end or side of the table opposite the presiding lady, and with it a carving-knife and fork. If an urn is used, it must be placed behind the teapot on a rug or mat. *For dinner.*—The first thing is to see that the saltcellars and castors are properly supplied. Then wipe the bread-basket, waiters, spoons, and sauce-ladles, and arrange everything required upon the dinner-tray, so that it may be readily carried into the dining-room. About half an hour before dinner-time, the table should be dusted, and the cloth neatly spread over it, taking care that the centre pattern of the cloth, if it have one, be exactly in the middle of the table. The tray should then be taken to the dining-room, and set in a convenient corner for transferring the things from it to the table. In placing the various articles, first put a saltcellar at each corner of the table, if there are four; if only two, one at one corner of the table at the top, and the other at the corresponding corner at the bottom; laying either one or two tablespoons by the side of each. Then place a carving-knife and fork, and a gravy spoon, and a plain knife and fork inside of the carvers at the top of the table, and the same at the bottom; the handle of the gravy spoon to the right hand, and the bowl to the left. At the top of the table, lay the fish slice in the same manner, and at the bottom the soup-ladle; then place a knife and fork, a dessert-spoon, a tumbler, a wine-glass, and a piece of bread, for each person who is about to dine. The bread should be laid at the left hand of each guest, that it may not interfere with the glasses, which are on the right. A water decanter should be placed at each corner of the table, if there are four; if only two, one at each of the two remote corners, or one in the middle at each side of the table. If water decanters are not used, fill a jug with spring water, and set it on the side-board ready to fill the tumblers, as the company may require. If the dishes are not too numerous, they should be conveyed to the dining-room on a tray; but if the tray will not contain them, they may be taken up separately. *For tea.*—Place the teapot nearly in the centre of the tray in front of the lady who makes tea; the sugar-basin, milk-jug, and slop-basin, behind the teapot; and around, cups, saucers and teaspoons, one for each person. A small plate should be also laid for each person; the toast, if any, under a cover; cake, if usually taken; and a small cottage loaf, with a butter-dish and a knife; or, if preferred, a plate of nicely-cut thin bread and butter. *For supper.*—When there is no one to provide for but the family, it is usual to employ a tray with open hinges. Over this a cloth is laid, and the things required placed on it, as upon a table. When the tray is loaded, the ends and sides of the cloth must be turned down smoothly, and the sides of the tray fastened up. When the tray reaches the table, the sides of the tray are let down, the provisions uncovered, and the cloth spread around. On a waiter, or small tray, may be placed the malt liquor and water, and the requisite number of tumblers. If there is a supper-party, the cloth is laid upon the table nearly the same as for dinner; but a plate is put for each person, with a piece of bread on the left hand, and a tumbler and wine-glass on the right; and at each of the two remote corners of the table a small plate is set, with a slice of butter about an inch in thickness; the meat, poultry, &c., is garnished with sprigs of parsley, and laid on the table the same as for dinner.

TAMARIND DRINK.—Boil three pints of water with an ounce and a half of tamarinds, three ounces of currants, and two ounces of stoned raisins, till about a third has evaporated. Strain; add a bit of lemon-peel, which is to be removed in half an hour, then cool.

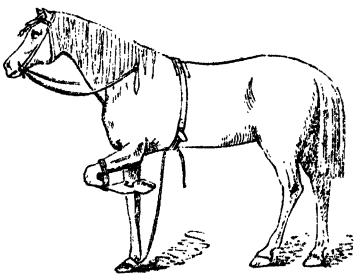
TAMARINDS.—Of the two species of the genus *tamarindus*, the fruit is much larger in the East Indian than the West Indian. The shell being removed, there remains the flat, square, hard seed embedded in a pulp, with membranous fibres running through it. In the East Indies the pulp is either dried in the sun and used for home consumption, or, with salt added, it is dried in copper ovens. This kind is sent to Europe. The sort called natural tamarinds, is much darker and drier than the West Indian, which are called prepared tamarinds. The West Indian tamarinds reach maturity in June, July, and August, when they are collected, and the shell being removed, they are put into jars, either with layers of sugar put between them, or boiling syrup poured over them, which penetrates to the bottom. Prepared tamarinds, therefore, contain much more saccharine matter than the others.

TAMING OF HORSES.—This subject has been partially treated of under the head of HORSE-TAMING, but at the period when that article was written, the precise method pursued by Mr. Rarey (the universally acknowledged Horse Tamer) had not yet been made public. It will scarcely be out

of place, therefore, to present a brief abstract of the various modes certainly adopted by Mr. Rarey, in bringing about the wonderful results which have attended his efforts in this direction. Rarey's theory is founded on the following three fundamental principles. First, that the horse is so constituted by nature that he will not offer resistance to any demand made upon him which he fully comprehends, if made in a way consistent with the laws of his nature. Second, that he has no consciousness of his strength beyond his experience, and can be handled according to our will without force. Third, that we can, in compliance with the laws of his nature by which he examines all things new to him, take any object, however frightful, around, over, or on him, that does not inflict pain, without causing him to fear. *To drive a horse that is very wild and has any vicious habits.*—Take up one fore-foot and bend his knee till his hoof is bottom upwards, and nearly touching the body; then slip a loop over his knee, and up until it comes above the pastern-joint, to keep it up, being careful to draw the loop together between the hoof and pastern-joint with a second strap of some kind to prevent the loop from slipping down and coming off. This will leave the horse standing on three legs; you can now handle him as you wish, for it is utterly impossible for him to kick in this

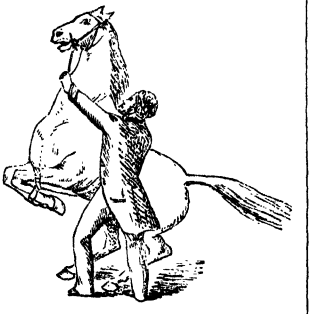


position. There is something in this operation of taking up one foot that conquers a horse quicker and more surely than anything else you can do to him—the chief reason being, that by conquering one member you conquer, to a great extent, the whole horse. When the horse's foot is first tied up, he will sometimes become very wild, and strike with his knee, and try every possible way to get it down, but he cannot do that, and will soon give up. This will conquer him better than anything you could do, and without any possible danger of hurting himself or the operator either, for you can tie up his foot and sit down and look at him till he tires. When you find that he is conquered, go to him, let down his foot, rub his leg with your hand, caress him, and let him rest a little; then put it up again. Repeat this a few times, always putting up the same foot, and he will soon learn to travel on three legs, so that you can drive him some distance. As soon as he gets a little used to this way of travelling, put on your harness, and hitch him to a sulky. You need not be fearful of his doing any damage while he has one foot up, for he cannot kick, neither can he run fast enough to do any harm. If he wants to run, you can let him have the lines and the whip too, with perfect safety, for he can go but a slow gait on three legs, and will soon be tired and willing to stop; only hold him enough to guide him in the right direction, and he will soon be tired, and willing to stop at the word. Thus you will effectually cure him at once of any further notion of running off. Generally speaking, horses kick because they are afraid of what is behind them, and when they kick against it, and it hurts them, they will only kick the harder; and this will hurt them still more, and cause them to remember the circumstance much longer, and also make it still more difficult to persuade them to have any confidence in anything dragging behind them again. But by the method suggested above, horses may be harnessed to a rattling sulky, plough, waggon, or anything else in its worst shape. The horses may be frightened at first, but they cannot kick or do anything to hurt themselves, and will soon find that you do not intend to hurt them, and then they will not care any more about it. You can then let down the leg and drive along gently without any further trouble. By this process, a horse, if he kick ever so badly, may be taught to go gently in harness in a few hours' time. *To make a horse lie down:* bend his left fore-leg and slip a loop over it, so that he cannot get it down. Then put a surcingle round his body, and fasten one end of a long strap around the other fore-leg, just above the hoof. Place the other end under the surcingle, so as to keep the strap in the right direction, take a short hold of it with your right hand, stand on the left side of the horse, grasp the bit in your left hand, pull steadily on the strap with your right, and bear against his shoulder till you cause him to move. As soon as he lifts his weight, your pulling will raise the other foot, and



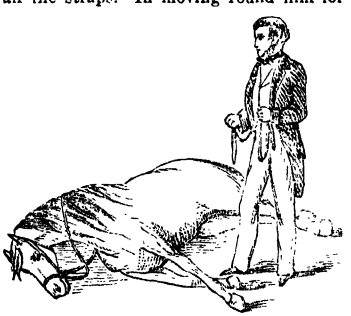
he will have to come on his knees. As soon as a horse recovers from his astonishment

at being brought to his knees, he begins to resist, that is, he rears upon his hind legs and springs about in a manner that is truly alarming. At this juncture you must remember that your business is not to set your strength against the horse's strength, but merely to follow him about, holding the strap just tight enough to prevent him from putting out his off fore-leg. As long as you keep close to him and behind his shoulders, you are in little danger. The bridle in the left hand must be used like steering lines: by pulling to the right or



left as occasion requires, the horse, turning on his hind legs, may be guided just as a boat is steered by the rudder lines; or, pulling straight, the horse may be fatigued, by being forced to walk backwards. The strap, passing through the surcingle, keeps the trainer in his right place; he is not to pull or in any way fatigue himself more than he can help, but, standing upright, simply follow the horse about, guiding him with the bridle away from the walls when needful. To do this well requires considerable nerve, coolness, and patience, and at times agility; for sometimes the animal will make a very stout fight, and even jump sideways with both fore-legs fast. When held and guided properly, few horses resist longer than ten minutes. Usually, after a violent struggle of eight minutes, the animal sinks forward on his knees, sweating profusely, with heaving flanks and quivering tail. Then is the time to get him into a comfortable position for lying down; if he still resists, he may be forced by the bit to walk backwards. Then, too, by pushing gently at his shoulder, or by pulling steadily the off-rein, you can get him to fall, in the one case, on the near side, in the other, on the off side; but the assistance rendered should be so slight that the horse must not be able to resist it. The horse will often give a final spring, when he is supposed to be quite beaten; at length, however, he slides over, and lies down, panting and exhausted, on his side. If he is full of corn, and well bred, take advantage of the moment to tie up the off fore-leg to the surcingle, as securely as the other, in a slip loop-knot. Now let the horse recover his wind, and then encourage him to make a second fight. It will often be more stubborn and fierce than the first. The object

of this tying-up operation is, that he shall thoroughly exhaust without hurting himself, and that he shall be convinced that it is you who, by your superior strength, have conquered him, and that you are always able to conquer him. When the horse lies down for the second or third time, thoroughly beaten, the time has arrived for teaching a few more of the practical parts of horse-training. When you have done all that you desire to the subdued horse—smoothed his ears, if fidgety about the ears; the hind-legs, if a kicker; shown him a saddle, and allowed him to smell it, and then placed it on his back; mounted him yourself, and pulled him all over—take off all the straps. In moving round him for



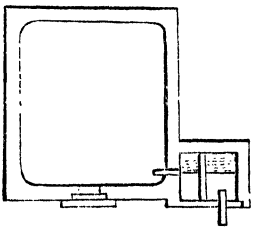
the purpose of gentling him, walk slowly, always from the head round the tail, and again to the head; scrape the sweat off him with a scraper; rub him down with a wisp; smooth the hair of his legs, and draw the fore one straight out. If he has fought hard, he will lie like a dead horse, and scarcely stir. You must now again go over him with a very gentle motion of the hand, and with this operation will be completed your first and most important lesson. You may now mount on the back of an unbroken colt, and teach him that you do not hurt

him in that attitude: if he were standing upright, he might resist, and throw you, from fright; but as he is exhausted and powerless, he has time to find out that you mean him no harm. You can lay a saddle or harness on him, if he has previously shown aversion to them, or any part of them: his head, tail, and legs are all safe for your friendly caresses; do not spare them, and speak to him all the time. If he has hitherto resisted shoeing, now is the time for handling his fore and hind legs kindly, yet, if he attempts to resist, with a voice of authority. If he is a violent, savage, confirmed kicker, as soon as he is down, put a pair of hobbles on his hind-legs. These must be held by an assistant on whom you can depend, and passed through the rings of the surcingle; with the horse's fore-legs tied, you may usefully spend an hour, in handling his legs, tapping the hoofs with your hand or a hammer—all this to be done in a firm, measured, soothing manner; only now and then, if he resist, crying, as you paralyse him with the ropes, "*Wo, ho!*" in a determined manner. It is by this continued soothing and handling, that you establish confidence between the animal and yourself. Patting him as much as you deem needful, say for ten minutes or a quarter of an hour, you may encourage him to rise. Some horses will require a good deal of helping, and their fore-legs drawing out before them. It may be as well to remark, that the handling of the limbs, especially of colts, requires caution. If a horse, unstrapped, attempts to rise, you may easily stop him by taking hold of a fore-leg, and doubling it back to the strapped position. If by chance he should be too quick, do not resist, for it is an essential principle never to enter into a contest with a horse unless you are certain of being victorious. In all these operations you must be calm and not hurried. When you have to deal with a savage kicker that you wish to subdue and compel to lie down, have a leather surcingle with a ring sewed on the belly part; and when the hobbles are buckled on the hind-legs, pass the ropes through the rings, and when the horse rises again, by buckling up one fore-leg, and pulling steadily, when needful, at the hind legs, or tying the hobble ropes to a collar, you reduce him to perfect helplessness; he finds that he cannot rear, for you pull his hind-legs, nor kick, for you can pull at all three legs; and after a few attempts he gives up in despair. In practising the art of taming, an average horse may be subdued by an average horseman; but a fierce, determined, vicious horse requires a man above the average in temper, courage, and activity; activity and skill in *steering* being of more importance than strength. It is seldom necessary to lay a colt down more than twice. Perhaps the best way is to begin practising the strap movements with a donkey, or a quiet horse full of grass or water, and so go on from day to day with the same perseverance as though you were practising skating or any other art. Remember you must not be in a hurry, and you must not chatter. When you feel impatient, you had better leave off, and begin again another day. And the same with your horse: you must not tire him with one lesson, but you must give him at least one lesson every day, and two or three, if he is very nervous. The most curious circumstance of all, in connection with this strapping-up and laying-down process, is, that the moment the horse rises, he seems to have contracted a personal friendship for the operator, and with a very little encouragement will generally follow him; this feeling may as well be encouraged, by giving the animal a piece of carrot, apple, or bread. It is an excellent practice to accustom all horses to strange sounds and sights; and of very great importance to young horses which are to be ridden or driven in large towns. *To accustom a horse to a drum:* place it near him on the ground, and, without facing him, induce him to smell it again and again, until he is thoroughly accustomed to it. Then lift it up, and slowly place it on the side of his neck, where he can see it, and tap it gently with a stick or your finger. If he starts, pause, and let him carefully examine it. Then re-commence, gradually moving it backwards, until it rests on his withers, by degrees playing louder and louder, pausing always when he seems alarmed, to let him look at it and smell, if needful. In a very few minutes you may play with all your force, without his taking any notice. When this practice has been repeated a few times, the horse, however spirited, will rest his nose unmoved on the big drum while the loudest sounds are being produced. *To teach a horse to tolerate an open umbrella:* go through the same cautious forms; let him see it and smell it; open it by degrees; gain your point inch by inch, passing it always from his eyes to his neck, and from his neck to his back and tail. In half an hour any horse may be taught that no injury is intended him; and he may thus be familiarized to many other articles, such as the riding-habit, saddle-cloth, &c. *To accustom a horse to a bit.*—Use a large smooth snaffle-bit, so as not to hurt his mouth, with a bar on each side, to prevent the bit from pulling through either way. This you should attach to the head-stall of the bridle, and put it on the horse without any reins to it, and let him run loose in a large stable or shed for some time, until he becomes somewhat used to the bit, and will bear it without trying to get it out of his mouth. It would be well, if convenient, to repeat this several times before you do anything more with the animal; as soon as he will bear the bit, attach a single rein to it. You should also have a halter on the horse, or a bridle made after the fashion of a halter, with a strap to it, so that you can hold or lead him about without pulling on the bit much. He is now ready for the saddle. *To break a horse to harness.*—Place him in a light stable, take the harness and raise it very slowly until he can see it, let him smell and feel it with his nose, until he becomes familiar with it, so that you can put it on

and rattle it about without his being disturbed by it. As soon as he will bear this, put on the lines, caress him as you draw them over him, and drive him about in the stable, till he will bear them over his hips. As soon as he is familiar with the harness and lines, take him out and put him by the side of a gentle horse. Always use a bridle without blinkers when you are breaking a horse to harness. Lead him to or around a light gig or phaeton; let him look at it, touch it with his nose, and stand by it till he does not care for it; then pull the shafts a little to the left, and stand your horse in front of the off-wheel. Let some one stand on the right side of the horse, and hold him by the bit, while you stand on the left side facing the vehicle. This will keep him straight. Run your left hand back and let it rest on his hip, and lay hold of the shafts with your right, bringing up very gently to the left hand, which still remains stationary. Do not let anything but your arm touch his back, and as soon as you have the shafts square over him, let the person on the opposite side take hold of one of them, and lower them very gently to the shaft-bearers. Be very slow and deliberate about hitching; the longer time you take the better, as a general thing. When you have the shafts placed, shake them slightly, so that the horse will feel them on each side. As soon as he will bear them without starting, fasten the braces, &c., and urge him along very slowly. Let one man lead the horse, to keep him gentle, while the other works gradually back with the lines till he can get behind and drive him. After you have driven him in this way for a short distance, you can get into the vehicle, and all will go right. It is very important that the horse should proceed gently when he is first hitched. After he has been walked awhile, there is not nearly so much danger of his starting. If the animal is very wild, it is better to put up one foot the first time he is driven. With the leg strapped up, the lighter the break or gig the better, and four wheels are better than two. *To make a horse follow a person.*—Turn him into a large stable or shed, where there is no chance of escape, with a halter or bridle on. Go to him and coax him a little, take hold of his halter and turn him towards you, at the same time touching him lightly over the hips with a long whip. Lead him the length of the stable, rubbing him on the neck, saying, in a steady tone of voice, as you lead him, "Come along, boy!" or use his name instead of "boy," if you choose. Every time you turn, touch him slightly with the whip, to make him step up close to you, and then caress him with your hand. He will soon learn to hurry up, to escape the whip and to be caressed, and you can make him follow you around without taking hold of the halter. If he should stop and turn from you, give him a few sharp cuts about the hind legs, and he will soon turn his head towards you, when you must always caress him. A few lessons of this kind will make him run after you, when he sees the motion of the whip; in twenty or thirty minutes he will follow you about the stable. After you have given him two or three lessons in the stable, take him out into a small field and train him; and thence you can take him into the road and make him follow you anywhere and run after you. *To make a horse stand without holding.*—After he has been well broken to follow you, place him in the centre of the stable, begin at his head to caress him, gradually working backward. If he move, give him a cut with the whip, and put him back to the same spot whence he started. If he stand, caress him as before, and continue coaxing him in this way until you get round him, without making him move. Keep walking round him, increasing your pace, and only touch him occasionally. Enlarge your circle as you walk round, and if he then moves, give him another cut with the whip, and put him back to his place. If he stands, go to him frequently and caress him, and then walk round him again. Do not keep him in one position too long at a time, but make him come to you occasionally, and follow you around the stable. Then make him stand in another place, and proceed as before. You should not train your horse more than half an hour at a time. *To cure jibbing.*—Horses contract the dangerous vice of jibbing, by improper management. When a horse jibs in harness, it is generally from some mismanagement, excitement, confusion, or from not knowing how to pull; but seldom from any unwillingness to perform all that he understands. High-spirited, free-going horses, are the most subject to jibbing, and only so because drivers do not properly understand how to manage this kind. The whipping of horses under such a condition is an error of judgment. When a horse jibs, or is a little excited, if he wants to start quickly, or looks around and does not want to go, there is something wrong, and he needs kind treatment immediately. Caress him kindly, and if he does not understand at once what you want him to do, he will not be so much excited as to jump and break things, and do everything through fear. As long as you are calm, and keep down the excitement of the horse, the chances are that you will make him understand you, which you would not do by harsh treatment. Almost any horse, after first jibbing, will start kindly if you let him stand five or ten minutes, as though there was nothing wrong, and then speak to him with a steady voice, and turn him a little to the right or left, so as to get him in motion, before he feels the stress of the weight behind him. There is a quicker process, that will generally start a jibbing horse, but it does not apply to all. Stand him a little ahead, so that his shoulders will be against the collar, and then take up the of his fore feet in your hand, and let one driver start him, and when the weight comes against his shoulders he will try to step; then let him have his foot, and he will go right along. If you wish to cure a horse of jibbing, that has long been in that habit, a day ought to be set apart for that purpose. Put him by the side of some steady horse; have driving reins on them;

tie up all the traces and straps, so that there will be nothing to excite them: do not rein them up, but let them have their heads loose. Walk them about together for some time, as slowly and leisurely as possible; stop often, and go up to the jibbing horse and coax him. Do not whip him or do anything to excite him; but keep him as quiet as possible. He will soon learn to start off at the word, and stop whenever you tell him. As soon as he goes properly, hitch him in an empty waggon, which should be standing in a favourable position for starting. It would be well to shorten the trace-chain behind the steady horse, so that, if necessary, he can take the weight of the waggon the first time you start them. Drive only a few yards at first; watch the jibbing horse closely, and if you see that he is getting excited, stop him before he stops of his own accord, caress him a little, and start again. As soon as he goes well, drive him over an ascent a few times, and then over a larger one, occasionally adding to the load. This process will cause any horse to pull truly.

TANK.—This receptacle for holding and preserving rain-water is a very useful adjunct to a household. It may be made of brick, set in compo. The best lining is brick set in very strong mortar, and covered with a coat of cement half an inch thick. The tank should be arched over with a flat dome of brick, leaving an opening to clean it out when required, which may be closed by a stone. If the water be first filtered, there will be very little deposit. The tank shown in the engraving is circular in the ground plan, with the sides built like a well. The bottom should be in the form of a flat dome reversed, and the top also domical, with an opening left in the centre of sufficient size to admit a man to clean it out occasionally; the top of this opening should be a little above the surface of the ground, and should be covered with an oak flap, with several holes bored in it for ventilation; or the cover may be an iron grating, horizontal, and a little elevated, or conical. These tanks may be constructed of various dimensions; the depth and width should be nearly equal; a hole should also be left for the service-pipe, or that which conveys the water into the tank, and also for the pipe for the pump, if the water be drawn out by that means. The water may be filtered previously to its entering the tank; the hole for the service-pipe ought, therefore, to be near the top, and on that side most convenient for the filtering chamber; this may be about four feet in diameter, and three feet deep; across this, about twelve inches from the side next the tank, a slate partition from the top to within about six inches from the bottom should be fixed; at the bottom of the box should be securely put clean coarse sand, or powdered charcoal, about a foot in thickness. The pipe or opening from the filter to the reservoir, should be of ample dimensions, and be made at about eighteen or twenty inches from the bottom, in the small division or space behind the slate. Above this opening, and at every part most convenient, should be an opening or drain to carry off the water when the tank is full. This filter should



also have a cover, that it may be cleaned out, and fresh sand or some other purifier put in as often as may be found requisite. As the water comes from the roof, it is to be first conveyed into the large division of the filtering chamber, on the opposite side of the slate partition, and passing through the sand, it rises in the small division purified, when it is rendered fit to pass into the tank by the tube. If there are two or more of these filtering chambers, or if they are of greater depth, the water may be passed through the greater quantity of sand, &c., in them, and be still more purified. Both the tanks and the filtering chambers should be water-tight; if constructed of brick, the inner course may be built in Roman cement, and afterwards the whole of the inside covered with a coat of about three-quarters of an inch thick of the same material. Water from drains formed in the ground for the purpose of collecting it for domestic purposes, may be purified by passing it through a sand filter previously to its entering the tank. In constructing tanks of the above description, care must be taken to have the earth loosely filled around the brick-work, and to allow sufficient time for the work to get properly settled previously to admitting any great weight of water. A current of air is calculated to promote the purity of water in tanks, which is easily effected by the earthenware or other pipe which conveys the water from the roof being six or eight inches in diameter, with an opening left in the tank. When the prevailing winds do not blow leaves or soot on the roofs, the water will remain good, even for drinking, without cleaning out the tanks above once a year; but, in some cases, filtering by ascension has been found useful, and effected by the water being delivered by a pipe at the bottom of a cask or other vessel, from which it cannot escape till it has risen through the holes in a board covered with pebbles, sand, or powdered charcoal, as described above. Tanks or ponds dug in the chalk four feet deep, what is excavated being added to the sides roofed over, have been found very valuable for large flocks of sheep.—See CISTERN, POND, RESERVOIRS, &c.

TANKARD COOL.—A quart of mild ale, a glass of white wine, one of brandy, one of capillaire, the juice of a lemon, a roll of the

peel pared thin, nutmeg grated at the top, a sprig of borage or balm, and a bit of toasted bread.

TANSY, CULTURE OF.—Tansy is extremely hardy, and will grow in any soil. It is easily propagated at any season by parting the roots.

TANSY PUDDING.—Pour a quart of boiling milk over a thick slice of the crumb of bread; cover it till cold. Beat the yolks of six, and the whites of two eggs; pound some tansy with two or three leaves of spinach; squeeze the juice, and put in as much of it as will make the pudding of a good green colour; a glass of brandy, half a grated nutmeg, and four ounces of fresh butter; mix all the ingredients, sweeten and put into a saucepan, and stir it over the fire till it be hot. Bake it in a buttered dish for half an hour. Before serving, strew grated loaf-sugar over the top.

☞ Milk, 1 quart; bread, 1 slice; eggs, yolks, 6, whites, 2; tansy, sufficient; spinach leaves, 3; brandy, 1 wineglassful; nutmeg, ½ of 1; butter, 4 ozs.

TAP.—An implement fitted to casks, barrels, &c., for drawing off liquids. Several improvements have been made in this article. One is so constructed that the fluid way of the tap may be inspected and cleaned; and for this purpose the front part is formed so that it may be screwed off and on the body; or an aperture is formed in the front, and a screw plug fitted into it. Another new kind of tap is formed with a conical barrel, of which the widest part forms the bottom of the tap, and with a hollow conical plug, ground to fit the barrel. The plug has only one aperture for the admission and outlet of fluid. The top of the plug is solid. In these taps, the greater the pressure of the fluid passed through them the tighter will they become; and in the case of steam or other heated fluid, the tap will not be liable to any sudden change of temperature, as the plugs, being always charged with the hot fluid, will keep the temperature uniform.

TAPER.—An article for giving light, generally made of wax, and very convenient for sealing letters or procuring a light at such time as candles or gas are not required.

TAPIOCA.—Choose the largest sort, wash it two or three times in cold water, then soak it in fresh water five or six hours, and simmer it in the same until it becomes quite clear; then put lemon-juice, wine, and sugar. The peel should have been boiled in it. It thickens very much.

TAPIOCA JELLY.—Take a quarter of a pound of tapioca, swell it thoroughly in a pint of water; then add a glass of wine, port or Madeira, with sugar to the taste. Tapioca swelled in milk is a very light and nutritious food.

TAPIOCA MILK.—Soak an ounce of tapioca in a pint of cold water for half an hour, pour off the water, and add a pint and a half of good milk; boil slowly until the tapioca is dissolved, then add sugar, nutmeg, and a little white wine, if not prohibited by the medical attendant.

TAPIOCA PUDDING.—Soak two tablespoonfuls of tapioca in a quart of cold milk for four hours; mix with it two eggs well beaten, two ounces of sugar, and a little grated lemon-peel; let it boil, stirring it all the time, to prevent the eggs from turning the milk. Bake it in a dish for half an hour; one egg is enough for common purposes.

TAPIOCA SOUP.—See SAGO SOUP.

TAR.—An empyreumatic turpentine, obtained by cutting to pieces trees of the pine or fir tribe, and exposing them to heat in a furnace or in the open air. The ordinary purposes to which tar is applied are well known. For medical purposes it has long been used as a remedy in chest affections, chronic bronchitis, incipient consumption, &c. Tar is usually administered in the shape of tar-water, which is best made by digesting—stirring occasionally—one ounce of tar in thirty-two ounces of water for seven or eight days, and then straining. The dose is half a pint twice daily, mixed with milk. Tar is now chiefly used as an external application in some cases of skin diseases, either in the form of water or in that of ointment, made by melting together equal parts of tar and suet, and squeezing them through linen.

TAR VINEGAR.—This is used for imparting a smoky flavour to meat, and is made as follows:—Pour half a pound of the best pickling vinegar over an equal quantity of common tar; stir them together, and let them remain for an hour; then pour off the vinegar. The meat should be dipped into this mixture just previously to being dressed.

TARES.—This plant is cultivated for its stem and leaves, it is of hardy growth, and when sown upon rich land will return a large supply of green fodder for the consumption of horses; or for fattening cattle. The

preparation of the soil seldom consists of more than one ploughing, if for autumn sowing; and of a winter and spring ploughing when to be sown in spring. If in the latter case the land is very foul, several ploughings are given, or one ploughing and several stirrings with the cultivator. In

general, tares succeed some of the corn crops. The time of growing depends on the kind of tare and the purpose in view. The winter variety is sown in September and October; and the first sowing in spring should be as early as the season will permit. If they are to be cut green for soiling throughout the summer and autumn, which is the most advantageous method of consuming them, successive sowings should follow till the end of May. Summer tares when meant for seed ought to be sown early, otherwise the return will be imperfect. The mode of sowing tares is mostly broadcast, which should be performed as evenly as possible over the surface of well-prepared land; the seeds being afterwards covered in by proper harrowing, in order to prevent them being picked up by the birds, and to ensure their perfect vegetation and growth. After the seed is sown and the land carefully harrowed, a light roller should be drawn across, so that the surface may be smoothed, and the scythe permitted to work without interruption. It is proper also to guard the field for several days against the depredations of pigeons, which birds are very fond of tares, and will pick up a great part of the seed unless constantly watched. The quantity of seed to an acre is from two and a half to three and a half bushels, according to the time of sowing, and to whether they are to be consumed green or left to stand for a crop. The after-culture given to tares, consists merely in pulling out the larger weeds, unless they are in rows, in which case, the horse or hand hoe is employed. In reaping tares for soiling, they ought always to be cut with the scythe or the sickle, by breaking asunder the stalks and tearing up a number by the roots, rendering the second crop of little value. When mown early, they will in a moist season produce three mowings, but generally two. In reaping tares for seed, they may be either mown or taken with the sickle, and heated like peas in drying, stacking, and thrashing. Tares are eaten off the ground in some places by different kinds of live stock, particularly by sheep; and as the winter-sown variety comes early in spring, the value of this net food is then very considerable. Tare crops are sometimes made into hay, in which case more attention is found necessary than in those of most of the artificial grains, as wet is more injurious to them, and they require more sun and air; but in other respects they demand the same cautious management, in order to preserve the foliage from being lost. The time for cutting for this purpose is, when the blossoms have declined and they begin to fall and be flat. When well made, the hay is of the best and most nutritious quality. The produce of tares cut green is ten or twelve tons per acre, which shows the advantage of making these crops into hay. It is found that the spring tares are lighter, and most liable to be injured by a dry season. The produce in seed is likewise found to be considerable—from three to six sacks, and in some instances, forty bushels or more, being obtained from the acre.

TARPAULIN.—A material of a thick heavy substance, rendered waterproof, and used for covering every description of property. When merchandise and effects are conveyed in open vans, &c., a tarpaulin is indispensable, to be employed when the rain begins to descend. When not in use, it should be folded up in such a convenient form that it may be spread over anything by a single person unaided.

TARRAGON, CULTURE OF.—In a dry loamy soil, tarragon proves quite a hardy plant, but it is apt to perish in a wet situation. It is easily propagated by parting the roots, or by planting in the spring young shoots with only two or three fibres.

TARRAGON VINEGAR.—Take either the young leaves of tarragon when the plant is going into bloom, or the buds of elder-flower, and to every half peck put one gallon of vinegar, leaving it for a fortnight in a jug to ferment. Then drain it through a flannel bag, put into it a small bit of dissolved isinglass, and bottle it.

TARTAR EMETIC.—Mix twenty grains of tartar emetic and two grains of white sugar with one drachm and a half of lard. Use, as a counter-irritant in white swellings.

TARTARIC ACID.—This acid was first obtained in a separate state by Scheele; it exists in several vegetable products, but principally in bi-tartrate of potash, which is usually called cream of tartar, a salt which is deposited from wine. Tartaric acid is colourless, inodorous, and very sour; it occurs in crystals of a considerable size, the primary form of which is an oblique, rhombic prism; it suffers no change by exposure to the air; water at sixty degrees dissolves about one-fifth of its weight, and at two hundred and twelve degrees twice its weight. It combines readily with alkalies, earths, and metallic oxides, and these salts are called tartrates; many of them are usefully applied in the arts. Tartaric acid is largely employed as a discharge in calico printing, and for making what are called sodaic powders, which are imitations of soda water. Tartaric acid is entirely confined to the vegetable kingdom, and is found free or uncombined in tamarinds, in the unripe grape, and in pepper, and in combination in tamarinds, ripe grapes, gooseberries, mulberries, squill, and dandelion.

TARTLETS.—Rub over patty-pans a little bit of butter, and line them with tart or puff-paste; fill them with marmalade, preserved strawberries, raspberries, currants, or any sort of fruit, take a small bit of the paste, and with the hand roll it upon the paste-board with flour till it be stiff, and will draw out in straws; hold it in one hand and with the other draw it out, with these small strings cross the tartlets according to fancy, wet the edge, and lay on a narrow rim of paste cut with the paste-cutter.

TAXES.—The land tax, ground rent, and sewers rate, are taxes chargeable to the landlord, but by Act of Parliament the occupants of houses are required to pay all levies rated on the premises, and to deduct so much out of the rent as the landlord

ought to have paid. But if the rates payable by the landlord are not deducted from the rent of the current year, they cannot be deducted, or the amount recovered of the landlord in any subsequent year. Even if the tenant expressly covenant to pay the rent reserved, "without any deduction whatever," still it has been decided that he may deduct the land tax and ground rent. The assessed taxes, poor rates, police, lighting and cleansing rates, are the tenant's own taxes, which he is bound to pay under the penalty of having his goods distrained. Most of the water and gas companies have, also, in addition to the power of cutting off the supply of water or light, authority to distrain for rates in arrear, in the same manner as landlords for their rent.

TAXIDERMY.—The art of bird-stuffing, which, in the hands of the naturalist, becomes a very interesting pursuit, and may be readily performed by adhering to the following instructions. In the first place, the manipulator must buy a medical student's dissecting-case, that will contain half-a-dozen knives of the kind he wants, two pairs of sharp pointed scissors, a pair of forceps, and most likely some chain-hooks and a blow-pipe. These last two items he may lay aside; but all the rest are just the things he wants, and buying them second-hand they will cost him no more than a couple of knives and one pair of scissors would if purchased new. He will also require a pair of round and a pair of flat pliers for his wire; a pair of cutting pliers, which, as they are to be used both for wire and for bones, should be pointed ones; a three-cornered file, wire of various sizes, plain and coloured glass eyes, some soft thread, some fine twine, tow, cotton-wool, preservation powder, arsenical soap, with brush for laying on the same, and some camphor. For the arsenical soap take—powdered arsenic, 2 ounces; camphor, 5 ounces; white soap, 2 ounces; salt of tartar, 6 drachms; powdered lime, 2 drachms. The soap is to be cut in very thin slices, and put in a crucible with a small quantity of water, over a gentle fire, and frequently stirred with a piece of wood. When properly melted, the lime and salts of tartar must be added; the arsenic is then to be stirred in, and lastly the camphor (reduced to powder with a little spirits of wine) is to be mixed in, off the fire. For the preservative powder take—powdered arsenic, 4 ounces; burnt alum, 4 ounces; tanner's bark, 8 ounces; mix, reduce to powder, and pass through a fine sieve: then add camphor (reduced to powder with spirits of wine), 2 ounces; musk, 30 grains. Both these preparations must be kept in well-closed jars. The soap, when ready for use, should be about the consistence of Devonshire cream. The bird-stuffer should then get the tools and preparations ready, and shoot an old starling (by far the best bird for a beginner). Take a stick of the required size and make two holes with an awl the natural distance apart for the bird's legs; pass the leg-wires through the holes, and twist them firmly round the stick; now fasten the end of the stick firm, either in a vice or nailed to a block; press the legs a little backwards, making the feet the pivot; then put one finger just below the knee-joints on the front of the legs and press the body forwards, making the knees the pivots, until you have the body in a natural position as regards the legs. Now take hold of the body with one hand, and with the other press back the neck-wire to rather more than at right angles with the body; then take the middle of the neck-wire between your fingers, and with the other hand press the free extremity that projects beyond the head, and bend down the head until you have the natural form. To place the wings, supposing the bird to be at rest: cut two pieces of wire two or three inches long or more, according to the size of the bird, and point one end; take the wing in your hand, and pass the pointed end of the wire through the last joint, or rather on the free side of the last joint; now lift the wing with one hand, and, with one finger of the other, push the first bone, part of which you cut off in skinning the bird, well up under the skin of the back; then bring the wing down to the side, and push the wire firmly into the body. Open the mouth, and take out the wool with which the eye sockets are filled; then stuff the neck, through the mouth, until the proper size; place a little wool in the eye-socket, on the further, upper, and under side. Take with the forceps one of the glass eyes by the little piece of wire which projects from one side, and insert carefully into the socket, making it project rather too much through the lids. Place a little more wool behind the glass eye, and fill up the opening into the eye-sockets and the mouth with it, and tie the beak together. If the eyes now project too much, press them gently back with the finger. Take two little thin strips of wood, drive a strong pin through the centre of one piece nearly to the head; place this under the tail near its base, and pass the point of the pin between the two centre quills; place the centre of the other strip of wood on the point of the pin, and press it down until the tail is held firmly between the two pieces of wood, when you can spread it to the required extent. With a smooth-pointed wire (a knitting-needle will do), arrange every feather in its place, and then wind soft cotton over the whole body to keep the feathers in place, and put the bird in a freely-ventilated room to dry. In ducks, hens, &c., the neck is so long and narrow that the skin cannot be drawn over the head with these birds, therefore, skin the neck as high as you can and cut it off; make a cut through the skin from the angle of the jaw to the bottom of the piece of neck still attached to the head, and remove the neck, brain, tongue, &c., through the opening. Most bird-stuffers, and every beginner makes the opening in the neck on the side next the back of the case the bird is to be placed in; but, after very little practice, you may do this so neatly that it is not of much consequence on which side you do it.

TEA, ADULTERATION OF.—A very considerable amount of ingenuity is displayed, both at home and abroad, in the adulteration of tea, as well as in the manufacture of spurious articles in imitation of it. First, are to be considered the *adulterations of black tea.* The chief adulterations to which black tea is subject consist in the use of leaves other than those of tea, in the re-preparation of exhausted tea-leaves, and in the employment of substances, either for the purpose of imparting colour and astringency to the infusion of the leaves, or to glaze and face the surface of the dried leaves, so that they present an improved appearance to the eye. It has been repeatedly ascertained that the leaves of various British plants are sometimes used in this country in the adulteration of tea, among which are the following: beech, elm, horse-chestnut, plane, fancy oak, willow, poplar, hawthorn, and sloe. The leaves are dried, broken into small pieces, and usually mixed up with a paste made of gum and catechu; afterwards they are ground and reduced to a powder, which, when coloured with rose-pink, is mixed either with the dust of genuine tea, or with inferior descriptions of black tea. The great difficulty experienced in the re-preparation of exhausted tea-leaves, is to cause them to resume the twisted form imparted by the Chinese method of rolling and drying the leaves. For this purpose, the leaves are steeped in a strong solution of gum; this, in drying, occasions the contraction of the leaves, and causes them to assume to a certain degree their original appearance; the solution at the same time imparts a polished surface to the leaves. The forms of the greater number of the leaves, even after this preparation, are still very different from those of tea, as originally prepared; the leaves are more broken, and agglutinated into small flattened or rounded masses. This circumstance, and the shining appearance of the leaves, are sufficient to enable the experienced eye to detect samples of tea manufactured from exhausted leaves, even when mixed with a portion of unused tea. When a solution of sulphate of iron is brought into contact with a solution of tannin, or one of tea (which contains a large amount of tannin), the liquid becomes deeply coloured. Of this fact the fabricators of spurious tea are well aware: for they avail themselves of it, and frequently add to the gum-water to be used in making up exhausted tea-leaves, a proportion of sulphate of iron. Rose-pink is another adulterating agent; it consists of the colouring matter of logwood, in combination with carbonate of lime. An infusion of the wood is first prepared, through which the lime is diffused, and this, in subsiding, carries with it the characteristic colour, which, incorporated with the lime, forms rose-pink. The presence of logwood is immediately detected by moistening a small portion of the tea-leaves of the sample with water, and rubbing it gently about upon a sheet of white paper, which, in that case, will be stained bluish-black; moreover, if a portion of the tea, being thrown in cold water, imparts immediately to the liquid a pinkish or purplish colour, which is rendered red by the addition of a few drops of sulphuric acid, it is a sign of the presence of logwood; for genuine black tea produces only after a time a golden brown liquor, which is not reddened by sulphuric acid. One of the substances resorted to for facing tea is plumbago, or black lead, which gives to the surface of the leaves a black, shining, and metallic or leaden appearance, so characteristic, that when once seen it may be again readily recognised. Also, if a thin slice be removed from the surface of one of the leaves faced with this substance, and placed under the microscope, it will be seen to be thickly studded with numerous minute black particles. Again, if one or two teaspoonfuls of such tea be infused in boiling water, the liquid, after a time, will, in many cases, when the quantity of facing is considerable, acquire a blackish hue, and, on evaporation, the bottom of the vessel containing it will be found to exhibit the dark, shining, and characteristic coating of black lead. *The adulteration of green tea* may be next considered. The development of the characteristic colour of the leaves of green tea is stated to take place during the third roasting in the *kuo*, the leaves at the end of the second roasting being of a dark olive colour, almost black. In the third roasting, which is, in fact, the final drying, the heat of the fire is diminished, the quantity put into the *kuo* is greatly increased, and the time of roasting regulated. At this period, a change of colour takes place in the leaves, they beginning to assume a bluish tint, resembling the bloom on fruit. The colours used in the facing of green tea are usually three: yellow, blue, and white. The yellow and blue colours, when mixed, form a green, and white is added, either to lessen the intensity of the former colours, or else to give polish to the surface of the leaves. Prussian blue is the substance most frequently employed in the facing of spurious green tea. It is distinguished from indigo by the iron which enters into its composition, and which may be detected by the ordinary tests, as well as by the non-effect of chlorine in bleaching it. Under the microscope it may be recognised by the form and colour of the particles of which it consists, as also by the action of liquor potassæ, and dilute sulphuric acid; the first turns the fragments of a reddish hue, and the other restores the colour. Although not absolutely poisonous, yet when introduced into the system, even in minute quantities, it is in some cases capable of exerting an injurious action. Verdigris, Dutch pink, chromate of potash, chrome yellow, and other substances more or less noxious, are used in the adulteration of black tea. The detection of adulteration will be considerably facilitated by pointing out the simple methods to be adopted for determining whether a sample of tea be sufficiently coloured or not. For this purpose, if the leaves be coated to any considerable extent, it will be sufficient simply to view one or two of them

as opaque objects, with a glass of one inch focus, when the colouring matters entering into the composition of the facing will be detected as minute specks or particles, each reflecting its appropriate tint. Another method of determining the same point is to scrape gently the surface of two or three of the leaves with a penknife, when, if they be faced, the colouring matters may be detected in the powder thus separated, viewed as an opaque object. A third method is to place five or six leaves on a slip of glass, moistening them with a few drops of water, and, after the leaves have become softened, firmly squeezing the water out between the finger and thumb; this will then be found to contain more or less of the ingredients forming the facing, should such have been employed. Or, should it be desirable to obtain the results on a large scale, half an ounce or so of the leaves may be agitated in a little water for a few minutes; this will detect much of the facing, without unfolding the leaves, and after a time the facing will collect as a sediment at the bottom of the vessel. Lastly, the tea-dust, more or less of which is present in nearly every sample of tea, is usually found to contain the ingredients used in the facing in considerable quantity, and from its examination satisfactory results may in general be very readily obtained. Having by one or other of the above processes determined whether the sample of tea be faced, the next step is to ascertain the nature of the substances used for this purpose. The blue colouring matter has generally been found to be either Prussian blue or indigo, most frequently the former. Prussian blue is recognised under the microscope by the angular form of the fragments, and by their brilliant and transparent blue colour, but most decidedly by the action of liquor potassæ, which quickly destroys the blue, tinging the fragments of a dull reddish-brown colour. Indigo is distinguished under the same circumstances by the irregular form of the particles, their granular texture, and greenish-blue tint, but chiefly by the fact that the colour is not destroyed by the liquor potassæ. Turmeric powder is at once recognised by its size and bright yellow colour; and Dutch pink, by the action of liquor potassæ and acetic acid: the one reagent converts the bright yellow into a dark brown, and the other occasions effervescence. The chief points to be recapitulated are: that the principal *black teas*, namely, the Congous and Souchongs, arrive in this country for the most part in a genuine state; that certain descriptions of black tea, as scented Orange, Pekoe, and Caper, are invariably adulterated, the adulteration consisting in general in the glazing of leaves with plumbago or black lead; the caper likewise being subject to admixture with other substances, as paddy-husk, lie tea, and leaves other than those of tea. That several varieties of a spurious caper, or black gunpowder, are prepared, which consist of tea-dust, and sometimes the dust of other leaves and sand, made up into little masses with gum, and faced with plumbago, Prussian blue, and turmeric powder: in some cases these imitations are sold separately, but most frequently they are used to mix with and adulterate the better qualities of caper. With respect to *green tea*, the principal conclusions are, that these teas, with the exception of a few of British growth and manufacture from Assam, are invariably adulterated; that is to say, are glazed with colouring matters of different kinds. That the colouring matters used are in general Prussian blue, turmeric powder, and China clay, other ingredients being sometimes but not frequently employed. That these colouring matters possess properties calculated to affect the health injuriously. That in this country there is really no such thing as a green tea; that is, a tea which possesses a naturally green hue. That green teas, and more especially the gunpowders, in addition to being faced and glazed, are more subject to adulteration in other ways than black teas, as by admixture with leaves not those of tea, with paddy-husk, and particularly with lie tea. That lie tea is prepared so as to resemble green tea, and is extensively used by the Chinese themselves to adulterate gunpowder tea. The above are the most important conclusions as to the condition of black and green teas as imported, but these articles undergo further deterioration in our own country, as follows:—That exhausted tea-leaves are frequently made up with gum, &c., and resold to the public as genuine black tea, and, when artificially coloured and glazed, even as green tea. That the substances employed in the colouring are in many cases very much more objectionable and injurious than those used by the Chinese, being often highly poisonous. That it is no uncommon thing for tea, both black and green, to be fabricated from leaves not those of tea, and possessing no properties in common with the leaves of that plant. That black lie tea is often coloured and extensively employed by our own dealers and grocers for the adulteration of green tea.

TEA BISCUITS.—These biscuits are made with the finest flour, fresh butter, seasoned with a little salt, and melted in warm milk. For a moderate quantity, one pound of flour, two ounces of butter, and one pint of milk, will be sufficient. Make it into a stiff paste, adding to it a large tablespoonful of strong brewer's yeast, and leave it covered near the fire, allowing time enough to make it rise. When quite light, knead it well, roll it out an inch thick, and form it into round cakes of the size of a muffin. Bake them in buttered pans until they are of a light brown; split and butter them, and send them to table. If intended to be kept and eaten cold, the paste must be rolled out very thin and cut of a smaller size.

TEA CAKE.—Rub into a quart of dried flour, of the finest kind, a quarter of a pound of butter; then beat up two eggs with two teaspoonfuls of sifted sugar, and two teaspoonfuls of washed brewer's or unwashed distiller's yeast; pour this liquid mixture into the centre of the flour, and add a pint of warm milk as you mix it; beat it up with

the hand until it comes off without sticking; set it to rise before the fire, having covered it with a cloth. When it has remained there for an hour, make it up into good-sized cakes, an inch thick; set them in tin plates to rise before the fire during ten minutes, then bake them in a slow oven. These cakes may be split and buttered hot from the oven, or split, toasted, and buttered, after they are cold.

TEA CREAM.—Take some good green tea, and infuse half an ounce in a pint of milk, which pour boiling hot over the tea; cover it, and when it has infused a quarter of an hour, pour off the milk, mix it with half a pint of cream and the yolks of six eggs; strain through a tamis, and put it in a basin (not a saucepan) of hot water, or on a gentle fire, till thick enough.

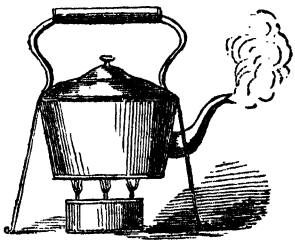
TEA, DIETETIC PROPERTIES OF.—The dietetic and medicinal properties of tea are thus detailed (putting out of view the qualities usually imparted by the addition of sugar, milk, or cream):—It acts on the system as a stimulus or sedative, according to the strength of the infusion that is taken. When taken in moderation, it produces effects at once agreeable and beneficial; the gentle stimulation to the stomach certainly assists digestion. When used in larger quantity, its primary action is that of a stimulus. Its well-known effect of inducing wakefulness illustrates this. To many persons, when taken late in the evening—and in some degree when taken strong at almost any time—it produces a very sensible degree of stimulation, and a state of sleepless excitability. Besides inducing wakefulness, tea apparently sharpens the mental faculties, and, perhaps in an especial degree, the imagination. For, generally speaking, authors, and others who have labour of this description to perform, find that they can work with much greater facility immediately after partaking of this beverage than at any other time. Green tea has, generally speaking, more stimulating, black tea more sedative properties. The stimulating effects are, however, always and necessarily followed by sedative effects, which may amount in extreme cases to depression, or to a degree of narcotism; and, in most cases, it acts as a narcotic on the organs of excretion, producing more or less visceral torpidity or sluggishness. The stimulant properties of tea are not so strongly exhibited when it is taken with a solid meal as when with a small quantity of light food. Taken along with food, it is at times serviceable to assist the digestion of the meal, and it unquestionably serves an important purpose in completing and perfecting the last stages of digestion, when, for instance, it is taken three or four hours after a hearty dinner. The effect of tea on the second stage of digestion, and probably on the secretion of the bile, points out and explains its value when taken as just stated, and also illustrates the well-known anxiety of the dyspeptic for tea-time, and the comparative comfort he enjoys after this beverage. It is also very valuable in cases of nervous and sick headache, and acts as a restorative under any circumstances where the system has been subjected to exhaustion. To the person who has a sufficiency of nourishing and wholesome food, the use of tea in moderate quantities, and at proper times, cannot be said ever to be followed by unpleasant or unsatisfactory consequences. If taken in excessive quantities, however, tea becomes decidedly debilitating to the nervous system, affecting it much in the same way as any other stimulant and narcotic. In cases where it evidently disagrees, it ought to be given up altogether; and it may be taken as a general rule, that one large cup, or two small ones, of moderately strong tea, morning and evening, are sufficient. If this quantity is exceeded, not only is it apt to cause nervousness, but the amount of warm fluid debilitates the stomach. Tea should not be drunk too hot, as it weakens the digestive organs; nor too cool, as it is apt to produce nausea; a moderate temperature, pleasant to the palate, is the best. Tea should not be drunk too weak, as it acts thus as a violent diuretic; nor too strong, on account of the injury it does to the nerves. Black tea is better than either green or mixed. A good proportion of milk and sugar should be taken with tea, to correct any possible nauseous qualities present.

TEA, GROWTH AND PREPARATION OF.—The tea-plant is a hardy, evergreen, and leafy shrub, which attains the height of from three to six feet and upwards. It is

generally propagated from seed, and the plant comes to maturity in from two to three years, yielding in the course of the season three, and in some cases, four crops of leaves. The first gathering takes place early in the spring, a second in the beginning of May, a third about the middle of June, and a fourth in August. The leaves of the first gathering are the most valuable, and from them Pekoe tea, which consists of the young leaf-buds, as well as black teas of the highest quality, are prepared. Those of the last gathering are large and old leaves, and consequently inferior in flavour and value. The leaves vary considerably in size and form; the youngest leaves are narrow, con-

voluted, and downy; those next in size and age have their edges delicately serrated, with the venation scarcely perceptible; in those of medium and large sizes the venation is well marked, a series of characteristic loops being formed along each margin of the leaf, and the serrations are stronger and deeper, and placed at wider intervals. The principal varieties of black tea are Bohea, which is the commonest and coarsest description, Congou, Souchong, Caper and Padre Souchong, and Pekoe, which are of the highest quality, the last consisting of the very young unexpanded leaves, and which, when clothed with down, constitute flowery Pekoe. The principal varieties of green tea are Twankay, Hyson-skin, Young Hyson, Hyson, Imperial, and Gunpowder, which in green tea corresponds with flowery Pekoe in black. Imperial, Hyson, and Young Hyson, consist of the second and third gatherings, while the light and inferior teas, separated from Hyson by a winnowing machine, constitute Hyson-skin. There is, according to most writers, but one species of the tea-plant, from which the whole of the above, and many other varieties of tea are obtained, the differences depending upon soil, climate, weather, age of the leaves, and mode of preparation. The plants from which black teas are prepared are grown chiefly on the slopes of hills and ledges of mountains, while the green tea shrubs are cultivated in manured soils. Upon this circumstance many of the differences between the two varieties depend. Other differences are occasioned by the processes adopted in the preparation and roasting of the leaves. Thus, while black tea is first roasted in a shallow iron vessel, called a *kuo*, and secondly in sieves, over a bright charcoal fire, green tea does not undergo the second method of roasting, but only the first, that in the *kuo*. An important operation in the manufacture of tea consists in the rolling the leaves, so as to impart to them their characteristic twisted shape. This is effected by subjecting the leaves to pressure, and rolling by the hands in a particular manner.

TEA KETTLE.—This utensil for containing the water with which tea is drawn, is made of a variety of forms, sizes, and materials, according to the particular place they are intended for. The largest and strongest for the kitchen are of copper or cast-iron; smaller tea-kettles for the same place are made of tin. With regard to these latter, it must be remarked that if they are put on the fire with a sufficient quantity of water the solder of the joints would not melt, because this being a moveable body carries off the greater part of the heat from the metal, and does not become hot enough for the solder to melt. If, however, the kettle should remain on the fire with very little water, it is evident that the solder which fixes the spout will not be protected; and should the flame be permitted to reach this part, the spout becomes unsoldered, wholly or in part, and the kettle leaks, an accident well known to happen too frequently. The best tin tea-kettles have the spout formed, not of tin-plate, but of stout iron tinned, without any seam, and fixed on to the kettle by being passed through a circular hole in the body, to which it is soldered inside, and therefore is safe from the flame; the handles of these are likewise made of stout iron tinned, and fixed on by rivets. Tea-kettles for the breakfast and tea table are generally made of more elegant forms, and various contrivances are used to keep the water boiling while it is off the fire. For this purpose a tea-kettle may be placed upon a stand which contains a flat iron heater that keeps it boiling. These are usually made of tin-plate, and are very economical and convenient. By means of a properly contrived handle, the tea-kettle and stand may be carried together. Another way is to keep the water boiling by iron heaters, or tubes of copper attached to the tea-kettle, and reaching to the bottom. Within these tubes are put irons red hot. It is important that the lid of the kettle should not fit so tight as to prevent the escape of steam. When the lid fits perfectly tight, there is danger of the steam forcing the boiling water out suddenly through the spout, by pressing upon the surface of the fluid within. Another plan is as follows: If a common tea-kettle be placed upon an open fire, the heat and flame that rises round the sides has little effect, and it is only that which strikes the bottom that conduces materially to the heating of the water. By surrounding the body of the kettle with a cylinder of stout iron, as seen in the engraving,

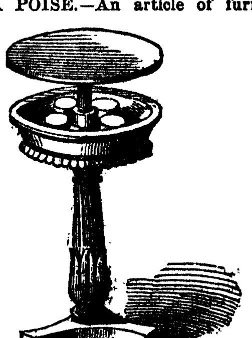


extending deeper than the bottom of the kettle, and soldered tight round the top, there will, of course, be a cavity between this casing and the kettle. The heat applied, whether that of a fire or lamp, will not only strike the bottom, but will accumulate to a considerable degree round the sides, and occasion the water to boil much sooner than in the ordinary way. The best tea-kettles have handles formed of wood, glass, or ivory. One with a metallic handle cannot be touched when filled with boiling water, without using a kettle holder, made of some non-conducting substance, as cloth of some kind, or by wrapping a piece of paper round it, while a wooden, ivory, or glass handle, being itself a bad conductor, may be used without inconvenience.

TEA-MAKING, DIRECTIONS FOR.—Tastes differ regarding the flavour of various sorts of tea, some preferring all black,

others all green, and many a mixture of both in different quantities. A good mixture in point of flavour is two-fifths black, two-fifths green, and one-fifth gunpowder. In point of wholesomeness, however, all black is decidedly the best. The flavour and the strength of tea depends, in a great measure, upon the manner in which it is made, and the best way of conducting this process will be ascertained to be as follows:—The proportion of tea to be used is commonly considered as one teaspoonful for each person and one for the pot; this proportion will yield a beverage of an agreeable strength. An important feature is to have the water ready boiling, not simmering, as is too commonly the case; for, unless the water be boiling, the tea cannot possibly be good. Having well scalded the teapot, put in the tea, and pour over it about one-third of the water the pot will contain, and set it by the side of the fire for ten minutes, then fill up the pot and allow it to remain for six or eight minutes longer, by which time it will be thoroughly drawn. In pouring it out, be careful not to drain the pot to the very last cup, and also distribute the tea in such a manner among the partakers of it, that one portion does not have all the strong and the other portion all the weak. Never add fresh tea to that which has already been made by way of strengthening it, for it will not have that effect; but in the event of its being too weak, then put the additional tea into a large teacup, fill it up with boiling water, and leave it there closely covered for a few minutes, after which pour the contents into the teapot. Another plan recommended is always to use two teapots, each of sufficient size to hold the quantity of tea required; pour the whole of the water over the tea at once, and do not allow it to stand more than three or four minutes, when it should be poured into the other teapot and served from that. If the party is large, this process must be repeated. By this means all the tea will be of equal strength, and the aromatic flavour will be extracted without any of the injurious matter. Soft water is better for making tea with than hard water, the former is least impregnated with foreign mixture, and will always yield the greatest quantity of the tanning matter, and will strike the deepest black, with sulphate of iron in solution. If, however, hard water must of necessity be used, its deleterious properties may be remedied by the addition of a little carbonate of soda. If tea be used in a tea urn, care must be taken that the water boils, and that the urn heater is red hot; then, in the first place, dust the urn and put the boiling water into it, before you put in the heater; and, to prevent an unpleasant taste being imparted, or spoiling the boiling water by dust, or particles of the hot urn (which may rub off the heater as it is being put into its place), be careful to put on the round rim or ring before you put in the red hot heater; and be sure, also, to avoid pouring any water into the place where the heater goes, otherwise, when the iron is put in, the steam may rush out and scald the operator seriously. It is a well-ascertained fact, that the infusion of tea made in silver or polished metal teapots is stronger than that which is produced in black or other kinds of earthenware. This is explained on the principle that polished surfaces retain heat much better than dark, rough surfaces, and that, consequently, the heat being confined in the former case, must act more powerfully than in the latter. It is further certain that the silver or metal teapot, when filled a second time, produces worse tea than the earthenware vessel, and that it is advisable to use the earthenware pot, unless a silver or metal one can be procured sufficiently large to contain at once all that may be required. These facts are readily explained by considering that the action of the heat retained by the silver vessel so far exhausts the herb as to leave very little soluble substance for a second infusion; whereas the reduced temperature of the water in the earthenware pot, by extracting only a small proportion at first, leaves some soluble matter for the action of a subsequent infusion. The reason for pouring boiling water into the teapot before the infusion is made is, that the vessel being previously warm may abstract less heat from the mixture, and thus admit a more powerful action. Neither is it difficult to explain the fact why the infusion of tea is stronger if only a small quantity of boiling water be first used, and more be added some time afterwards; for if we consider that only the water immediately in contact with the herb can act upon it, and that it cools very rapidly, and especially in earthenware vessels, it is clear that the effect will be greater where the heat is kept up by additions of boiling water, than where the vessel is filled at once, and the fluid suffered gradually to cool. When the infusion has once been completed, it is found that any other addition of the herb only affords a very small increase in the strength, the water having cooled much below the boiling point, and consequently acting very slightly.

TEA POISE.—An article of furniture



kept in the drawingroom as a receptacle for various kinds of tea ready for use. It

is sometimes made with a rising top, as shown in the annexed figure, and the various canisters are arranged within.

TEA SYRUP.—Pour a quarter of a pint of boiling water over three ounces of young hyson tea; let it stand an hour, then add a pint of brandy; cork it up well, let it stand for ten days, shaking it frequently; then strain it, sweeten with clarified syrup, and bottle it. A teaspoonful of this in a glass of water makes a very refreshing drink.

TEA URN.—The tea-urn is the most elegant mode of supplying water for tea. It is made in the form of a vase, but in a great variety of patterns. The accompanying engraving represents one of the usual

kind. In the centre there is a vertical tube, into which a cylinder of iron heated red hot is slipped down, and covered by a small lid, and that by the lid of the urn. This keeps the water in the urn at a boiling heat. Some tea-urns have lamps beneath them, instead of iron heaters, which have the advantage of keeping the water hot any length of time.

TEA URN, TO CLEAN.—In an earthen gallipot put an ounce of bees-wax, cut up in small pieces; set it by the fireside until perfectly melted and quite hot, very near boiling heat; remove the jar from the fire, and stir into it rather less than a tablespoonful of salad oil, and rather more than a tablespoonful of best spirits of turpentine, continue stirring till well mixed and nearly cold; fill the urn with boiling water so as to make it thoroughly hot, apply a thin coating of the above mixture, and rub with a soft cloth till all stickiness is removed; then polish with a clean rag and a little crocus powder. The crocus powder must be very fine, so as to sift through muslin.

TEAL.—A bird which is a great favourite with sportsmen. About April, these birds collect a quantity of grass and rushes, and make a covered nest, the opening for the most part to the south; in this they lay from ten to fourteen eggs, of a dirty white,

and as big as those of a pullet. The nest of the teal is never placed in such a situation as to rise and fall with the water. It is found on all the grassy lochs of the north, and sometimes some hundred yards from the water's edge, and at others, close by; but at all times a dry spot is selected, where it deposits its eggs. Teal shooting bears a certain resemblance to some of our inland shootings which are neither common nor within the reach of every one; and it is a most amusing sport when pursued on the banks of a small river or even a large brook, well sheltered by bushes. When hunted up, a teal seldom rises in the air, but usually skims along the stream, and presents a fine shot. If it cannot be got at through the interception of trees or large bushes, one of the party should run forward so as to circumvent its entire escape out of reach. It is not often, however, that a teal flies away altogether. The teal will also frequently swim down stream the moment after it drops; so that if the shooter does not cast his eye quickly that way, instead of continuing to look for him in one spot, the bird will probably catch sight of the sportsman and fly up, while his attention is being directed to the wrong place.

TEAL, TO DRESS.—Half-roast them; when they come to table slice the breast, strew on pepper and salt, pour on a little port wine, and squeeze the juice of a lemon over; put some gravy to this, set the plate on a lamp, cut up the bird, let it remain over the lamp till done, turning it.

TEETOTAL DRINKS.—As there are many persons who wholly abstain from alcoholic liquors, the following collection of recipes for unintoxicating beverages are herewith given under a general head, for the purpose of easy reference:—

Apple Baked Drink.—Bake half a dozen apples without peeling them, put them into a jug, and pour half a gallon of boiling water over them whilst they are hot, cover the whole up until cold, then sweeten with honey or sugar.

Apple Drink.—Boil five or six ripe pippins, cut into six or eight pieces, in half a gallon of water until quite soft, strain through a sieve, and sweeten with honey and sugar.

Apricot Effervescing Drink.—Take a pint of the juice of bruised apricots, filter until clear, and make into a syrup with half a pound of sugar, then add an ounce of tartaric acid, bottle, and cork securely. For a tumbler three parts full of water, add two tablespoonfuls of the syrup, and a scruple of carbonate of soda, stir well, and drink while effervescing.

Barley Water with Honey.—Add the juice and rind of one lemon to a tablespoonful of honey, and two teacupfuls of barley, put it into a jug, and pour a quart of boiling water upon it.

Barley Water with Isinglass.—Take a teaspoonful of pearl barley, six lumps of loaf sugar of the ordinary size, half a lemon, and enough isinglass to clear it. Pour half a gallon of spring water on these ingredients, and let it stand till cold.

Cool Cup.—Weigh six ounces of sugar in lumps, and extract the essence from the rind of a large fresh lemon by rubbing the lumps of sugar upon it; then put them into a deep jug, and the strained juice of one lemon and a half. When the sugar is dissolved, pour in a bottle of cider, add nearly half a small nutmeg lightly grated, and serve the cup with or without some sprigs of fresh balm or borage in it. If closely covered down and placed on ice for a short time, it will be more agreeable as a summer beverage.

Currant Water.—Squeeze a pound of currants into a quart of water, add four or five ounces of pounded sugar. Mix well, strain, and ice, or allow to cool.

Effervescing Waters.—These are made extemporaneously by adding to twenty grains of bi-carbonate of soda (or potash), fifteen grains of citric (or tartaric acid), about half a teaspoonful of coarsely powdered white sugar or a teaspoonful of syrup may be added, and if cleared, two or three drops of essence of lemon. The soda with either of the acids makes soda water, the potash, potash water, and the addition of the lemon and sugar converts it into effervescing lemonade. If ginger beer be desired, it is only necessary to add about ten grains of powdered ginger instead of the lemon essence. A tablespoonful of lemon-juice (obtained from half a lemon or an orange) is equal to fifteen grains of citric acid, and may be substituted for it and the essence with advantage. The method of proceeding in each case is as follows:—Dissolve the soda or potash in a wineglassful of water with the sugar or syrup, and the essence of ginger or lemon, when they are used; then dissolve the acid in an equal quantity of water (or squeeze the lemon) in another glass, pour the two together, and drink while effervescing.

Fruit Beverages.—Fruit drinks should be made with the juice of fresh fruit when it can be obtained, in preference to syrup or jam, and the usual method of preparing these drinks is to boil the juice which has been squeezed from the fruit, with a little water, straining it afterwards through a flannel bag, and adding as much syrup or sugar, lemon-juice and water, which should be perfectly cold before use.

Ginger Drink.—Take a pound of cream of tartar, three pounds of loaf sugar, a quarter of a pound of coarsely pounded ginger, boil these ingredients together in four gallons of water for ten minutes; skim it clear, and let it stand till nearly cold; add a spoonful of yeast, stir the whole together, let it stand all night to settle, then bottle in small stone bottles securely corked; in three days it will be fit for use.

Iced Beverages.—These are made by the addition of ice to other materials, by which the flavour of the whole is rendered more grateful to the palate. Clean and pure ice is necessary for the purpose.

Indian Syrup.—Take five pounds of lump sugar, two ounces of citric acid, and a gallon of boiling water; when cold, add half a drachm of essence of lemon, stir it well, and bottle it. About two tablespoonfuls to a glass of cold water.

Lemon Kali.—Take of highly-dried citric or tartaric acid twenty-four grains, carbonate of soda, also highly dried, one scruple, coarsely powdered refined sugar (also dried) two drachms, and essence of lemon one or two drops. The whole must be kept in a very dry bottle. When required for use, a dessertspoonful will make a pleasant beverage when added to three parts of a tumbler of water.

Lemon Water.—Put two slices of lemon, thinly peeled, into a teapot, a small piece of peel, and sugar to sweeten; pour in a pint of boiling water, and stop it closely for two hours.

Lemon Barley Water.—Rub two ounces of sugar on the rind of a lemon, so as to extract its flavour; press out the juice on to the sugar, and pour on it a quart of plain barley water, made without lemon or sugar.

Normandy Pippin Water.—Cut up five or six Normandy pippins into small pieces, boil them for half an hour in a quart of water, with a little lemon-peel, and a clove; sweeten to taste, strain, and drink when cold.

Orange Barley Water.—Rub two ounces of sugar on the rind of an orange, and afterwards press out the juice upon the sugar, upon which pour a quart of plain barley water.

Peach Water.—Mash eight ripe peaches, add the juice of a lemon, add a teacupful of syrup made in the ordinary way, and a pint and a half of water; strain through a sieve, and mix with cold water when required for drinking.

Raspberry Effervescing Draught.—Take three pints of raspberry juice, filter clear, and make a syrup with a pound and a half of sugar, and add three ounces of tartaric acid. Keep it in well-corked bottles. For a tumbler three parts full of water, add two tablespoonfuls of the syrup and a scruple of carbonate of soda.

Rhubarb Sherbet.—Boil six or eight sticks of rhubarb for ten minutes in a quart of water; strain the liquor into a jug, in which a thinly pared lemon-peel is placed, and two

tablespoonfuls of clarified sugar; let it stand for five or six hours, and it will then be fit to drink.

Sugar Water.—Boil a sufficient quantity of sugar in water to make it pleasantly sweet, let it stand till cool, then drink with ice, or not, as desired. The same drink may be made by simply dissolving two or three lumps of sugar in a tumblerful of water.

Turkish Sherbet.—Wash a small quarter of veal, and put it on the fire with nine pints of water; skim it well, and let it boil till reduced to two pints; run it through a sieve, and when cold add to it a pint and a half of lemon-juice, and two pounds of loaf sugar which has been made into a syrup with a pint and a half of water, and cleared with the white of an egg.

Welsh Nectar.—Boil two gallons of water, and let it stand to cool; add a pound of raisins, two pounds of loaf sugar, the juice of three lemons, and their rinds thinly peeled, stir the whole daily for four days, then strain it through a jelly-bag, bottle it, and cork it securely. In ten days or a fortnight it will be fit for use.—See, also, APPLE WATER, BARLEY WATER, CHOCOLATE, CIDER, COCOA, COFFEE, CRANBERRY WATER, CURDS AND WHEY, GINGER BEER, ICED WATER, LEMONADE, ORANGEADE, ORGEAT, PERRY, RASPBERRY VINEGAR, RICE WATER, SHERBET, SODA WATER, STRAWBERRY WATER, TOAST AND WATER, &c.

TEETH, PRESERVATION OF.—The preservation of the teeth ought to form an important item in the care of the person. The possession of sound teeth is a great blessing, as they not only promote the process of digestion, but keep the breath sweet and pure. Unsound and unclean teeth are also most unsightly and unpleasant for other persons to be brought in contact with; for these combined reasons, the greatest care should be observed in the management of these important organs. It must be understood that the teeth are bones thinly covered over with a fine enamel, and this enamel is more or less substantial in different persons. Whenever this enamel is worn through by too coarse a powder or too frequently cleansing the teeth, or eaten through by a scorbutic humour in the gums, the tooth cannot long remain sound. The teeth, therefore, are to be cleaned but with great precaution, for if the enamel is worn off faster by cleaning the outside than nature supplies it within, the teeth will probably suffer more by this method than by neglect. A butcher's skewer, or the wood with which they are made must be bruised and bit at the end, till with a little use it will become the softest and best brush for this purpose; and in general the teeth may be cleaned with this brush without any powder. It is necessary to observe that, very near the gums of persons whose teeth are otherwise good, there is apt to grow a false kind of enamel, both within and without, and this false enamel or tartar, if neglected, pushes the gums higher and higher till it leaves the fangs of the teeth quite bare, above the true enamel, so that sound teeth are destroyed, because the gum has forsaken that part which is not sheathed and protected. In the summer months this tartar may be effectually removed by partaking daily of strawberries; eating plentifully of watercress is also considered a good remedy. An excellent tincture for this defect will be found as follows:—Mix six ounces of tincture of Peruvian bark with half an ounce of sal-ammoniac. Shake these well for a few moments every time before the tincture is used. The method of using it is, to take a spoonful and hold it near the teeth, then with a finger dipped in, rubbing the gums and teeth, which are afterwards to be washed with warm water. Another method of preserving the teeth is to wash out the mouth with water after every meal, especially if animal food has been eaten; by these means the particles of food lodging about the teeth and gums are dislodged, which, when allowed to remain and accumulate, proves excessively injurious. Much harm is frequently done to the teeth by cleaning them with too hard a brush or deleterious dentifrices, in either case the enamel being scratched and otherwise injured. As a matter of course, the preservation of the teeth is greatly influenced by what is eaten and drunk. All things that are either very hot or very cold are extremely bad; acids are especially injurious, as are also sweets. *The decaying of teeth* is partly due to chemical decomposition of the food lodged between the teeth in eating. When there is joined to this an unhealthy or weak condition of the ivory, which is thus rendered incapable of resisting the action of external causes, and also the continual pressure of the adjacent teeth, when too close together, then decay is almost sure to take place in some part or other of the crown. When it occurs in the sides of the necks, just below the enamel, the cause always is in the food, and generally so when in the middle of the crown of the molars; but sometimes decay takes place beneath the enamel, and long before the slightest fissure in this part can be detected by any ordinary observation, or, at all events, while there is no opening large enough to admit the food. Besides these causes, another exists in the uncovered state of the roots, or fangs, or in these being covered by tartar instead of gum, both of which circumstances tend to produce decomposition and decay, and should be cautiously guarded against. When a cavity is actually developed, the sooner it is filled the better. When it is small and has not opened into the natural cavity of the tooth, gold leaf is the best material, the dentist previously cutting away the decayed matter and pressing in the gold with great force. When, however, this cavity is exposed, gold is useless under ordinary circumstances. The following are some of the best methods of filling teeth when beginning to decay:—1. Mix thirteen parts of pure finely powdered caustic lime with twelve parts of anhydrous phosphoric acid. This powder is moist during the mixing, and while in that state is to be introduced into the decayed tooth. The place in the tooth is to be made dry

before receiving the mixture. This kind of filling must be used two or three minutes after being prepared. Soon after it is lodged in the decayed cavity, it becomes very solid. 2. Take pure anhydrous phosphoric acid, forty-eight grains, pure caustic (unslaked) lime, forty-two grains. Finely pulverize each separately, and keep them separate in well-stopped bottles till wanted. For use, mix the required quantity in a small mortar, as rapidly and perfectly as possible, and at once press the dry mixture in the cavity of the tooth. The surface should then be smoothed off and finished by moistening with water. This cement soon acquires great hardness; it is very white and durable, and in its composition resembles the natural earthy matter of the teeth. The whole process requires expertness to succeed; but the latter, when attained, will amply repay for one or two failures. If the composition be not mixed and applied quickly it becomes moist, and is therefore unfit for use. In many cases the odour arising from carious teeth is very offensive; to remedy this, the mouth should be well rinsed with a teaspoonful of the solution of chloride of soda in a tumbler of water, which will have the desired effect.—See DENTIFRICE, TOOTHACHE, &c.

TEETHING.—This natural process in a child's development, usually commences about the third month, though it is seldom till the fifth or sixth that the teeth make their appearance through the gums. The period when the teeth may be expected is indicated by an increased irritability of the infant, the gums become tense, shiny, and swollen; while the excited glands in the neighbourhood pour out so large a quantity of saliva, that it overflows the mouth, causing the infant to *drivel*, as the nurses call this natural salivation. At the same time the child, as if to relieve the heat and irritation it feels, thrusts its hands into its mouth in the attempt to do what the watchful mother will do for it—*scratch* the top of the gum with her nail, or, making a rasp of a rough crust, or a proper *gum-ring*, rub it freely along the top ridge, that by abrading it of the binding cuticle, the imprisoned gum may have the power to expand. As the only benefit that can accrue from rubbing the child's gum is the tearing or relaxing of this fine but tenacious cuticle, all smooth surfaces, such as coral or ivory rings, are perfectly useless; such instruments to be of any service, should be cut into small diamonds like a fine file, and used frequently by the parent, exactly in that manner. The crust, though serviceable from its roughness, is dangerous from the chance of crumbs breaking off and getting into the infant's throat. After the irritation and drivelling have continued for some weeks, a white line or a round spot appears on the top of the gum of the lower jaw, and ultimately of the upper; through these white spots the teeth finally burst their way in the following order: two incisors of the lower jaw are the first to make their appearance, though frequently several weeks elapse between the advent of the first and second; the next cut are the four incisors of the upper, then the remaining two incisors of the lower jaw, one on each side, but not joining. There is now a pause for a short time in the process. The next in succession are the four eye teeth in either jaw, thus completing the infantine set of sixteen teeth. Another pause, usually of some months, succeeds before nature resumes her active operations; when she does, it is to place one double tooth on each side of both jaws, thus completing the child's complement of twenty teeth. When these are shed, and nature completes her office, instead of the first ten she places sixteen teeth in each jaw, thus doubling her first complement, and making the adult set thirty-two. Each tooth as it is formed makes half a circle on its axis, and rising sideways, pierces the gum with the extreme point of its edge, revolving as it rises to the perpendicular.

The *diseases* that teething gives rise to in infants are very numerous, and the consequences of so natural a process are some of the most remarkable facts connected with the development of the human economy. The disorders excited by difficult dentition are, diarrhœa, convulsions, mesenteric disease, water on the brain, rickets, and remittent fever—all of them to the infant fearfully mortal diseases. Each of these affections, though so different in its locality, and so opposite in its symptoms, is induced by the same cause, long-continued irritation in the gums reacting on the delicate organization of the brain and nervous system. And, as this irritation is caused by the difficulty the imprisoned tooth finds in escaping from the fibrous membrane in which it is enveloped, and making its way through the tightly bound gum, it becomes the duty of the medical man or parent, as soon as the first constitutional disturbance manifests itself, to assist the efforts of nature to effect the escape of the tooth, by dividing the gum and leaving an aperture through which the new-formed tooth may reach its destination. But, as *lancing* the gums, as the process is called, will be worse than useless unless *effectually done*, the gums should never be cut unless the tooth can be plainly felt below, and to be of service, the incision must be carried down to the tooth, or else the unyielding membrane in which it is encased will be undivided, and the child put to the inconvenience of lancing without effecting the slightest benefit. As, however, the irritation commences from the first entrance of the tooth into the gum on emerging from its bony socket, and long before the actual pressure of the tooth can cause the graver mischief, or simply from the increased amount of blood circulating in the parts, it is evident that lancing the gums in so early a stage of formation is not only impolitic, but hurtful. Another mode of relief, both for the diarrhœa and convulsions that so frequently occur in weakly infants at this period, must be looked for; and this mode in all stages of dentition, from the first to the last, will be found either a source of instant relief or of certain recovery: this remedy is the *hot bath*, which, in all cases of

infantine suffering, is the mother's best hope, and should be her unshaken reliance. The time a child should be kept in a hot bath should seldom exceed *two minutes;* and, as the object is to unload some congested organ, or to relieve certain parts of their excess of blood by causing a rapid determination to the skin, the water should be hot enough to produce this effect as instantaneously as possible. When diarrhœa continues in despite of the hot bath, a little magnesia or a few grains of prepared chalk may be given two or three times a day until the excessive action is checked; or if unabated by these means, a few drops of tincture of kino is to be administered, as prescribed for diarrhœa. —See BATH, CONVULSIONS, DIARRHŒA, SCARLET FEVER, &c.

TELESCOPE.—The telescope invented by Galileo consisted of one convex lens and one concave lens, the distance between them being equal to the difference between the focal lengths of the two lenses. This is the construction of what is called an opera glass; and the Galilean telescope is now used chiefly for viewing objects within a theatre or an apartment, since, if considerable magnifying power were given to it, the extent of the field of view would be very small. A simple telescope may also be constructed by means of two convex lenses, which are placed at a distance from one another equal to the sum of their focal lengths. In order to afford a view of objects in the same position as they appear to have when seen by the naked eye, Mr. Dollond employed an eye-tube containing four lenses; whereas in the eye-piece invented by Huyghens, which is used in most astronomical telescopes, there are only two lenses, and objects are seen inverted. In reflecting telescopes, a speculum at one extremity of the tube serves the purpose of the object-glass in refracting telescopes, by forming an image at its focus, and the image so formed is viewed by the eye through intermediate reflectors. The Newtonian reflecting telescopes have one concave speculum at the bottom of the tube; and the rays reflected from it fall in a convergent state upon a small plane mirror, placed so as to make an angle of forty-five degrees with the axis of the telescope. After the second reflection the rays unite and form an image, which is viewed through a Huyghenian eye-piece fixed in the side of the tube opposite the plane mirror, that is, near the open end of the tube. In the Gregórian reflecting telescopes the second reflection is given by a second concave mirror, the face of which is towards the observer. The telescope constructed by the late Sir Wm. Herschel differed from the Newtonian telescopes only in having no small mirror. The surface of the great speculum, which was four feet in diameter, had a small obliquity to the axis, so that the image formed by reflection from it fell near the lower side of the tube at its open end; at this place there was a sliding apparatus, which carried a tube containing the eye-glasses. The observer, in viewing, was situated at the open end of the tube, with his back to the object, and he looked directly towards the centre of the speculum. The reflecting telescope executed by Lord Rosse, in 1842, is fifty-six feet long, and its speculum is six feet in diameter. It is capable of being directed from the zenith to the horizon towards the south, and from the zenith to a position parallel to the earth's axis towards the north; it has also a movement in azimuth of about eight degrees on each side of the meridian. The Great Exhibition contains a noble telescope by Mr. Ross, which is considered the largest ever constructed on the refractive principle. Telescopes are, generally speaking, expensive instruments; but a cheap telescope for observing heavenly bodies may be constructed as follows:—Procure from an optician a thirty-five inch object-glass (that is, a convex glass which produces a focus of the sun's rays at the distance of thirty-six inches) and a one-inch eye-glass (that is, a convex glass producing a focus at one inch). Employ a tin-plate worker to make two tin tubes, one thirty inches long, and about an inch and a quarter in diameter; the other, ten or twelve inches long, and its diameter such that it will just slide comfortably inside the larger. The inside of these tubes should be first painted, or lined with a dull black. At the end of the larger tube an ingenious workman will have no difficulty in securing the object-glass, so that not more than an inch diameter of it shall be exposed, and at the end of the smaller tube the eye-glass must be fixed. When the open end of one tube is inserted in the open end of the other, so that the two glasses shall be about thirty-seven inches apart, a telescope will be found which will magnify the diameter of objects thirty-six times; or, in other words, will make the heavenly objects appear thirty-six times nearer. With such a telescope the satellites of Jupiter, the crescent of Venus, and the irregularities of the surface of the moon, may be distinguished. It must be observed that with this instrument all objects will appear inverted; but with regard to celestial objects, this is of no importance. This telescope will cost about four shillings; but for twice that sum a very much superior one may be constructed by obtaining a larger and better object-glass, of forty to forty-eight inches focal distance, the cost of which is three shillings and sixpence, retaining the one-inch eye-glass, and having the tubes made to suit the additional greater length of focus and diameter of object-glass. The possession of such a telescope may add greatly to the pleasure and instruction of those who have any taste for the sublime and beautiful facts of astronomy.

TENANT.—This term is here considered as the holder of lands or tenements. *A tenant at will* is a person who holds lands or tenements at the will or pleasure of the lessor. This tenancy at will, however, is at the will of both parties, for either may determine the holding, and quit his connection with the other, at his own pleasure. If, however, the landlord puts his tenant at will out after he has sown his land, the lessee may claim free ingress, egress, and regress to cut and carry away the profits.

It is established that if a tenant takes from year to year, either party must give a *reasonable* notice before the end of the year, although that *reasonable* notice varies according to the custom of different counties. If, however, an agreement be made to let premises so long as both parties like, and reserving as a compensation accruing from day to day, and not referable to a year or any aliquot part of a year, it does not create a holding from year to year, but a tenancy at will, strictly so called. And though the tenant has expended money on the improvement of the premises, that does not give him a term to hold until he is indemnified. The tenant who is suffered to remain in possession after his lease is expired, pending a negotiation for a new lease, is a tenant at will. The possession of the tenant at will has, in fact, been held to be the possession of the lessor. A person who lives rent free by the consent of the owner is a mere tenant at will. So is also a person who has been let into possession of land under a contract of sale which has not been completed. *A tenant from year to year* is one who holds lands and tenements by an uncertain and indeterminate tenure, more especially if an annual rent is reserved. Payment of rent is primary evidence of a tenancy from year to year. When a tenant, under these conditions, takes possession, he is bound to keep the premises for a year, for till then he cannot give the proper notice, which must expire at a period corresponding with that at which he took possession; and the same remark applies to the landlord. The entrance of a tenant in the middle of a quarter does not alter the nature of the tenancy; he is a tenant from the quarter-day. The tenant who holds over after his lease has expired is a tenant at will at the same rate as he paid under the lease, till the landlord receives the first quarter's rent, and then he becomes a yearly tenant at the same rent. A tenant under an agreement for a lease is a yearly tenant. An occupation pending a negotiation for a lease will entitle the landlord to sue, although no distress for rent can be levied. A tenant from year to year is only liable to repairs which are necessary from *voluntary* negligence, but he is not liable for accidental fires and fair wear and tear; his liability, therefore, is confined to tenantable repairs, and not to those of a substantial kind. A tenant from year to year may assign over his interest in the estate for any portion of time less than a year, or he may sublet a portion of it in the absence of any agreement to the contrary with his landlord, and this he may do without having his landlord's consent to the transfer. But though a yearly tenant can thus assign over his interest, a tenant at will cannot.

TENCH.—A fish very much like carp in its haunts and habits; the head, sides, and belly are of a yellowish green; the fins are large, and of a reddish brown colour; the tail is not forked; its body is thicker and deeper than other fish, in proportion to its length, somewhat approaching the bream in shape; the scales are smooth and small; and the eyes are of a golden tint, encircled by a band of crimson. The tench is found in ponds, lakes, pits, and occasionally in the deep and sluggish parts of rivers; it spawns in May and June, and quickly recovers its condition. It bites best from April until August, and the baits and tackle and mode of angling for it are similar to those used for carp—worms, gentles, wasp grubs, and honey-paste being those most preferable.

TENCH BOILED.—Scale and clean the fish, then wrap them in buttered paper, and broil on a gridiron; serve with melted butter, or any other sauce.

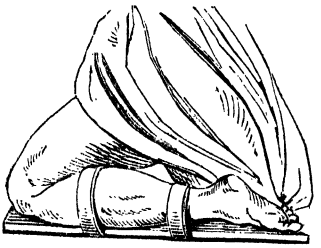
TENCH FRICASSEED.—Dip the fish for a minute or two into boiling water; then take it out, and remove the skin and the scales, beginning at the side of the head; then gut and wash it; cut it into pieces, and fricassee in the usual manner.

TENCH FRIED.—Draw and wash the fish well; then wipe it very dry; cut it open down the back; season with salt, and fry of a good colour in boiling oil or lard; serve with anchovy or any other sauce.

TENCH MARINADED.—Scale and clean the fish, and lay them in a dish, with some sweet oil, parsley, green onions, and shallots, chopped fine; a bunch of sweet herbs, salt and pepper. When they have thoroughly imbibed the flavour of this seasoning, place them between two sheets of writing-paper, well buttered, covering them with the seasoning, and broil them over a slow fire; serve without the paper, pouring over them some good sauce made hot.

TENDO ACHILLES.—The tendon of the heel; this is one of the strongest and most important sinews of the body, constituting the terminal ribbon of the two fleshy muscles that form what is called the calf of the leg. It forms the chief support and pliant motion of the lower extremity, and is not only one of the most important tendons of the body, but assists in giving more symmetry to the leg of man and woman than any other part. In certain constitutions, it is sometimes ruptured or torn by a sudden, but by no means violent movement of the body; the *abruptness* of the motion seeming to have the power to effect that which a much more considerable force could not achieve in deliberate movement. Thus, a sudden twist, an abrupt leap or spring, and an unexpected slip from one step to another, though only two or three inches in depth, will, in certain constitutions, cause this serious accident. The far more frequent cause of this injury, however, is the result of external violence, such as a kick, or a blow with a stick; but whatever may be the cause, the result is to throw down the injured person on his face, as if shot, without the power to stand. The *treatment* of this accident is simple, though painful and constrained, and consists in relaxing to the uttermost the muscles that participate in forming this tendon, and placing the cut or torn edges in close approximation, and so retaining them till nature throws out a sufficient amount of new callosity to re-

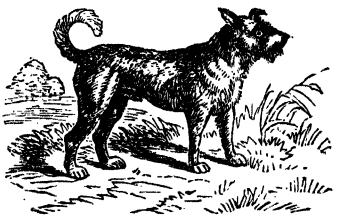
unite the fractured or divided edges. In a bone, this takes from six to twelve weeks; but, in a tendon, it may be completed in from three to six. When it is a simple tear or fracture, the leg is doubled back on the thigh, stretching out the foot to the utmost length of the toes, and by means of a splint laid underneath, with detached bandages of tape, securing the limb in that position. When the injury has been inflicted by a knife or cutting instrument, though the treatment is the same as regards the position of the limb, yet, as the skin is also divided, and being loose, might get between the uniting tendon, it will be necessary—having put the leg in a proper situation—to gather up the skin on each side of the incision, and sew



the two together close to the limb, at the sixth or fourth of an inch from their cut edges, and then cut off the superfluous skin. At the end of three weeks, the leg may be released from its confinement, and, after a few days, slowly extended, and the foot placed in a very high heeled boot with a cork heel; a little gentle exercise may be attempted every two days, having a thin slice of cork cut from the heel, till at length the foot may be placed flat on the ground, and the weight of the body thrown once more on the tendo Achilles.

TENT WINE JELLY.—Put into an earthen jar one ounce of isinglass, half an ounce of powdered gum arabic, one ounce of powdered white sugar candy, and half a pint of tent wine; place the jar in a saucepan of water, and let it simmer until the isinglass is dissolved. It will require to be stirred occasionally, and, when it is all dissolved, should be briskly stirred and poured into moulds. The jelly is made with much less trouble and expense than calf's-foot jelly, and will be found very agreeable and nourishing.

TERRIER.—Of this dog there are two prominent varieties, the rough and the smooth. The rough variety is to be met with in its best condition in Scotland, and is there to be found of various sizes, as from sixteen inches to six. A few have long hair; but the greater number have the coat rough and crisped. A mixed breed between the two is re-crossed to generate our best bull terrier; and the breed so generated is handsome, useful, and very courageous. A large breed of English terriers has of late sprung up, most of which



are rather rough coated; but a few others are smooth. These, by being crossed with the bull-dog, have inherited undaunted courage in attacking the higher order of vermin, as the badger, &c. A small variety of terrier, with crooked legs, is also sometimes used for hunting rabbits in cover, and is extremely useful in woods; for the rabbits, as though sensible of the want of speed in their pursuers, retreat before them so slowly as to present a ready mark for the sportsman's aim.

TETANUS.—This disease, commonly called *rigid spasm*, or *lock-jaw*, is a violent contraction of the muscles of voluntary motion, attended with tension and extreme rigidity of the parts affected, and receiving particular names from the portion or part of the body affected; thus, when all the muscles of volition are affected in one invisible spasm, the disease is called *tetanus*. When the body is bent *forward*, by the spasm seizing only the anterior muscles; when it is bent *backwards* like a bow, the body resting on the heels and the top of the head, by the disease affecting the opposite class of muscles; or when it is drawn into an arch on the *right* or the *left side*, accordingly as each separate set of muscles are contracted. Besides these four, there is, however, another form, and, as being more frequently met with, of more importance to the general public: and that is that form of tetanus affecting the muscles of the jaw and neck, which from their violent contraction firmly shutting the mouth, and contracting the gullet, has been named *trismus*, or locked jaw. In ordinary convulsions or spasms, the contractions and relaxations are alternate, with remissions of ease, whether attended with partial or complete insensibility. The peculiarity of tetanus, however, is that the contraction of the muscles is kept up without any change or abatement; the muscular fibre being grasped in a dead lock of unmitigated intensity to the last, while the involuntary muscles, as those of respiration, are unimpaired, and the intellect of the patient is as clear, and his sensation as acute, as in the soundest health. This disease is divided into the acute and chronic, and into that proceeding spontaneously or from poisons, and called *idiopathic*, and that the consequences of wounds or injuries, greater or less, received by the body, when it is called

traumatic. As it is only intended to treat of locked jaw, or trismus, in this article, it will be sufficient to observe that the causes which generally induce this form of tetanus are of the traumatic order, and result from erysipelas, wounds of the head, lacerations of the scalp, punctures of the hands and feet, especially with rusty or jagged substances, bites from rabid animals, injuries from machinery, and sometimes from the extraction of a decayed tooth. It is a peculiarity of this fatal disease that the exciting cause is often as insignificant as the consequences are grave. Males are more subject to it than females, and, for one case of idiopathic locked jaw, there are five, the result of external injury.

Symptoms.—These commence after the injury, from a quarter of an hour to three or four days, and sometimes as late as ten or twelve weeks, with a stiffness in the back of the head and neck, extending to the shoulders, and very materially impeding the motion of the head; this gradually extends to the throat, rendering talking irksome, and, finally, swallowing impossible. The pain and rigidity of the muscles of the throat runs down the breast, and darts sharp pains through the chest, into the back; the muscles of the neck now beginning to plunge and contract, and gradually increasing their tension, drawing the head backwards, at the same time that the lower jaw is drawn upwards till it becomes in such close approximation, that it is impossible to separate them; all the muscles of the throat, cheeks and neck, feeling like bars of wood in their rigid contraction. The eyes are dilated, glaring and motionless in their sockets; the tongue, if it has not been protruded and caught in the teeth, has been drawn back into a roll at the base of the mouth; the forehead is dragged up into deep ridges, and the skin of the face is violently stretched up to the ears, where it is raised into wrinkles, giving a wild, distorted, and ghastly look to the countenance; as the last symptom is added to the series forming the disease, locked jaw is complete. Without proceeding further with the description of trismus, it will be enough to say that the disease is sometimes fatal in fifteen minutes, though the ordinary period may be taken as from four to eight days.

Treatment.—When the disease proceeds from worms, or some internal irritation—the rarest exciting cause—aperient medicines of an active nature are to be given directly, and continued till the cause is expelled; when from splinters or bits of glass, or sharp substances, lodged in the flesh, incisions should be made, and the injured part well cleaned of all cause of irritation, and where a nerve has been injured, it should be divided as soon as possible. Where the constitution is robust, and the patient strong, bleeding should be adopted to a large extent, the hot bath and friction employed, and the muscular contraction overcome by the fumes of tobacco, or by opium, morphia, or aconite; but if the constitution is debilitated, the same result must be effected by camphor, musk, ammonia, and stimulants of wine and brandy, with cold affusions on the head from a height. Besides these, and, in fact, nearly all the remedies of the pharmacopœia, which have been employed with varying success, the wild hemp has of late years been used with more than usual advantage, and still more lately chloroform; but whatever the remedy administered, the dose requires to be very considerable to produce any effect.

TETTER.—A cutaneous disease, attended with heat, redness, and a partial inflammation of the skin, followed by a scaly eruption, appearing on different parts of the body, such as the hands, arms, chest, and head, in the form of indurated, opaque, yellowish-brown scales, or *lamellæ* of the epidermis or scarf skin, which go through a regular process of maturity, disquamation, or peeling off, and reproduction, till the disease is finally eradicated. There are many varieties of this disease, differing somewhat in the size and colour of the eruption, and the locality the disease affects: thus, ringworm, lepra, dandriff, and scaly tetter, all belong to one order, though to different genera of the same disease. Any crude or indigestible food, long persisted in, and vitiating the healthy fluids of the body, may, and most frequently does, lead to this form of diseased cuticle; though, at the same time, many of the varieties magnified by dirt become contagious, and are propagated by contact. The *treatment* is generally very simple; the warm bath, and friction, with any gentle aperient, persevered in for a few days, with a vegetable diet, lime-juice, or acid fruits, will soon eradicate the disease. In obstinate cases, but only in such, it may be necessary to adopt the following course of medicine, at the same time avoiding all fish diet, or salt provisions. Take of

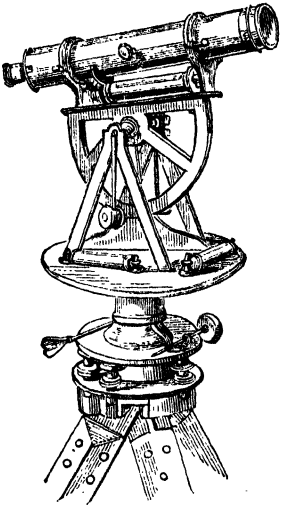
Infusion of quassia . .	8 ounces
Nitric acid	10 drops
Muriatic acid	10 drops.

Mix, and take a tablespoonful three times a day, and every night, at bed-time, one Plummer's pill.

THATCH.—A covering of straw, rushes, or reeds, as a substitute for tiles or slates for houses, barns, ricks, stacks, and sheds. First, is to be considered the mode of thatching hay-ricks and corn-stacks, as the simplest. The rick or stack having been formed into a proper shape, either with a roof slanting from a ridge, or conical, ending in a central point, the straw is prepared by moistening it, that it may more easily bend without breaking. It is then forked up in a loose heap, the straws lying in every direction, and somewhat matted. Portions are now drawn out from this heap in handfuls, which lays the straws again in a more parallel order; these are placed in a forked stick, which will hold several of these bundles or handfuls, and are thus carried to the thatcher on the top of the rick or stack. He seizes a handful, and bending one end into a kind of noose, he inserts this into the hay or straw near the bottom of the

roof at one end, if it be a square roof, or at any convenient part, if it be a round one. He presses down the straw which he has thus inserted to about half its length, in order to form the eaves, which extend a little beyond the lower part of the roof. When he has thus laid several handfuls side by side, so as to cover about a yard in width, that is, so far as he can conveniently reach without moving his ladder, he begins another row, a little above the place where he began, so that the lower end of the straw now inserted may cover the upper part of the first row, as tiles do each other. Thus he proceeds upwards till he comes to the upper ridge of the roof, or to the point of the cone in a round stack. In the latter case, the covering diminishes to a point, so as to form a triangle. The ladder is now shifted a yard to one side, and the same operation is performed, care being taken that each fresh handful put on shall be interwoven with that which lies beside it, so that no water can possibly pass between them. Thus the work proceeds until the roof is completed, and it only remains to secure the upper ridge in a square stack, or the point of the cone in a round one. In the first case, the highest layer of straw is made to extend beyond the ridge on both sides, and the ends are brought together, and stand up like the bristles on a hog. A rope of straw has been prepared, and many small rods, about two feet long, and cut sharp at the point; these are inserted just below the ridge, in a line with it, and about a foot apart; one end of the straw rope is inserted into the stack, and twisted firmly round the projecting end of the first rod; it is then wound once round the next rod, and so on the whole length of the ridge: this is done on both sides. The straws which form the ridge are now cut with shears horizontally, to give it a neat finish, and at each end a kind of ornament is usually made by winding a straw rope round a handful of the projecting straw, forming a kind of knot or bow, according to the taste of the thatcher. Rods and straw ropes twisted round them are inserted near the edge of the slanting side and all along the eaves, which prevent the wind from blowing off the thatch. The only difference in the thatch of a round rick is, that it is brought to one point, where it is tied with straw ropes wound round it, and formed into a kind of bow; the rods are inserted a little below in a circle, and the straw rope twisted round them, and likewise around the circular eaves. Barley is generally put into square stacks, and wheat in round ones. When the outside is neatly trimmed and cut smooth, so that no birds can lodge in it, wheat may be kept for years without danger of injury or loss, much better than in a barn, or even in a granary. In thatching sheds and buildings which are to last many years, the straw is prepared in the same manner, but the ends of the handfuls, as they are put on a lathed roof, are kept down by means of long rods, which are tied to the laths of the roof by means of strong tar twine. A much thicker coat of straw is put on; and rye-straw, which has a solid stem, is preferred as more lasting, and less liable to be filled with water than hollow stems. Instead of straw ropes, split willow is used, and the rods which are inserted are much nearer each other, and more carefully secured. As this kind of thatching is a peculiar trade, it requires a regular apprenticeship to be a master of it.

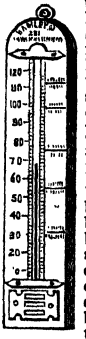
THEODOLITE. — A surveying instrument for measuring the angular distances between objects projected in the plane of the horizon. In accurate surveying, when the instrument used for observing the angles is a sextant or reflecting circle, or such that its plane must be brought into the plane of the three objects which form the angular points of the triangle to be



measured, the altitudes of the two distant objects above the horizon of the observer must be determined, and a calculation is then necessary to reduce the observed angles to the plane of the horizon. The object of the theodolite is to measure the horizontal angles at once, and thereby render the previous calculation, and even the observation of the altitudes unnecessary. The theodolite, as now generally constructed for the purposes of ordinary surveying, may be described as follows:—The horizontal limb or circle consists of two circular plates which turn freely on each other. The lower or graduated plate receives the divisions of the circle, and the upper or vernier plate has two sets of vernier divisions diametrically opposite. The vertical axis consists of two conical parts, one working within

the other. The external part is attached to the graduated plate, and the internal to the vernier plate. The diameter of the under plate is somewhat larger than that of the vernier plate, and its edge is sloped off to receive the graduations, and portions of the opposite edges of the vernier plate are sloped off in like manner to receive the vernier divisions. The graduation is usually to thirty minutes of a degree, but is subdivided by the verniers into single minutes; and in a well-made instrument quarter minutes may be estimated by the eye. For the purpose of adjusting the plane of the circle to the horizon, the external axis is fitted into a ball, which works in a socket between two parallel plates, held firmly together by the ball and the socket, the under plate being connected with the staff-head supporting the instrument. But this adjustment may be also made by a tripod support, having a foot screw at each extremity acting against a plate of metal supported by a staff. Upon the plane of the vernier plate are placed two spirit levels at right angles to each other, with their proper adjusting screws, by which the circle is brought accurately into the horizontal plane indicated by the levels. The centre of the circle is adjusted over the point which forms the centre of the station, from which the observation is to be made by means of a plummet. In some theodolites the telescope is supported in the manner of a transit instrument; that is to say, the telescope and the horizontal axis on which it turns form one piece, and the vertical limb is a complete circle. By this construction the instrument becomes better adapted for observing the altitude of stars, and consequently for finding the direction of the meridian and the azimuths of objects, or for other astronomical purposes. In theodolites for common topographical purposes, the horizontal circle is seldom more than five inches in diameter; but as the double vertical axis gives the means of carrying round the telescope from the first object to the second without disturbing the graduated circle, then, by clamping the vernier and graduated plate by bringing it back, and the graduated circle along with it, to the first object, the measure of the angle may be repeated any number of times. The principal adjustments of the theodolite are—first, to rectify the line of collineation of the telescope; secondly, to make the axis of the horizontal limb truly vertical; and thirdly, to adjust the zero of altitude.

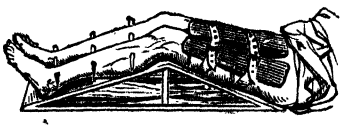
THERMOMETER.—The thermometer is an instrument for ascertaining the degree of heat or cold in any body. In Fahrenheit's common thermometer, the scale of degrees is marked as its commencement at 32°, which is the freezing point; and it rises to 212°, the degree at which water boils. That which is called Reaumur's scale has the interval between the points of freezing and boiling water determined by experiment, and the distance between them is divided into eighty parts, the zero of the scale being at the freezing point. *Register Thermometers* are of the greatest importance in meteorology, for enabling the observer



to ascertain the highest or lowest point of a thermometer scale at which the column of mercury may have stood during his absence; and several contrivances have been adopted by artists in order to obtain this end: of these, one, which is still preferred, was invented by Mr. Fix, whose name the instrument bears; it is described in the "Philosophical Transactions" for 1782. It consists of a long tube bent so as to form three parallel branches, of which the central branch is an elongated bulb, and the rest of the tube has a capillary bore. The lower portion of the bent tube contains mercury, which rises in the two side branches to certain points, and the bulb is filled with spirit of wine, which, passing over a bend at the top, descends to the upper extremity of the mercury in one of the branches; the upper end of the other branch is also filled with spirit, and this is hermetically sealed. Two small indices of steel, coated with glass, are introduced in the branches, and are capable of being forced upwards by the rising of the column of mercury in either tube, and they have about them a fine wire or thread of glass; so that they will remain stationary where they happen to be when the head of the column recedes from them. Their lower extremities consequently indicate the points at which the end of the columns may have stood before such recess.

THIGH, BROKEN.—This accident may occur at any part of the bone, though more frequently taking place at the upper third of the shaft, the neck of the bone, or the lower third. The injury is easily detected by the bending at the seat of the affected part, and the total inability to lift the limb. The fracture of the thigh may be either transverse—across the bone—or oblique, and, besides the pain and immobility, may be known by the shortening of the limb in one case, and the disfigurement in the other. *Treatment:*—There are many methods now in use for what is called the reduction of a fractured thigh; either that of laying the patient on a firm flat bed or mattress, and, having placed the broken bone in position, and introduced pads between the knees and insteps, to buckle the two limbs together in three or four places; or, after reducing the fracture, envelope the whole limb from the toes to the waist in a broad bandage, and then applying a long splint, extending from under the armpit to beyond the foot, keep the limb extended and firmly in its place till the union is effected; or, by means of a double inclined plane for the whole limb, and short splints for the thigh—a process, which, as it admits of greater comfort to the patient, and is more convenient for the surgeon, is regarded as the best. The double inclined plane is an apparatus composed of two boards half an inch thick, and two feet wide, one reaching

from the hips to the under part of the knee, and the other from thence to the



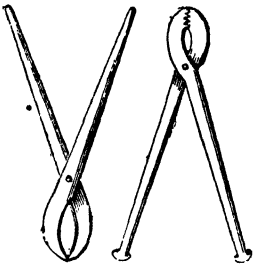
heel: these are then to be joined by a brace in the middle, and secured on a horizontal board by braces and ties at either end; the apex, or centre angle which comes under the knee, being about six inches from the horizontal plane. The fractured bone having been properly approximated and secured in position by two padded splints, tied by broad firm ligatures at certain distances, pads are to be placed in the hollows of the limb, and the sound leg being placed beside the other, both are to be connected by straps at the thigh, knee, ankles, and toes; and the inclined plane having been covered with smooth padding, the two members are to be raised on the plane, precaution being taken by a few rolls of a bandage, that the limbs cannot slip off—a protection that is sometimes guaranteed by pegs let into the sides of the double incline.

THIMBLE.—A species of guard worn upon the finger when sewing or otherwise engaged with the needle, for the purpose of protecting the finger from injury. The best thimbles are made of gold and silver. Those manufactured of baser metals, and especially of brass, are apt to gall the flesh, and, therefore, should not be worn if one of the better kind can be procured; it would be as well to wear, in addition to the thimble, a guard upon the forefinger of the left hand, which would not only protect it from festers and other sores, but will prevent that dark and disagreeable appearance, which may be seen on the hands of females who sew much, and neglect this precaution.

THIRST.—In most cases, either in health or disease, the necessity for the use of diluents is made known by the occurrence of thirst. This sensation, which is perceived in the mouth and throat principally, is evidently only felt from sympathy with the body generally, for it is not relieved by the mere moistening of these parts, but only by a supply of fluid afforded to the system at large, either, as in most cases, by the stomach, or through the medium of the skin. In health, a certain amount of fluid or of diluent is required periodically by the body to supply the waste continually going on by the discharge of vapour from the lungs and skin, and by the excretions. The amount must, of course, vary somewhat according to the conditions of the surrounding atmosphere as to temperature and dryness, and also according to the amount of exercise taken; a man taking much active exertion, and perspiring profusely, requiring a much larger support of diluent than one who is not. The unnecessary use of diluents by persons in health, is undoubtedly hurtful, particularly when the amount is taken along with the food; the gastric juice is thereby diluted too greatly, and its digestive powers impaired; moreover, persons who drink largely with their food are apt to wash it down in a half-masticated condition, and to take more than is necessary. A certain amount of dilution is, nevertheless, requisite for digestion, and error on this side also is undoubtedly committed. The instinctive desire for fluid in cholera and in diseases generally which are attended with fever, ought not to be neglected. There appears to be almost a superstitious fear with many of allowing the sick to drink cold water. There are, however, few safer prescriptions, none, perhaps, which may be more freely carried out by unprofessional persons, than the unrestricted allowance of cool, unstimulating drink, in all acute diseases in which thirst exists, and especially if fever be present. Diluents may be administered through the medium of the skin, and thirst and distress allayed in this way, when the power of swallowing is impaired or lost, either temporarily or permanently, or when the only diluent at command, such as sea-water, is unfit for drinking. Thirst is frequently occasioned in an unusual degree by partaking too freely of sauces, condiments, and other provocatives, with food; not only are the importunings of thirst thus begotten, but indigestion is induced, by the large quantity of fluid which is taken to allay the thirst. The inconvenience and pangs of thirst may be allayed by carrying a pebble in the mouth, and by bathing the wrists in cold water.

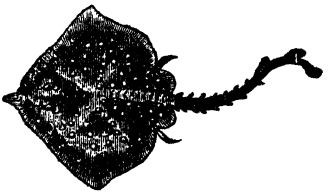
THISTLE.—A well-known prickly weed, common in corn-fields and pastures. Wherever thistles grow naturally, it is a sure sign that the land is strong and of tolerably good quality; but they are at the same time a great annoyance to every plant intended to be cultivated. There are no plants over which a more watchful eye should be kept than the thistle tribe, as they are not only useless, but occupy much ground, and, being furnished with winged downy seeds, are capable of being multiplied and carried to almost any distance; besides, they do much mischief by impeding the work both in handling hay and corn crops. Where they prevail to a great extent, there is no remedy like breaking up the land and taking a course of crops, for palliative remedies are of little avail. Hand-weeding, when the weeds are confined to local spots, and are only just beginning to spread generally over the soil, will be found effectual; but when once the pasture becomes generally infected with the seeds and roots of these plants, no time should be lost in using the plough, harrow, and horse-hoe, and a judicious course of cleaning the crops before returning the land again to permanent pasture. In crops of artificial grasses, such as sainfoin, lucerne, &c., and when it is impracticable under such circumstances to draw out this weed without injuring the crops, a good remedy will be found in the

use of common salt. Children may be employed to apply the salt by hand to the crown of the weed. If the least part of the root of the thistle be left, it springs up season after season. Besides possessing this principle of vitality in the root, its seeds are so winged with down as to render dissemination, even to a great distance, by means of the wind, almost certain. It is obvious that the annual and biennial species of thistles may be readily removed by preventing them running to seed and disseminating themselves, which is best effected by carefully eradicating them or frequently mowing them over close to the surface, and rolling. But in the perennial kinds, from their roots continuing in the earth, increasing and throwing out new shoots and stems every year, there is much difficulty in extirpating them; and they perhaps can be destroyed in no other way than by rooting them out of arable land by a thistle-drawer, deep ploughing, and frequent harrowings, or by fallowing or laying the land down to



pasture; the annual species seldom appear in pasture lands. But for destroying the common thistles, the best method is by the thistle drawers seen in the engraving.

THORNBACK.—The thornback is a flat fish, somewhat differing in structure from the class to which it belongs. The eyes are upon the upper surface, and the mouth

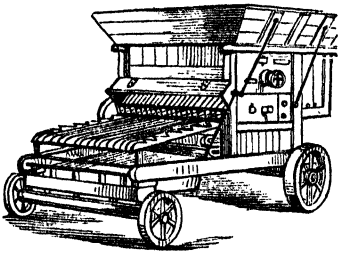


underneath. The skin is spotted, and studded with spines and tubercles, and the bony tail is covered with formidable spines.

THORNBACK, TO DRESS.—This fish is frequently sold as skate. It should be hung one day at least previous to dressing; then boiled in slices, or fried with eggs, or in butter.

THREAD.—A well-known material used for sewing, somewhat coarser than either silk or cotton. It may be rendered stronger, and also easier to work with, by being drawn through bees-wax. In the sale of thread a systematic kind of dishonesty is practised, in giving the reel upon which the thread is wound an appearance of containing far more than it really does. Other manufacturers set their face against this system, and supply the public with honestly-wound reels. The names of these manufacturers are to be found upon the reels issuing from their factories.

THRESHING MACHINE.—An implement used for beating out the corn from



grain or other crops. To the farmer on an extensive scale the threshing machine is absolutely necessary. Various machines for effecting the purpose of threshing have been lately invented. Portable threshing machines, such as seen in the engraving, and the horse-work attached complete, are now made by all the leading machine-makers, and are so constructed that the machine packs upon the gear, and the whole, mounted upon two wheels, is easily conveyed from place to place. Many persons keep three or four different sizes and let them out, finding one man to superintend the feeding; the farmer who employs it finding horses to work it and the labourers to attend upon it. They are paid for at so much per day, or quarter, for the corn threshed; when the latter form of payment is adopted, it is important to look well after the work, or the corn may not be threshed clean. Whenever this operation is being carried on, the eye of the master should be constantly turned to it, to see that no delay occurs, and that it be well done, and that the bearings and running parts of the machine are kept well oiled. If peas are being threshed, it is important to see that they do not get split, which will sometimes happen, and the men continue threshing, not being aware of it. To thresh well, the man who feeds must be used to it, and deliver the sheaves openly and with care; threshing should not be performed when the atmosphere is surcharged with water, if it can possibly be avoided. After the kernels have been threshed from the straw by the threshing-machine, they will have to be passed through the process of winnowing, which will remove all the small pieces of

husk, the small seeds, and whatever dirt may have become mixed with it.

THRIFT, OR SEA PINK.—The common thrift (*statice Armeria*) has been long introduced from the sea-shore and the mountain top into our gardens, where its rapid propagation has obtained it the name of thrift. There are two varieties, the pink and the scarlet, the latter of which, though the prettiest, is not so common as the other. Thrift improves by cultivation, but in the garden it is apt to rot and decay when it is permitted to stand for several successive years without removal. The roots should be planted in September, though they will grow at almost any season.

THROAT, AFFECTIONS OF.—The throat is subject to two forms of inflammatory action, acute and chronic; of the former, there are two conditions, which, though both present acute inflammatory action, and both are diseases of a dangerous character, are very different in their symptoms and their consequences. These are—1st. *Inflammatory sore throat.* A disease that attacks persons of either sex, and of all ages up to forty or forty-five years; after which period it is but rarely met with. It is very often found attacking several persons at the same time like an epidemic, in spring and autumn, especially so when there are great vicissitudes of atmosphere: the disease being induced by the sudden application of cold to a heated body, or the reverse, but most frequently from wet feet, a sudden draught of cold air to the throat or nape of the neck, or even from a drink of cold water when the body is greatly heated.

The *symptoms* that first attract attention are, a great difficulty in swallowing, with heat, constriction, and dryness of the throat; the difficulty of swallowing rapidly increasing till at length that operation becomes impossible, every attempt ending in the ejection of the liquid through the nostrils. As the disease advances, a thick ropy phlegm, of a yellowish colour, is thrown out from the part, and after much trouble expelled; at the same time sharp pains run through the jaws and ears, the voice in some cases is reduced to a whisper, and in all is thick and hoarse. From the first sensation of dryness in the throat, symptoms of fever show themselves in the constitution, such as heat, shivering, thirst, nausea, sickness, and headache. If the earlier remedies have failed to check the inflammation, the disease at the end of five, or sometimes seven days, runs into suppuration, and one or more abscesses are formed in the tonsils, which usually burst into the mouth; but when the enlargement impedes the respiration, the abscess must be opened, and the matter discharged.

Treatment.—When the symptoms are slight, a hot bran poultice, kept constantly to the throat, a mild aperient, and the immersion of the feet for a few minutes in hot water, is often all that is needed. In more severe cases, however, and where the constitution is robust, an emetic of ten grains of ipecacuanha and one grain tartar emetic, should be mixed in warm water and given directly, to be followed in two hours by two compound colocynth pills, and half an ounce of Epsom salts, dissolved in a tumblerful of water an hour later. As soon as the emetic has ceased to act, the front of the throat should be rubbed with hartshorn and oil, and a hot bran poultice directly after applied round the throat. If the inflammatory action has set in strong, the emetic should be followed by bleeding from the arm, or it may be adopted at any subsequent stage of the treatment, and the poultice laid aside and a blister laid on the throat, should the urgency of the symptoms warrant its use. When the thick phlegm causes annoyance and cannot be expelled, a gargle of warm vinegar and water should be employed to facilitate its removal. When suppuration sets in, which may be known by the throbbing in the part and frequent shivers, the hot poultice must be frequently changed, and the steam of hot water repeatedly inhaled, so as to promote the formation of the matter. In scrofulous constitutions the tonsils frequently become chronically enlarged, and upon any slight exposure to heat or cold commence a tardy process of suppuration. In such cases the treatment recommended for scrofula must be adopted both internally and locally.

2. *Putrid sore throat:*—This serious affection is not regarded as a substantive disease by many medical men, but rather as a grave consequence, or severe symptom of some other malady, such as malignant and scarlet fever, or typhus, in which diseases it is very often found as a terminating symptom. The *symptoms* of this disease commence with cold shivers, pain in the head, giddiness, stiffness in the muscles of the neck, flushed face, red or suffused eyes, sore throat, nausea, sickness, and sometimes vomiting. The pulse through all these progressive changes is small, quick, and feeble, and easily extinguished by pressure. The throat, when examined, presents an inflamed appearance, the redness deepening round the fauces, which, after a time, are dotted here and there by irregular brown spots. The tongue and gums are lined with a brown fur, while small vesicles filled with a transparent acrid fluid form on the inner lips, and in the nostrils, which, on breaking, excoriate the mouth and upper lip. Concurrent with this latter symptom, diarrhœa takes place, the constitutional disturbance or fever increases, and the strength of the patient sinks rapidly, the pulse still more rapid and feeble, is also intermittent, and with increased difficulty of breathing, there is often both delirium and coma. On the third or fourth day a scarlet rash not unfrequently breaks out over the chest and arms, which, on the sixth or seventh, peels off; the mouth is covered with a dark fur, a fetid odour issues from the throat, and the patient exhibits all the characteristics of putrid or malignant typhus. When the bright red appearance of the throat declines about the fifth day, and some return of appetite shows itself, a favourable termination may be hoped for, but when the inflammation passes rapidly into ulcera-

tion and sloughing, and a flow of acrid saliva takes place from the mouth, with coma, the result of the case is regarded as extremely doubtful. *Treatment.*—The mode of treating this disease is precisely the same as for typhus, and consists in supporting the patient's strength by the most potent and energetic means, to give him strength to resist the first shock of the disease, and then, to facilitate the separation of the sloughs and support him over the reactionary stage. To fulfil the first intention, beef tea, jellies, and a nutritious diet must be employed from the first, with doses of wine at regular intervals, and where the depression is great, brandy, either as a substitute or in addition; at the same time such a stimulating tonic as the following mixture should be administered every two hours, with, at bed-time when necessary, an addition to the last dose of fifteen or twenty drops of laudanum. Take of

Aromatic confection . .	1 drachm
Quinine	10 grains
Camphor water	5 ounces

to be rubbed smoothly in a mortar; then add

Compound tincture of bark	4 drachms
Compound tincture of cinnamon	4 drachms
Sal volatile	1 drachm

Mix and give a tablespoonful every two hours. Bottles of hot water should be kept to the feet, and a warm bran poultice placed round the throat. When the first stage of the disease has been passed, in addition to a nutritive diet, and a course of tonic stimulants, only less frequently administered, the throat must be gargled occasionally with the following gargles in succession. *Gargle No.* 1. Take of

Strong sage tea	1 pint
Vinegar	4 ounces

Mix. To be used every hour for three or four times on each occasion. *Gargle No.* 2. Boil

Bruised oak bark . . .	2 ounces

in a pint of water for ten minutes; and add

Alum	2 drachms

Mix. To be used as the former. *Gargle No.* 3. Take of

Infusion of rose leaves .	1 pint
Sulphuric acid	30 drops

Mix. To be used as the above. *Gargle No.* 4. Take of

Capsicum vinegar . .	6 ounces
Tincture of catechu . .	4 drachms

Water, to make a pint. Mix, and use as the former. For the fœtor that arises from the sloughing, the mouth and throat are to be occasionally washed with a weak solution of chloride of lime, and, throughout the whole disease, the room should be frequently sprinkled with aromatic vinegar, or the chloride of lime or tin.

Ordinary *sore throat* or hoarseness, when not a symptom of any more severe illness, may usually be easily disposed of by rubbing the throat freely with hartshorn and oil, and then enveloping the throat and neck in two or three folds of hot flannel, plunging the feet two or three times quickly in very hot water upon stepping into bed, and placing a piece of Spanish-juice in the mouth, allow it to dissolve there during sleep. When the sore throat is attended with cold chills, a dry hot skin and tendency to headache, before resorting to the liquorice and being well covered up with clothes, the patient should drink about half a pint of hot egg-flip made tolerably potent with a due proportion of gin or rum.—See BRONCHITIS, MUMPS, SCROFULA, &c.

THRUSH.—Of this family of birds, the song-thrush is the smallest and most attractive. It is found all over Europe, frequenting woods near streams and meadows, and is naturally somewhat shy and timid.

In confinement it may be lodged and treated like the blackbird, though less luxuriously. When wild, it lives on insects and berries; and in the cage, the two common pastes, oatmeal moistened with milk or water, or even bran moistened with water, have been found to answer. It requires a great deal of water for bathing and drinking. It is an excellent songster, but does not take kindly to the cage, and is not easily taught any artificial note. The male thrush may be distinguished from the female by a darker back, and a glossier appearance of the feathers. The belly, also, is white. Young birds are hatched about the middle of April, and should be kept very warm. They should be fed with raw meat, cut small, or bread mixed in milk with hemp-seed well bruised: when they are able to feed themselves give them lean meat, cut small, and mixed with bread or German paste. Keep them in a warm, dry, and sunny situation.

THRUSH, OR APHTHÆ.—This is a disease of the mucous membrane of the mouth, stomach, and bowels; and when severe, may be traced throughout the whole alimentary canal. Though thrush may attack persons at any stage of life, it is still regarded as a disease more peculiarly incident to childhood and infancy; and is generally

induced by an abrupt change of diet, or some cause impairing the nutritive quality of the mother's milk, which produces this eruptive fever in the infant's digestive organs. The *symptoms* of thrush are heat, pain, and restlessness, followed by a series of small, raised, white spots, scattered over the mouth, tongue, and lips; sometimes there are but few, at others the whole mouth is studded with them. After a day or two they enlarge and become distended with a white puriform fluid; the eruption looking like a cross of minute beads: this completes the suppurating or second stage; after which, the vesicles proceed to ulceration, when they burst, discharge their fluid, and degenerate *into small flat ulcers, causing throughout*, but especially in this the last stage, considerable irritation and pain. *Treatment.*—Having, if possible found the immediate cause of the disease, and if an improper food, removed it, the child must be carefully fed on a diet that in no way can irritate the tender and inflamed lining membrane; and, if necessary, a few spoonfuls of beef tea are to be given occasionally as a gentle stimulant. The medical treatment consists in the exhibition of the subjoined powders and mixture, and the employment, each evening, of the warm bath as a sedative to the restless child. Take of

Grey powder	8 grains
Scammony	6 grains
Rhubarb	3 grains

Mix and divide into nine powders for an infant from six to twelve months, giving one powder twice a day; into six powders for an infant from one to two years old, one twice a day; and into four powders for a child of three years, to be given in the same manner. Take of

Mucilage	½ ounce
Castor oil	2 drachms
Syrup	2 drachms

Mix well in a mortar, and add

Dill water	½ ounce

Mix, and give a small teaspoonful twice a day to an infant from six to twelve months; three times a day to one of from one to two years; and every six hours to a child of three years old. Should the thrush have proceeded to ulceration, the mouth of the infant or child should be washed out by a lotion, made by dissolving a small quantity of alum or borax in water well sweetened with honey; and then, by tying a fold of lint to a piece of stick, and using it as a mop, to cleanse the mouth, having first well wetted it in the lotion.

THYME.—For this plant a poor, light, and dry soil is best. The situation cannot be too open. Thyme is propagated by rooted slips. To obtain slips, some old shoots may be divided into as many rooted portions as possible, or layers may be obtained by loosening the soil around them, and pegging the lateral shoots beneath the surface. They must be planted out from the beginning of February until the close of May, water and weeding being similarly required. In autumn the decayed stalks should be cleared away, and a little fresh earth scattered and turned in among the stools. Although it is perennial, yet, after three or four years, thyme becomes stunted and unproductive, and consequently requires to be raised periodically from seed.

TIC DOULOUREUX.—This extremely painful affection of the nerves of the face, though receiving a special name, is in nothing different—except in the more acute violence of its pain—from the general or local forms of neuralgia; an inflamed or highly sensitive condition of a certain nerve or set of nerves, the result of constitutional disturbance, indigestion, or wounds in the course of one *or other of the filaments of the nerves*, being both the exciting cause and the disease itself. The causes that most frequently produce tic douloureux, are almost always some long standing functional derangement of the digestive organs, affections of the liver or of the kidneys, or alimentary canal. Next in frequency to these causes, is exposure to long sustained fatigue or sudden heat or cold, applied to the body, and sometimes sleeping in the sun. Tic has been frequently known to follow a halt, during a long march in India, and like tetanus too, tic douloureux sometimes supervenes upon wounds; and years after the injury, whether punctured, gunshot, or incised, has been healed, this agonizing disease will break out upon any sudden application of heat or cold to the body, or indeed after any deep emotion of the mind. Whatever may be the predisposing cause, the suffering and consequences induced bear no proportion in their intensity to the insignificance of the agents that give rise to the disease.

The *symptoms* of tic commence with a sudden plunging throbbing pain, darting as it were from over the eye, out of the cheek-bone, under the orbit, or from the side of the lower jaw, and spreading, if the paroxysms are long continued, over the whole of one side of the face from forehead to chin. The pain is so abrupt, peculiar, and intense, as almost to deprive the sufferer of breath in its first assault. These shooting, throbbing, and as they are justly called, agonizing pains continue for an uncertain time, from only a few minutes to one or more hours in duration, subsiding either by degrees or by an instant cessation of pain, and ending as abruptly as the first shock began. Tic douloureux is distinguished from toothache by the situation, and from rheumatism, the only other affection it can be confounded with, by the peculiarity and violence of the pain, the shortness of its duration, by always coming on in paroxysms, and by the absence of all swelling and redness over the part. A peculiarity of this disease is, that though sometimes induced by the slightest touch of the finger, or the faintest breath of cold air, at another time the part may be slapped or rubbed with impunity.

Treatment.—This consists, in the first instance, acting on the digestive organs, correcting the functional disturbance, and lastly by elevating the tone of the system, and ena-

bling it to restore the irritated nerves to a pristine soundness, or if this cannot be done by constitutional means, by the employment of *local* remedies for that purpose. First, the best mode of acting on the digestive organs is by the steady employment of gentle aperients, care being taken to avoid any active or drastic purgative. For this purpose, a five grain compound rhubarb pill should be taken every night for several days till the bowels are brought into a healthy state, or a pill composed of equal parts of the compound rhubarb and colocynth pill may be substituted, where a little more active medicine is needed, the nightly dose being the same in this as the former. Secondly, to correct the functional disturbance, if, as most frequently, the result of indigestion, two tablespoonfuls of the following mixture are to be taken every four or six hours. Take of

Hops	2 drachms
Cascarilla, bruised . .	1 drachm
Cloves, bruised	2 drachms

Infuse in a pint of boiling water for twelve hours; add

Carbonate of potass .	2 drachms

Dissolve, and strain for use. Or where the stomach is cold and weak, as in advanced life, let the patient take a teaspoonful of *Gregory's powder* in a little peppermint water twice or three times a day. Thirdly, to elevate the tone of the system, the body must be braced by tonics, which may be effected by either of the two following forms of medicine. Take of

Carbonate of iron . .	2 drachms
Sulphate of quinine .	18 grains

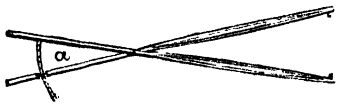
Mix, and divide into six powders, one to be taken three times a day; or, take of

Infusion of quassia . .	8 ounces
Quinine	1 scruple
Diluted sulphuric acid .	30 drops

Dissolve; two tablespoonfuls to be taken three times a day. Accompanying the tonic course, the patient should take several glasses of wine during the day, or else an equivalent of the best stout, and should live on a liberal dietary, taking as much exercise as is compatible with age and strength. When, in despite of all such remedial means, the paroxysms of pain continue, it often becomes necessary to relieve any local congestion that may exist around the nerve, either by the application of five or six leeches over the source of the pain, or by the employment of cupping glasses or a mustard plaster. In case of both of these means failing, a blister may be applied behind the ear of the affected side, and in extreme cases a blister down the spine at the nape of the neck, which must be converted into an issue, and kept open for a week or two. It is seldom, however, that this has to be resorted to, the disease, however intense the paroxysms, generally yielding to any one course if steadily and judiciously carried through, unless, indeed, the disease is the consequence of a system shattered by wounds, campaigns, and climate, then, and only under such unfavourable circumstances, tic douloureux becomes most formidable. The discovery of chloroform has, however, placed in the physician's hand a boon that in a disease of this nature is in truth a very blessing to suffering nature, and may be employed in conditions of system and under circumstances where opium, morphia, brandy, and both narcotics and stimulants are inadmissible, or, from the necessary dose to effect relief, would be dangerous.—See NEURALGIA.

TILES.—These form a heavier covering for a roof than slates, and are now employed for offices and houses of an inferior class. There are two kinds of tiles in common use, plain tiles and pantiles. Plain tiles are of the same form as slates, but are laid on laths of oak or fir, and bedded and pointed with mortar. The pitch of the roof requires to be forty-five degrees, and the tiles require frequent pointing. Pantiles are curved, and are laid on each other dry: they are seldom used except in cow-houses, sheds, and other outbuildings. They do not form so warm a roof as plain tiles, and are more liable to be deranged. Common tiles are not nearly so durable as slates, being much affected by the frost; but when glazed, as they sometimes are, with a dark glaze, they are very durable. When the red colour of tiles is objectionable, they may be covered with a coat of anti-corrosive paint.

TIMBER MEASURER.—An implement employed for taking the dimensions of standing timber without climbing the tree. The measurer illustrated in the annexed figure, is composed of two pieces of deal, about thirteen feet long, with a brass limb



or index, on which are engraven figures denoting the quarter-girth in feet and inches. Raising the instrument, the index end is taken hold of, and the other applied to that part of the trunk where the girth is to be taken, opening it so wide as just to touch at the same time both sides of it, keeping the graduated index uppermost, on which the quarter-girth will be shown, allowing one inch in thirteen for the bark. *For taking the height of a tree.* Rods of deal or bamboo, seven feet long, made so as to fit into ferrules at the end of each other, tapering, as in a fishing-rod, may be used. Five of them, with feet marked on them, would enable a person quickly to measure the height of a trunk of not more than forty feet, as he would reach above seven feet. A measuring staff, for taking the height of trees, may also be made as follows:—Divide a square staff of seven or eight feet in length, into feet and inches, for the convenience of measuring the distance between the places of observation and the

tree, or taking other dimensions. Upon one side of this staff, at a commodious distance from the bottom, fix a rectangular board, the length of which is exactly equal to twice its breadth, which breadth may be about four or five inches. At each corner of the lower extremities of this board fix sights or small iron pins, as also in the centre of the left side, and at the top left corner. Thus, when the top of a tree is seen through the sights, the tree's height is equal to the distance from its bottom added to the height of your eye; but if seen through the sights obliquely, its height is equal to twice the distance from the bottom, adding the same height as before. In making an observation with this instrument, it ought to be fixed perpendicularly to the horizon, which may be done by means of a plummet suspended from the centre of the top of the board. In taking the altitude of a tree growing upon an inclined plane, the measurer must endeavour to make his observations from a place upon a level with the bottom of the tree. If this cannot be done, direct the horizontal sights towards the lower part of the tree, and let an assistant make a mark upon it; then find the height of the tree above this mark as before, to which add the distance of the mark from the ground, which must, in this case, be considered the height of the eye, and the sum will be the height of the tree. Another mode of taking the height of trees is, by means of an instrument shaped like a gun stock, the end being adapted for the shoulder, the muzzle or line, for taking a sight at the top of a tree, and the square being marked or cut on the board at the farther extremity.

TIME, ECONOMY OF.—Book: *Life Doubled by the Economy of Time*, 1s. 6d.

TIME-PIECE.—See CLOCK.

TIN.—This metal is of a silver-white colour, very soft, and so malleable that it may be reduced into leaves 1-1000th of an inch thick, called tin-foil. It suffers but little change by exposure to the air. Its tenacity is but slight, so that a wire, of 1-15th of an inch in diameter, is capable of supporting only about 31lbs.; a bar a quarter of an inch in diameter was broken by 286lbs. weight. Tin is inelastic, but very flexible, and when bent, it produces a peculiar crackling noise. When rubbed, it imparts to the fingers a peculiar smell, which remains for a considerable time. Its specific gravity is about 7·29; at 442° Fahr., it fuses, and, if exposed at the same time to the air, its surface is tarnished by oxidation, and eventually a gray powder is formed. When heated to whiteness, it takes fire, and burns with a white flame, and is converted into peroxide of tin. If slowly cooled after fusion, it exhibits a crystalline appearance on solidifying. The combination which tin forms with oxygen, chlorine, sulphur, and iodine, and those which the oxide of tin forms with the various acids, are valuable in calico printing and many other of the practical arts. Most of the malleable metals are rendered brittle by alloying with tin. It combines readily with potassium and sodium, forming brilliant white alloys, which are less fusible than tin. With arsenic it forms a metallic mass which is much whiter, harder, and more sonorous than pure tin. With antimony, tin forms a white, hard, and sonorous alloy. Bismuth forms with tin an alloy which is more fusible than either of the metals separately, a mixture of equal weights melting at 212°. This compound is hard and brittle. Copper and tin form alloys which are well known and highly useful—bell-metal and bronze. With mercury tin readily amalgamates, and the compound is used for silvering mirrors. Tin forms with iron white compounds, which are more or less fusible according to the proportion of iron they contain. Tin plate is, of all the alloys of tin, the most useful, and the preparations of this and of pewter are the most extensive applications of this very valuable metal.

TIN COVERS, TO CLEAN.—Get the finest whiting, which is only sold in large cakes, the small being mixed with sand; mix a little of it powdered with a small drop of sweet oil, and rub well, and wipe clean; then dust over them some dry whiting in a muslin bag, and rub bright with dry leather. The last is to prevent rust, which the cook must be careful to guard against by wiping them dry, and putting them by the fire when they come from the parlour; for, if but once hung up without, the steam will rust the inside.

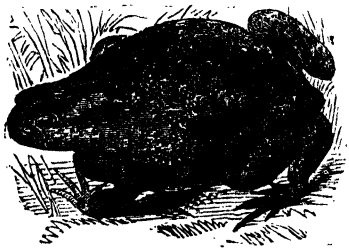
TIPPERARY CAKE.—Wash a pound of butter in a little orange-flower water, and beat it to a cream; then mix into it by degrees a pound and a half of powdered loaf sugar, and sixteen eggs well beaten; add a pound of well-dried flour, half a pound of sweet almonds, blanched and pounded in a little rose-water, and two ounces of caraway-seeds; beat the whole well together for half an hour, pour it into a buttered tin lined with buttered paper, and bake in a quick oven for two hours.

☞ Butter, 1lb.; sugar, 1¼lb.; eggs, 16; flour, 1lb.; almonds, ¼lb.; caraway seeds, 2ozs.

TIPSY BREAD.—Pare off the crust, and cut into thin round slices of four or five inches, the crumb of a twopenny or threepenny roll; spread over each bit raspberry or strawberry jam, and place the slices, one over the other, pretty high in a glass dish, and pour over them as much sherry sweetened with sugar as the bread will soak up; stick round the sides, and over the top, blanched sweet almonds, cut like straws, and pour a custard round it. It may be made the day before, or two or three hours before dinner, and with the crumb of bread.

TIPSY CAKE.—Pour over a sponge cake, made in the form of a porcupine, as much white wine as it will absorb, and stick it all over with blanched sweet almonds, cut in the form of straws; or, pour wine in the same manner over a thick slice of sponge cake, cover the top of it with preserved strawberries or raspberries, and stick all round it.

TOAD.—This animal, although generally regarded with fear and aversion, is in reality perfectly harmless. The body is of a dull hue, its shape awkward, and its movements



apparently difficult. It issues from its concealment at twilight in search of food, which consists of insects, worms, and slugs. On this account, this animal is of the greatest service in gardens, and especially in greenhouses and other horticultural structures.

TOAD-IN-A-HOLE.—This is an economical dish; and if well dressed, is very good. Make a common batter of eggs, flour, and milk, but rather thicker than usual, and put in the centre of it a fowl, boned and stuffed with forcemeat; let it be entirely covered with the batter, then bake it. Two pounds of beef, or any kind of meat, may be seasoned and dressed in the same manner.

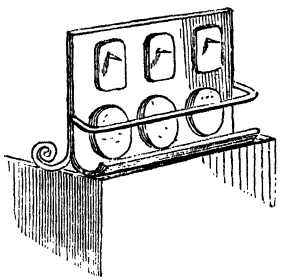
TOAST AND CHEESE. — Take some old Cheshire, with a lump of butter, and the yolk of a hard-boiled egg; beat them into a paste, which spread upon slices of buttered toast, and hold a salamander over them until the paste is browned and melted. The paste may also be spread between thin slices of bread and butter, and eaten cold as a sandwich.

TOAST AND WATER.—Take a slice of fine and stale bread, cut very thin—as thin as toast is ever cut—and let it be carefully toasted on both sides, until it be completely browned all over; but not blackened nor burned in any way. Put this into a common deep stone or china jug, and pour over it from the teakettle as much clean boiling water as you wish to make into drink. Much depends on the water being actually in a boiling state. Cover the jug with a saucer or plate, and let the drink cool until it be quite cold: it is then fit to be used. The fresher it is made the better, and, of course, the more agreeable. The above will be found a pleasant, light, and highly diuretic drink. It is a most excellent drink at meals, and may be used in preference to fermented liquors in the summer time, if more agreeable to the drinker.

TOAST BUTTERED.—The bread should be cut thicker than for dry toast, from a square loaf, taking care to toast the whole round. When the first slice is toasted, it should be buttered on one side, then cut into quarters and placed upon the plate before the fire, while the next slice is toasted, buttered, and cut, when it also must be placed upon the first piece; and so on for as many slices as are required. The crust should properly be cut off before the bread is toasted, and carefully put away, as it will make a very good bread pudding, and ought not to be wasted.

TOAST DRY.—Cut very thin slices of bread from a loaf not less than two days baked; put either one or two at a time on the toasting-fork, taking care not to hold them too near the fire; they should be just warmed on each side, then turned, and, when sufficiently done on one side, they should be turned again; and when they are thoroughly toasted, they should be either placed upright on a plate, one against the other, or put in the toast-rack; but they should be kept near the fire until required for the table. Toast should never be made long before it is sent to table, or it becomes tough and leathery; some people cut off the crust.

TOASTER.—A culinary utensil, as seen in the engraving, placed upon a stand of



strong wire, that hooks on to the bars of a grate, and made either loose, or to slide backwards and forwards on the stand; this will dress bread, cheese, and small pieces of meat.

TOBACCO, ADULTERATION OF. — The following are the substances which have either been discovered or have been stated on good authority to have been employed in the adulteration of tobacco, either in the form of cut or roll tobacco, cigars, or snuff. They may be divided, first, into vegetable substances not tobacco, as the leaves of the dock, rhubarb, coltsfoot, cabbage, potato, &c., malt cummings, that is, the roots of germinating malt; peat, which consists chiefly of decayed moss; seaweed, roasted chicory root, bran, catechu, and oakum. Secondly, sub-saccharine substances, as cane-sugar, treacle, honey, beet-root dregs. Thirdly, into salts and earths, as nitre, common salt, sal ammoniac, nitrate of ammonia, carbonate of ammonia, potash, soda,

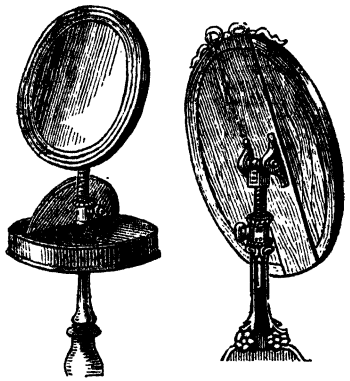
and lime-water; yellow ochre, umber, fuller's earth, Venetian red, sand, chromate of lead. The detection of some of the above substances is easy enough, but others present great difficulties. The method of examination to be pursued is as follows:—A certain quantity of each tobacco (100 grains) is to be weighed immediately after it is purchased, before it has had time to lose weight by evaporation, and thoroughly dried at a temperature of about one hundred degrees of Fahrenheit. It is then to be re-weighed: the loss or per-centage of water is by this means ascertained. Each sample may next be thoroughly examined by means of a microscope, in order to ascertain whether there be any foreign vegetable substance present; if it contain any of those enumerated above, in ever so fine a state of powder, and even in the smallest quantities, they may be detected with the greatest certainty with the aid of the microscope. The structure of the tobacco leaf differs materially from that of other leaves, and may thus be readily distinguished. With regard to the method of proceeding for the detection of grape-sugar or glucose in tobacco, the following simple method will be found efficient. Take one thousand grains of a solution of tobacco, containing two grains of the dried extract to one ounce of water; add four drachms of liquor potassæ, boil, filter, and then add about four hundred grains of Fehling's test liquid, and heat to boiling; if any glucose be present, the red oxide of copper will be thrown down; collect and thoroughly wash the precipitate in order to free it from any albumen that may be present, weigh and calculate it as before.

TOBACCO, GROWTH AND PREPARATION OF.—There are various kinds of dried leaf, or manufactured tobacco, distinguished by the name of the country in which they are grown, as well as by differences of colour and quality, arising chiefly from soil and climate. *Virginian tobacco* is the strongest kind, and is best adapted for smoking in pipes and for snuffs. This tobacco will retain more moisture than almost any other kind. *Maryland* is paler in colour and milder than the former, the pale cinnamon is the best, the "scrubs" the commonest. *Kentucky* possesses an intermediate strength between the two last-named tobaccos. *Orinoko* is of a yellow colour, and very mild and delicate. *Cuba* is also a mild tobacco, and the best kind emits a peculiarly musky or spicy odour. *St. Domingo* is of inferior quality. *Dutch* is very mild and deficient in flavour. *Turkey* and *Latakia* are mild and highly prized tobaccos. *Persian* is delicate and fragrant. All manufactured tobaccos may be referred to one or other of the four following forms or kinds:—In the first kind the leaves are cut into shreds; to this all the different varieties of *cut tobacco* belong. In the second, the leaves are twisted or spun into a kind of rope; this includes the various kinds of *rolled, spun,* or *twist tobacco*. In the third, the steeped leaves are folded one over the other, so as to form *cigars, cheroots,* &c. In the fourth form, the leaves are reduced to powder constituting snuff. The different varieties of roll and cut tobacco are *Shag, Returns,* and *Bird's-eye;* other less common kinds are *Maryland, O'naster, Orinoko, Turkey, Persian,* and *Varinas*. *Shag* is prepared chiefly from Virginia and Kentucky tobacco. *Returns* is a light-coloured mild tobacco, made up of small pieces of broken leaves, and the dust and siftings produced in the various processes of manufacture. *Bird's-eye* differs from other varieties, in containing the mid-ribs of the leaves, the transverse slices of which have been fancifully compared to the eyes of birds. The principal kinds of roll tobacco are *Pigtail, Bogie, Alloa, Negro-head,* and *Cavendish*. The three first are used entirely for chewing, and are distinguished by the difference in the thickness of the ropes, *Alloa* being the thinnest and *Bogie* the thickest. *Negro-head* and *Cavendish* are used nearly exclusively for smoking. *Negro-head* is manufactured in the form of a thickish rope, it also sometimes consists of two ropes coiled together in short pieces. *Cavendish* is made into small and square flat cakes, about an inch and a half wide by five inches long.

TOBACCO SMOKING.—The effect that smoking of tobacco has upon the health, has been one of those vexed questions which have provoked a variety of opinions, according to the peculiar views held by the disputant. The most obvious injury which is apt to result from smoking, more or less, according to the extent in which it is indulged, is disorder and irritation of the digestive organs, frequently accompanied with depression of spirits, and at times with extreme nervous irritability, the latter being more especially manifested in an inveterate smoker, if, from illness or any cause, his habitual indulgence is interfered with. The occurrence of cancer in those who habitually smoke from a short pipe, and the injury to the teeth from smoking, and especially their discoloration, are notorious; further, there is a tendency to disease of the throat and air passages when this indulgence is followed to any great extent. Some persons, when smoking, expectorate freely, while others abstain from doing so. There cannot be a doubt that the unnatural degree of expectoration excited by smoking, has an injurious tendency on the health, as the saliva that is parted with is necessary for the purpose of promoting digestion, and the digestive organs being deprived of this essential ingredient, do not perform their functions with that regularity they otherwise would. Two of the unpleasant effects attending tobacco smoking, are the unpleasant taste it leaves in the mouth, and the disagreeable odour it imparts to the breath; and to remedy this as much as possible, the mouth should be freely washed with cold water immediately after smoking. The objections to smoking tobacco as a mere habit, do not of course extend to its employment as a remedy for disease, particularly of an asthmatic character, in which some persons derive the greatest benefit from its moderate use. In any case in which tobacco has produced low symptoms in an alarming degree, its use should be immediately discontinued.—See PIPE SMOKING.

TOFFY.—Put into a brass skillet, or small preserving-pan, three ounces of very fresh butter, and as soon as it is just melted, add a pound of brown sugar of moderate quality; keep these stirred gently over a very clear fire for about fifteen minutes, or until a little of the mixture, dropped into a basin of cold water, breaks clean between the teeth without sticking to them. When it is boiled to this point, it must be poured out immediately, or it will burn. The grated rind of lemon, added when the toffy is half done, improves it much; or a small teaspoonful of powdered ginger, moistened with a little of the other ingredients as soon as the sugar is dissolved, and then stirred to the whole, will vary it pleasantly to many tastes. The real Everton toffy is made with a much larger proportion of butter; but it is the less wholesome on that very account. If dropped upon dishes first rubbed with a buttered paper, the toffy when cold can be raised from them easily. Butter, three ounces; sugar, one pound; fifteen to eighteen minutes; or, sugar, one pound; butter, five ounces; almonds, two ounces; twenty to thirty minutes. Boil together a pound of sugar and five ounces of butter for twenty minutes; then stir in two ounces of almonds blanched, divided, and thoroughly dried in a slow oven, or before the fire. Let the toffy boil after they are added till it crackles when dropped into cold water, and snaps between the teeth without sticking.

TOILETTE GLASS.—The toilette glasses in common use are those termed swing glasses, from their being moveable to any angle in a frame. The cheval glass is one which stands on the floor for viewing the



whole person, with lights on each side. An improved stand has been invented and manufactured by Mr. Henry Dolman, of 10, Nelson Street, Greenwich, which is intended to allow of looking-glasses being either elevated or depressed, and also swivelled either horizontally or vertically, or both, so as to place and secure them in any desired position. The pillar which supports the glass is hollow, and has a square or round bar or rod, which slides vertically therein, being provided with a toothed rack and a small pinion, which is turned by a handle or knob. The upper extremity of this rack bar carries a boss, which is capable of being turned upon its vertical axis, and the upper part of this boss carries a horizontal axle, to which are attached two scrolls or brackets, which are screwed or fixed to the back of the looking-glass. Thus it will be seen that the glass may be turned or swivelled either on its horizontal or vertical axis, or both, and also raised or depressed by means of the rack. The pinion is provided with a ratchet wheel and fall, to support the glass when raised to the required position. The horizontal axis is provided with a clip and tightening screw. The same plan of suspending the glass is applied to gentlemen's mirrors, a small circular box concontaining the shaving-apparatus, &c. This glass may, by a little management, be used also for the ladies' toilette, to show the back of the head while dressing before the ordinary mirror. The advantages of this invention are, the facility with which the glasses may be moved in any direction, and their firmness in whatever position they are placed. To this it may be added that the designs of the stands and frames are of the most elegant description. The same kind of stand is also applicable to fire-screens and easels, and other articles where facility of adjustment is desirable.

TOMATO.—The tomato, which is used as a condiment or sauce, is the fruit of one among many species of solamine. It is a native of South America; but it is also well known and much cultivated in the United States, France, Germany, and Italy. The fruit is about the size of a golden pippin; it has an acid flavour, and is used as an addition to soups and sauces, as a preserve, and as a pickle. It is not much used in England; but in Italy whole fields are covered with it, and scarcely a dish is served up into which it does not enter as an ingredient.

TOMATO KETCHUP.—Cut half a peck of ripe tomatos into quarters, lay them on dishes, and sprinkle over them half a pound of salt. The next day, drain the juice from them through a hair sieve into a stewpan, and boil it for half an hour, with three dozen of small capsicums and half a pound of shallots; then add the tomatos, which should be ready pulped through a strainer. Boil the whole for thirty minutes longer; have some clean wide-necked bottles kept warm by the fire; fill them with the ketchup while it is quite hot; cork, and dip the necks into melted bottle-resin or cement.

TOMATO SAUCE.—Take off the stalks, halve the tomatos, and gently squeeze out the seeds and watery pulp; then stew them softly with a few spoonfuls of gravy, or of strong broth, until they are quite melted. Press the whole through a hair sieve, and

heat it afresh with a little additional gravy, should it be too thick, and some cayenne and salt. Serve it very hot. For a large tureen of this sauce, increase the proportions; and should it be at first too liquid, reduce it by quick boiling. When neither gravy nor broth is at hand, the tomatos may be stewed perfectly tender, but very gently, in a couple of ounces of butter, with some cayenne and salt only, or with the addition of a very little finely minced onion; then rubbed through a sieve and heated, and served without any addition, or with only that of a teaspoonful of chili vinegar; or, when the colour is not a principal consideration, with a few spoonfuls of rich cream, smoothly mixed with a little flour, to prevent it curdling. The sauce must be stirred without ceasing, should the last be added, and boiled for four or five minutes. Or, stew very gently a dozen fine red tomatos, prepared as for the preceding receipt, with two or three sliced shallots, four or five chilies, or a capsicum or two, or (in lieu of either, with a quarter of a teaspoonful of cayenne pepper) a few small dice of lean ham, and half a cupful of rich gravy. Stir these often, and, when the tomatos are reduced quite to a smooth pulp, rub them through a sieve; put them into a clean saucepan, with a few spoonfuls more of rich gravy, afterwards; add salt, if needed; boil the sauce, stirring it well for ten minutes, and serve it very hot. When the gravy is exceedingly good and highly flavoured, the ham may be omitted. A dozen small mushrooms, nicely cleaned, may also be sliced and stewed with the tomatos instead of the shallots, when their flavour is preferred, as they may be added with them. The exact proportion of liquid used is immaterial, for, should the sauce be too thin, it may be reduced by rapid boiling, and diluted with more gravy if too thick.

TOMATOS FORCED. — Cut the stem quite close, slice off the tops of eight fine tomatos, and scoop out the inside; press the pulp through a sieve, and mix with it one ounce of fine crumbs of bread, one of butter broken very small, some pepper or cayenne, and salt. Fill the tomatos with the mixture, and bake them for ten minutes in a moderate oven; serve them with brown gravy in a dish. A few small mushrooms stewed tender in a little butter, then mixed and added to the tomatos' pulp, will very much improve this receipt. Bake for ten minutes.

TOMATOS PICKLED. — For this purpose the small round sort are the best, and each one should be pricked with a fork, to allow some of the juice to exude. Put them into a deep earthen vessel, sprinkle salt between every layer, and leave them for three days covered; then wash off the salt, and cover them with a pickle of cold vinegar, to which add the juice, mixed with a handful of mustard-seed, and an ounce of each of cloves and white pepper for every peck of tomatos.

TOMATOS ROAST.—Select them nearly of the same size, take off the stalks, and roast them gently in a Dutch oven; or, if more convenient, place them at the edge of the dripping-pan, taking care that no fat from the joint shall fall upon them, and keeping them turned, that they may be equally done. From ten to fourteen minutes will roast them.

TOMATOS STEWED. — Arrange them in a single layer, and pour to them as much gravy as will reach to half their height; stew them very softly until the under sides are done, then turn, and finish stewing them. Thicken the gravy with a little arrowroot and cream, or with flour and butter, and serve it round them.

TONGUE.—The tongue is the index of health, the thermometer of the physical stamina of the body; and, according to the aspect that this organ assumes, physicians are in the habit of deciding the gravity and nature of the disease with which the patient is at the time suffering or threatened. The coating, as it is called, of the tongue, serves to point out to the experienced observer the particular structure in which the disease is situated. Sometimes the organ is covered with a dark brown fur; at others, it is lined with white, as if loaded with cream; again, it will be dry, pale, and hard or red, swollen and moist, with raised papillæ; but as these changes may vary even during a few hours, it is difficult to make the subject intelligible to those not familiar with the changes that occur in the organ itself. The tongue in a state of health should be clear of all coating or fur, of a natural brown colour, well but not excessively moistened with saliva, and free from all unpleasant taste or clamminess. Still, a slight coating in the morning, or at certain times of the day, is not to be attributed to disease, but rather to a participation in the function of digestion going on in the stomach, or an exudation thrown out during sleep, and unremoved by the reactionary power of muscular exertion. The tongue, like other organs of the body, is liable to disease, such as hypertrophy or enlargement; atrophy or wasting of the organ; cancer, ulceration, cracking, or tumours forming in the centre, on the tip, or edges; or a small, irritable, and extremely painful species of ulcer, liable to form on any part of the tongue, lips, gums, or mouth, and known as aphthæ; a small, circumscribed, ulcerous sore, extremely painful, and exactly resembling thrush, only that they seldom appear in groups or clusters, and seldom show more than one or two at a time. With a few exceptions, all the diseases of the tongue proceed from some derangement of the digestive organs, and nearly all of them are to be cured by a course of alterative and cooling medicines, such as an equal mixture of blue and colocynth pill, and a small dose of Epsom salts, or the phosphate of soda. When the aphthous ulcers are tedious, the most expeditious practice, in addition to the alterative course, is to touch each, as it makes its first appearance as a pimple, with blue stone or caustic. Infants are occasionally born with a restricted

tongue, or the organ so hampered that it cannot with comfort or ease keep hold of the mother's nipple, and consequently is debarred from obtaining an adequate supply of milk. Those children who make a clacking noise with their mouths, and frequently drop the nipple, are said to be *tongue tied;* or, in other words, the fold of the mucous membrane being beneath the tongue, and sometimes extending to the tip, binds the organ so tightly as to prevent the free use or motion of it, and as such a malformation would greatly impede articulation and speech, the surgeon is early called upon to prevent so unpleasant a catastrophe, which is very easily and very quickly effected by transfixing the fine membrane that binds the tongue to the mouth, with a pair of short and delicate scissors, and cutting the *frenum*, or bridle, as it is called, from *within*, out. Simple as the operation is, it requires to be performed with a firm, light, and a steady hand, as the slightest injury to the adjacent vein might be fatal. Sometimes, indeed, the tongue is tied down to the mouth by a thick fleshy band, instead of the mere fold of tissue-like membrane, in which case professional advice must be sought, and surgical assistance procured to remove or cut through the obstruction.

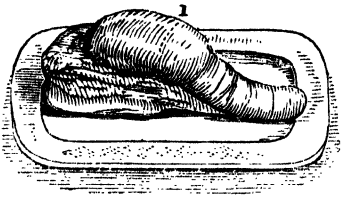
TONGUE BOILED.—When taken fresh from the pickle, they require no soaking, unless they should have remained in it much beyond the usual time, or have been cured with a more than common proportion of salt; but when they have been smoked and highly dried, they should be laid for two or three hours into cold, and as much longer into tepid water, before they are dressed. If extremely dry, ten or twelve hours must be allowed to soften them, and they should always be brought very slowly to boil. Two or three carrots and a large bunch of savoury herbs, added after the scum is cleared off, will improve them. They should be simmered until they are extremely tender, when the skin will peel from them easily. A highly dried tongue of moderate size will usually require from three and a half to four hours' boiling; an unsmoked one, about an hour less; and for one which has not been salted at all, a shorter time will suffice.

TONGUE PICKLED.—To three gallons of spring water add six pounds of common salt, two pounds of bay salt, two pounds of common loaf-sugar, and two ounces of saltpetre. Boil these over a gentle fire, and be careful to take off all the scum as it rises; when quite cold, it will be fit for use. Rub the tongue to be cured with fine salt, and let it drain for a day, in order to free it from the blood; then immerse it in the brine, taking care that every part of it shall be covered. The tongues should not remain more than from three to five days in the pickle. When the pickle has been in use for about three months, boil it up again gently and take the scum carefully off; add to it three pounds of common salt, four ounces of sugar, and one of saltpetre. It will remain good for many months.

TONGUE POTTED.—Mix an ounce of saltpetre and four ounces of brown sugar; rub a neat's tongue well with it, and let it lie in it for two days. Then boil it till quite tender, and take off the skin and side bits. Cut the tongue in very thin slices; beat it in a marble mortar, with a pound of clarified butter; season with pepper, salt, and mace, and pot as usual.

TONGUE STEWED.—After the tongue has been soaked, trimmed, and washed with extreme nicety, lay it into a vessel of fitting size, and place round it three or four pounds of the neck or of any other lean cuttings of beef, with some bones of veal, and pour in sufficient cold water to keep it covered until it is done; or instead of this, use strong unseasoned beef broth, made with the shin and any other odd bits or bones of veal which may be handy. Let the tongue be brought to boil very gradually, that it may be plump and tender. Remove the scum when it first rises, and when it is quite cleared off add a large faggot of parsley, thyme, and winter savoury, three carrots, a small onion, and one mild turnip. After three hours and a half of gentle simmering, probe the tongue, and if sufficiently done, peel off the skin and serve it quickly. If not wanted hot for table, lay it upon a clean board or trencher, and fasten it down to it by passing a fork through the root, and a smaller one through the tip, drawing the tongue straight with the latter before it is fixed in the board; let it remain thus until it is quite cold. Where expense is not regarded, three or four pounds of veal may be added to the beef in this receipt, or the tongue may be stewed in a prepared gravy made with equal parts of beef and veal, and vegetables as above, but without salt; this may afterwards be converted into excellent soups. A fresh or an unsmoked tongue may be dressed in this way, but will require less time; for the former, salt must be added to the gravy.

TONGUE, TO CARVE.—The middle slice of the tongue is considered the best. The tongue should be cut across at the line 1,



nearly through the middle, and thin slices taken from each side; a portion of the fat, which is situated at the root of the tongue, being assisted with each portion.

TONGUE, WITH CUCUMBERS. — Scald the tongue, to whiten it, for half an hour; when it is cold, lard it with bacon, seasoned with pepper, spices, parsley, and chives chopped. Stew the tongue with a seasoning of fine herbs, carrots, onions, different kinds of spices, and some stock; let it stew

slowly for hours. At the moment you serve, skin the tongue, and have a sauce of coulis thickened, in which put gherkins, sliced round.

TOOTHACHE. — There are few of the physical sufferings of life more dreaded than this comparatively insignificant misfortune. Toothache is too well known to require any description; all that is necessary is to point out how the tooth becomes affected, and recapitulate the best remedies both for its removal and cure. Each jaw, on either side, receives, through a small hole, a minute branch of a *sentient* nerve, which, running through the substance of the bone, gives off a small twig to each tooth as it passes on, till, finally escaping from the jaw, on each side of the centre of the upper and lower jaw, it becomes expended on both the lips. Each tooth is thus supplied with a small nerve, which endows it with life and sensation. Owing to inattention to the state of the stomach, the varieties of food and indiscrimination with which they are eaten, and neglect in keeping the mouth clean, the teeth become remarkably prone to decay—a disease which they sometimes acquire in a singularly short space of time—the tooth generally first decaying from the top downwards. When once the outer crust or enamel has been eaten through, the bony structure beneath does not long preserve its integrity, when the nerve exposed to the air, and often irritated by hard substances and fragments of food, is at once attacked by that mitigated form of neuralgia, known familiarly as the toothache, and which, when attacking the face, is denominated tic douloureux. As the admission of cold air, and hot food or drink, are the main causes that keep up the excessive pain, the aperture should always be closed up, and the air and all foreign substances carefully excluded. For this purpose a cement should be used, which, if employed with care, and when the hollow has been previously cleared out, will render the tooth serviceable for several years. Where this, however, cannot be effected, in consequence of the size of the opening, and neither cleaning the teeth nor aperient medicine relieves the pain, the tooth had better be extracted before it crumbles too far away to admit of its being drawn at all. Tobacco is occasionally of service; but, as few stomachs can endure the remedy, it is seldom employed. A small pill, made of a grain of opium, placed in the hollow tooth, will most frequently allay the acute pain, and finally end the paroxysm. Some, more partial to the stimulating process, use a few drops of creosote, a little piece of cotton wetted in tincture of myrrh, or friar's balsam, spirits of camphor or turpentine; but, next to the opium in the tooth, the best external remedy is a small bit of camphor inserted in the aperture. The modern remedy of chloroform, however, has superseded most other remedies, for, as either applied or inhaled, it ensures relief.

TOOTH DRAWING. — To be able to draw a tooth moderately well is an accomplishment which will stand a person in good stead, in many situations of life, where the services of a properly qualified person cannot be conveniently obtained. The operation is to be performed according to the following instructions:—*The front and the eye teeth are extracted* with straight forceps, one blade of which is placed at the back of the tooth, and the other blade in front, and the extremities of the instrument so disposed as to clip the tooth just at that part where it enters the gum. The right hand grasps the handles of the forceps, whilst the forefinger is at the same time thrust far in between them, to prevent too great pressure being made, and the tooth snapped off. If it be an upper tooth, the operator steadies the patient's head by placing it beneath his left arm, and then pulls downwards, giving the tooth a hoist at the same time, by which action it is readily drawn, if the pull be steadily made. If it be a lower tooth, the operator steadies the head in the same way, but, with the thumb of his left hand on the sound teeth, presses the jaw down, whilst his right hand pulls upwards, twisting the tooth as it is being pulled. *Drawing a back tooth* is a more difficult and complicated business, and is generally performed with an instrument called a key. The free end of the stem of the key has a deep solid lip, which is called the bolster, and on the top of this moves a shortly-curved iron claw, which, when the handle of the instrument is twisted, acts in a powerful manner, and drags the tooth out of its socket. If an upper back tooth is to be drawn, the operator has most power and control, and can see best what he is about, if he set the patient on the floor, throw his head far back, and fix it between his knees. If it be the lower tooth, the patient may be placed in a chair. In either case, the mouth must be held wide open. The operator now introduces the key, with the claw thrown back, into the mouth, within the range of the teeth, and places the bolster of the instrument against the gum of the tooth to be pulled out; he then turns the claw across the top of the tooth, and lets it drop till it rests on the outside of the tooth just where it sinks into the gum. Here the operator steadies the claw with the forefinger of the left hand, and grasping the handle of the instrument, as he would the handle of a corkscrew when pulling out a cork, he twists it from without inwards, and as he does this, the claw acting as a lever, and the bolster as the fulcrum, the tooth is lifted out of the socket. Another mode of performing this operation is to draw the tooth outwards, in which case the bolster must be placed on the outside of the gum, and the claw made to clasp the inside, after which the handle of the instrument is twisted outwards. One important caution is necessary to be observed, namely, to be sure, when fixing the claw, to clasp the right tooth, and take care it does not slip on to the next, or a sound serviceable tooth may be drawn, and the affected one left behind.

TOOTH PASTE.—Mix honey with finely-powdered charcoal, and use the paste as a dentifrice.

TOOTHPICK.—An instrument for cleansing the spaces between the teeth. The best and cheapest are made from a piece of quill. This ought to be passed round and between all the teeth after each meal, which will serve to keep off the tendency to form tartar. At night, a brush with water only may be used with advantage; and where there is a strong tendency to decay between the roots, a piece of strong silk may be drawn backwards and forwards between each fang.

TOOTH POWDERS.—Tooth powders may be compounded in various ways; the following receipts afford some of the best. 1. Powdered orris-root, half an ounce; powdered charcoal, two ounces; powdered Peruvian bark, one ounce; prepared chalk, half an ounce; oil of bergamot or lavender, twenty drops. Mix these ingredients well together in a mortar until they are thoroughly incorporated. 2. Prepared chalk, an ounce and a half; Peruvian bark powdered, half an ounce; camphor, a quarter of an ounce. 3. Pound charcoal as fine as possible, in a mortar, or grind in a mill; then well sift it, and apply a little of it to the teeth about twice a week. 4. Cut a thick slice of bread into squares, and burn it till it becomes charcoal. Pound it, and sift it through fine muslin; it is then ready for use. 5. Prepared chalk, one pound; camphor, one or two drachms. The camphor must be finely powdered by moistening it with a little spirits of wine, and then intimately mixed with the chalk. 6. Powdered cuttle-fish, one pound; powderd myrrh, two ounces. 7. Coral, cuttle-fish, dragon's-blood, eight drachms each; burnt alum and red sanders, four drachms each; orris-root, eight drachms; cloves and cinnamon, half a drachm each; vanilla, eleven grains; rosewood, half a drachm; rose-pink, eight drachms; all to be finely powdered and well mixed.

TOOTH WASHES.—1. Myrrh, one ounce, dissolved in a pint of spirits of wine. A little of this, dropped on the tooth-brush, is excellent for the teeth and gums. 2. Dissolve two ounces of borax in three pints of boiling water; before it is quite cold, add a teaspoonful of tincture of rhubarb, and a teaspoonful of spirits of camphor. Bottle the mixture for use. Add a wineglassful of the solution to half a pint of teapot water, and use it daily.

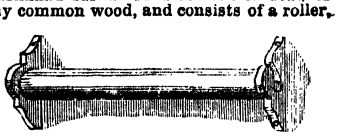
TORTOISESHELL.—This shell is procured from a marine tortoise, called the hawk's-bill turtle, or *testudo imbricata*. Each animal furnishes thirteen principal plates, five along the centre of the back, and four on each side; and twenty-five smaller scales or plates, which constitute the margin of the shell. The horny plates which constitute true tortoiseshell, are separated from the bony foundation which forms the shell or covering of the animal by the application of heat; the whole shell being commonly placed over the fire until the plates begin to start from the bones, and the separation being completed by the aid of a slender knife. The yellow-coloured shell bears a higher price than that which is mottled. In veneering with tortoiseshell, by which very beautiful work may be produced, it is usual to apply fish-glue, mixed with lampblack, vermilion, green, chrome, white, or other colouring matter, at the back of the shell, both to heighten its effect and to conceal the glue or cement by which it is secured to the wooden foundation.

TORTOISESHELL, IMITATION.—First steam and then press the horn into proper shapes, and afterwards lay the following mixture on with a small brush, in imitation of the mottle of tortoiseshell. Take equal parts of quicklime and litharge, and mix with strong soap lees; let this remain until it is thoroughly dry, brush off, and repeat two or three times, if necessary. Such parts as are required to be of a reddish brown, should be covered with a mixture of whiting and the stain.

TORTOISESHELL, TO PREPARE.—To mend tortoiseshell, bring the edges of the pieces to fit each other, observing to give the same inclination of grain to each, then secure them in a piece of paper, and place them between hot irons or pincers; apply pressure, and let them cool. Take care that the heat is not too great, or it will burn the shell.

TOUCH-PAPER.—Dip a piece of any unsized paper, such as blotting-paper, blue paper, or printing paper, in a solution of an ounce of saltpetre in nearly half a pint of water; then, after it has become perfectly dry, it will be fit for use.

TOWEL ROLLER.—This should be placed at the back of the kitchen-door of every cottage; or, if not at the back of the door, it should be near the sink or fixed washhand-basin. It is formed of deal, or any common wood, and consists of a roller,



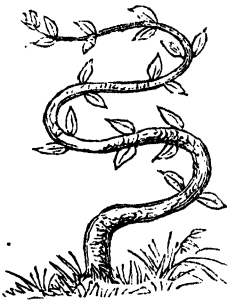
with a small pin at each end, which pins work in sockets cut out of brackets fixed to a door, or any other perpendicular surface. One of these brackets has its socket cut through, to admit of taking out and putting in the roller, when the towel requires to be changed; the other has merely a circular hole cut into one.

TOWELS.—Towels are made of diaper or huckaback, of a quality adapted to the uses to which they are applicable. They should be one yard long, and about ten or twelve nails wide. The best are bought single, and are fringed at the ends; others are neatly hemmed, and sometimes have a tape-loop attached to them, by which they can be suspended against a wall.

TRACING-PAPER.—Lay open a quire of paper of large size, and apply, with a clean sash tool, a coat of varnish, made of equal parts of Canada balsam and oil of turpentine, to the upper surface of the first sheet, then hang it on a line, and repeat the operation on fresh sheets until the proper

quantity is finished. If not sufficiently transparent, a second coat of varnish may be applied as soon as the first has become quite dry. Rub the paper with a mixture of equal parts of nut-oil and oil of turpentine, and dry it immediately by rubbing it with wheat flour, then hang it on a line for twenty-four hours. Both the above are used to copy drawings, writings, &c. If washed over with ox-gall and dried, they may be written on with ink or water-colours. The paper prepared from the refuse of the flax mill, and of which bank notes are made, is also called tracing-paper, and sometimes vegetable-paper.

TRAINING. — In horticulture, training has for its object the rendering plants more productive either of flowers or of fruit, by regulating the number and position of their branches. If their number be too great, they overshade those below them, and by excluding the heat and light, prevent the elaboration of the sap required for the production of fructification. If they are too few, the sap is expended in the production of more, and in extending the surface of the leaves required for the digestion of the juices. The position of the branches is important, because if trained against a wall they obtain a higher temperature and protection from winds; and if trained with their points below the horizontal, the return of the sap is checked. Shy-flowering shrubs are made to blossom abundantly, and freely-flowering shrubs are made to blossom earlier, by having their branches bent below the horizontal line. The reason of this appears in the fact, that a plant propels its sap with greatest force perpendicularly. This is the reason why at such angles gardeners find the trained branches of their wall trees rendered more productive of blossoms and furnished with a smaller surface of leaves. A similar effect is produced by training a branch in a waving form, for two-thirds of its length are placed horizontally, as in the accom-



panying outline. Besides the usual modes of training, there are two especial modes which deserve notice. *Quenouille training* consists in training one upright central shoot in summer, and shortening it down to fifteen inches at the winter pruning, in order that it may, at that height, produce branches forming a tier, to be trained in the first instance horizontally. The shoot produced by the uppermost bud is, however, trained as upright as possible during the summer, and is cut back, so as to produce another tier fifteen inches above the first, and so on until the tree has reached the desired height. In this climate it is necessary to train the shoot downwards, which is easily done by tying those of the first tier to short sticks, those of each successive tier being fastened to the branches below them. When the shoots are thus arched downwards at full length, or nearly so, they soon come into a bearing state. *Balloon training* is forcing downwards all the branches of standard trees, till the points touch the earth; and they have the merit of producing large crops of fruit in a very small compass.—See APPLE, CHERRY, ESPALIER, FRUIT TREES, ORCHARD, PEACH, PEAR, &c.

TRANSPARENT PUDDING.—Put into a saucepan half a pound of fresh butter, the same quantity of pounded loaf sugar, and eight well-beaten eggs; stir it over the fire till of the thickness of buttered eggs, put it into a basin to cool, and mix with it a teaspoonful of grated nutmeg; bake it in a dish lined with puff paste. Before serving, grate loaf sugar over the top.

☞ Butter, ½lb.; sugar, ½lb.; eggs, 8; grated nutmeg, 1 teaspoonful.

TRANSPLANTER.—Great difficulty has been experienced from time to time in removing trees from one spot to another. To obviate this, an implement termed a transplanter has been invented. A very simple contrivance, and one exceedingly well calculated for the removal of subjects under half a ton weight, consists of a low two-wheeled truck, with strong hooks attached to the hinder part, to which the cradle in which the plant is placed is suspended; in front is a long pole, which acts as a lever in upraising the plant, as well as securing the ball when loaded, and also as the means of draught by which men drag it along, or to which a horse may be yoked. The ball is prepared in the usual manner, and when the trench around it is opened, one of the iron sides which forms the cradle, is set upright in the trench, close to the ball, and three iron rods are passed through it under the ball, and also through the corresponding holes in the other iron side, which, for the purpose, is placed in the trench exactly opposite the first. These three iron rods are furnished at one end with eyes, and at the other with screws, so that, when they are fitted in their places, they may be screwed up tightly so as to keep the opposite sides of the ball together. These sides and rods being all screwed up tight, the plant may be removed at once; or if there be any apprehension of danger in consequence of the roots being cut, the soil may be filled in, and the whole allowed to remain until the root wounds are healed, and the spongioles again formed, when all that is required is to remove the soil from the trench carefully, and proceed as if the lifting had taken place at once. When all

is prepared, the truck is run back, the wheels kept on two planks laid over the sides of the trench, the draught-pole is elevated until the two strong hooks in the hinder part of the trench catch into the top holes of the centre arm of each of the sides, which for that purpose are about six inches higher than the others. These being hooked on, the draught-pole is drawn down, the tree and its ball are drawn up from the pit, as by a lever, the ball secured to the truck, and, if the tree is tall, it may be attached to the draught-pole by a rope. A rope is also taken round the stem of the tree, quite at its base, and carried once or twice round the ball, and then secured to the axle. The tree is then removed to its destination, and when placed over the centre of the pit, the wheels at the same time being supported by two planks laid across the side of the hole, and blocked to keep them steady; the rope is removed, and the draught-pole is elevated so as to let the ball rest on the bottom of the pit prepared for it. The truck is then disengaged from the ball by unhooking it from the cradle, and removed; the iron rods below and around the ball are unscrewed and drawn out, which is readily accomplished by cutting back the side of the pit to allow of their being pulled out in that direction. This finishes the operation. Another contrivance for transplanting trees is as follows: The ball of the tree intended to be removed is carefully separated from the surrounding soil, with as many of its roots preserved as possible, the stronger being cut off close to the surface of the ball, while the more flexible are tied up in bundles, enveloped in soft hay or straw, and covered with a double mat to keep the whole together; a piece of cord is then placed loosely round it, between which are set upright pieces of thin boarding, from two to three inches broad, of equal length, and three or four inches apart all round, the cord keeping them in their proper places. These boards being adjusted, a strong half-inch rope doubled is put round the upper part of the ball, making it fast in front but not too tight; the remaining portion of the rope is taken down the front, and is made to surround the ball again near the bottom, after which the ropes are to be tightened up by means of a rack pin; so that the whole may be kept tightly together. The ball is then to be undermined on one side, as near to the centre as possible, and a piece of strong board, say eight or nine inches broad, is to be introduced under it, and the tree drawn gently over to the side under which the board is placed, while the operation of undermining the opposite side is

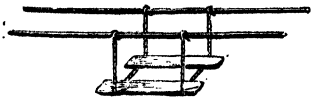


Fig. 1.

going on; and when a similar board is placed under that side, the tree is to be brought to the perpendicular again, resting on the two boards, which may be called the lifting board. Two strong ropes are then brought under the lifting boards, as shown in *fig.* 1. The ends of these ropes are then brought up and secured to the handspikes or bearers, as seen in *fig.* 2; and to prevent the ropes slipping off the lifting boards, notches are cut in them into which the ropes fit.

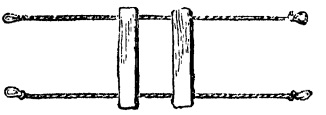
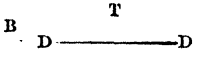


Fig. 2.

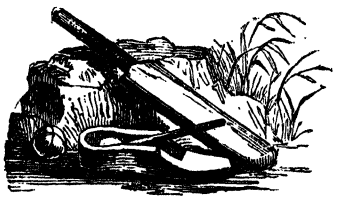
For plants which two, six, or ten men easily carry, the apparatus is quite sufficient if the distance be not great to which the tree is to be removed. When ten men are employed, two additional handspikes are placed across the others at right angles, which will afford lifting power for four men more, six being employed upon the others, in the way in which masons carry large stones upon their hand-barrows. If the tree be too large for six men to carry with perfect ease, it will be better to employ a wheeled machine. Another kind of transplanter or tree-lifter is illustrated in the annexed engraving. This apparatus is formed of two pieces of iron, the breadth and thickness of a common cartwheel tire, three or four inches wide, rather more than half an inch in thickness, and about six feet long, which being bent, will reduce them to three feet across. This size will do for trees requiring from two to four men to lift them; but a size larger, and stronger in proportion, will be wanted for trees requiring more men to move them. The earth must be excavated at some distance from the tree, so as to leave a large ball of earth attached to it, and the irons must be put under the ball of earth as near the centre as possible, leaving a space between them of about two feet, or, for larger trees, a little more. Two strong poles must then be passed through the hooks in the irons, so as to form a complete hand-barrow. The tree may then be readily lifted, and cross levers may be used for larger trees. The whole may be fixed or unfixed without any loss of time; and it requires no tying, as there is no danger of the tree slipping off the irons. *The flower transplanter* consists of two semi-cylindrical pieces of iron with handles, and which are so inserted in the ground as to enclose a plant with a ball of earth between them. In this state they are attached to each other by two iron pins, and, being pulled up, bring with them the plant to be removed, surrounded by a ball of earth. This being set in a prepared excavation surrounded by loose earth, the transplanter is then separated as at first, and, being withdrawn, one half at a time, the earth is gently pressed to the ball containing the plant, and the whole well

watered. Tender plants thus transplanted, receive no check, even if in flower. One of the best of these instruments consists of a cylinder about six inches long, and five inches and a half wide, open at top and bottom, and with two handles; the lower edge of the cylinder is serrated with four saw teeth, which with the rest of the edge, are sharpened by a file when necessary. There is a bottom into which the cylinder, fits; two segments and a pronged instrument Supposing it desired to remove a hyacinth, the cylinder is placed over the plant, and worked into the soil till it is filled up to the brim. The cylinder with the plant and soil which it contains, should be then lifted up, and placed on the bottom which fits so tightly as to adhere without any fastening. The two flat semicircular pieces are afterwards to be placed on the surface of the soil, on each side of the stem of the plant. It may now be watered and kept in the instrument as in a common flower-pot, or carried to any distance; when it is to be replanted, the bottom being taken off, the plant and ball of earth may be pushed through the cylinder into a pot, or a hole in the soil, as may be desired, by pressing on the semicircular plates with the pronged instrument. The same arrangement is particularly favourable for packing or sending to a distance.

TRAP-BAT.—This is a healthful and exciting out-door game, which may be played at any season of the year. In order that it may be played with the greatest advantage, a smooth piece of ground is selected, that where the trap is set down being particularly flat and even, so that any little risings or unevenness should not turn a straightly trolled ball aside. The trap is then set in the following direction:—T (trap), B (boundaries), D D (distance line):—



There is no special rule as to the width of these two boundaries, marked by stumps; they are generally made by mutual arrangement, and in accordance with the number playing on each side. If only a few, the two boundaries are brought closer to each other; but, with a dozen, they would be extended. Neither is the distance line any special number of yards; but this must depend whether men, youths, or a certain number of the fair sex, join in the game. If the latter, from eight to ten or twelve yards are sufficient; but, in a match with trap-bat players, this distance is extended. Sometimes the two boundaries are placed on a level with the distance line; the level of the eye, in fact, from one boundary to the other forming the distance or standing line. At other times the distance line is below the boundaries, and marked by two smaller stakes being driven in. The outer side now range themselves along this distance line, from one to two or three yards apart, according to the number and the width of the boundaries. One of the inner side then takes the ball up in the left hand and places it in the mouth of the trap. A sharp, quick, and straight rap with the edge of the bat is next given on the tongue



of the trap, which causes the ball to fly upwards. The moment the tongue is so struck, the bat-hand should be immediately drawn back, in order to be in readiness to strike the ball the moment it rises or falls to the best or easiest point for striking. The batsman is not compelled to strike at every ball rising from the trap; but if he aims at, and misses the ball, he is what is commonly called "once out;" on a second miss, he is "twice out;" and a third miss, the striker is "out," and can no more go in that innings. When a ball is hit, it must reach the distance line, or the striker is out; also, should the ball be struck outside either of the boundaries. Should the ball be struck over the head and out of reach of the outer side or the distance line, the striker is here again out, or should it be caught clean from the bat or first bound. In either of these cases, the striker gives up his place at the trap to another on his own side. From this, it will be seen that the utmost judgment must be exercised in striking the ball, which should be struck downwards, so as to bound several times before reaching the distance line; the hit should be made free from the shoulder, and with force, in order to be certain of carrying the ball well down to the outside party. The object of these latter, on the distance line, is to prevent the ball passing them. Each must keep his post, and only guard just that portion of the ground which is half-way between him and the next on the line. By this means no confusion arises, but simply the one takes the ball standing on the line in its direction. In trolling the ball back, only one step can be made by one foot towards the trap. The ball should be trolled up easily, so that, in the event of its not hitting the trap, it may rest within a bat's length of it. In either instance the striker is out. Every time the ball is pitched or trolled up without hitting the trap, or resting within bat's length, a notch or point is scored, and the striker continues to hit and score away until, from one or other of the above casualties, he goes out. At the end of the innings, the total is, of course, added up, and the next party go in against it. Two innings each are a game. Although the above is a very simple and interesting game, and well known to every schoolboy, still there are really very few good trap-bat

players. About two feet high is the average range of the strike, and the force of the blow on the trap must be given accordingly. At this height the ball can always be struck down with force, and the chances of giving a catch avoided. Striking too high would inevitably give a catch, or send the ball "over heads." Taking all points of the game, and the interest that is capable of being realised therefrom, trap-bat and ball affords a few hours' quiet and healthy enjoyment.

TRAVELLING BAG.—It is a matter of great importance, and conducive to personal comfort and convenience, for a person who is travelling to be able to carry with him some receptacle to contain all the articles likely to be called into immediate use, and which possesses the combined advantages of being compact and easily portable. The patent travelling bag shown in the engraving is one of the nature in which are comprised all the various improvements that have suggested themselves to the inventors. It is similar in appearance, and is opened in the same manner as the "wide-opening barred bag," by the use of the registered

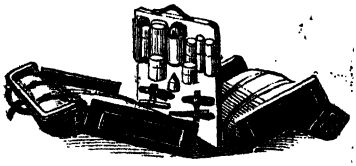


Fig. 1.

sliding-nozzle double-action lock; it then presents the whole of the fittings standing erect in the centre, as in *fig.* 1, leaving the sides free. By a simple contrivance, the bag is further made to open to the bottom. On two boards or standards are displayed the fittings; the boards, being supplied with a long hinge and handle, may be lifted out of the bag, and made to stand firmly on a table, as in *fig.* 2; the sides, then lying flat, are in a convenient position

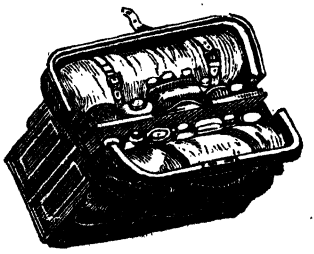


Fig. 2.

for packing. The inner parts of the sides are provided with strong flaps, and also strong elastics and fasteners, to confine any article packed under them. One side of the bag can be opened to the bottom, leaving the other side still upright. The bag can be used without the fittings, the whole of the interior being then available for packing, besides the flaps. It is also supplied with a new patent handle, the ends of which slide in grooves, thereby allowing the handle to lie quite flat on the top of the frame.

TRAY.—A domestic contrivance for conveying a number of articles together, which could not otherwise be conveniently carried in the hands. They are usually made of papier maché or of tin. The former kind are the best, being much lighter and nearly as durable. Trays should not be washed with water that is very hot, as it is liable to crack them.

TREACLE.—The viscid, brown, uncrystallizable syrup which drains from moist sugar during its formation, and from the sugar-refining moulds. It contains a large portion of sweet or saccharine principle, and is therefore, particularly on account of its cheapness, a useful article of domestic economy. It is considered very wholesome, and especially for children, who are generally very fond of it.

TREACLE BEER.—Take a pound and a half of hops, and boil in thirty-six gallons of water for an hour; then add fourteen pounds of treacle, and a little yeast, to work it; ferment, and bottle.

TREACLE POSSET.—Boil a pint of milk; add sufficient treacle to curdle it; allow the curd to settle, strain off the liquid, and drink it as hot as possible.

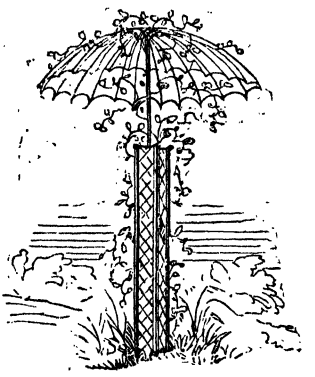
TREACLE PUDDING.—Half a pound of flour, the same of finely-minced suet; of raisins stoned and cut small, and well-cleaned currants, a quarter of a pound each, three tablespoonfuls of treacle, and half a pint of water. Mix it all well together; boil it in a cloth for four hours, and serve it with a sweet sauce.

☞ Flour, ½lb.; suet, ½lb.; raisins, ½lb.; currants, ½lb.; treacle, 3 tablespoonfuls; water, ½ pint.

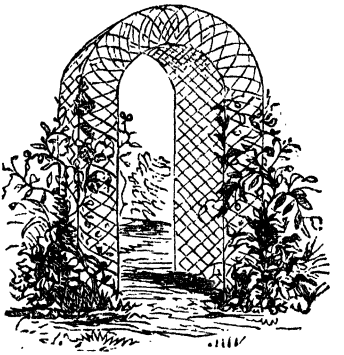
TREACLE VINEGAR.—To two tablespoonfuls of the best treacle put one of the best white wine vinegar; mix well together, and put it in a bottle for use. A large tablespoonful of this mixture, taken night and morning, either in substance or in a tumbler of water, is a very fine and wholesome remedy in costive and bilious habits. It makes also a fine cooling drink, and is considered to brace the stomach, and gently to promote salutary perspiration.

TRELLIS-WORK.—An arrangement of supporters upon which to train plants. The cheapest, the easiest, and the soonest made is that formed with straight poles or stakes of ash, oak, or chestnut, in length from five to six or seven feet, driving them in the ground in a range about a foot distant, all of an equal height, and then railed along the top with the same kind of poles or rods, to preserve the whole form in a regular position. They should be fully an inch and a half thick, and, having pointed them at one end, drive them with a mallet into the ground

in a straight range, close along the row of trees, a foot deep at least. To render trellis-work still stronger, run two, three, or more ranges of rods along the back part of the uprights, a foot or eighteen inches asunder, fastening them to the upright stakes, either with pieces of strong wire twisted two or three times round, or by nailing them. Trellis-work for climbers is constructed in a variety of elegant forms; but chiefly is to be noticed the manner in which the wire-trellis for climbing plants is attached to the pots. A strong wire ring is carried round the pot, a little above its bottom. To this a sufficient number of upright wires are attached all round. These upright wires are pressed down upon the surface of the pot, till they reach the rim, over which they are firmly bent till they touch the highest point of the rim, or are even bent a little within it. At this point they are secured by a second ring of stout wire, which having been done, the uprights are directed upwards, and fashioned into the pattern required. By these means a sort of collar is formed upon the rim of the pot, which prevents the trellis from slipping downwards, while at the same time the lowest ring of the wire keeps it from swinging and swaying backwards and forwards. Umbrella trellis-work is a form



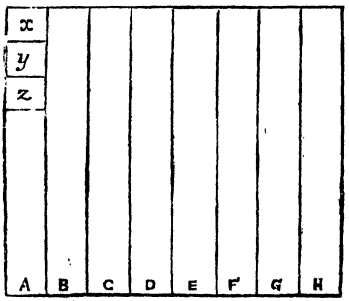
excellently adapted for climbers of shrubs having long racemes of flowers. For covered walks, and for plants of less rapid and strong growth, such a trellis-work as is here illustrated is suitable. The arcade when well covered, affords pleasant shady walks, and both the shade and the beauty of the flowers are enjoyable. Trellises are of the greatest use in forcing houses, and houses for fruiting the trees of hot climates. On them the branches are readily spread out to the sun, of whose influence every branch and every turf and single leaf partakes alike, whereas if the trees were left to grow as standards, unless the house were glass on all sides, only the extremities of the shoots would enjoy sufficient light. The advantages, in point of air, water, pruning, and other parts of culture, are equal in favour of trellis; independently altogether of the tendency which proper training has on woody fruit trees, to induce fruitfulness. The material of the trellis is either wood or metal; its situation



in ordinary hot-houses is against the back wall, close under the glass roof, or in the middle part of the house, or in all these modes. Sometimes it is in separate parts, and either fixed or moveable; and in some cases, though rarely, it is placed across the area of the house. The most general plan is to place it under the glass roof, and at the distance of from ten to twenty inches from it, according to the length of the foot stalk of the leaves of the plants to be trained. The moveable rafter-trellis consists of a rod bent parallel to the roof, with horizontal sheds or rods, extending from six to ten inches on each side, containing two collateral wires, the rod itself forming the third. This rod is hinged, or moves in an eye or loop, fixed either immediately above the plate of the parapet, or near the top of the front glass. It terminates within a foot or two of the back wall, and is suspended from the roof by two or more pieces of chain attached to the studs, the links of which are put on hooks fixed to proper parts of the roof. Their advantage is chiefly in the case of very early forcing, when they can be let down two or three feet from the glass, and thus lessen the risk of injury from frost. A whole sheet of tegument of trellis, if desirable, may be lowered and raised on the same general plan. Rafter-trellises are in general use only for such houses as are not chiefly devoted to vines, such as pineries, peach-houses, and sometimes greenhouses.

TRENCHING.—An operation in horticulture and agriculture performed for the purpose of increasing the fertility of the land, by assisting it to free itself from any superabundant surface-water, and enabling it at the same time to retain moisture longer in a dry season, by allowing a freer and more permeating action of the air and sun, be

permitting the ascent of the heat and moisture from the interior of the earth, and by obtaining an easier passage and greater range for the roots of the plants. To perform this operation, take out with the spade, at one end of the plot of land about to be trenched, a portion of the soil, two feet and a half wide, and fourteen inches deep. Carry this away to the opposite end, that it may serve to fill up the last trench. Having thus opened the first trench, fill it up with the soil which is dug and shovelled out of the second; fill up the second with the earth taken out of the third; and so on to the last, which, as before observed, must be filled up with the soil from the first trench. The first thing to be done, after removing the earth from the first trench, is to loosen the bottom with a three-pronged fork; but not to remove any more of the soil; as, should the bottom be of a retentive character, it would be by that means rendered impervious to water. In order to keep the work straight, the operator should provide himself with a couple of two-feet sticks, and, after opening the first trench, mark the distance of the next; then stretch the line from one stick to the other, and, with the spade, cut a nick by the side of it as a guide.



The best manner of turning over the earth, as it is taken from the trenches, is to throw the surface spadeful to the bottom of the open trench, with its face downwards; and what is afterwards taken out, lay on the top to form the new surface. Thus the upper layer of the soil becomes to the depth of the trench the bottom layer. It sometimes happens, however, that the surface-spadeful is the richest and mellowest; in such a case it should, during the work, be kept on the surface, instead of being turned into the bottom. This is to be accomplished by removing, not only all the earth out of the first trench to the farther end of the plot, but the first spadeful from the second trench also. Then what remains in the second, turn into the first, and take the top spadeful of the third trench to raise the first to the proper level.

TRESPASS.—This is generally any act whereby another is injured in person or property; but, in a more limited and common acceptation, it signifies an entry upon another man's ground without his permission, especially if contrary to his order, and doing some damage, however inconsiderable; for which a compensation is recoverable, according as the intent of the trespasser was wilful or inadvertent, and the damage actually sustained. Every man's ground in the eye of the law is enclosed either by a visible fence or imaginary boundary line, and whoever enters upon it without leave of the owner is a trespasser. But a person is answerable not only for his own trespass, but that of his cattle; for if by negligent keeping, they stray upon the land of another and tread down the herbage, or commit other injury, this is a trespass for which the owner must answer in damages. In some cases trespass is *justifiable*, as if one come to demand or to pay money, then payable or due; or to execute, in a legal manner, the process of law. Also, a man may justify entering into an inn or public-house without leave of the owner, because when a man professes to keep such accommodation, he gives a general licence to any person to enter his doors. So, a landlord may justify entering to distrain for rent; a commoner to attend his cattle commoning on another's land; a reversioner to see if any waste be committed on the estate. But in cases where a man misbehaves himself, or abuses the authority with which the law invests him, he becomes a trespasser; as if a person come into a tavern, and will not go out in a reasonable time, but stays there all night, contrary to the inclination of the owner, he makes himself a trespasser from his first entry. An exclusive interest in the crop or herbage, without a property on the soil, is sufficient to maintain an action of trespass. But possession, actual or constructive, must be proved. If trees are excepted in the lease, the land whereon they grow is necessarily excepted also; consequently, the landlord may maintain trespass for *breaking his close*, if the tenant cut down the trees. *Trespasses in sporting* involve a number of nice points of law which are being constantly disputed. The following will be found to comprise the leading features in this respect:—The common law allows the hunting of foxes, badgers, and such noxious animals over the ground of another man for the public good, and excuses a trespass done in the pursuit of them: provided in doing this, no more damage is done than is necessary and inevitable, and that it is done in the usual and ordinary course. But the law will not justify any excessive damage to the land; for even in hunting the fox or badger, a man must not break the ground or dig for him. In general, it is a trespass at common law for any man to hunt over another's ground, for which the owner or tenant may maintain his action. And to unbag a fox, and pursue him over another's ground, would be undoubtedly a trespass. In an action for trespass for sporting over the ground of another, the jury may take into consideration, in determining the verdict, not only the actual damage sustained by the plaintiff, but circumstances of aggravation

and insult on the part of the defendant. To prevent trifling and vexatious actions of trespass, it is provided by statute, that, where the jury who try an action of trespass, give less damages than forty shillings, the plaintiff shall be allowed no more costs than damages. But to this rule two exceptions have been made by subsequent statutes, which enact, that in all actions of trespass, when it appears that the trespass was wilful and malicious, and it is so certified by the judge on the back of the record, the plaintiff shall recover full costs. Also that full costs may be had against any inferior tradesman, apprentice, or other dissolute person, who is convicted of trespass in hawking, hunting, fishing, or fowling, upon another's ground, though the damages be under forty shillings, and without any certificate of the court. Every trespass is deemed wilful where the defendant has notice, and is forewarned not to come upon the land; as every trespass is malicious where the intent of the defendant plainly appears to be to harass and distress the plaintiff; and in such cases the plaintiff is entitled to full costs. A more summary proceeding than by action against trespass is provided by the Game Act, which enacts, that any person trespassing in the day-time in pursuit of game, &c., shall, on conviction before a justice of the peace, forfeit any sum not exceeding two pounds, with the costs of conviction; and if any persons to the number of *five* or more together, commit a trespass in like manner, each shall forfeit five pounds with costs of conviction. Such trespassers not quitting the ground when required, or refusing to give their addresses, may be arrested and taken before a magistrate, and on conviction be fined not exceeding five pounds.

TRESSELS.—A contrivance by which the place of a table is supplied on particular

or temporary occasions; and which consists simply of two or more wooden supports with a board laid across the top of them.

TRIFLE.—Take equal parts of wine and brandy, about a wineglassful of each, or two-thirds of good sherry or Madeira, and one of spirit, and soak in the mixture four sponge biscuits and half a pound of macaroons and ratafias; cover the bottom of the trifle-dish with part of these, and pour upon them a full pint of rich boiled custard, made with three-quarters of a pint, or rather more, of milk and cream, taken in equal portions, and six eggs, and sweetened, flavoured, and thickened. Lay the remainder of the soaked cakes upon it, and pile over the whole, to the depth of two or three inches, previously well drained; sweeten, and flavour slightly with wine only; less than half a pint of thin cream (or of cream and milk mixed); wash and wipe the whisk, and whip it to the lightest possible froth; take it off with a skimmer, and heap it gently over the trifle.

☞ Macaroons and ratafias, ¼lb.; wine and brandy mixed, ½ pint; rich boiled custard, 1 pint; light froth to cover the whole, ½ pint of cream and milk mixed; sugar, 1 dessertspoonful; wine, half glassful.

TRIPE BOILED.—Take six pounds of tripe—the thick is the best; boil it gently in milk for two hours. In the mean time, peel a dozen large onions, and boil them in water gently until they are done thoroughly. Add a little thickening, flour and water mixed thin, into the tripe saucepan; then serve in a soup-tureen, with the onions on the top, being careful not to mash the onions; send a little nice melted butter in a butter-boat, and some nice mealy potatoes stewed.

TRIPE FORCED. — Cut the tripe into small square pieces, dip them in some small beer, batter, or yolk of an egg, and fry them in good dripping till of a nice light brown; then take them out, let them drain for a minute, and serve with plain melted butter.

TRIPE FRICASSEED. — Cut it into small pieces; put them into a saucepan, with as much white wine as will cover them, white pepper, shred ginger, a blade of mace, sweet herbs, and an onion. Stew it a quarter of an hour, take out the herbs and onion, and put in a little shred parsley, the juice of a lemon, half an anchovy cut small, a gill of cream, and either the yolk of an egg or a piece of butter. Season to taste, and garnish with lemon.

TRIPE PIE.—Lay into the bottom of a dish some thinly-sliced cold or raw ham, then put in a layer of tripe, with the jelly adhering to it; season with pepper and salt, and add a bit of butter; fill the dish in this manner, and put in a few tablespoonfuls of brown stock; cover the dish with puff paste. A beef steak may be substituted for the ham, laid into the bottom, and the dish filled up with tripe.

TRIPE ROASTED.—Cut the tripe into two oblong pieces; make a forcemeat of bread-crumbs and chopped parsley, seasoned with pepper and salt, bind it with the yolk of two eggs, spread it upon the fat side of the tripe, and lay on the other fat side; then roll it very lightly, and tie it with packthread. Roast and baste it with butter. It will take one hour, or one hour and a half. Serve it with melted butter, into which put a tablespoonful of ketchup, and one of lemon pickle.

TRIPE STEWED.—Tripe is prepared by tripe-sellers. Wash it in several waters; then put it into a stewpan, with some strips of bacon-fat, carrots, onions, bay-leaf, thyme, parsley, shallot or garlic, cloves, allspice whole, salt, and peppercorns; moisten it with some spoonfuls of stock and consommé, if you have any ready; add a pint of white wine. Stew gently six hours; let it cool; cut onions in slices, fry them in oil or butter, with chopped parsley; add the tripe to this, and garnish with sippets of bread fried in butter.

TRIPE, TO CHOOSE.—There are two dis-

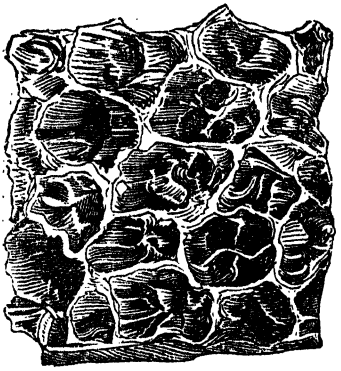


Fig. 1.

tinct kinds of tripe, and, in choosing it, the honeycomb tripe, *fig.* 1, will be found the

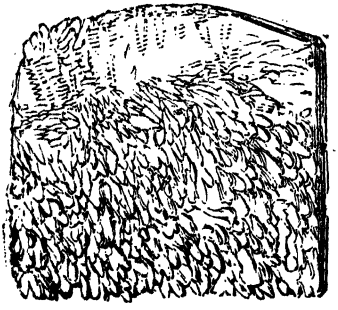


Fig. 2.

best for boiling; and the thin tripe, *fig.* 2, the most suitable for frying.

TROLLING. — One of the branches of angling which is generally practised at mid-water or thereabouts, and includes spinning with a live, a dead, or an artificial bait, with a small fish generally, or its representative. When neither fly fishing nor bottom fishing can be practised, in consequence of certain forbidding circumstances of water and season, trolling can be resorted to as an excellent substitute. The fish most commonly taken by any sort of trolling in our rivers are pike, perch, and trout. Trolling is divided into three parts, viz., sinking and roving, trolling with gauge and snap-hooks, and spinning. *Sinking and roving* is practised with a live bait; a minnow or a loach for the common trout and perch; bleak, gudgeon, dace, or roach, for pike or large trout. The best general bait for all sorts of trolling is the gudgeon. The rod used should be a long bottom one, with a good winch, and prepared plaited silk trolling-line. For foot-line, about a yard and a half of the best gut. The link to which the hook is tied should be of fine gimp, if pike are sought for; but gut, or three-twisted hairs, will do for trout and perch. The baits must be strong and lively, and placed on the hooks with as little injury to them as possible. Allow the bait to swim here and there, generally at mid-water, but in deep places, deeper, drawing it up gently to the surface now and then, letting it sink again, and guiding it to the best looking spots of the locality. *Snap-baits* are mostly used at seasons when pike do not feed with sufficient voracity to pouch their baits promptly. Their merit lies in allowing the troller to strike quickly, before the fastidious fish, suspecting something wrong, has time to eject the bait from his mouth. The rod used must be short and stiff; that known as the punt barbel rod being the best. Snap-baits are twofold—one, which does not spring when you strike the fish, and the other which does. The first-named consists of three hooks—two large ones, tied back to back, with their barbs pointing different ways; and one smaller hook tied on at the top of the shanks of the others, and pointing straight out from them. The spring-snap is generally used with dead bait; it requires deep insertion in the bait to allow the spring to act, which it will not do without some considerable resistance. *Spinning* is a dashing, killing method of angling, and the practice of it requires considerable muscular exertion. The best spinning rod is made of a single piece of East India mottled cane, fourteen or sixteen feet long, well ringed, with a screw winch, requiring no winch fittings. With a rod of this description, salmon and large trout can be trolled for in the deepest and widest waters. In narrow streams, the angler can spin with a very small portion of line out, and almost avoid casting, the length of the rod allowing the bait to be dropped noiselessly wherever it is wished, and to spin it accordingly. The baits used in spinning should be of the most brilliant colours: the brightest minnows, gudgeons, dace, roach, you can procure. The hooks used in spinning should be of the bright steel colour of the wire, not changed to the ordinary blue hue of hooks; and they should be whipped on with light-coloured silk, waxed with white wax. Artificial spinning baits are sold at the various tackle shops. They all kill fish more or less successfully; but the majority of them are inferior to the natural bait.

TROUT.—This fish is found in lakes, rivers, and minor streams, and is finest in appearance from the end of March to about the middle of August; their spawning time is from November to January. The most brilliant and beautiful trout are generally found in streams that flow principally over rocky bottoms. They feed upon worms, minnows, and other small fish; but their most favourite food is the fly. In angling for trout, a stout rod, running tackle, and

a cork float, are required; the principal baits consist of minnows, small frogs, snails, caddis, grubs, and artificial flies. Trout begin to take a bait on or near the ground early in the year, and, before March, will readily take most bottom baits all day long in favourable weather; but, as the summer advances, it is only very early or very late in the day that they will take a bait near the ground, they being at the intermediate hours more disposed to rise to the surface in pursuit of flies and other winged insects. In March and April, use the worm in the forenoon, and a fly or minnow, according to the state of the water, the rest of the day; in the swiftest and sharpest currents, provided the day be warm and bright, and in the deeps early and late; but if the water be discoloured or very thick, try the gravelly shallows near the sides and tails of streams with a worm only, to run on the bottom with one large shot, a foot at least from it. When the water is clearing off, and is of a dark brownish colour, first use the worm, which should be a well-scoured brandling, cast in as a fly at the head of the stream, and move it gently towards you, still letting it go down with the current so as to keep it a little under water; the line should be rather short, with no lead upon it, and the hook fine. Then try the minnow, and as the water clears, the artificial flies should be tried. In fishing for trout with the worm, use running tackle, and employ a strong line; but let its strength consist in the excellence of its material rather than its bulk, to which end the hook should be small, the gut fine, the shotting fine also; and let the whippings be well concealed, for, in bright water, trout are singularly wary and suspicious. In some few instances a float is indispensable, and, when such is the case, let that also be as light and fine as the water will allow; in many cases, however, a float is unnecessary in trout fishing, and a trapping bait without one is commonly to be preferred, which is thus managed:—Make use of a rod from fourteen to sixteen feet long, firm, but light; draw out as much reel line as, with the gut link, will altogether reach somewhat beyond the length of the rod; if it be longer it will be unmanageable; if shorter, it will not give all the scope or range it ought. The hook may be No. 5, 6 or 7, according to circumstances. Trout is by some persons "dipped for," at almost all times and all seasons, either with winged insects or with their larvæ; but the principal dipping time for both is when the stone-fly and May-fly are on the water. To bait with either a stone-fly, or a green or gray drake, put two or three on the hook together, which should be carried through the thick part of the fly's body under the wings, with their heads standing different ways; pass your hook through them under the wings, about the middle of the insect's body, and take care that your fingers are always dry when baiting, or you will soon kill or spoil your bait. As the season advances, beetles, bees, and large flies of all kinds, may be used with effect. The fly-minnow is sometimes successful, when trailed, dipped, or cast on the surface of the stream, and proves occasionally so on the still waters.

TROUT BAKED.—Where there is an oven it is decidedly the best, and also the simplest mode of dressing all the larger sort of fresh-water fish. Dry the fish, lay them in a baking-dish, season with pepper and salt, and put a little butter on them; bake them according to the size; add the juice that comes from the fish to some rather thick melted butter.

TROUT BOILED.—Clean, scale well, and boil whole in cold water, allowing it to boil gradually; vinegar or horseradish put in the water improve the flavour. When done, carefully drain off the water so as not to break the skin, and serve with lobster shrimp, or anchovy butter sauce.

TROUT BROILED.—When the fish is clean washed and well dried, tie it round with packthread to keep its shape entire, melt some butter with a good deal of basket salt, and cover the trout with it; put on a clear fire, at a good distance, and broil it gradually. Wash and bone an anchovy, cut it small, and chop some capers; melt some butter with a little flour, pepper, salt, nutmeg, and half a spoonful of vinegar. Pour this over the trout, and serve it hot.

TROUT COLLARED.—Wash them clean, split them down the back, bone, and dry them well in a cloth; season them well with finely pounded black pepper, salt, and mace, roll them tight, and lay them close into a dish; pour over them an equal quantity of vinegar and beer, with two or three bay leaves, and some whole black pepper; tie over the dish a sheet of buttered paper, and bake them an hour.

TROUT FRIED.—Scale, gut, and clean them, take out the gills; egg and crumb them, then fry in lard or oil until of a light brown. Serve with anchovy sauce and sliced lemon.

TROUT IN WHITE SAUCE.—Boil the fish gently in as much water and light white wine, in equal quantities, as will only cover them. When done, keep them hot while you boil the vinegar, with a bit of butter and a little flour. Meantime have ready beaten two eggs, with a spoonful of cold water, and pour them and the sauce to and fro at a little distance above the stove, till of due thickness, and serve the fish in it, adding a little salt.

TROUT POTTED.—Mix together the following quantity of finely-pounded spices:—One ounce of cloves, half an ounce of Jamaica pepper, quarter of an ounce of black pepper, quarter of an ounce of cayenne, two nutmegs, a little mace, and two teaspoonfuls of ginger; add the weight of the spices, and half as much again of salt, and mix all thoroughly. Clean the fish, and cut off the heads, fins, and tails, put a teaspoonful of the mixed spices into each fish, and lay them into a deep earthen jar with the backs downwards; cover them with clarified butter, tie a paper over the mouth of the jar, and bake them slowly for eight hours. When the back bone is tender, the fish are done enough. Take them out of the jar, and put

them into a milk pan with the backs upwards; cover them with a board, and place upon it a heavy weight. When perfectly cold, remove the fish into fresh jars, smooth them with a knife, and cover them with clarified butter.

TROUT STEWED.—Melt three ounces of butter in a broad stewpan, or well tinned iron saucepan; stir to it a tablespoonful of flour, some mace, cayenne, and nutmeg; lay in the fish after it has been emptied, washed very clean, and wiped perfectly dry; shake it in the pan that it may not stick, and when lightly browned on both sides, pour in three-quarters of a pint of good veal stock, add a small faggot of parsley, one bay-leaf, a roll of lemon-peel, and a little salt; stew the fish very gently from half to three-quarters of an hour, or more, should it be unusually fine. Dish the trout, skim the fat from the gravy, and pass it through a hot strainer over the fish, which should be served immediately. A little acid can be added to the sauce at pleasure, and a glass of wine when it is considered an improvement. This receipt is for one large and for two middling-sized fish. Trout may be stewed in equal parts of strong veal gravy and of red and white wine, without having been previously browned: the sauce should then be thickened, and agreeably flavoured with lemon-juice and the usual store sauces, before it is poured over the fish. They are also good when wrapped in buttered paper, and baked or broiled; if very small, the better mode of cooking them is to fry them whole. They should never be plain boiled, as, though naturally a delicious fish, they are then very insipid.

TROUT, TO CHOOSE.—It is a very fine fresh-water fish; all the kinds of this fish are excellent, but the best are the red and yellow trout. The females are considered the best, and are known by having a less head and deeper body than the male; their freshness is known by the same methods that have been already mentioned for other fish.

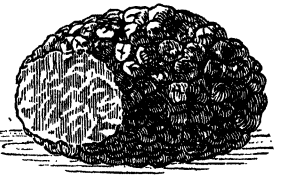
TROUT, WITH BACON.—Cover the bottom of a small oval paper form with a few very thin slices of fat bacon; cut down the back, some nicely washed small trout, and, having removed the bones, lay the fish open flat upon the bacon; sprinkle with chopped parsley, pepper, salt, a little mace, and two cloves finely pounded. Bake half an hour in a quick oven, and serve in paper.

TROWEL.—This implement is made of iron, from six to twelve inches long in the plate, and half as broad, hollowed like a scoop, and fixed on a short handle to hold with one hand; it is convenient in removing small plants with a ball or lump of earth about their roots, lifting bulbous flower-roots after the flowering is past in summer; planting bulbs in patches or little clumps about the borders, for digging small patches also in the borders, and sowing hardy annual flower seeds; likewise for filling small pots with mould, stirring the surface of the earth in pots, and fresh earthing them when necessary.

TROY WEIGHT.—The troy pound is the legal standard, though only actually used in weighing precious metals and stones, and apothecaries' drugs. There is no doubt that it was originally the pound of silver, the pound sterling; and there is evidence that this pound was sometimes described as divided into twenty parts, called sterling shillings. The pound troy is now divided for gold and silver, into twelve ounces, each ounce into twenty pennyweights, and each pennyweight into twenty-four grains. But for medicine, it is divided into twelve ounces, each ounce into eight drams or drachms, each drachm into three scruples, and each scruple into twenty grains. A cubic foot of water weighs 75·7374 pounds troy.

TRUCK.—A species of conveyance generally drawn by the hand, and used for transporting merchandise, agricultural produce, &c., from one place to another by the aid of manual labour only. Trucks prove very convenient when the articles which are to be transported, lie in a situation where a horse and cart, or a waggon could not reach without difficulty. They are usually lent out at a certain charge per hour.

TRUFFLES, CULTURE OF.—These edible fungi may be easily cultivated where there are woods or coppices of oak or hazel, and



where the soil is not too stiff or inclining to chalk. The soil where they abound most is a reddish sandy loam; this will then be the best for the purpose of culture, especially if it has lain long uncultivated. The soil must be undisturbed till the plants are ready to be put in, which should be in the months of October, November, and December, if the weather be open; for at that time the truffles are found in their full ripeness, and then, likewise, they are in a state of putrefaction, which is the time when the seeds are prepared for vegetation. The soil and the truffles thus being formed, the cultivator must proceed as follows: Open a piece of ground of convenient space, and take out the earth to the depth of about eight inches, screening it, that it may be as fine as possible; then lay this fine earth to the depth of two or three inches at the bottom of the trench or open ground, and upon it lay some of the over-ripe truffles, about a foot and a half distance from each other, and as soon as possible prepare a thin mud made of the screened earth and water, well stirred and mixed together, and pour it on the truffles till the open ground is quite filled up. By this means, in a few hours, the ground will be closely settled about the

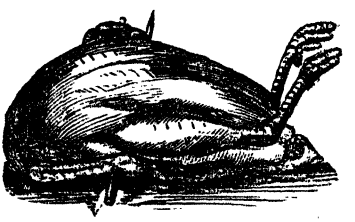
truffles as if it had never been dug or disturbed at all, and a good crop may be secured.

TRUFFLES POTTED.—Cut up a pound of sweet fresh butter, and dissolve it gently over a clear fire; take off the scum which will gather thickly upon it, and when it has simmered for three or four minutes, draw it from the fire, and let it stand until all the buttermilk has subsided; pour it softly from this upon six ounces of ready-pared sound French truffles, cut into small but rather thick slices, and laid in a delicately clean enamelled saucepan; add a full seasoning of freshly pounded mace, and fine cayenne, a small saltspoonful of salt, and half a large nutmeg. When the butter has become quite cold, proceed to heat the truffles slowly, shaking the saucepan often briskly round, and stew them as gently as possible for twenty minutes, or longer should they not then be tender. If allowed to heat and boil quickly, they will become hard, and the preparation, as regards the truffles, will be a comparative failure. Lift them with a spoon into quite dry earthen or china pans, and pour the butter on them; or, add to them sufficient of it only to cover them well and to exclude the air, and put the remainder of the butter apart; it will be finely flavoured, and may be eaten by delicate persons, to whom the truffles themselves would be injurious. It may also be used in compounding savoury sauces, and moistening small croustades before they are fried or baked. The truffles themselves will remain good for months when thus prepared, if kept free from damp; and in flavour they will be found excellent. The parings taken from them will also impart a very agreeable savour to the butter, and will serve extremely well for immediate use. They will also be valuable as additions to gravies or soups. We should observe that the juice which will have exuded from the truffles in the stewing will cause the preparation to become mouldy, or otherwise injure it if it is put into the pans either with them or with the butter. The truffles must be well drained from it when they are taken from the saucepan, and the butter must remain undisturbed for a few minutes, when it can be poured clear from the juice, which will have subsided to the bottom of the pan.

TRUFFLES STEWED. — Wash and brush clean the truffles, put them in a stewpan with a little wine, a slice or two of fat bacon, and a little good broth; let them boil gently until quite tender, then serve them in a napkin dry, as you would roasted chestnuts.

TRUFFLES, USE AND NATURE OF. — Although enumerated among vegetables, truffles are not as yet known to be capable of cultivation, but are found underground by pigs and dogs trained for the purpose. When sold in the shops they are of different qualities, the white, the red, and the black, and are, therefore, generally thought to be of different species; but the difference arises from the period of their ripeness, as they are always dug up the moment they are found, and the black being the most mature, always bear the highest price. Their chief use is to add a high flavour to sauces, stews, and pies, as half an ounce simmered in a pint of gravy, will greatly improve them. Truffles are also frequently employed to stuff poultry.

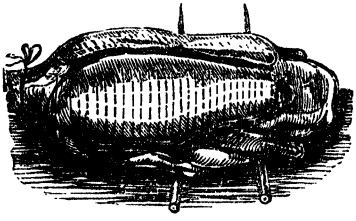
TRUSSING.—A preparation which poultry, game, &c., undergo previously to being dressed. All kinds of poultry should be killed the first thing in the morning, when their crops are empty. They should be plucked while they are warm; all the flues taken out, and the hairs singed off with white paper. It is the general opinion that fowls and pigeons should not be drawn until just before they are dressed, as it is apt to make them dry. In drawing poultry, a very small slit should be made under the vent with a penknife, in this, the forefinger should be inserted, and any internal fat there may be about the vent, draw out. Next, take hold of the gizzard, which may be known by its being the hardest part of the interior; draw it out carefully; it will generally bring the whole of the intestines with it, but if the liver should be left, again insert the finger and take hold of the heart, which will bring out with it the liver, which must not be touched for fear of bursting the gall-bladder. Trim round the vent with a pair of scissors. Be careful to take away the gall-bladder from the liver without breaking it, for if one drop of the gall escapes, the whole liver is spoilt. The gizzard consists of two parts, with a stomach or bag, in the middle, containing gravel and undigested food; one part of the skin by which the two parts of the gizzard are united is rather narrower than the other; slit this with a knife, and turning the gizzard inside out, remove the stomach-bag and trim round the gizzard, but avoid cutting the skin by which it is joined in the middle. In trussing poultry, cut off the neck about two joints from its commencement at the shoulders, but be sure to leave half an inch or more, of the skin longer than the part of the neck remaining, for the purpose of wrapping over when tied. The feet and legs of young chickens intended to be roasted should be taken off about an inch below the first joint; the legs of fowls are generally left on, but they must be scalded in boiling water, and the claws and skin taken off; then turn the tops of the pinions



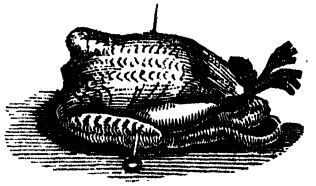
over the back, place the legs in an erect position, and with a skewer fix the middle joint of the pinion to the side, and pass it

through the body to the other pinion. The legs of chickens must then be pressed down on the apron close to the breast, and have a skewer passed through the side bones, leg, and body, to the side bone on the opposite side. The legs of capons and large fowls are fixed outside the side bone, the same as

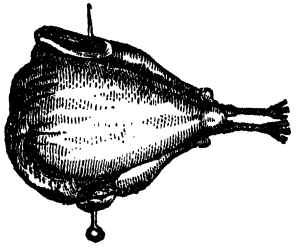
a turkey, and a skewer is also passed through to the legs below the toes. For a fowl that is to be boiled, a slit is made on each side of the belly, the back, and the legs, and the trussing is completed. The feet, heart, liver, lights, and milt are to be dressed separately when well cleaned. *Ducks* have the feet always left on; but the wings must be taken off at the middle joint. In doing this, leave more skin than belongs to the bone. The feet must be scalded, and the skin and claws taken away; they then must be turned over the back. In inserting the skewers, keep the thigh-joints outside of the pinions, and run the skewer through the leg, then through the bit of skin that hangs below the pinion, then through the body,



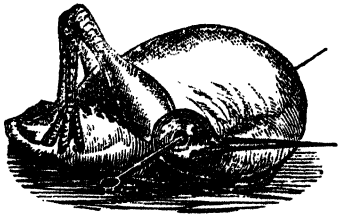
the other pinion, skin, and the other leg. The short skewer must be inserted just above the joint, which is twisted to turn back the feet. Tie the skin round the throat, put on the seasoning at the vent, and turn the surrounding parts through a small slit in the apron. *Geese* are trussed in exactly the same way as ducks, except that the feet are cut off, and dressed with the giblets. The liver is sometimes dressed separately, and considered by some persons a great delicacy. A piece of greased white paper should be laid over the breast, and secured with a string, before a goose is put down to wash. *Turkeys* are trussed in the same way as fowls; but the sinews of the leg must be drawn out before trussing. The gizzard of a turkey, intended to be roasted, should be scored, and both gizzard and liver covered with the caul of veal or lamb; but buttered paper does as well, and is more generally used: this is to prevent them becoming dry. The breast should be secured in the same way, with a piece of buttered paper. Thoroughly clean the head, and thrust it under the wing. *Pigeons* should be cleaned with great care. For roasting, truss with the feet on, tie the joints close down to the hind quarters, and turn the feet over the front. For boiling or stewing, cut off the feet, and truss just as fowls for boiling. For broiling, lay them open by cutting them down the back, and laying them quite flat. As pigeons



have no gall, no extra care will be required with the liver. *Pheasants*, *Partridges*, and *Guinea Fowls*, are trussed with the head tucked under the wing, and the feet on, which are twisted and tied to the hind quarters, and turned back over the breast.

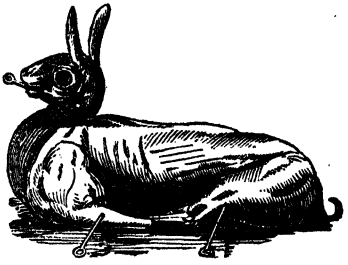


The liver may be used in the stuffing. *Wild ducks*, and all other web-footed wild fowl, should have the feet left on, and be cleaned and trussed in the same manner as tame ducks. *Woodcocks*, *Plovers*, *&c.*, and all

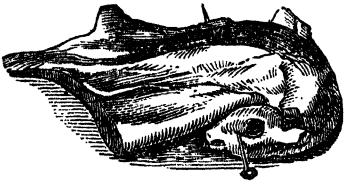


other birds that live by suction, are not drawn. The feet are left on, the knees twisted round each other, and raised over the breast, by which means each foot turns back and falls on the side of the hinder

parts. *Hares* trussed for roasting, have the legs turned back without disjointing, so that the haunches are thrown up, much in the form that a cat is often seen sitting, the end lines of the fore and hind legs meet each other, and lie side by side. Two skewers should be inserted, one where the end of the leg meets the fleshy part of the shoulder, and the other where the shoulder meets the fleshy part of the leg. The head is fixed back, with a skewer thrust into the mouth,



through the head, on to the back between the shoulders. The belly should be slit no more than is necessary for taking out the paunch. To secure its keeping in place, a string is employed for bracing it; the string is laid across the back, twisted round the end of both skewers, and brought over across the back and tied. In skinning hares and rabbits, particularly hares, the ears and tail should be preserved entire, as they improve the appearance of these dishes on the table, and are much esteemed. *Rabbits* for boiling are opened all the way down the belly; joint the legs at the hind quarters, so as to admit



of their turning along the sides; turn the shoulders back to meet them, so that the lower joints of each lie straight along, side by side. The head should be skewered down to the right shoulder. Rabbits for roasting are trussed like hares. *Fawns or Kids* are generally trussed in the same way as hares. As the flesh is of a dry nature, they should be covered with a caul or buttered paper, which should be fastened on with a string. *Sucking pigs*, the moment they are killed, should be put into cold water for a few minutes. Put the pig for half a minute into a pail or pan of boiling water, then take it out and pull off the hair or bristles as quickly as possible. If any should remain, put it again into hot water; when quite free from hair, wash it thoroughly in warm water, and then rinse it several times in cold water. The feet should be taken off at the first joint; then make a slit down the belly, and remove the entrails. Once more, wash the pig inside and out in cold water, and wrap it in a wet cloth till it is ready to be dressed, which should be as soon as possible.

TULIP.—This is one of the choicest among florists' flowers, and its culture is accordingly made an object of extraordinary attention. *Seed sowing.*—The raising of tulips from seed is a very tedious process, as it is about seven years before they blow, and often two, three, or more years before they break, as it is termed, into the variety of colours so much fancied among cultivators. It is a common and very good way, therefore, to make a sowing every year, with the expectation that, at the end of seven or more years from the first sowing, new varieties may be obtained. The seed should be sown about the end of September, or any time in October. Pans should be prepared about five inches deep, with holes to drain off stagnant water, and a layer of broken potsherds, an inch thick over the bottom, for the same purpose. Over these must be placed pieces of slate horizontally, in order to preserve the drainage, and to check the downward growth of the root, which generally descends until hindered by some impediment. If it find none, it frequently exhausts itself, and no bulb is formed; besides, the larger it grows, the smaller the bulb will be. The check given by the pieces of slate will often cause a bulb to grow larger in one year than it might otherwise grow in three. The annexed engraving shows the section of a tulip seed-

pan, to show the mode of draining and of checking the roots by slates. The pan should be filled up over the slates with light rich earth, such as is termed sandy loam, sifted lightly through a sieve. One-third of decayed horse-droppings is recommended to be mixed with the earth. When the surface has been made even, let the seeds be sown very regularly, and as thinly as possible. Some of the same earth must then be sifted over the seed to the depth of a quarter

of an inch. The pans should be placed at first where they may have the morning sun till eleven o'clock; but as the cold weather advances, they must be removed to a more open situation, where they may have the benefit of sunshine during the whole day. At the same time, it is necessary to shelter them from cold winds, and to protect them from frost and excessive wet. In this way they are to be kept during the winter; but, in March, when the plants appear above ground, in a similar manner to onions, the pans may be removed to their first situation. The seedlings are not so delicate as to need any extraordinary attention, except that, when the season is dry, moderate watering must not be neglected, and they will require to be shaded from a hot sun, but not placed under the drop of trees. They must be carefully weeded, and kept clear of moss. The leaves will die off about the beginning of June; but the young bulbs are then too small to be moved, and it is better to allow them to remain two years without disturbing them. When the leaves begin to turn yellow, it will not be necessary to water any more, though they must be kept growing as long as possible. It is important, also, to distinguish between the natural withering of the flowers and the yellowness produced by dry cutting winds. Soon after the leaves decay, a little fresh earth may be sifted over the surface of the pans; and again, at Michaelmas, fresh earth should be added, without disturbing the undersoil, where the minute young bulbs are lying dormant. The second year's management is precisely like the first, up to the period when the leaves decay; then pans of fresh earth, with good potsherd drainage and horizontal slates, should be prepared, as in the first instance, for sowing the seed, and the young bulbs must be taken up from the seed-pans, and planted out immediately. The earth in the fresh pans may be about five or six inches deep over the pieces of slate, and the bulbs may be planted about two inches apart and two inches deep; or they may be planted in the open ground. About the beginning of November in the south, or a fortnight earlier in the north, it will be advantageous to sift some fresh earth over the surface of the pans, to prevent the growth of moss and the penetration of frost. When the winter proves severe, however, they will require the further protection of mats or pease haulm, as the young bulbs are more liable to suffer from frost than those which are older. When the leaves make their appearance in the spring, the surface of the soil should be stirred, but not too deeply, for fear of injuring or displacing the bulbs. Should the spring prove dry, the plants will require to be frequently refreshed with moderate waterings; and when the leaves die off, all weeds must be removed, and the surface covered with fresh earth—a process that will require to be repeated about Michaelmas. The year following, they are to be managed precisely in the same manner as old roots and offsets. On the bulbs being taken up the fourth summer, they will be much improved in size, and may now be planted out in an appropriate bed, prepared as for blooming bulbs, in drills six inches asunder, and three inches deep. Some will bloom the fifth season. When in full bloom the flowers should be examined, to mark such as exhibit the best properties, in order to separate them from others at the period of shifting. These are afterwards to be planted out in beds apart, under the name of breeders, which are plain or self-coloured, on a white or yellow bottom, without the fine streaks of colour produced by the process of breaking. This process, though of great interest to the cultivator, is little understood, and has, therefore, been either left to chance, or to empirical means founded on no certain principles. The time which a breeder requires to break, is equally uncertain with every other thing connected with the process; some flowers breaking in the leaf, as it is termed, and others taking from one to twenty years. All efforts to hasten the period have been in vain. *Culture of the offsets.*—When tulips have broken into a good disposition of colour, they can only be increased by offsets, which require to be treated in the same manner as seedling bulbs of similar size. The offsets should be separated from the parent bulb, after drying at Midsummer, before putting them away in drawers or bags. The offsets must not be kept long out of the ground, though some advise planting them as late as November. It is not convenient to plant offsets among the blowing roots; they answer best in a border by themselves, where they may be set pretty closely together, especially when they are small. These offsets should be taken up when their leaves wither off, the same as the full-grown bulbs; otherwise, when the season proves very wet, they are apt to rot, particularly those of the early growing sorts, which are not by any means so hardy as the late blowers. When the offsets have been thus taken care of for one year or more, till they attain the size of full-grown bulbs, they may be planted out in flowering beds. *Planting out full-grown bulbs.*—A good tulip bulb ought to be solid, firm, and covered with a brown skin; and great care must be taken not to bruise the bulb or the crown, for this will infallibly produce canker, and, probably, occasion the rotting away of the whole bulb. When a valuable bulb has been wounded or injured, the part should be pared with a sharp penknife, and left for some days to dry the wound before it is planted, as the moisture of the soil would otherwise cause the wounded part to become putrescent. The aspect most advantageous for flowering is one that is open and airy, that the plants may have the full benefit of sunshine during the whole day in the earlier stages of their growth. At the same time, it ought not to be exposed to the sweep of the north and east winds, which would tend much to injure the leaves in the spring, and would, consequently, affect the beauty of the bloom. *Culture of the tulip.*—The tulip grows best in loam from rotted turf cut from an old pasture, and if, at the depth of two or three feet there be a layer of two or

three inches of cow-dung, the plants will feel the benefit of it just at the time they most need it, when they are rising for bloom and swelling their pods. The tulip has to be planted six inches apart every way, and three inches deep; this is best managed by levelling the bed four inche lower than it is to be left, placing all the oulbs in their intended situations, and then covering them with four inches of soil, which will give three inches above their crowns. When the flowers begin to show the colour of their blooms, shade them from the sun, and never let any but the very early or the very late evening rays reach them. At the same time it cannot be too strongly recommended that they should be uncovered at every opportunity by daylight; on cloudy days, and on all occasions when the sun is not hot, they should have as much air as possible. When the bloom has declined, take all the cloths away, and remove from the flowers all the seed-pods, unless you want to save them; when the stems die half-way down, and the leaves begin to turn yellow, take them all up, dry them in the shade, and lay them in a cool dry place, protected from frost. Planting should all be done during October and the early part of November. After planting, the bed should be hooped over, and mats or canvas kept ready at hand to protect it from very heavy rains or severe frosts. Too long or frequent covering, however, will keep the influence of the air from the roots, and thereby cause the plants to grow weakly; and moderate rains are more beneficial than injurious. About the end of February all the healthy plants will show leaf, and at this time they require to be looked over carefully, to detect any appearance of sickliness or canker. When a cankered spot is discovered, it ought to be cut out with care on a mild dry day, and the wound exposed to the air, which, in most cases, will heal it, unless the whole plant be in a diseased state; and the surface of the bed should also be stirred, the lumps bruised, and the earth laid close to the stems. As soon as the buds begin to bleach or show colour, the mats should be discontinued by day, unless when the air is very bleak, or when frost is apprehended at night. When the colours of the flowers begin to show, the awning should be let down in the hot sun, for exposure to either sun or rain would cause the colours to run and mix, and in this way would spoil the beauty of the flowers. But they should have all the air mornings and evenings, and when the sun does not shine. The awning should be large, and lofty enough to allow of being walked under. The angle of the roof should be acute, because, if it be too flat, the heavy showers which sometimes prevail when tulips are in bloom, are apt to penetrate the canvas and damage the flowers. The awning is composed of stout duck or canvas, with a lining of light calico on the ties of the roof, like a ceiling over the whole extent of the bed; the white colour of the cloth adds much to the softness of tint and semi-transparency of the flowers. There should be a door at each end, for the convenience of admitting a current of free air when the weather is too inclement to admit of the awning being pulled up. This is effected by very simple means: the lines pass through staples in the side of the ridge-board, where a knot at the end fastens them, and the lines must be brought down under the pole and made to pass through a fixed pulley at the top of each line. They are then to be brought down, and those on each side passed through a block containing as many pulleys or sheaves as there are lines. By these means all the lines attached to each side of the awning will be collected into one parcel; and either on one side or both, can be raised or lowered to any degree that may be necessary. The sides of the frame-work should be closed with canvas drawn as tightly as possible. At the time the awning is erected, the hoops ought to be removed, and boards placed round the bed, to keep the mould from breaking down at the edges. The paths should also be made a few inches lower, in order to bring the flowers nearer to the eye. As some of the bulbs may fail to send up flower stems, or may perish altogether, the vacancy thus produced ought to be supplied by breaking off the flower stems of other plants, and immersing them in phials of water sunk in the bed. *Quality of a good tulip.*—From one-third to one-half a hollow globe, when expanded properly, edge smooth and even, petals thick, marking unbroken round the exposed edges of the petals, when expanded, but not to be edged more than half way down the petal, all six petals alike; colours well defined, and the base of the petals, forming the bottom of the cup, must be free from the slightest stain, the white or yellow, or any shade between them, must be pure, all alike; the stem straight and stiff, from eighteen inches to three feet in length. *Crossing.*—As the seedlings will, in general, partake of the form and habit of the plant from which the seed is gathered, and its colours only will follow those of the flowers from which the pollen is taken, so, as a general rule of crossing, therefore, colours should be crossed upon form, and the contrary, according to the intention of the operator. When the flower has been selected that is intended to stand for seed, the anthers must be removed before they burst and scatter their pollen. This is best done early in the morning, the pollen being then more moist than when the sun is strong; and hence it will not so readily escape by accident, and thwart the experiment. For a different reason the crossing ought to be performed at mid-day, by taking several anthers from the flower selected on account of its colours, and dusting the pollen from them on the summit of the pistil. Too much pollen can scarcely be used in the experiment. After the operation, the plant will require all the sun, rain, and air that it can have. The plants, indeed, which are intended to stand for seed should be treated somewhat differently from those planted for flowering only, by planting them in a separate bed, in a very open situation. They must not be shaded with nets, as this like-

wise prevents the ripening of the seed. About the middle of July the seeds will be fit to gather, as will appear by the stalks becoming dry and withered. When the seed vessels begin to open, they should be cut off, with about six inches of the stem, and the seeds preserved in the pods till the time of sowing, taking care to keep them dry, to prevent mouldiness, which would hinder them from vegetating. *Taking up the bulbs.*—As soon as the flower falls the seed pods must be removed just at the top of the stalk, for if they remain, the plants will continue in a growing state, and exhaust the vigour of the bulbs, which will prove greatly injurious to their blooming finely the following season. On the other hand, when the seed pods are removed, the leaves soon become yellow and wither, and the bulbs, instead of being gorged with sap, become firm and ripe. The criterion of the exact time of taking up is when the stem becomes dry enough, three inches above the surface of the soil, to bend down without breaking. On being taken up they may be put in appropriate drawers or boxes, and be kept in the shade for a few days; but before the drawers are put away, the loose skins, fibres, and offsets, should be removed, only taking care not to peel off the innermost brown skin, which must remain on till the time of planting, otherwise the bulb will be too much dried and exhausted. The most convenient method for keeping the varieties distinct is to have shallow boxes divided into compartments for each bulb, and numbered to correspond with a written catalogue of names. These boxes may be placed in a cabinet having shelves for nine boxes, divided into a hundred and five compartments, in fifteen rows, seven in each row. These may be numbered along the sides, so as to correspond with the numbers of the rows in the bed, the advantage of which will be that either in planting out or taking up, the utmost correctness may be observed with respect to each individual bulb.

TUMOUR.—This is a word of very wide signification, and may be applied to any local enlargement, however simple or harmless in its character, or however grave or malignant in its consequences; as a tumour is simply a swelling, any morbid enlargement of a part, whether the slow growth of a persistent evil, that after much pain and greater or less expense of time manifests itself in the form of an outward bulging or enlargement, or it may be the swelling, that springs up almost instantly after a fall, bruise or blow; each, whether the disease that causes it be a concussion against a door in the dark, as a swollen and black eye, or the slow development of a cancerous mischief, is equally a tumour. It would be quite out of place in a practical daily work like this, to enter minutely upon the many varieties of tumours which surgeons have enumerated, and which are only of consequence to the medical man himself, and would confuse the general reader. Except those swellings which are the result of blows, falls, or immediately follow an accident, and are those only, indeed, with which we shall give any special direction for treatment, all tumours have for simplification been divided into *two* classes, *sarcomatous* and *encysted*. In other words, fleshy, inelastic, firm swellings, without any apparent inflammation, attended with little or no pain, a sense of dull weight in the part, and excessively sluggish in their growth, though when once excited proceeding rapidly to assume other and more important characters; and the other case, swellings or tumours, consisting of firm fibrous sacs, like gutta-percha balls of varying size, containing a fluid that, through all the superstructure of skin and adipose substance, can be felt to fluctuate. Each of these divisions has several varieties or orders, as the simple *fatty tumour*; the indolent growth known as *goitre* or *wen*; and the most dangerous of all, the *fungus hæmatodes*. In all varieties of either of the two classifications, as the patient's health at the time has much to do with the successful treatment, a surgeon should be consulted as to the best system to adopt for the cure of the disease; as, by an error of practice, a *simple* tumour might be converted into a *malignant disease*. For ordinary tumours or swellings, the result of accident or inflammation, the best mode of treatment is the soothing system of warm or hot fomentations, especially so when situated *over* a joint. In such cases, where there is any hope to disperse the swelling before running into the stage of suppuration, a warm solution of sugar of lead, half an ounce of the sugar of lead to a quart of warm water, with which a gill of vinegar has been mixed, is one of the best of applications. When, however, throbbing has set in, accompanied with increased pain and heat of the part, and constitutional tremors, such treatment is no longer of any avail, and must be set aside; matter, in that case is forming, and it must be encouraged by *hot* fomentations of chamomile flowers, or poppy-heads, and continued till the abscess is sufficiently forward to be opened. For the ordinary and common tumours, that occur on the head or face, from blows or falls, the extract of lead applied on lint for a few times, is generally the only remedy needed; sometimes indeed, when not early attended to, leeches are demanded, but if the lead is applied early, they will never be required.

TUNBRIDGE CAKES.—Rub six ounces of butter quite smooth into a pound of flour, then mix in six ounces of sugar, beat and strain two eggs and make the above into a paste. Roll it out very thin and cut it with the top of a glass into cakes; prick them with a fork, and cover with caraways, or glaze with the white of an egg, and dust a little white sugar over. Bake them in a moderate oven.

☞ Butter, 6ozs.; flour, 1lb.; sugar, 6ozs.; eggs, 2; caraways and sugar, sufficient.

TUNBRIDGE PUFFS.—Put into a nicely tinned saucepan a pint of milk, and when it boils, stir into it as much flour as will make it a thick batter; add three well-beaten eggs, and two or three drops of oil of cinnamon, or any other seasoning; dust a

large flat plate with flour, with a spoon throw on it the batter in the form of balls or fritters, and drop them into boiling clarified dripping or lard Serve them with pounded loaf sugar strewed over. The batter may be made into a pudding, adding with the eggs an ounce of salt butter. Boil, and serve it with a sweet sauce.

TUNING FORK.—In tuning the notes of a musical instrument, such as the pianoforte, the first point is to fix upon some one note, by the pitch of which all others may be determined. The only way of retaining a permanent pitch for use is by having an instrument which tune will not alter. A standard pitch is usually obtained, or professed to be obtained by the tuning fork, an instrument consisting of two steel prongs, extending from a steel handle. When these prongs are sharply struck, they vibrate, and if the instrument be then held to the ear, or placed upon the flap of a table, or any other sound-board, a low and pure sound is heard, if the prongs be perfectly equal. These tuning forks are usually made to sound either C or A.

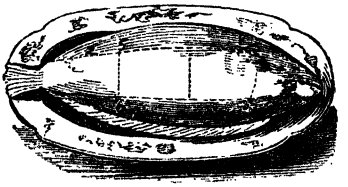
TURBOT.—This is the best of all our sea fish, and is taken on the south and east coasts of England in great numbers, and also of Norway and Holland. It is a broad flat fish, thick and fleshy, with a gelatinous skin, which is highly esteemed. The consistence of the flesh should be firm and curdy, without being hard or woolly; and it is better kept for a couple of days in a cool place.

TURBOT BAKED.—Butter the inside of the dish which is to contain it, and sprinkle it with a mixture of beaten pepper, grated nutmeg, chopped parsley, and a little salt; pour in a pint of white wine. Cut off the head and tail of the turbot, and lay it in a dish; sprinkle it with the same sort of mixture with which you did the dish, and pour over it another pint of wine. Stick small bits of butter all over the fish, dredge a little flour, and strew crumbs of bread. When baked of a fine brown, lay it on the dish; stir the sauce in the baking-dish all together; put it into a saucepan, and shake in a little flour; add a bit of butter and two spoonfuls of soy or ketchup when it boils; and when it again boils, pour it into a tureen and serve it up. The dish may be garnished with scraped horseradish, or slices of lemon.

TURBOT BOILED.—Make a brine with a handful or two of salt, and a gallon or more of water; let the turbot lie in it two hours before it is to be boiled, then set on a fish kettle with water enough to cover it, and about half a pint of vinegar, or less if the turbot is small, and put in a piece of horseradish; when the water boils, put in the turbot, the white side uppermost, on a fish plate; let it be done enough, but not too much, which will be easily known by the look; a small one will take twenty minutes, a large one half an hour; then take it up, and set it on a fish plate to drain, before it is laid on the dish, with lobster sauce or white sauce.

TURBOT FRIED.—It must be a small turbot, cut across as if it were ribbed; when it is quite dry, flour it, and put it in a large frying-pan with boiling lard sufficient to cover it; fry it till it is brown, then drain it. Or with sauce made thus: clean the pan, put into it almost enough sherry to cover it, anchovy, salt, nutmeg, and a little ginger; put in the fish, and let it stew till half the liquor is wasted; then take it out, and put in a piece of butter rolled in flour, and a minced lemon; let them simmer till of a proper thickness; rub a hot dish with a piece of shallot; lay the turbot on the dish, and pour the sauce over it.

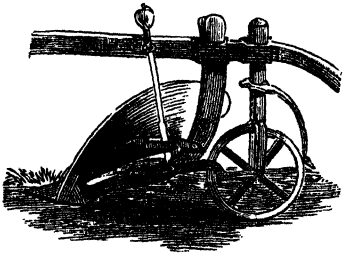
TURBOT, TO CARVE.—The fish should be placed with the underpart uppermost on the dish, so that this may be assisted in preference. Make an incision from 1 to 2, and another from 3 to 4; then cut from between



5 and 6, which is the primest part. When the whole of this side is served, assist the upper part, raising the backbone with the fork, while the fish-knife is used for the flesh; this is more solid and less delicate. The fins are much esteemed.

TURBOT, TO CHOOSE.—Turbot, and all flat fish, are rigid and firm, when fresh; the under side should be of a rich cream colour. When out of season, or too long kept, this becomes a bluish white, and the flesh soft and flaccid. A clear bright eye in fish is also a mark of being fresh and good.

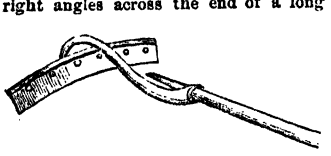
TURF CUTTER.—An implement employed for the purpose indicated by its name, is represented in the annexed engraving. In its general construction it resembles a



plough. To the free part of the beam are connected, through uprights carrying axles, two wheels, one on each side. At the back

of the basin is fitted a standard, which carries the axle of a third wheel. The axle is prolonged beyond the wheel on each side, and forged or affixed to it are two small cranks. To that before the hind wheel is fitted a curved bearer, which terminates at bottom in a share or parer, and to the support is affixed a mould-board. To each of the cranks on the axis of the hind wheel is connected a rod, the other end of which is fixed to a scraper or cleaver, which on the rotation of the wheels, travels to and fro, and clears and scrapes the share and mould-board. When the implement is regulated for the removing of turf, to a standard descending from the beam, just in the rear of the fore wheels, two cutters are fitted, one for cutting off the turf longitudinally, or in a line with that in which the implement is drawn, and the other for cutting it transversely, or in a line at right angles to that in which the implement advances. At bottom, the cutter standard terminates in a bow, which carries an axle, upon one end of which is keyed a circular disc. On the axle, and between the bow, is affixed a cutter for making the cross cut. Upon the implement going forward, the circular disc revolves, makes a continuous cut, and carrying round the other cutter with it, causes it to cut once with every revolution of the disc.

TURF SCRAPER.—A plate of iron fixed at right angles across the end of a long



handle, used chiefly to scrape off earth or the exuviæ of worms, snails, &c., from lawns, grass verges, or walks, early in the spring. In some cases, teeth, like those of a saw, are formed in the edge of the blade of such scrapers, in order to tear out the moss from lawns.

TURFING.—This operation consists in laying down turf on surfaces intended for lawns, in parterres or pleasure-grounds. The turf is cut from a smooth firm part of an old sheep pasture, free from coarse grasses; in performing this operation, the ground is first crossed by parallel lines about a foot asunder, and afterwards intersected by others three feet asunder, both headed by a line and the turf-raser. Afterwards, the turf-spade is employed to separate the undivided turfs, which are rolled up and conveyed to the spot where they are to be used. It is to be observed, that, in this case, all the sides of each turf are bevelled, by which means when they are laid down exactly as they were before being taken up, their edges will fit, and in some degree lap over each other, whereby, after rolling, a more compact surface will be formed. The surface on which the turfs are to be laid ought previously to be either dug or trenched, so as to be brought to one degree of consistency, and then rolled, so that it may not afterwards sink; the turfs being laid in such a manner that they may fit, are to be first beaten individually, and then watered and rolled till the whole is smooth and even. Edgings of turf are generally two feet broad, or upwards. The turfs being cut in regular portions, with the edges or sides of each turf perpendicular, and the two ends oblique in the slope, they are to be placed so that the one may fit exactly to the other. They are next to be beaten with the beetle, afterwards watered, and again beaten or rolled till they become very nearly level with the gravel; and finally, a line is applied to their edges and the raser used to cut them off periodically.

TURKEY BOILED.—Make a stuffing with grated bread, oysters chopped, grated lemon-peel, pepper, salt, nutmeg, about four ounces of butter or suet chopped, a little cream, and yolk of egg to make it a light stuffing; fill the craw. If there is any left, make it into balls. Flour the turkey, put it into water while cold; take off the scum as it rises; let it boil gently; a middling-sized turkey will take about an hour. Boil the balls, lay them round it with oyster sauce on the dish and in the boat. The stuffing may be made without oysters; or it may be stuffed with forcemeat, or sausage-meat mixed with a few crumbs of bread and yolks of egg. If oysters are not to be had, white celery sauce is very good, or white sauce.

TURKEY BONED.—Take a small, well-kept, but quite sweet hen-turkey of from seven to eight pounds weight, and remove, by the receipt for a fowl, all the bones, except those of the pinions, without opening the bird; draw it into shape, and fill it entirely with exceedingly fine sausage-meat, beginning with the legs and wings; plump the breast well in preparing it, and when its original shape is restored, tie it securely at both ends, and at the extremities of the legs; pass a straight iron skewer through these and the body, and another through the wings and body; then lay a twine over the back of the turkey, and pass it under the ends of the first skewer, cross it in the centre of the back, and pass it under the ends of the second skewer; then carry it over the pinions to keep them firmly in their place, and fasten it firmly at the neck. When a cradle spit is not at hand, a bottle jack will be found more convenient than any other for holding the turkey; and after the hook of this is passed through the neck, it must be further supported by a string running across the back and under the points of the skewer which confines the pinions to the hook, for otherwise its weight would most probably cause it to fall. Flour it well, place it far from the fire until it is heated through, and baste it plentifully and incessantly with butter. An hour and three quarters will roast it well. Break the bones into pieces for gravy in a pint and a half of water or good veal broth, with a little salt, a few slices of celery, a dozen corns of pepper, and a bunch or two of parsley. Brown gently in a piece of

fresh butter, a couple of ounces of lean ham; add to them a slight dredging of flour and a little cayenne, and pour to them the broth from the bones; after it has boiled for an hour, and has been strained and skimmed, shake the stewpan well round, and stew the gravy until it is wanted for the table; clear it entirely from fat, strain and serve it very hot. A shallot or half an onion may be browned with the ham, when either is liked, but their flavour is not, we think, appropriate to poultry.

TURKEY BROILED.—On the rump, gizzard, and a drumstick, put pepper and cayenne; let them be broiled, and brought to table as hot as possible; cut them in small pieces, pour over them a ladleful of mustard, ditto of melted butter, a spoonful of soy, ditto of lemon-juice, and some of the gravy out of the dish; mix quickly, and hand round. Fowls may be treated in the same way.

TURKEY GIBLETS.—The giblets consist of the pinions, the claws, the neck, liver, and gizzard. Scald the whole, and put them into a stewpan with some butter, a bunch of parsley, chives, a clove of garlic, two cloves, thyme, bay leaf, basilic, mushrooms, put all on the fire with a spoonful of flour, moisten the whole with water or stock, season with salt and pepper; stew till done, then take out the bouquet, and add three yolks of eggs, warm, but do not let it boil or it will curdle. You can vary the flavour by adding turnips or potatoes sliced.

TURKEY HASHED.—Mix some flour with a piece of butter, stir it into some cream and a little veal gravy, till it boils up, cut the turkey in pieces, not too small, put it into the sauce, with grated lemon-peel, white pepper and mace pounded, a little mushroom powder or ketchup, simmer it up. Oysters can be added.

TURKEY PATTIES.—Mince some of the white part with grated lemon, nutmeg, and a little salt, white pepper, cream, and a little butter warmed; fill the patties, and bake as usual.

TURKEY PIE.—Break the bones of a turkey, and beat it flat on the breast. Lard it with bacon, lay it in a dish with some slices of bacon under it, and season it well with salt, pepper, nutmeg, and cloves. Lay a slice of bacon over it, cover it with a crust, and bake it.

TURKEY PULLED.—Skin a turkey; take off the fillets from the breast, and put them into a stewpan with the rest of the white meat and wings, side-bones, and merrythought, with a pint of broth, a large blade of mace pounded, a shallot minced fine, the juice of half a lemon, and a roll of peel, some salt, and a few grains of cayenne; thicken it with flour and butter, and let it simmer for two or three minutes till the meat is warm. In the mean time, score the legs and rump, powder them with pepper and salt, broil them nicely brown, and lay them on or round the pulled chicken. Three tablespoonfuls of good cream, or the yolks of as many eggs, will be a great improvement to it.

TURKEY ROASTED. — When trussed for roasting, cut the liver to pieces, and set it over the fire in a stewpan, with half a pint of oysters washed, and their liquor, which must be strained, some pepper and salt, two bay leaves, two blades of mace, a piece of butter rolled in flour; let these stew very gently about ten minutes, and then take them off, singe the turkey, and stuff it with the oysters, cover the paper over it, spit it and lay it down to a good fire, but at a distance; while it is roasting, set on a stewpan, with half a pint of essence of ham; take a pint of oysters, throw them into boiling water, remove the beard, then put them into the essence of ham; add a little lemon-juice, give them a boil. When the turkey is done and in the dish, pour the sauce over it.

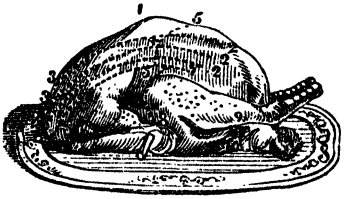
TURKEY SAUCE.—Open a pint of oysters into a basin, wash them from their liquor, and put them into another basin. Pour the liquor, as soon as settled, into a saucepan, and put to it a little white gravy and a teaspoonful of lemon pickle. Thicken with flour and butter, and boil it three or four minutes. Put in a spoonful of cream, and then the oysters. Shake them over the fire till quite hot, but do not let them boil.

TURKEY STEWED.—Choose a small turkey and bone it, fill it with a forcemeat made as follows:—Take nearly a pound of veal and the meat of two pigeons, a tongue out of the pickle, boiled and peeled, chop all these ingredients together, and beat them in a mortar with some marrow from a beef bone, or a pound of suet from a loin of veal; season them with two or three cloves, two or three blades of mace, and half a nutmeg dried at the fire, and pounded with some salt; mix all these well together, fill the turkey, and fry it of a fine brown; put it into a pot that will just hold it, lay some skewers at the bottom of the pot, to keep the turkey from sticking; put in a quart of good stock gravy, cover it close, and let it stew for half an hour, very gently; put in a glass of port wine, one spoonful of ketchup, a large spoonful of pickled mushrooms, and a piece of butter rolled in flour, cover it close, and let it stew half an hour longer, fry some hollow French loaves; then take some oysters, stew them in a saucepan with a bit of mace, their liquor, a little sherry, and a piece of butter rolled in flour, let them stew till they are pretty thick; fill the loaves with them, lay the turkey in a dish, pour the sauce over it, and lay the loaves on each side.

TURKEY STUFFING.—Take the foregoing composition for the roast turkey, or add the soft part of a dozen oysters to it, an anchovy, or a little grated ham or tongue, if you like it, is still more relishing. Fill the craw of the turkey, but do not cram it so as to disfigure its shape. Pork sausage meat is sometimes used to stuff turkeys; or fried, and sent up as a garnish.

TURKEY, TO CARVE.—In carving a turkey, it should not be divided till the breast is disposed of; but if it be thought proper to divide, the same process may be followed

as directed for a fowl. The following is the best mode of carving this bird:—Cut slices from the breast in the direction of 2 2 2 and from 4 to 3. Sever the four quarters, and



divide the thighs from the drumsticks which, being tough, should be reserved to the last. A thin slice of the forcemeat which is under the breast should be given to each person. The finest parts of a turkey are the breast, neck bones, and wings.

TURKEY, TO CHOOSE.—A turkey-cock, if young, has smooth black legs with a short spur, the eyes full and bright, and the feet limber and moist. Observe that the spurs are not cut or scraped; an operation often performed to deceive the unwary. A hen turkey is known to be fresh by the same rules; if she is old, her legs will be red and rough; if she is with eggs, the vent will be soft and open; if the vent is hard, she has no eggs.

TURKEY, TO PREPARE.—When the bird is picked carefully, break the leg-bone close to the foot; hang on a hook, and draw out the strings from the thigh; cut the neck close off to the back, taking care to leave the crop-skin long enough to turn over the back; remove the crop, and loosen the liver and gut at the throat end with the middle finger. Cut off the vent, remove the gut, pull out the gizzard, with crooked wire, and the liver will soon follow; but be careful not to break the gall. Wipe the inside perfectly clean with a wet cloth; then cut the breast-bone through on each side close to the back, and draw the legs close to the crop; then put a cloth on the breast, beat the thigh bone down with a rolling-pin till it is flat. If the turkey is to be trussed for boiling, cut the first joint of the legs off; pass the middle finger into the inside, raise the skin of the legs, and put them under the apron of the bird. Put a skewer into the joint of the wing and the middle joint of the leg, and run it through the body and the other leg and wing. The liver and gizzard must be put in the pinions, care being taken to open and previously remove the contents of the latter; the gall bladder must also be detached from the liver. Then turn the small end of the pinion on the back, and tie a packthread over the ends of the legs, to keep them in their places. If the turkey is to be roasted, leave the legs on; put a skewer in the joint of the wing, tuck the legs close up, and put the skewer through the middle of the legs and body; on the other side put another skewer in at the small part of the leg. Put it close on the outside of the side bones, and push the skewer through, and the same on the other side. Put the liver and gizzard between the pinions, and turn the point of the pinion; another skewer through the body of the bird.

TURKEY WITH TRUFFLES. — Take two pounds of truffles, brush them well, skin them, and chop them fine. Take all the fat you can find in the turkey; put in a saucepan a piece of butter, the truffles, salt, and spices; let them stew about ten minutes; add the parings of the truffles chopped, and the fat of the turkey pounded, and some bacon also pounded. Put all this into the turkey to stuff it, taking care to close it well, so that the stuffing should not escape. Roast the turkey, and serve it with truffles warm or stewed. It must stew gently in some stock which will serve for the same, and which you thicken with flour browned in butter and the parings of the truffles.

TURKEY EGGS, TO DRESS.—Though of a large size, they are delicate in flavour, and are equally valuable for the breakfast-table, cooked simply in the shell, or for compounding any of the dishes for which hen's eggs are commonly in request. They make super-excellent sauce, omelettes, custards, and puddings; and are especially to be recommended poached, or served by any other of the following receipts. Those of the smallest size and palest colour, which are the eggs of the young birds, are the best adapted for serving boiled in the shells; they are sometimes almost white. Those of the full-grown turkeys are thickly speckled, of a deep tawny hue or fawn colour. Six minutes will render the whites firm; four minutes will poach them.

TURKEYS, TO REAR.—When turkey chicks first come forth, they are extremely weak, and much assiduous care is necessary to rear them. The first thing to be attended to is, to remove them to a situation where they are not exposed to the sun's rays, which at first are too powerful for them. A woody place is the most suitable to their natural habits. Nothing is so destructive to them as rain, from which they must be protected. When young turkeys accidentally get wet, they should be brought into a house, carefully dried by applying soft towels to them and placed near a fire, and fed upon bread which has been mixed with a small proportion of ground pepper or ginger. It should be made up in the form of small peas. If the bread is too dry for this purpose, it may be moistened with a little sweet milk. Should the turkey-poults refuse to eat it, a few of these pellets may be forced down their throats. Even heavy dews prove destructive to them, and frost is no less injurious in its effects. These must, therefore, be most carefully guarded against when the hens incubate in March or early in April. Dry and sandy situations are most congenial for breeding turkeys, and especially elevated situations, where large woods are contiguous. A male turkey is sufficient for twelve or sixteen females, although the former number is probably the safest to

prevent sterility in the eggs, which is frequently the case with those of turkeys. Eggs should never be intrusted to the care of a female until she is at least two years of age; and hens may be kept for the purpose of incubation till they reach their tenth year. The largest and strongest hen's eggs should be kept for this purpose. During the time the hen is sitting it becomes necessary to place food near her, as otherwise, from her assiduity, they may be starved to death, as turkey-hens seldom move from their nest during the whole time of incubation. Where farmers rear turkeys in great numbers, they do not indulge the hen by allowing her to sit as soon as she has done laying, but keep them from her until all the other hens have ceased to lay, as it is of consequence that they should all be hatched about one time. When turkey-hens are uneasy during this interval, they may be indulged with hen's eggs. When they have all ceased to lay, each of them is provided with a nest ranged close to the wall, in a barn or other convenient place, and each is supplied with from sixteen to twenty of her own eggs. The windows and doors are then closed, and only opened once in the twenty-four hours for the admission of air, and for the purpose of feeding the hens. They are taken off their nest, fed and replaced, and again shut up. On the twenty-sixth day, the person who is intrusted with the management of the birds, examines all the eggs, and removes those that are addled, feeds the hens, and does not again disturb them till the poults have emerged from their shells and have become perfectly dry, from the heat of the parent bird; as to be subjected to cold at this time would certainly kill them. When the young birds are thoroughly dried, two of the broods are joined together, and the care of them intrusted to a single hen; and those which have been deprived of their offspring are again placed on hen's or duck's eggs, and subjected a second time to the tedious operation of incubation, in which case it is not unusual for them to bring out thirty eggs. We cannot recommend this practice in point of humanity; for the poor hens, when they have accomplished their second sitting, are literally reduced to skin and bone, and frequently so weak as hardly to be able to walk. As before hinted, great care should be taken of the young poults; besides warmth, proper food, and shade, the nearer they are to a pure running stream the better, as they drink a great deal, and nothing is of greater importance to their being successfully reared than fresh drink. They must be also carefully protected from strong gusts of wind, and on the slightest appearance of a thunder-storm, should be immediately taken into a house. They should get no food for twenty-four hours after they leave their eggs. Their first food should be hard-boiled eggs finely chopped, and mixed with crumbs of bread. Curd is also an excellent food for them. When they are about a week old, boiled peas and minced scallion are given to them. If eggs are continued, the shells should be minced down with their food to assist digestion, or some very coarse sand or minute pebbles. They should be fed thrice a day, and as they get older a mixture of lettuce-milk will be found beneficial, together with minced nettles. Barley boiled in milk is another excellent food at this period, and then oats boiled in milk. In short, the constitution of young turkeys requires at all ages every kind of stimulating food. When about three weeks old, their meat should consist of a mixture of minced lettuce, nettles, curdled milk, hard-boiled yolks of eggs, bran, and dried camomile; but when all these cannot be readily obtained, part of them must be used. Fennel and wild endive, with all plants which are of a tonic character, may be safely given to them. Too much lettuce, however, has been found to be injurious. When poults are about a month old, they should be turned out along with their parent bird into the fields or plantations, where they will find sufficient food for themselves. Grass, worms, all kinds of insects, and snails are their favourite food, and nature dictates to them such vegetables as are conducive to their general health. As their feet are at first very tender, and subject to inflammation from the pricking of nettles and thistles, they ought to be rubbed with spirits, which has the effect of hardening the skins and fortifying them against these plants. The glandulous fleshy parts and barbels of their heads begin to develope when they are from six weeks to two months old. This is a critical period with the poults, and unusual care must be bestowed on them, as they now become weak, and often sickly. A little brine mixed with their food will be found very beneficial, or spirits much diluted with water. A paste made of fennel, pepper, hemp-seed, and parsley, has been found an excellent remedy when afflicted with an inflammation of the wattles, to which they are liable when growing. They are very subject to this if the weather happens to be broken or changeable at the time these tubercles are growing. These parts swell and grow very red, which frequently proves fatal to them. If, therefore, such be the state of the weather at this critical period, the paste above recommended should be given although they are perfectly healthy, and it will be found an excellent preventive. When the inflammation becomes very great, recourse is often had to bleeding in the axillary vein, which frequently effects their recovery. Soon after the turkey-poults have acquired their first feathers, they are liable to a disease which is very fatal to them if not attended to. This distemper produces great debility, and the birds appear languid and drooping, and almost totally neglect their food. Their tail and wing feathers assume a whitish appearance, and their plumage has a bristled aspect. This is occasioned by a disease in two or three of the rump-feathers. On examination, the tubes of these will be found filled with blood. The only remedy for this disease is to pluck them out, when the bird will speedily acquire its wonted health and spirits. In fattening turkeys for the table, various methods are resorted to. Some feed them on barley-meal mixed with skim-milk,

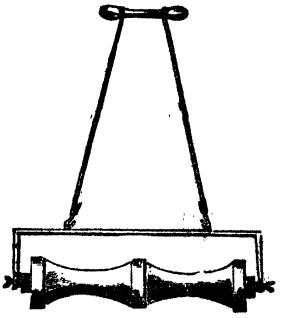
and confine them to a coop during this time; others merely confine them to a house; while a third class allow them to run quite at liberty, which latter practice, from the experience of those on whose judgment we can most rely, is by far the best method. Care should, however, be taken to feed them abundantly before they are allowed to range about in the morning; and a meal should also be prepared for them at mid-day, to which they will generally repair homewards of their own accord. They should be fed at night, before roosting, with oatmeal and skim-milk; and a day or two previous to their being killed, they should get oats exclusively. We have found from experience that when turkeys are purchased for the table, and cooped up, they will never increase in bulk, however plentifully they may be supplied with food and fresh water; but, on the contrary, are very liable to lose flesh. When feeding them for use, a change of food will also be found beneficial. Boiled carrots and Swedish turnips, or potatoes mixed with a little barley or oatmeal, will be greedily taken by them. A cruel method is practised by some to render turkeys very fat, which is termed cramming. This is done by forming a paste of crumbs of bread, flour, minced suet, and sweet milk, or even cream, made into small balls about the bulk of a marble, and passed over the throat after full voluntary meals.

TURMERIC.—Under this term are comprised many species of the *curcuma* genus of plants. Of the broad-leaved turmeric, the tubers are aromatic, and are used by the Hindoos, not only as a stimulating condiment and a medicine, but as a perfume. Its sensible properties are much like those of ginger, but not so powerful. It is employed in the East in cases of disease, as colic, cramp, torpor, &c., where stimulants are required. It is a native of Bengal, China,

and various other parts of Asia and of the Asiatic islands. Some of the other species yield a kind of ginger, and some a kind of arrow-root. The common turmeric is occasionally wild, and it is also extensively cultivated in China, Java, Malacca, and in Bengal, prospering in a moist but not swampy soil. The Chinese sort is most esteemed, rather on account of its superior richness in colouring matter than from any other cause. Two varieties are found in commerce — the round turmeric and long turmeric. Turmeric possesses an acrid volatile oil, giving it aromatic qualities which render it useful in languid habits, where digestion is difficult and circulation slow. It is of some importance as a dye; but it is as a condiment, both in the East and in this country, that it merits notice, as it is an ingredient in all curry powders and curry paste.

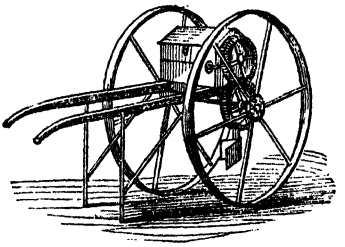
TURNIP, CULTURE OF.—The varieties of turnip commonly grown may be arranged as whites or yellows. Of white turnips, by far the best and most generally cultivated is the globe. Of yellow turnips, there are the field or Aberdeen yellow, which is more hardy than the globe, and answers well for succeeding that variety in spring. The choice of sorts may be considered as limited to the white globe, yellow, and Swedish, according as early, middling, or late supplies are wanted. The preparation of the land for the turnip crop is a matter of considerable importance. Immediately after harvest, the land should be deep ploughed, and care be taken that no water is allowed to remain on the surface. In the following spring, after the sowing of the spring corn, the land being sufficiently dry, the preparation must be resumed; that will be in the latter end of May, or the beginning of June. The land must then be cross-ploughed, and well worked over with the harrows in every direction, to thoroughly clean it. The land having been thoroughly prepared and reduced to a fine even tilth, it is formed into

drills, or single-out ridglets, from twenty-seven to thirty inches from centre to centre.

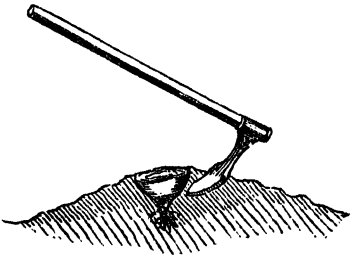


The manure is then brought in single-horse

carts, and evenly placed at the bottoms of the furrows. This being done, a double mould-board plough splits the ridge between the furrows and covers the manure, as seen in the engraving. A light roller, which covers the drills, and, therefore passes twice over the same ground, is then passed over the tops of the ridges, to flatten and compress them; the seed is then sown by means of a small seed barrow drill attached



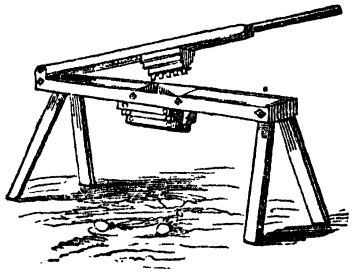
to it. It is a very simple machine, and works very well. A box, supported on two wheels, contains the seed, and revolving in it is a small brush similar to a seed machine. The brush forces the seed through a small perforated plate; a coulter, moving in front, opens a small drill, into which the seed falls; the earth is then raked over the seed by a forked piece of iron or a link of a chain. Enough seed should always be sown to allow for the frequent loss from the attacks of insects and other contingencies. About two pounds to an acre will be enough. After the sowing is completed, the plants generally make their appearance in about ten days or a fortnight, according to circumstances. When they are in rough leaf, and about three inches high, the process of horse-hoeing commences, to destroy any weeds that may have come up two or three days afterwards; they are then hand-hoed, and pieced out into spaces about ten inches or a foot apart. After that they must be singled: that is, out of every bunch of plants left when pieced off, the strongest must be selected and allowed to remain; the rest are pulled up. This operation must be carefully done, and the earth brought up to the roots of the plants left. As soon as the weeds again appear, the hoe must be again at work, and again, if necessary, until the broad leaves of the plant quite cover the ground. When the bulbs are well formed, or bottled, as it is called, a double mould-board plough is passed between the rows to earth them well up; but this must not be done to excess, as the deep furrows are inconvenient when the sheep are feeding. The culture of the turnip is then concluded. Towards the end of October, or the beginning of November, when the pastures fail, the turnips may be used for food, either as food for sheep on the ground where they grew, or they may be carried on to pasture lands, or to the homestead for other stock; or they may be stored for after use. If the latter plan be adopted, they should be removed from the field before the frost touches them. When sheep are to be fed, the turnips are either pulled up by the hand, and carried away, as wanted, into the fields in which the sheep are kept, and there spread regularly upon the ground; or more frequently and economically, the sheep are at once driven into the fields of turnips, and suffered to consume the roots as they stand. In this case, the animals are not suffered to range over the whole field, at first, but are confined to a space of an acre or more, by means of nets, or a series of moveable rails or hurdles. When the sheep have eaten the roots very nearly, the remnant in the ground may be picked up by a turnip-picker, such as seen in the accom-



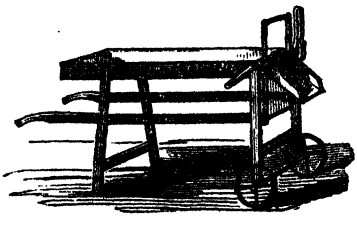
panying figure. By its mode of action, the top root of the turnip is cut through, and the shell separated from the ground at one stroke. The turnip crop is liable to a variety of casualties, more especially in the early state of its growth, either from want of moisture when the seed germinates, or afterwards from the attacks of the turnip-fly, a species of beetle that attacks the young plants. It is considered safe from this when the leaves appear rough. A vigorous growth, therefore, is the most likely thing to escape its ravages. There are often insects that attack the plants in its later stages, but not so frequently. They are also subject to a species of blight or canker, which prevents their growing. The roots, instead of enlarging, form excrescences, and are distasteful to cattle. A maggot is formed in them when they begin to decay. This destructive disease is well known, and is generally called "fingers and toes." If it appears very prevalent in a particular locality, it is better to substitute some other crop for a time, and it will disappear entirely. Previous to turnips being stored, the tap-root and top leaves must be removed; but not so as to injure the bulb. Turnips may be stored either in covered buildings, in pits, or in heaps; the latter plan is preferred. The heaps should be about eight feet wide at the base, of any length, and piled as high as they will stand; the heap is then thatched with straw, and secured with straw ropes. Taking up and replacing is a mode by which turnips have been pre-

served by some growers. The mode is to cart the turnips from the field where they grow to a piece of ground near the farm offices, before the winter rains set in, when, the tap-root being cut off, the plants are set on the surface of the ground, in an upright position, as close to each other as they can stand, when they keep much better than in a store during the whole season. The advantages of having them quite close to the homestead, in place of bringing them, most probably, from a distant part of the farm in wet or stormy weather, are sufficiently obvious to justify the practice. To raise turnip seed, the usual mode is to select the most approved specimens of the variety to be raised at the season when they are full grown; and either to remove all others from the field, and leave them to start into flower-stems next year, or to transplant them to a place by themselves, where they will be secure from the farina of other plants of their genus. In either case, they must be protected by earthing up from the winter's frosts and rains, and, in the ripening season, from the birds.

TURNIP CUTTER.—When cattle are fed off turnips, it is necessary to cut the turnip in order to avoid waste, and to render it



more readily eatable. For this purpose, a turnip cutter, such as seen in the engraving, is called into use. A similar kind of implement, known as the turnip slicer, is also much used, and is illustrated in the annexed engraving. It is easily moved from place



to place on two small wheels, drawn along by means of two handles. It is sufficiently effective to supply sliced turnips to a small flock of sheep, and is particularly convenient for use where a few sheep are placed by themselves, such as tups in the corner of a grass field, or ewes in a paddock at the period of lambing. The instrument consists of a wooden frame, supporting a trough, together with the cutting apparatus. The frame is formed of four posts, spreading a little below. Each part is connected by cross-rails, and they are connected longitudinally by the bars, which form also the handles of the wheelbarrow; being bolted to the posts at a suitable height for that purpose. A pair of wheels, of cast iron, fitted to an iron axle, which is bolted to the front parts, gives it the conveniency of a wheelbarrow. The trough, into which the turnips are laid for cutting, has a sloping continuation in front of the cutters, for throwing off the sliced turnips. The cutting apparatus consists of a grooved frame of iron, in which the compound cutter moves up and down by means of the lever handle. A forked support is bolted by a pin to the further side of the wooden frame, and at the extremity of the fork a swing link is jointed. The lower end of the link is jointed to the extremity of the lever, which is likewise forked, forming its fulcrum; and the gridiron cutter is also jointed by its top bar to the lever. While the point, therefore, of the cutter moves in a parallel line, by its confinement of the grooves in the frame, the fulcrum is allowed to vibrate on the joint of the swing link, thus allowing an easy vertical motion to the cutter through the full range of its stroke.

TURNIP PIE.—Season some mutton chops with salt and pepper, reserving the ends of the neck bones to lay over the turnips, which must be cut into small dice, and put on the chops. Add two or three spoonfuls of milk, also a sliced onion, if approved, and cover with a crust.

TURNIP SOUP.—Take from a knuckle of veal all the meat that can be made into cutlets, and stew the remainder in five pints of water, with an onion, a bundle of herbs, and a blade of mace. Cover it close, and let it simmer over a slow fire four or five hours. Strain it, and set it by till the next day. Then take the fat and sediment from it, and simmer it with turnips, cut into small dice, till tender, seasoning it with salt and pepper. Before serving, thicken with flour and cream.

TURNIP TOPS, TO BOIL. — Gather young turnip tops in the spring; wash and drain well; put them into plenty of boiling water, with a little salt; boil for twenty minutes, or a little longer; then take them out, and serve plain after draining them; or chop them fine, and mix them with a little butter, pepper, and salt.

TURNIP WINE.—Take a large number of turnips; pare and slice them; then place in a cider press, and obtain all the juice you can. To every gallon of juice add three pounds of lump sugar and half a pint of brandy. Pour into a cask, but do not bung until it has done working; then bung it close for three months, and draw off into another cask. When it is fine, bottle and cork well.

TURNIPS BOILED.—Pare them, taking care to remove all the inner rind, put them into the saucepan with the meat you are cooking, either whole or cut in halves; young turnips will require three-quarters of an hour, and if they are middle-aged, one hour and a quarter. Old ones should never be used when they are to be eaten with the meat, for they are stringy and bitter; indeed, they should be cautiously used even for soup.

TURNIPS MASHED.—When they are boiled quite tender, squeeze them as dry as possible between two trenchers, put them into a saucepan, mash them with a wooden spoon, and rub them through a cullender, add a little bit of butter, keep stirring them till the butter is melted and well mixed with them, and they are ready for table.

TURNIPS STEWED.—After they have been washed, wiped quite dry, and pared, slice the turnips nearly half an inch thick, and divide them into dice. Dissolve an ounce of butter for each half-pound of the turnips, put them in as flat as they can be, and stew them very gently indeed, from three-quarters of an hour to a full hour. Add a seasoning of salt and white pepper when they are half done. When thus prepared, they may be dished in the centre of fried or nicely boiled mutton cutlets, or served by themselves.

TURNIPS, TO PRESERVE.—The best way is to stack them up in straw in the following manner:—One load of any sort of dry straw is sufficient for an acre of fifty tons weight. Pull up the turnips, top and tail them, then throw them in a sort of windrow, and let them lie a few days to dry. First place a layer of straw next the ground, and upon it a layer of turnips about half a yard thick, then another layer of straw, so go on alternately with a layer of straw and a layer of turnips; every layer grows narrower, till it comes to a point at the top, like a sugar-loaf. The last layer must be straw, which serves to keep all dry. You must observe always when you have laid a layer of turnips, to stroke or lap over the ends of the under layer of straw, in order to keep them close or from tumbling out. The heap should be as large as a hay-cock; the tops may be given to sheep or cattle as they are cut off.

TURNOVER. — Roll some paste out quickly, nearly half an inch thick, and cut it into pieces, about five inches wide. Lay a small quantity of any kind of preserved fruit, jam, or marmalade on them, double them over, and cut them into squares, triangles, crescents, or any shape you like, closing them very neatly by wetting and pinching them at the sides. Lay them, with paper, on a baking tin, ice them the same as pies and tarts, and bake them about twenty minutes, taking care not to discolour the icing. The following makes a good paste for fruit turnovers. Rub a quarter of a pound of butter in one pound of flour, make a hole in the middle, and put in a little water, two yolks and one white of egg, work them all up to a proper consistency and roll out for use.

TURPENTINE.—A substance of various kinds, chiefly an exudation from different species of pines. Common turpentine is the fluid resinous exudation from the Scotch fir, and others of the pine tribe. From this the valuable oil of turpentine or spirits of turpentine, as it is frequently called, is obtained by distillation, the dry substance which remains constituting the resin. Oil or spirits of turpentine is a valuable remedy either externally or internally. In the former case, if applied to the skin, by means of cloths soaked in it, it is a powerful counter-irritant, acting like mustard, and sometimes even blistering. It is often employed for purposes of counter-irritation in inflammatory diseases in the abdomen. When thus used it should be warmed, by placing the pot or bottle containing the turpentine in hot water. In rheumatic affections, lumbago, sciatica, &c., turpentine is a valuable addition in liniments. Internally it acts as a remedy for renal complaints, for worms, hæmorrhage, &c.

TURTLE SOUP. — Hang up the turtle, the night before it is to be dressed, cut off its head, or a weight may be placed on its back, to make it extend itself, after which cut off its head and fins. In the former case it must bleed freely. When dead, cut the belly part clean off, sever the fins at the point, take away the white meat, and put it into spring water. Draw, cleanse, and wash the entrails, scald the fins, the head, and the belly shells; saw the shell about two inches deep all round, scald and cut it in pieces; put the shell, head, and fins into a pan, cover them with veal stock, add shallots, thyme, savory, marjoram, parsley, a little basil, cloves, mace, and a nutmeg; chop the herbs, and pound the spice very fine, stew it till tender, then take out the meat, and strain the liquor through a sieve. Cut the fins in three pieces, and take all the brown, as the meat is called, from the bones, and cut it in neat square pieces. Melt butter in a stewpan, and put the white meat to it, simmer it gently till nearly done, then take it out of the liquor, and cut it in pieces about the size of a goose's egg. Cover the bowels, lungs, heart, &c., with veal stock; add herbs and spices as before, and stew them till tender. The liver must be boiled by itself, being bitter, and not improving the colour of the other entrails, which should be kept as white as possible. The entrails being done, taken up, and cut in pieces, strain the liquor through a sieve. Melt a pound of butter in a stewpan large enough to hold all the meat; stir in half a pound of flour, put in the liquor, and stir the whole till well mixed. Make a number of forcemeat balls. Put to the whole three pints of Madeira, a high seasoning of cayenne pepper, salt, and the juice of two lemons. The deep shell must be baked, whether filled or not, as the meat must be either browned in the oven or with a hot iron. The shell being thus filled, the remainder is to be served in tureens. In filling up the shells and tureens, a little fat should be put at the bottom, the lean in the centre, and eggs and forcemeat balls, with part of the entrails, on the top.

TWELFTH-CAKE. — Two pounds of sifted flour, two pounds of sifted loaf sugar, two pounds of butter, eighteen eggs, four pounds of currants, half a pound of almonds blanched and chopped, half a pound of citron, one pound of candied orange and lemon-peel cut into thin slices, a large nutmeg grated, half an ounce of ground allspice; ground cinnamon, mace, ginger, and coriander, a quarter of an ounce of each, and a gill of brandy. Put the butter into a stewpan, in a warm place, work it into a smooth cream with the hand, and mix it with the sugar and spice in a pan (or on a paste board) for some time, then break in the eggs by degrees, and beat it at least twenty minutes; stir in the brandy, and then the flour, and work it a little, add the fruit, sweetmeats, and almonds, and mix all together tightly; have ready a hoop cased with paper on a baking plate, put in the mixture, smooth it on the top with your hand dipped in milk, put the plate on another, with saw-dust between, to prevent the bottom from colouring too much; bake it in a slow oven four hours or more, and when nearly cold ice it. If made in cold weather, the eggs should be broken into a pan, and set into another filled with hot water, likewise the fruit, sweetmeats, and almonds, laid in a warm place; otherwise it may chill the butter, and cause the cake to be heavy.

☞ Flour, 2lbs.; sugar, 2lbs.; butter, 2lbs.; eggs, 18; currants, 4lbs.; almonds, ½lb.; citron, ½lb.; orange and lemon-peel, 1lb.; nutmeg, 1; allspice, ½oz.; cinnamon, mace, ginger, coriander, ½oz. each; brandy, 1 gill.

TYPHUS, OR NERVOUS FEVER.—This disease, sometimes denominated jail, hospital, or camp fever, is usually divided into two varieties, *typhus mitior*, or low nervous fever, and *typhus gravior*, or putrid fever; both forms being highly contagious.

Mild typhus, or low nervous fever.—This disease is indicated by lassitude, depression of spirits, loss of appetite, cold chills, and hot flushes, pains in the head, back, and limbs, nausea, and sometimes sickness, confusion of ideas, difficult and anxious respiration, pulse weak, small, and quick, occasionally intermittent. The tongue, at first moist and white, becomes coated with a dark brownish fur, and when protruded, is attacked with tremor. As the disease advances, the heat on the surface increases, the tongue becoming dry, hard, and brown, or unnaturally red; the mind grows more confused, and the ideas still more dis-associated, a low muttering delirium sooner or later supervening, attended with flushed face and redness of the eyes, with more or less of throbbing of the temporal arteries: at the same time all the secretions are suppressed, and the skin feels hot and dry. In severe cases, all the symptoms become exaggerated, and a deep coma terminates the case. The *predisposing* causes of typhus are either a delicate and nervous state of body, strong depressing emotions of the mind, impure air, and bad living, or exposure to great heats and colds. The direct or immediate cause is contagion. In the *treatment* of typhus, as in all other fevers, the first object of the physician is to reduce the heat and febrile symptoms, by unloading the stomach and acting on the bowels; for this purpose an emetic of fifteen grains of ipecacuanha and one grain of tartar emetic, mixed in a little warm water, should be given as early as possible, and the vomiting encouraged by frequent draughts of warm water. As soon as the emetic has ceased to act, a dose of Epsom salts should be administered, and if necessary, repeated in three or four hours; and when the bowels have been moderately, but sufficiently acted on, two tablespoonfuls of the following mixture are to be given every six hours. Take of—

Solution of acetate of ammonia	2 ounces
Syrup of saffron	2 drachms
Mint water	6 ounces
Spirits of nitre	2 drachms
Antimonial wine	3 drachms

Mix. Should the heat of the skin continue unabated, the body should be hastily sponged with cold vinegar and water, and the patient returned to bed undried. As bleeding from the system—unless adopted in the earliest stage—is considered very questionable practice, any excessive action, either in the chest or head, must be met by local remedies, such as blisters or leeches. The head should be early shaved, or the hair cut close, and the scalp kept cool by bladders of pounded ice, or cold evaporating lotions, such as the following. Take of—

Sal ammoniac	3 drachms
Camphor water	1 pint
Nitre	1 drachm

Dissolve, and add

Ether	½ ounce

Linen cloths wetted with this, are to be applied frequently to the scalp. At the same time that the head is kept cool, the feet are to be preserved of a steady heat by bottles of hot water. The patient is to be supplied with cold drinks, the room frequently and well ventilated, and sprinkled with vinegar or chloride of lime. In the first stages of the disease, the diet must be particularly mild and light, such as farinaceous foods; but as soon as the severity of the symptoms abates, the regimen must be altered, and the patient stimulated by a richer diet, by wine, and if necessary, spirits, to resist the consequences of the excessive debility that about the seventh or ninth day usually supervenes, and which, if not resisted, would eventuate in putrid fever, or what is known as *typhus gravior*, or *malignant typhus*. This, though frequently a sequence of the former disease, is very often a primary affection; in which case it is always much more sudden than the other form of typhus, more rapid in its progress, and infinitely more severe in all its symptoms; the heat of the skin is greater, the anxiety more excessive, the pains in the back, joints, and head far more acute; the tongue dark and furred, the pulse quick, small, and hard; the nausea

passes into retching, which ends in bilious vomiting; the breath becomes hot and fœtid, and a blackish brown crust, called *sordes*, forms on the lips, teeth, and gums, while a prostrating debility attends every change. As the disease advances, blood either oozes from the gums or mouth, or is effused below the cuticle in drops, giving rise to the dark purple spots, called *petechiæ;* the face becomes sharp and withered, a muttering delirium follows, the tendons of the wrist start up, and the patient picks at the bed clothes.

Treatment.—In the first stage, and to moderate the fever, the same treatment recommended in the former disease must be adopted, and any local symptom treated according to its severity, by blisters, leeches, or lotion. As, however, the debility is the most dangerous evil to be encountered, food and tonics must in this disease very early form a great and important part of the treatment; and considerable judgment is required to know at what exact period of time to commence the dietetic system. Beef tea or strong mutton broth, slightly thickened with a small quantity of sago, semolina, or tapioca, must be administered in a few tablespoonfuls at a time every quarter of an hour; and when the patient is too weak to help himself, or becomes unconscious from the nervous state of the head, the mouth must be opened by pressing with the fingers of the left hand the cheeks, between both jaws, till the muscular rigidity is overcome, and the teeth part sufficiently in front to admit the introduction of a spoon; and the same amount of nourishment administered every fifteen minutes. Concurrent with the nourishment, though at different times, doses of the following tonic mixture are to be given either every two, three, or four hours, according to the amount of debility or prostration existing. Take of—

Infusion of quassia .	5½ ounces
Aromatic confection .	½ drachm
Compound tincture of valerian	2 drachms

Mix, and add ten grains of quinine dissolved in half an ounce of water, and thirty drops of diluted sulphuric acid. Mix thoroughly, and give a tablespoonful to commence with for a dose, increasing the quantity, according to circumstances, to two or more spoonfuls. The debility is often so excessive, though tonics and nourishment are freely administered, that it becomes necessary to use the most powerful stimulants at the same time, to rouse the system from the state of putrescence into which it is frequently lapsing. For this purpose, ammonia, camphor, ether, opium, wine, and brandy are, either separately or united in a mixture or draught, the remedies to which the physician looks to save his patient from the fatal prostration that characterises the end of the disease. When the pulse is hard and quick, the tongue dry, the breathing oppressed and difficult, much thirst, and a flushed hot skin, as a general, but not invariable rule, stimulants are *inadmissible;* while a moist tongue, a weak compressible pulse, and cold extremities, urgently *demand* their use. When wine is given, it should be either as strong negus, or neat in half glasses at a time; the spirits should be always given in water, either alone or with fifteen drops of sal volatile and five of ether in each dose of about a wineglassful; or the wine and brandy may be administered separately, and alternated with a dose of the following mixture, being a combination of all the other stimulants. Take of—

Camphor water	5 ounces
Sal volatile	1 drachm
Laudanum	1 drachm
Aromatic tincture . . .	½ ounce
Ether, spirits of . . .	1 drachm

Mix. One or two spoonfuls to be taken either every two or four hours. The bowels are to be kept gently open by a calomel and colocynth pill, followed by a teaspoonful of Epsom salts dissolved in a tumbler of water; and all the local remedies advised in the former disease are, as the symptoms require, to be adopted in this: the body sponged when necessary, the room well ventilated, and the atmosphere frequently purified by burnt vinegar, chloride of lime, or disinfecting liquids. Saline, effervescing, or acidulated drinks are to be given frequently; and besides the diet that the stage of the disease may demand, fresh ripe fruits, baked apples or pears, may be eaten at any time when the patient's appetite enables him to do so. In no disease is the after treatment during convalescence more difficult, and in none does it demand more time, care, and judgment, than in putrid typhus.

U.

UDDER AND TONGUE PIE.—Parboil a tongue and an udder, slice them tolerably thin, and season them with pepper and salt. Put a puff paste round the edge of a dish, place a layer of udder and tongue at the bottom, then some stoned raisins, followed by another layer of udder and tongue until the dish is filled. Cover the top with a crust, bake the pie, remove it from the oven, and pour in the following sauce. Beat up some yolks of eggs with vinegar, white wine, sugar, and butter. Shake them over the fire till on the point of boiling, and pour it into the pie just previously to being sent to table.

UDDER, WITH TONGUE.—After cleaning the tongue well, salt it with common salt and saltpetre three days, then boil it, and with it a fine young udder with some fat to it, till tolerably tender; then tie the thick part of one to the thin part of the other, and roast the tongue and udder together. Serve them with good gravy, and currant jelly sauce. A few cloves should be stuck in the udder.

ULTRAMARINE.—This is a well-known blue pigment of extraordinary beauty, and great permanence. Ultramarine was originally pepared from the lakes lazuli or lazulite. This mineral presents itself in small masses of granular structure, in a rock of heterogeneous structure; this rock, which in commerce is called lapis, sells for a higher or lower price for pigments, according to the proportion of lazulite which it is found to contain. The most perfect specimens of lazulite are used as gems; while the less perfect are used in the preparation of ultramarine. The lazulite is made red hot, quenched, pounded to powder, washed, dried, made into a paste with pure linseed oil, and certain resinous substances, kneaded, diffused in hot water, and allowed to settle until the ultramarine (leaving all the other ingredients) falls to the bottom. The whole of these processes require great care. This colour is now prepared at a very moderate price, and is equal in beauty to that obtained from the lazulite. The artificial ultramarine is stated to be prepared by adding freshly precipitated silica and alumina mixed with sulphur, to a solution of caustic soda, and the mixture is to be evaporated to dryness; the residue is put into a covered crucible and exposed to a white heat, by which, when the air has partial access to it, a dark pure blue mass is obtained; the product is then reduced to impalpable powder. The proportion of materials to be used is, about thirty-six silica, thirty-six alumina, twenty-four soda, and three sulphur.

UMBRELLA.—The variable climate of England renders an umbrella a very useful and indeed almost indispensable article of possession; and these articles are now so conveniently made, that they may be carried about and occasion no more inconvenience than an ordinary walking-stick. The best and most expensive umbrellas are made of silk, and, with proper care, they will last for years; others are made of alpaca, and are a good substitute for silk; and a third kind, the cheapest and commonest, are manufactured from gingham. In purchasing an umbrella, it is a question whether it is better to select an expensive or a cheaper one, because these articles are so peculiarly liable to be lost or stolen. On the other hand, it should be borne in mind that the possession of a good umbrella will induce a person to be careful of it, and thus to retain it in his possession when a common one would be lost. Some persons object to carrying umbrellas on the score of trouble, but in point of fact this trouble is imaginary, and not greater than the wearing of a hat. It is certain that a person who is always provided with an umbrella need not fear the weather, and he is also spared those disagreeable contingencies—the chance of getting wet, encroaching under another person's umbrella, or being under the necessity of borrowing one, consequently involving the trouble of returning it, and possibly, as is the case nine times out of ten, inconveniencing the lender by neglecting to return it. Those who disdain the use of umbrellas, generally appear with shabby hats, soiled bonnet ribbons, wrinkled silk dresses, &c., the consequence of frequent exposure to unexpected showers, to say nothing of colds taken, and other kinds of indisposition. Umbrellas may be made to last a longer time than ordinarily by proper care. When not in use, they should be enveloped in an oilskin case, which may be purchased at the shops where umbrellas are sold. It is important that the handle of the umbrella should terminate with a hook, so that it may be hung up, instead of being laid about in corners, on tables, &c., and thus lost. This hook should also be a natural continuation of the handle, and not fastened on, as, under this condition, it is frequently coming loose and falling off. If the umbrella is wet, do not unfurl it for the purpose of drying it more rapidly. If you do, the whalebones acquire a peculiar set, which it is almost impossible to obviate; they become permanently bent, in consequence of the shrinking of the cloth while drying, and give the umbrella, when closed, a bulging and unseemly appearance. Umbrellas manufactured with steel ribs, should not be kept tightly done up when not in use, as the continual pressure of the steel ribs on the material cause it to wear through those parts, and in the course of time, produces a fracture. It is prudent to keep two umbrellas, one for your own use, and one to lend in emergencies, for it is proverbial that borrowed umbrellas are never returned, or if returned, not until they are half worn out, and the immediate call for them has gone by.

USQUEBAUGH.—Usquebaugh is a strong compound liquor, chiefly taken by way of dram; it is made in the highest perfection at Drogheda, in Ireland. The following are the ingredients, and the proportions in which they are to be used: take of best brandy, one gallon; raisins stoned, one pound; cinnamon, cloves, nutmeg, and cardamoms, of each, one ounce; rind of one Seville orange, and brown sugar candy, one pound. Shake these well every day, for at least fourteen days, and it will, at the expiration of that time, be ready to be fined for use.

V.

VACCINATION.—This operation is so easily taught, learned, and practised, that trifling attention to a few simple rules may render any person a benefactor to his neighbourhood. Vaccination is constituted by the introduction of matter beneath the skin, in consequence of which a little bladder of peculiar appearance is formed, and passes through various stages, till the progress of vaccination is complete. The younger the lymph, the greater its intensity. The lymph of a fifth-day vesicle, when it can be obtained, never fails. It is, however, equally powerful

up to the eighth day, at which time it is also most abundant. After the formation of areola, the true specific matter of cow-pox becomes mixed with variable proportions of serum, the result of common inflammation; and diluted lymph is always less efficacious than the concentrated virus. After the tenth day the lymph becomes mucilaginous, and scarcely fluid, in which state it is not at all to be depended on. Infantile lymph is more to be depended on than the lymph obtained from adults. For the proper performance of vaccination, let the lancet be exceedingly sharp, and if fresh lymph is to be used, its point must be introduced into the vesicle of the child near at hand, in such way as to bring out upon it some lymph without drawing blood, and is then to be inserted into the arm of the child to be vaccinated. It should penetrate the skin to a considerable depth. In making the incision the skin should be held perfectly tense between the forefinger and the left hand. The lancet should be held in a slanting position, and the puncture made from above downwards. With lymph of ordinary intensity, five vesicles should be raised, and these should be at such distance from each other as not to become confluent on their advance to maturation. About the third day a blush appears distinctly at the vaccinated points; by aid of the microscope, the effluence surrounding the inflamed point will be distinctly seen even on the second day. On the fifth day, the scarf skin is elevated into a pearl-coloured vesicle, containing a thin and perfectly transparent fluid in minute quantity. The shape of the vesicle is circular or oval, according to the mode of making the incision. On the eighth day the vesicle is in its greatest perfection; its margin is tinged, and sensibly elevated above the surrounding skin. In colour, the vesicle may be yellowish or pearly. The vesicle possesses the indented form characteristic of small-pox. On the eleventh day the areola begins to fade, leaving in its decline two or three concentric circles of a bluish tinge. Its contents now become opaque, the vesicle itself begins to dry up, and a scale forms, of a circular shape and of a brown or mahogany colour. By degrees this hardens and blackens, and at length, between the eighteenth and twenty-first day, drops off, leaving behind it a scar of a form and size proportioned to the prior inflammation. A perfect vaccine scar should be of a small size, circular, and marked with radiations and indentations. These show the character of the primary inflammation, and attest that it has not proceeded beyond the desirable degree of intensity. Until the eighth day the constitution seldom sympathises. At that period, it is usual to find the infant restless and uneasy. The bowels are disordered, the skin is hot, and the sleep disturbed. These evidences of constitutional sympathy continue for two or three days. There is, however, much variety observable now. Some children suffer lightly in their general health throughout the whole course of vaccination; others exhibit scarcely any indication of fever, although the areola be extensive and the formation of lymph abundant. In this way vaccination is to be managed when the lymph can be obtained fresh from the vesicle of a child who is passing through the disorder. But it may happen that vaccination has to be performed where no fresh lymph is to be obtained; and it may have to be procured from a great distance, and much time may necessarily have to pass ere it arrives. To meet this emergency, there are various modes of conveying lymph. It may be collected in stoppered bottles, and in little glass bulbs, which will do well enough for two or three days; ivory points, when well armed and carefully dried, are very effective. In vaccinating with a point, which is a piece of ivory shaped like a very narrow lancet, the proceeding is rather different from vaccinating with fresh matter. The point having been chosen, the dried lymph upon it must be moistened by breathing upon it a few times. Punctures in the skin are to be made with a lancet in the same way as already directed, and then the point having been breathed on again, must be passed into each wound thus made, and gently pressed, so as to transfer the lymph from the point to the wounds. During the progress of vaccination, care should be taken that the vesicle is not burst or injured; for if it be, the progress of the disorder cannot be watched, nor its having passed through its proper course ensured.

VALERIAN.—This is a herb, or undershrub, possessing many valuable qualities. It is a native of Europe, and by the sides of rivers, and in ditches, and moist woods is abundant in Great Britain. The root has a very strong smell, which is dependent on a volatile oil. It is very attractive to cats,

and also to rats, and is employed by rat-catchers to destroy rats. It is also employed in medicine at the present day. The root, or more properly, the rhizoma, with its root

fibres, is used in medicine. The medicinal action is chiefly due to the volatile oil and extractive.

VALET.—The valet in small families is expected to assist as footman also; but his particular province is to attend exclusively to the personal accommodation of his master. Upon him he waits during all times that the toilet is being made; preparing and arranging every article that may be required; brushing and folding clothes, &c. The wardrobe is also placed under the care of the valet, and it is his duty to see that all necessary repairs are done. For wet weather, when his master may come in from riding or walking, the valet should be always prepared, by having ready the necessary changes of linen and clothes, and by being himself in waiting to remove the damp clothing, and to prevent its being injured in the drying. In preparing for journeys, the valet should endeavour to ascertain the probable time of his master's absence, that he may be able to provide a sufficiency of linen and other clothing. At the inns, he takes charge of these supplies, and, as at home, places everything in readiness for the periods of dressing and undressing. Besides this, if his master be unattended by his footman, it is his duty to attend to his accommodation generally, as well as his dressing-room. Whenever his master needs his services, he must be at hand; even at table, if more than ordinary attendance be required, he must be ready to wait. By these requisites it will be seen that a valet should be handy and versatile. A good education will be found of great service in a situation of this nature; and a knowledge of French, German, and other European languages, will be found to enhance considerably the services of the valet who possesses it.

VANILLA.—As the greater portion and the finest kinds of the vanilla of commerce, are imported from Vera Cruz, the most important species must be natives of Mexico. The fruit is the only part of the plant that is used. It has a balsamic odour, and a warm agreeable flavour. For these properties it is indebted to a peculiar volatile oil, and to a considerable quantity of benzoic acid. The fruit is gathered when it gets yellow, and it is first allowed to ferment for two or three days, it is then laid in the sun to dry, and when about half dried, it is rubbed over with the oil of cocoa; it is again exposed to the sun to dry, and oil again a second time. The fruit is then collected in small bundles, and wrapped up in the leaves of the Indian reed. Neither in Guiana nor in Mexico is the vanilla plant cultivated, but the fruit is collected by the natives, who sell it to the Europeans.

VANILLA CREAM.—Boil one ounce of isinglass in a pint of milk, for ten minutes, taking care it does not stick to the bottom of the stewpan. Put into it half a stick of vanilla, cover it down, and let it stand till nearly cold. Beat up the yolks of five eggs, mix into them six ounces of pounded sugar, put these into a stewpan; take the vanilla out of the milk, which add to the eggs. Mix them well and stir the custard over the fire till it thickens, but do not let it boil. Strain it into a bowl; keep stirring it, and when on the point of setting, add three pints of cream well whipped, mix it well, and pour it into a mould, set it upon ice till wanted, when dip it for a moment into warm water, wipe it dry, and turn over upon a dish.

VANILLA CUSTARD FROTHED.—Sweeten and flavour one pint of milk with vanilla. Beat the whites of seven or eight eggs to a stiff froth; and when the milk boils, take out a tablespoonful of the froth and let it set in the milk, turning it once. Put it on a sieve to drain, then another, and another. When there is a sufficient quantity, strain the milk, and make it into a custard in the usual way, eight or nine eggs to a pint of milk. Put the custard, when cold, into a glass dish, and place the frothed whites upon it.

VARNISH, FOR BASKETS.—Take either red, black, or white sealing-wax, whichever colour you wish to make; to every two ounces of sealing-wax, add one ounce of spirit of wine, pound the wax fine, then sift it through a fine lawn sieve, till you have made it extremely fine, put it into a large phial with spirits of wine, shake it, let it stand near the fire forty-eight hours, shaking it often; then with a little brush, rub your basket all over with it, let them dry, and do them over a second time.

VARNISH, FOR CARDWORK.—Before varnishing cardwork, it must receive two or three coats of size, to prevent the absorption of the varnish and any injury to the design. The size may be made by dissolving a little isinglass in hot water, or by boiling some parchment cuttings until dissolved. In either case the solution must be strained through a piece of clean muslin, and for very nice purposes should be clarified with a little white of egg. A small clean brush, called by painters a sash tool, is the best for applying the size, as well as the varnish. A light delicate touch must be adopted, especially for the first coat, lest the ink or colour be started or smothered.

VARNISH, FOR DRAWINGS.—Boil some parchment in clear water, in a glazed pipkin, until it becomes a fine clear size; strain and keep it for use; give your work two coats, observing to do it quickly and lightly. When dry, apply the varnish.

VARNISH, FOR GRATES.—Melt four pounds of common asphaltum, and add two pints of linseed oil, and one gallon of oil of turpentine. This is usually put up in stoneware bottles for sale, and is used with a paint brush. If too thick, more turpentine may be added.

VARNISH, FOR PAPER HANGINGS.—The cheapest kind is ordinary turpentine varnish, which can be bought for three shillings a gallon. Another kind is paper or crystal varnish, the price of which is six shillings per gallon, but owing to the great proportion of turpentine which these contain, they are not to be depended on for use

or durability. The best low-priced varnish that can be used for the purpose is oak varnish, which costs from ten to twelve shillings per gallon. The body of this consists chiefly of oil; it is therefore durable, not apt to crack, and presents a smooth glossy surface. In all cases the wall should have two coats of size before the varnish is laid on.

VARNISH, FOR SEALING WAX.—The method of making the varnish or japan is very easy, being simply reducing the wax to a coarse powder, and pouring the best spirits of wine on it in a bottle, and letting it gradually dissolve without heat, shaking the bottle occasionally, till it is all dissolved. A two ounce stick of the best wax will be enough for a quarter of a pint of spirits. Recollect that much depends on the goodness of the sealing wax, and that you may vary the colour of the varnish by using different coloured wax. As this varnish dries very quickly, it should not be made until it is wanted for use.

VARNISH, TO POLISH.—Take two ounces of tripoli powdered, put it in an earthen pot with water to cover it, then take a piece of white flannel, lay it over a piece of cork or rubber, and proceed to polish the varnish, always wetting it with the tripoli and water. It will be known, when the process is finished, by wiping a part of the work with a sponge and observing whether there is a fair even gloss. When this is the case, take a bit of mutton suet and fine flour, and clean the work.

VARNISH, WHITE.—The white varnish used for toys is made of sandarac, eight ounces; mastic, two ounces; Canada balsam, four ounces; alcohol, one quart. This is white and drying. Varnish for objects of the toilet table, such as work-boxes, card cases, &c., is made of gum sandarac, six ounces; elemi (genuine) four ounces; animi, one ounce; camphor, half an ounce; rectified spirit, one ounce. Melt slowly. These ingredients may, of course, be lessened in proportion.

VASES, FOR FLOWERS.—Vases of many forms, rustic or classic, may be introduced with good effect for containing flowers in pots, or otherwise; being raised on stone pedestals, or any other appropriate point which the garden or its adjuncts may afford. The rustic vase should have the ornamental part made of plaited osiers nailed on rough wood. The classical vase may be obtained in an endless variety of shapes in cast-iron or composition, to resemble free-stone.

VEAL A LA BOURGEOIS.—Cut lean pieces of veal, lard them with bacon, and season with pepper and salt, beaten mace, cloves, nutmeg, and chopped parsley. Put slices of fat bacon into a stewpan, lay the veal on them, cover the pan, and set it over the fire for eight or ten minutes to heat it. Then with a brisk fire brown the veal on both sides, and shake some flour over it. Pour in a quart of good gravy, cover close, and stew it gently till done. Take out the slices of bacon, skim off the fat, and beat up the yolks of three eggs with some of the gravy. Mix all together, and stir one way till smooth and thick, take it up, lay the meat in a dish, and pour the sauce over it. Garnish with lemon, and serve hot.

VEAL A LA MODE.—Take about eleven pounds of the breast of veal, cut it into pieces of three or four ounces each, put three or four of dripping; mince a couple of large onions, and put them into a large deep stewpan; as soon as it is quite hot, flour the meat, put it into the stewpan, keep stirring it with a wooden spoon; when it has been on about ten minutes, dredge it with flour, and keep doing so till you have stirred in as much as you think will thicken it; then cover it with boiling water (it will take about a gallon), adding it by degrees, and stirring it together; skim it when it boils, and then put in one drachm of ground black pepper, two of allspice, and two bay leaves; set the pan by the side of the fire, or at a distance over it, and let it stew very slowly for about three hours; when you find the meat sufficiently tender, put it into a tureen, and it is ready for table.

VEAL BLANQUETTE.—Take the remains of roast veal, cut it in small pieces, or mince it fine, having cut off the outside skin, melt in a stewpan a piece of butter, some flour, salt, pepper, and a bundle of parsley; warm the veal in this sauce, having added a little white stock, or some milk seasoned with nutmeg and mace. Just before you serve, have the yolks of three eggs well beaten with the juice of a lemon; add this to the blanquette, let it warm, but not boil, or the eggs will curdle. Serve hot with sippets of bread. You may vary the flavour by leaving out the parsley and using lemon-peel. Blanquettes of chicken or turkey are made the same way. Occasionally you might leave out the yolks of eggs and add stock, with the flour browned, and a few pickled mushrooms.

VEAL BOILED.—Veal must be put in plenty of boiling water, and be most carefully skimmed, or it will look dirty and brown. Some cooks use a fourth part of milk, and this has an advantage in avoiding the extraction of the juices. The time is in accordance with the general rule. The parts boiled are the knuckle, the fillet, stuffed as for roasting, and the breast with its sweetbread. Bacon or ham are eaten with it; and for sauce, either parsley and butter, or white sauce, or by some people, onion sauce. The water in which veal is boiled makes good stock with additions; but if milk is used, it soon turns sour.

VEAL BOMBARDED.—Cut out the bone of a fillet of veal, and fill up the place with a good forcemeat. Then make cuts all round the fillet, at about an inch distance from each other. Fill one with forcemeat, another with boiled spinach, a third with crumbs of bread, chopped oysters, and beef marrow, and so on. Wrap the caul close round it, and put it into a deep pot, with about a pint of water. Make a paste to lay over it. When taken out of the oven,

skim off the fat, and put the gravy into a stewpan with a spoonful of mushroom ketchup, one of lemon-pickle, five boiled artichoke bottoms cut into quarters, two spoonfuls of browning, with half an ounce of morels and truffles.

VEAL BOUILLON.—Take a slice of veal, with a slice of ham or bacon; set them in a stewpan for half an hour, turning both to procure a nice colour; then have in the soup-pot some boiling water, put in the meat, add onions, carrots, and half a pound of beef to help the flavour, and let it stew slowly till done; skim it well. If for invalids, leave out the bacon and beef, and add chervil or rice.

VEAL, BREAST, COLLARED.—Take a breast of veal, pick off all the fat meat from the bones; beat up the yolks of two eggs, and rub it over with a feather; take some crumbs of bread, a little grated nutmeg, some beaten mace, and a little pepper and salt, a few sweet herbs, a little lemon-peel cut small, and strewed over it; put a thick skewer into it to keep it together; roll it up tight, and bind it very close with twine; roll a veal caul over it, and roast it an hour and a quarter; before it is taken up, take off the caul, sprinkle some salt over it, and baste it with butter. Let the fire be brisk, and the veal of a fine brown when it is taken up; cut it into three or four slices, lay it in the dish, boil the sweetbread, cut it into slices, and lay round it; pour over it white sauce, which must be made as follows: a pint of good veal gravy, half an anchovy, a teaspoonful of mushroom powder; let it boil up, then put in half a pint of milk and the yolk of two eggs well beaten; just stir it over the fire, but do not let it boil or the milk will curdle; put in some pickled mushrooms just before it is sent to table.

VEAL, BREAST, FORCED.—To force the breast, cut the ends of the bones on both sides; raise the veal from the bones, and put on it a forcemeat with some veal pounded, some sausage-meat, parsley, shallots, salt, pepper, and nutmeg, all chopped; mix well together, and lay on the breast of veal; roll up the veal, and sew the meat with a large needle and twine, or coarse thread, to prevent the forcemeat escaping; lay slices of fat bacon at the bottom of the stewpan, and put in the breast of veal, with some stock, salt, pepper, and a bundle of herbs. At the end of three hours' slow stirring, take away the twine; after taking the meat out of the sauce, strain the latter, having carefully skimmed it; add a little flour, and, when warm, pour the sauce over the veal, and serve, garnished with lemon. Cut off the gristle before you cook this dish.

VEAL, BREAST, IN HOTCH POTCH.—Cut the brisket of a breast of veal into little pieces, and every bone asunder; then flour it, and put half a pound of butter into a stewpan. When it is hot, throw it into the veal; fry it all over a light brown, and then have ready a teakettle of boiling water; pour it into the stewpan, fill it up, and stir it round; throw in a pint of green peas, a whole lettuce, washed clean, two or three blades of mace, a little whole pepper, tied in a muslin rag, a little bundle of sweet herbs, a small onion, stuck with a few cloves, and a little salt; cover it close, and let it stew an hour, or till it be boiled to your palate if you would have soup made of it; but if you would have any sauce to eat with the veal, you must stew it till there be just as much as you would have for sauce, and season it with salt to your palate; take out the onion, sweet herbs, and spice, and pour it altogether into a dish. If you have no peas, pare three or four cucumbers, scoop out the pulp, and cut into thin pieces; then take four or five heads of celery, washed clean, and cut the white part small. When you have no lettuces, take the small hearts of savoys, or the little young sprouts. If you would make a very nice dish of it, fill the inside of the lettuce with forcemeat, tie the top close with a thread, and stew it till there be just enough for the sauce; set the lettuce in the middle, and the veal around; pour the sauce all over it; garnish the dish with rasped bread, made into figures with your fingers.

VEAL, BREAST, ROASTED.—Let the caul remain skewered over the joint till within half an hour of its being ready for table; place it at a moderate distance from a brisk fire, baste it constantly, and, in about an hour and a half, remove the caul, flour the joint, and let it brown. Dish, pour melted butter over it, and serve it with a cut lemon, and any other of the usual accompaniments to veal. It may be garnished with fried balls of the forcemeat, about the size of a walnut.

VEAL, BREAST, STEWED.—Cut a piece off each end, and make a forcemeat as follows:—boil the sweetbread, cut it very small, add grated bread, a little beef suet, two eggs, a little milk, some nutmeg, salt, and pepper; mix it well together, and stuff the thin part of the breast with some of it; the rest make up into little balls, and fry; skewer the skin close down, flour, and boil it in a cloth, in milk and water; make some gravy of the ends that were cut off, with half a pint of oysters, the juice of a lemon, and a piece of butter, rolled in flour. When the veal is done, put it in the dish; garnish with the balls, and pour the sauce over it.

VEAL, BREAST, WITH PEAS.—Cut a breast, or a portion, in pieces, fry them with a little butter, an onion, and a cabbage lettuce, shred small. When browned, add a little flour; shake it well together; then add a small quantity of broth or water; let it stew gently. When the veal is three parts done, take a quart of peas, put them in water, and moisten them with a little butter, so that they adhere together; take away nearly all the gravy from the veal, and put in the peas. When both are done, add pepper, salt, and a little pounded sugar; thicken the peas with flour and butter; dish the veal, and pour the peas over. There should be very little sauce with peas.

VEAL BROTH.—Put two pounds of veal, with some sweet herbs, and ten peppercorns, into a clean tin saucepan, with four quarts of water; simmer to two quarts, and clear off the fat when cold. Add one onion, if approved. To remove the fat, take it off when cold, as clear as possible; and if there be still any remaining, lay a bit of clean blotting-paper on the broth when in the basin, and it will take up every particle; or, if the broth is wanted before there is time to let it get cold, put a piece of cork up the narrow end of the funnel, pour the broth into it, let it stand for a few minutes, and the fat will rise to the top; remove the cork, and draw off in a basin as much of the broth as is wanted, which will be perfectly free from fat.

VEAL CAKE.—Boil six eggs hard, cut in halves, and lay some of the pieces at the bottom of an earthenware pot; then shake in chopped parsley, some slices of veal and ham, about two inches square, and then eggs again, repeating the parsley and seasoning after each layer until the pot is full. Pour in sufficient water to cover it, lay about an ounce of butter on the top, tie it over with thick paper doubled, and bake about one hour. Then press close together with a spoon, and let it stand till cold. If put into a mould instead of the pot, it forms a handsome supper dish.

VEAL, COLD, TO DRESS.—Take a piece of veal that has been roasted (but not overdone), cut it into thin slices, take from it the skin and gristle, put some butter over the fire, with some chopped onions, fry them a little, then shake some flour over them; shake the pan round, and put in some veal stock, gravy, a bunch of sweet herbs, and some spice; then put in the veal with the yolks of two eggs; beat up with butter a grated nutmeg, some parsley shred small, some lemon-peel grated, and a little juice; stir it one way till it is thick and smooth, and put it in the dish.

VEAL COLLOPS.—Cut them about five inches long, not so broad, and not too thin; rub them with eggs, and strew over them crumbs of grated bread, parsley chopped, grated lemon-peel, pepper, salt, and nutmeg, with a few leaves of thyme shred small; set them before the fire in a Dutch oven, baste them, and, when nicely brown, turn them; thicken some rich gravy with some flour, add ketchup, cayenne, mushrooms, and hard yolks of eggs. Boil this up, and pour it over them.

VEAL CURRIED.—Cut part of a breast of veal in moderate sized pieces; put it in a stewpan with an onion and a shallot sliced fine, a slice of lemon, one ounce of butter, a little parsley, and thyme, and a tablespoonful of curry-powder, mixed with the same quantity of flour; let the whole stew together until the meat is slightly brown; add sufficient broth or water for the sauce; let it boil gently till the veal is done; strain the sauce through a sieve, pour it over the veal quite hot, and serve with rice in a separate dish.

VEAL CUSTARD.—Pour, boiling, a pint of rich, clear pale veal gravy on six fresh eggs, which have been well beaten and strained; sprinkle in directly the grated rind of a fine lemon and a little cayenne, some salt, if needed, and a quarter of a teaspoonful of mace. Put a paste border round the dish. Pour in, first, two ounces of clarified butter, and then the other ingredients; bake the custard in a very slow oven, from twenty-five to thirty minutes, or until it is quite firm in the middle, and send it to table with a little good gravy. Very highly flavoured game stock, in which a few mushrooms have been stewed, may be used for this dish with great advantage in lieu of veal gravy; and a sauce made of the smallest mushroom buttons may be served with it in either case. The mixture can be baked in a whole paste, if preferred so, or in well buttered cups; then turned out and covered with the sauce before it is sent to table.

☞ Rich veal or game stock, 1 pint; fresh eggs, 6; lemon, rind of 1; mace, ½ teaspoonful; salt and cayenne pepper, to season; butter, 2ozs.

VEAL CUTLETS.—Put the cutlets in a frying-pan, with salt, pepper, parsley, shallots chopped fine; moisten the whole with melted butter, and put the pan on a very quick fire. When the cutlets are done on one side, turn them on the other, till done enough; add a little flour, browned with butter. After you have taken out the cutlets, and a little stock, let it come to the boil, and pour the sauce over the cutlets.

VEAL CUTLETS, WITH BACON.—Raise the flesh entire from the upper side of the best end of a neck of veal, free it from the skin, and from the greater portion of the fat; slice it equally into cutlets, a little more than a quarter of an inch thick, brush them with eggs, strew them with fine bread crumbs, and fry them of a light brown. Toast, or fry apart, as many small slices of bacon as there are cutlets, and let them be trimmed nearly to the same shape; place them alternately on their edges round the inside of a hot dish (so as to form a sort of chain), and pour into the middle some rich gravy made in the pan, and very slightly flavoured with shallot; or, substitute for this some good mushroom sauce. Savoury herbs, grated lemon rind, nutmeg or mace, salt, and white pepper, or cayenne, should be mixed with the bread crumbs, in the same proportions, or they may be varied at pleasure. A cheek of bacon is best adapted to this dish.

VEAL, DIETETIC PROPERTIES OF.—This flesh contains a greater proportion of gelatine than lamb, and is much more difficult of digestion. In order to obtain good veal, the calf should be fed on the mother's milk until it is six weeks old; but, in consequence of the practice of feeding calves with milk adulterated with chalk, and other irregular methods adopted in rearing them, the flesh is deprived of its due proportion of fibrin, and its alimentary properties are thereby greatly deteriorated.

VEAL, FILLET, FRICASSEED. — Take some slices of cooked veal, and put them into a stewpan with water, a bundle of sweet herbs, a blade of mace, and let it stew till tender; then take out the herbs, add a little flour and butter boiled together, to thicken it a little,; then add half a pint of milk, and the yolk of an egg, beat very fine; add some pickled mushrooms; but some fresh mushrooms should be put in first, if they are to be had; keep stirring it till it boils, and then add the juice of a lemon; stir it well to keep it from curdling, then put it into a dish, and garnish it with lemon.

VEAL, FILLET, ROASTED. — Take out the bone, and put a good roll of forcemeat under the flap, dividing first with a sharp knife the skin from the meat, sufficiently to admit the quantity required; secure it well, truss the veal firmly into good shape, place it at a distance from the fire at first, and baste it with butter. The outside will have a richer crust of browning if the meat be washed, wiped tolerably dry, and well floured, before it is laid to the fire. It should be carefully watched, and basted often, that the fat may not burn. Pour melted butter over it after it is dished, and serve with it a boiled cheek of bacon and a lemon. Roast it from three hours and a half to four hours and a half, according to its size.

VEAL, FILLET, STEWED.—Stuff it, half bake it with a little water in the dish, then stew it with the liquor, some good stock gravy, and a little sherry. When done, thicken it with flour; add ketchup, cayenne, a little salt, juice of lemon, boil it up and serve.

VEAL, FRICANDEAU.—This is usually stewed, or rather bruised, sufficiently tender to be bruised with a spoon, and requires no carving; but the fat (or under part of the fillet) attached to it, which is sometimes, but not invariably, served with it, may be carved in even slices.

VEAL GRAVY.—When all the meat has been taken from a knuckle of veal, divide the bones, and lay them in a stewpan with a pound of the scrag of a neck, an ounce of lean bacon, a bunch of parsley, a little thyme, a bit of lemon-peel, and a dessert-spoonful of pepper; add as much water as will cover them. Boil and skim it; stop the pot down close, and let it stand till cold; then strain it, and take the jelly from the sediments. Pound some mace fine, and boil it with two spoonfuls of water, and add to the gravy. If cream is to be put to it, do not add the salt until the gravy comes off the fire.

VEAL HARICOT.—Take a neck or breast of veal (if the neck, cut the bone short), and half-roast it, then put it into a stewpan just covered with brown stock gravy, and when nearly done, have ready a pint of boiled peas, cucumber pared, and two cabbage lettuces, cut in quarters, stewed in brown gravy, with a few forcemeat balls ready fried, put them into the veal, and then let them simmer; when the veal is in the dish, pour the sauce and peas over it, and lay the lettuce and balls round it.

VEAL, JOINTS OF.—The various joints of veal are illustrated in the accompanying

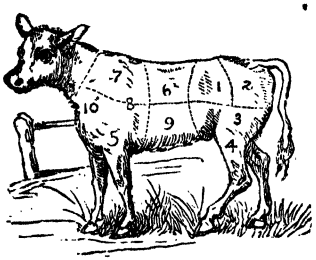
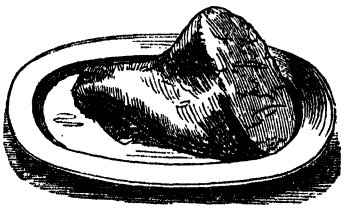


figure of a calf, and are as follows: 1. Loin, or best end. 2. Loin, chump end. 3. Fillet. 4. Hind-knuckle. 5. Fore-knuckle. 6. Neck, best end. 7. Neck, scrag end. 8. Blade bone. 9. Breast, best end. 10. Breast, brisket end. 11 Head.

VEAL KNUCKLE, BOILED. — Veal should be well boiled. A knuckle of six pounds will take nearly two hours. The neck must be also well boiled in a good deal



of water; if it is boiled in a cloth, it will be white; pour over it parsley and butter, and serve with tongue, bacon, or pickled pork, or it may be stewed white.

VEAL, KNUCKLE, HASHED. — Boil a knuckle of veal till it is tender, then take a little of the liquor it was boiled in, and put it into a stewpan with a little milk, a blade of mace, one anchovy, a bit of lemon-peel; let these simmer till the anchovy is dissolved, then strain the liquor, and put in a little milk, with a bit of butter rolled in flour; cut the veal into thin slices, and let them stew together till the gravy is of a proper thickness, shake the pan round often; poach five or six eggs, and boil some small slices of bacon, lay the eggs upon the bacon round the veal, and lay chopped parsley between.

VEAL KNUCKLE RAGOUT.—Cut in small thick slices the flesh of a knuckle of veal, season it with a little fine salt and white pepper, flour it lightly, and fry it in butter to a pale brown, lay it into a very clean stewpan or saucepan, and just cover it with boiling water; skim it clean, and add to it a faggot of thyme and parsley, the white part of a head of celery, a small quantity of cayenne, and a blade or two of

made; stew it very softly from an hour and three-quarters to two hours and a half. Thicken and enrich the gravy if needful with rice flour, and mushroom ketchup, or Harvey's sauce, or with a large teaspoonful of flour, mixed with a slice of butter, a little good store-sauce and a glass of sherry or Madeira. Fried forcemeat balls may be added at pleasure. With an additional quantity of water, or of broth (made with the bones of the joint), a pint and a half of young green peas stewed with the veal, for an hour, will give an agreeable variety of this dish.

VEAL, LOIN, MINCED.—Having roasted a fine loin of veal, take it up, and carefully remove the skin from the back part of it without breaking; cut out all the lean meat, but mind and leave the end whole, to hold the following mincemeat:—Mince all the meat very fine, with the kidney part, put it into a little veal gravy, enough to moisten it, with the gravy that comes from the loin; put in a little pepper and salt, some lemon-peel shred fine, the yolk of three eggs, a spoonful of ketchup, and thicken it with a little butter rolled in flour; give it a shake or two over the fire, and put it into the loin, then pull the skin over it. If the skin should not cover it, make it brown with a hot iron, or put it into an oven for a quarter of an hour. Send it up hot, and garnish with lemon.

VEAL, LOIN, STEWED.—Take part of a loin of veal, the chump end will do, put it into a large, thick, well-tinned, iron saucepan, or into a stewpan, with about a couple of ounces of butter, and shake it over a moderate fire until it begins to brown; flour the veal well all over, lay it into the saucepan, and when it is of a fine, equal, light brown, pour gradually in veal broth gravy, or boiling water, to nearly half its depth; add a little sauce, one or two sliced carrots, a small onion, or more when the flavour is much liked, and a bunch of parsley; stew the veal very softly for an hour or rather more, then turn it, and let it stew for nearly or quite another hour, or longer, should it not be perfectly tender. Dish the joint, skim all the fat from the gravy, and strain it over the meat, or keep the joint hot while it is rapidly reduced to a richer consistency.

VEAL, LOIN, TO ROAST.—Skewer down the flap, place the joint at a moderate distance from a good fire, keep it constantly basted, and be especially careful not to allow the kidney-fat to burn; to prevent this, and to ensure the good appearance of the joint, a buttered paper is often fastened round the loin, and removed about half an hour before it is taken from the fire. Egg sauce and brown gravy may be served with roast loin or breast of veal. Separate the skin from the flank with a sharp knife, quite from the end to the place where the forcemeat is to be put, and then skewer the whole very securely; when the veal is not papered, dredge it well with flour soon after it is laid down to the fire; two hours to two and a half hours.

VEAL, MINCED.—Cut the veal very fine, but do not chop it, take a little white gravy or water, but gravy is better, a little milk, a bit of butter rolled in flour, and grated lemon-peel, let these boil till like a fine thick cream, flour the veal, shake a little salt and some white pepper over it; put it into the saucepan to the other ingredients, and let it be quite hot; it must not boil after the veal is in, or it will be hard before it is taken up. If it is agreeable put sippets under it.

VEAL MIROTON.—Chop very fine some cold dressed veal and ham or bacon, mix it with a slice of crumb of bread soaked in milk and squeezed dry, two onions chopped and browned, a little salt, pepper, and a little cream. Put all these ingredients into a stewpan until they are hot, and are well mixed together; then add one or two eggs according to the quality, butter a mould, put in the whole and bake it in an oven until it is brown; turn it out of the mould, and serve with fresh gravy.

VEAL, NECK, BRAISED.—Cut off the ends of the long bones, and saw off the chine-bones, raise the skin of the fillet, lay it very close, and tie it up neatly. Put the scrag end, a little lean bacon or ham, an onion, two carrots, two heads of celery, and about a glass of Madeira wine into a stewpan. Lay on them the neck, add a little water, and stew it two hours, or till it is tender, but not too much. Strain off the liquor, mix a little flour and butter in a stewpan till brown, stir some of the liquor in, and boil it up, skim it nicely, and squeeze orange or lemon-juice into it, and serve with the meat. The bacon should be browned with a salamander and glazed. It may also be served with spinach or sorrel.

VEAL, NECK, STEWED.—Take the best end of the neck, put it into a stewpan with some boiling water, some salt, whole pepper, and cloves tied in a bit of muslin, an onion, a piece of lemon-peel, stew this till tender; take out spice and peel, put in a little milk and flour mixed, some celery ready boiled and cut into lengths, boil it up, then serve.

VEAL OLIVES.—Cut them thin from the fillet (if it is large, one slice will make three), rub over them some yolk of egg, strew on them some bread crumbs mixed with parsley, and parsley chopped, lemon-peel grated, pepper, salt, also nutmeg; lay on every piece a thin slice of bacon, not too fat, roll them up tight, skewer them with small skewers, rub the outside with egg, roll them in bread crumbs, and lay them in a Dutch oven; let them do without burning; they take a good deal of time, as they are thick. Pour the following sauce on the dish:—Take a pint of good gravy, thicken it with flour, add ketchup, cayenne, pickled mushroom, boil this up a few minutes. Forcemeat balls may be added.

VEAL PATTIES.—Chop about six ounces of ready dressed lean veal, and three ounces of ham very small, put it into a stewpan with an ounce of butter rolled in flour, half a gill of cream, half a gill of veal stock, a little grated nutmeg, and lemon-peel, some cayenne pepper and salt, a spoonful of essence of ham, and lemon-juice, and stir it over the fire some time, taking care it does not burn.

VEAL PIE.—Take some of the middle or scrag of a small neck; season it with pepper and salt, and either put to it or not a few pieces of lean bacon or ham. If it is wanted of a high relish, add mace, cayenne, and nutmeg to the salt and pepper, and also forcemeat and egg balls, and if you choose, add truffles, morels, mushrooms, sweetbread cut into small bits, and cock's combs blanched; if liked, have a rich gravy to pour in after baking; it will be very good without any of the latter additions.

VEAL PILLAU.—Half-roast a breast or neck of veal, cut it into chops, and season it with pepper, salt, and nutmeg. Put a pound of rice to a quart of stock, some mace, and a little salt. Stew it very gently till thick, but butter the bottom of the pan you do it in. Beat up the yolks of six eggs, and stir them in. Take a small deep dish, butter it, and lay some of the rice at the bottom. Lay the veal in a heap, and cover it with rice. Rub it over with the yolks of eggs, and bake it an hour and a half. Open the top and pour in a pint of rich gravy. Serve it hot to table, and garnish with a Seville orange cut in quarters.

VEAL POTAGE.—Take of a knuckle of veal, all the meat that can be made into cutlets, &c., and set the remainder on to stew four or five hours at least, with an onion, a bunch of herbs, a blade of mace, some whole pepper, and five pints of water; cover it close. Strain it, and set it by till next day, take the fat and sediment from the jelly, and simmer it with either turnips, celery, sea kale, and Jerusalem artichokes, or some of each, cut into small dice, till tender, seasoning it with salt and pepper, and butter the size of a walnut. Before serving, rub half a spoonful of flour with half a pint of good cream; boil it a few minutes. Let a small roll simmer in the soup, to be served with it. The potage may be thickened with rice or pearl-barley, or the veal may be minced, and served up in the tureen.

VEAL POTTED.—Take a part of a knuckle or fillet of veal, that has been stewed, or baked for the purpose of potting; beat it to a paste, with butter, salt, white pepper, and mace, pounded; press it down in pots, and pour over it clarified butter.

VEAL RAGOUT.—Either a neck, loin, or fillet of veal, will furnish this excellent ragout with very little expense or trouble. Cut the veal into handsome cutlets; put a piece of butter, or clean dripping, into a frying-pan as soon as it is hot; flour and fry the veal of a light brown, take it out, and, if you have no gravy ready, put a pint of boiling water into the frying-pan, give it a boil up for a minute, and strain it in a basin while you make the thickening, in the following manner:—Put an ounce of butter into a stewpan; as soon as it melts, mix it with as much flour as will dry it up; stir it over the fire for a few minutes, and gradually add to it the gravy you made in the frying-pan; let them simmer together for ten minutes; season it with pepper, salt, a little mace, and a wineglassful of mushroom ketchup or wine; strain it through a tamis to the meat, and stew very gently till the meat is thoroughly warmed. If you have any ready boiled bacon, cut it in slices, and put it to warm with the meat.

VEAL RISSOLES.—Mince and pound veal extremely fine; grate into it some remains of cooked ham. Mix these well together with white sauce flavoured with mushrooms; form this mixture into balls, and enclose each as pastry. Fry them in butter of a nice brown. The same mince may be fried in balls without pastry, being first cemented together with eggs and bread crumbs.

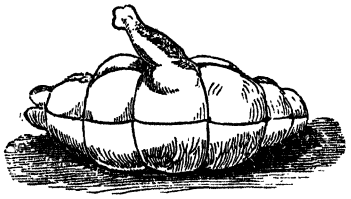
VEAL ROLLED.—Put the breast into a stewpan, with just water enough to cover it, an onion, a stick of celery, and a bundle of sweet herbs; let it stew very gently, adding more water as it stews, until it is tender; then take out the bones, and remove the skin; return the bones into the liquor, which will be a fine jelly, and serve as the sauce for several dishes. Cover the veal with a fine forcemeat, season it well, add egg-balls, and roll it up, securing it with tape. Put it into a stewpan with the fat bacon or a lump of butter, and a teacupful of the liquor it was stewed in; shake the stewpan about until the fat is melted, and turn the veal in it, that it may be all equally done, adding an onion and another bunch of herbs; let it braise one and a half, or two hours, then strain the gravy, and thicken it; garnish with forcemeat-balls, egg-balls, and fried paste cut in shapes. Peeled mushrooms may be given by way of variety.

VEAL ROLLS.—These are cut from any cold joint, or prepared in the same manner from the raw meat. Cut thin slices, and spread on them a fine seasoning of a few crumbs of bread, a little chopped or scraped bacon, parsley, and shallot, some fresh mushrooms stewed and minced, pepper, salt, and a small piece of pounded mace. This stuffing may either fill the roll like a sausage, or be rolled with the meat. In either case, tie it up very tight, and stew very slowly in a gravy and a glass of sherry. Serve it when tender, after skimming it nicely.

VEAL SCALLOPS.—Mince the meat extremely small, and set it over the fire with a scrape of nutmeg, a little pepper and salt, and a little cream, for a few minutes; then put it into the scallop shells and fill them with crumbs of bread, over which put some bits of butter, and brown them before the fire. Either veal or chicken looks and eats well prepared in this way, and lightly covered with crumbs of bread fried; or these may be put on in little heaps.

VEAL SHOULDERS BONED.—Lay the joint flat upon a table or dresser, with the skin downwards; with a very sharp knife cut off the flesh from the inner side nearly down to the blade-bone, of which detach the edges first; then work the knife under it, keeping it always close to the bone, and

using all possible precautions not to pierce the outer skin. When it is in every place



separated from the flesh, loosen it from the socket with the point of the knife, and remove it; or, without dividing the two bones, cut round the joint until it is freed entirely from the meat; and proceed to divide the second bone. That of the knuckle is frequently left in, but for some dishes, it is necessary to take it out; in doing this, be careful not to tear the skin. A most excellent grill may be made by leaving sufficient meat for it upon the bones of a shoulder of mutton. When they are removed from the joint, it will be found very superior to the boiled blade-bone of a roast shoulder, which is so much liked by many people.

VEAL SOUP.—A knuckle of veal of six pounds in weight, will make a large tureen of excellent soup, and is thus easily prepared; cut half a pound of bacon into slices, about half an inch thick, lay it at the bottom of a soup-kettle, or deep stewpan, and on this place the knuckle of veal, having first chopped the bone in two or three places; furnish it with two carrots, two turnips, a head of celery, two large onions, with two or three cloves stuck in one of them, a dozen corns of black, and the same of Jamaica pepper, and a good bundle of lemon thyme, winter savory and parsley. Just cover the meat with cold water, and set it over a quick fire till it boils; having skimmed it well, remove the soup kettle to the side of the fire; let it stew very gently till it is quite tender, about four hours; then take out the bacon and veal, strain the soup, and set it by in a cool place till you want it, when you must take off the fat from the surface of the liquor, and decant it (keeping back the settlings at the bottom) into a clean pan. If the soup is preferred thick, put three tablespoonfuls of the fat you have taken off the soup into a small stewpan, and mix it with four tablespoonfuls of flour; pour a tablespoonful of soup to it, and mix it with the rest by degrees, and boil it up till it is smooth.

VEAL STEWED. — Cut or chop two pounds of fresh veal into ten or twelve pieces; put these into a saucepan, with one teaspoonful and a half of salt, one teaspoonful of sugar, half a teaspoonful of pepper, two middle-sized onions sliced, and half a pint of water. Set on the fire for ten minutes, until forming a thick gravy. Add a good tablespoonful of flour; stir on the flour a few minutes; add a quart and a half of water; let the whole simmer until the meat is tender. Veal will take from one hour to one hour and a half. Onions, sugar, and pepper, if not to be had, must be omitted. It will, even then, make a good dish. Half a pound of sliced potatoes, or two ounces of preserved potatoes, and various vegetables may be added; also a small dumpling.

VEAL STOCK.—Take all the veal bones you may have, together with chicken, fowls, turkey, or any white meat, and put them in a stockpot; let them boil for ten or twelve hours; crusts of dry bread and egg-shells, the same as directed for the stockpot, with the exception that it must be all white meat. When boiled the time above mentioned, strain it off, and let it stand until it is cold; then take the fat off the top, turn it into another dish, and scrape the sediment off. If done as directed, you will find it a perfectly clear jelly. This may be used as the groundwork of all kinds of sauces for veal.

VEAL STUFFING. — Three or four sprigs of parsley, two ounces of beef suet, and a small piece of lemon-peel, chopped fine, two teaspoonfuls of dried marjoram, one teaspoonful of common thyme, half a teaspoonful of lemon thyme, a teacupful of fine bread crumbs, half a teaspoonful of salt, a quarter of a teaspoonful of black pepper, a sprinkle of cayenne, and a grate of nutmeg. Mix with a well beaten-up egg.

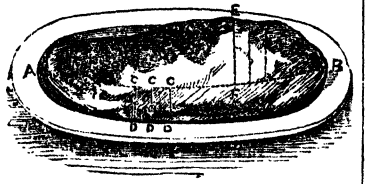
VEAL SYDNEY.—Pour, boiling, on an ounce and a half of fine bread crumbs, nearly half a pint of good veal stock or gravy, and let them stand till cool; mix with them two ounces of beef suet, shred very small; half a pound of cold roast veal, carefully trimmed from the brown edges, skin, and fat, and finely minced; the grated rind of half a lemon, nearly a teaspoonful of salt, a little cayenne, the third of a teaspoonful of mace or nutmeg, and four well-beaten eggs. Whisk up the whole well together, put it into a buttered dish, and bake it from three-quarters of an hour to an hour. Cream may be used, instead of gravy, when more convenient; but this last will give the better flavour. A little clarified butter, put into the dish before the other ingredients are poured in, will be an improvement.

☞ Bread crumbs, 1½oz.; gravy or cream, ½ pint; beef suet, 2ozs.; cold veal, ½lb.; rind of half a lemon; salt, small teaspoonful; a third as much mace and nutmeg; little cayenne; eggs, 4 large or 5 small.

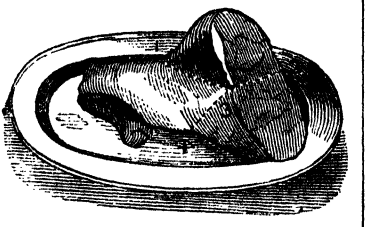
VEAL TEA.—Cut half a pound of fresh veal into slices, lay it in a dish, and pour over it a pint of boiling water; cover the dish, and let it stand half an hour by the fire, then just boil it up, pour it off clear, and salt it a very little.

VEAL, TO CARVE.—*The fillet:*—There is no difference between the mode of carving this and a round of beef, but the brown outside slice of the veal is much liked by many persons, and a portion of it should be served to them when the taste is known.

The forcemeat must be reached by cutting deeply into the flap, and a slice of it served with each helping. *The loin*:—This may be carved at choice, quite across, through the thick part of the flesh, or in slices taken in the direction of the bones. A slice of the kidney, and of the fat which surrounds it, should accompany the veal. *The breast*:—



Divide the joint into two parts by an incision in the direction A B; and then divide the brisket or gristly part, into convenient pieces, as C D, and the ribs also, as E F. The sweetbread, may be divided into portions, or assisted whole. *The knuckle*:—



Carve it in the direction 1 2. The most delicate fat lies about 4, and if cut in the line 3 4, the two bones, between which the marrowy fat lies, will be divided.

VEAL, TO CHOOSE.—The flesh of a bull-calf is firmer than that of a cow, but it is seldom so white; the fillet of a cow-calf is generally preferred, on account of the udder. If the head is fresh, the eyes are plump, but if stale, they are sunk and wrinkled. If a shoulder is stale, the vein is not of a bright red; if there are any green or yellow spots in it, it is very bad. The breast and neck, to be good, should be white and dry; if they are clammy, and look green or yellow at the upper end, they are stale. The loin is apt to taint under the kidney; if it is stale, it will be soft and slimy. A leg should be firm and white; if it is limp and flabby, with green or yellow spots, it is not good.

VEAL, WITH RICE.—Take a pound of rice, put it to a quart of veal broth, some mace, and a little salt, stew it over a very slow fire till it is thick, put at the bottom of the stewpan, the yolks of six eggs beat up, and stir it into it, then take a dish, butter it, lay some of the rice at the bottom, and put upon it a neck or breast of veal, half-roast it, cut into five or six pieces, lay the veal close together, in the middle, and cover it over with rice, wash the rice over with the yolk of eggs, and bake it an hour and a half, then open the top and pour into it some good thick gravy, squeeze in the juice of an orange.

VEAL, WITH WHITE SAUCE.—Boil milk or cream with a thickening of flour and butter, put into it thin slices of cold veal, and simmer it in the gravy till it is made hot without boiling. When nearly done, beat up the yolk of an egg, with a little anchovy and white sauce, pour it gently to the rest, stirring it all the time; simmer the whole together again, and serve it with sippets of bread and curled bacon alternately.

VEGETABLE MARROW AND CELERY PIE.—Cut three roots of celery into small pieces, with a proportionate quantity of vegetable marrow, and an onion, season with pepper and salt, add a dessert-spoonful of tapioca, steeped in a quarter of a pint of cold water, and an ounce of butter; put all together into a pie dish, cover with paste, and bake it in a moderately hot oven.

VEGETABLE MARROW, BAKED.—Take a middle-sized marrow, three eggs, a tablespoonful of bread crumbs, and a quarter of an ounce of parsley and leeks mixed. Half-boil the marrow; peel and cut it in small pieces, taking out the seeds and pulp, put it into a flat dish with some butter, melted, season with pepper and salt, and bake it for about twenty minutes in a moderately hot oven. Beat the eggs well, add the bread crumbs, and the parsley and leeks, pour them over the marrow; let it remain in the oven till nicely browned, and serve with brown sauce.

VEGETABLE MARROW, BOILED.—The smallest are considered the best, but when they are about five or six inches long, the fruit is more mature, better flavoured, and the fruit whiter. Put them into boiling water with a little salt; boil them gently till quite tender, and serve them, either whole or pared and halved, on a slice of bread toasted, with plain melted butter in a boat; or when cold they may be pared and sliced, then dipped in a batter made with an egg, a teacupful of water or milk beaten together, a little salt, and about a quarter of a pound of flour, or sufficient to make the batter thick enough to adhere to the slices, or they may be brushed over with egg, and covered with fine bread crumbs, and then fried. Arrange them neatly on a dish, and serve with melted butter.

VEGETABLE MARROW, CULTURE OF.—This is one of the most valuable varieties of this description of vegetable. It is useful for culinary purposes in every stage of its growth, peculiarly tender and sweet, and the plant is a prolific bearer. They are propagated by seed, which may be sown in a hot-bed of moderate strength, under a frame or hand-glasses, at the end of March, or early in April. In May, they may be sown in the open ground beneath a south fence, there to remain, or in a hot-bed if it is convenient to forward the plants for transplanting at its close, or early in June.

The plants are fit for transplanting when they have produced four rough leaves, or when of about a month's growth. They must be planted without any shelter on heaps of manure, the same as for the opening ground crop of cucumbers. Some may be inserted beneath poles, walls, or hedges to be trained regularly over them, on account of their ornamental appearance. They may be treated in every respect like the cucumber, only they do not require so much care; they want abundance of water in wet weather. When the runners have extended three feet, they may be pegged down, and covered with earth at a joint; this will cause the production of roots, and the longer continuance of the plant in vigour. The fruit for seed should be selected, and treated as directed for cucumbers.

VEGETABLE MARROW, FRIED.—Take one marrow, one egg, and two ounces of bread crumbs. Peel and cut the marrow in slices, three-quarters of an inch thick; let it drain for a quarter of an hour, and season it on both sides with pepper and salt, then brush each slice with egg; sift the bread crumbs over, and fry the slices in batter till they attain a light brown on both sides; bake in a tin in the oven till done, and serve in a strainer, with crisped parsley, and brown sauce.

VEGETABLE MARROW MARMALADE.—Peel the marrows, and grate them. To six pounds of fruit, put six pounds of loaf sugar, and the juice and grated rinds of two lemons; boil it for half an hour over a moderate fire, stir it frequently, and pour it into small moulds.

VEGETABLE MARROW, MASHED.—Peel and cut vegetable marrows in halves, scraping out the seeds, then boil them for about twenty minutes, with salt in the water, and when soft, drain them thoroughly in a sieve, wash them and add a little butter or cream; season with pepper and salt, stir them in a saucepan over the fire till quite hot; put them in a basin, and turn them into a dish.

VEGETABLE MARROW, PRESERVED.—Peel the marrows, and after scraping out the seeds and fibres, cut them in pieces. To each pound of fruit, allow one pound of loaf sugar, and the juice of a lemon. Set the whole over the fire, and after it begins to boil, let it continue boiling for half an hour, and then pour it into the preserving pots.

VEGETABLE MARROW, ROASTED.—Boil a large sized marrow for half an hour; cut it in two; take out the seeds; season with pepper and salt, and fill it with forcemeat, dredge it with flour; put two ounces of butter on the top; roast it in a quick oven, and serve with brown sauce.

VEGETABLE MARROW SOUP.—Pare a pound of vegetable marrows, and cut them into slices about a quarter of an inch thick, taking out all the seeds and pulp; wipe them dry and dredge them with flour, fry them in butter, till of a nice brown; stew the stems and parings of a quart of mushrooms, in a pint of water for an hour, adding a little salt; drain the water from them and set the liquid over the fire in a pan, with two quarts of boiling water; put in the marrows, and a quarter of a pound of crumb of bread, and a quart of mushrooms chopped small; season with pepper and salt, and let the whole boil together for an hour and a half. If the soup be too thin, mix a teaspoonful of flour with a little butter, stir it well in, and after it has boiled for a few minutes, add a tablespoonful of vinegar.

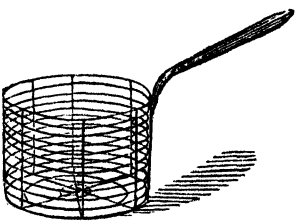
VEGETABLE MARROW, STEWED.—Pare off the outer skin; cut the gourd into slices and then into dice, taking out the seeds. Scrape a little fat bacon, which put into a stewpan with a small onion or two, and a little parsley chopped fine. Cover the stewpan close, and fry gently from five to ten minutes; then thicken with a spoonful of flour, and add a little veal broth, to make the sauce the consistency of rich cream. Season with pepper and salt, replace the cover, and stew gently until quite tender. A mushroom, chopped, may be added.

VEGETABLE PIE.—Scald and blanch some broad beans; cut carrots, turnips, artichoke bottoms, mushrooms, peas, onions, lettuce, parsley, celery, &c. Make the whole into a stew, with some good veal gravy. Bake a crust over a dish, with a little lining around the edge, and a cup inserted to prevent it sinking. When baked, lift the crust, and pour in the stew.

VEGETABLE PUDDING.—Take six ounces each of raw scraped carrot, finely mashed potatoes, currants, flour, and beef suet; mix well without any liquid if for boiling, but add an egg and a little milk if for baking.

VEGETABLE SOUP.—Pare and slice five or six cucumbers; and add to these the insides of as many lettuces, a sprig or two of young peas, and a little parsley. Put these with half a pound of fresh butter, into a saucepan, to stew in their own liquor, near a gentle fire, half an hour; then pour two quarts of boiling water to the vegetables, and stew them for two hours; rub down a little flour into a teacupful of water, boil it with the remainder of the ingredients for fifteen or twenty minutes, and serve it.

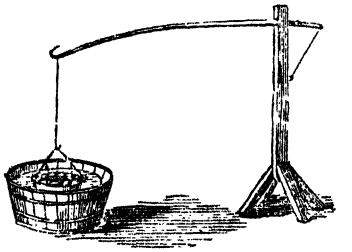
VEGETABLE STRAINER.—A culinary implement employed for straining off water and other liquids from solid matters; it



should be kept particularly clean, and one article should not be placed in it before all traces of the preceding one have been effaced.

VEGETABLE VINEGAR. — To eight gallons of clear rain-water add three quarts of molasses; turn the mixture into a clean tight cask, shake it well two or three times, and add three spoonfuls of good yeast, or two yeast cakes; place the cask in a warm place, and in ten or fifteen days, add a sheet of common wrapping-paper, smeared with molasses, torn into narrow strips, and good vinegar will be obtained. The paper is necessary to form the "mother," or life of the vinegar.

VEGETABLE WASHER.—An implement similar to that seen in the engraving is very useful for washing vegetables. This



is, in fact, a ready mode of sousing them, and is the only way to get the insects, &c., out of them. The vegetables are placed in the inner receptacle, which is moved up and down several times, and the action of the water thus produced, effectually cleanses the vegetables.

VEGETABLES, PREPARATION AND DRESSING OF.—In choosing vegetables the medium-sized sort is to be preferred to the largest, or the smallest; they are more tender, juicy, and full of flavour just before they are full grown; on the other hand, unripe vegetables are as insipid and unwholesome as unripe fruits. Roots, greens, salads, and the various productions of the garden, when fresh gathered, are plump and firm, and have a fragrance and freshness which no art can impart to them; though it will refresh them a little to put them into cold spring water for some time before they are dressed. To boil them in soft water will best preserve the colour of such as are green; but if only hard water can be obtained, a teaspoonful of carbonate of potash may be added to the water. Previous to dressing vegetables, they should be thoroughly washed and cleansed from dust, dirt, and insects. Pick off all the outside leaves, trim them nicely, and if they are not quite fresh-gathered, and have become flaccid, it is absolutely necessary to restore their crispness before cooking them, or they will be tough and ill-flavoured; lay them in a pan of clean water, with a handful of salt in it, for an hour before they are dressed. Most vegetables being more or less succulent, the full proportion of fluids is necessary for their retaining that state of crispness and plumpness which they have when growing. On being cut or gathered, the exhalation from the surface of vegetables continues, while from the open vessels of the cut surface there is often great exudation or evaporation, and thus their natural moisture is diminished; the tender leaves become flaccid, and the thicker masses or roots lose their plumpness. This is not only less pleasant to the eye, but is a great injury to the nutritious powers of the vegetable; for in this flaccid and shrivelled state, its fibres are less easily divided in mastication; and the water which exists in vegetable substances, in the form of their respective natural juices, is directly nutritious. The first care in the preservation of succulent vegetables, therefore, is to prevent them from losing their natural moisture. They should always be boiled in a saucepan by themselves, and have plenty of water; if meat is boiled with them in the same pot, the appearance and taste of each will be spoiled. To have vegetables delicately clean, put on the saucepan, make it boil, put a little salt in, and skim it perfectly clean before the vegetables are put in, which should not be till the water boils briskly; the quicker they boil, the greener they will be. Vegetables should be taken up immediately they are done, if they remain only a few minutes over the fire afterwards, their appearance and flavour are both deteriorated. The practice of putting soda into the water in which vegetables are boiled is not a wholesome one, nor is it necessary, when the foregoing directions are attended to.

VEGETARIAN COOKERY.—As there are many persons who wholly abstain from animal food, and as the dressing of vegetables is worthy of universal attention, the following recipes, by which ordinary vegetables may be converted into savoury dishes, are given under one head, in order to facilitate immediate reference.

Artichoke Ragout.—Soak artichoke bottoms in warm water for two or three hours, changing the water; put them into a stew-pan with some good gravy, a tablespoonful of mushroom ketchup, a little salt and cayenne pepper. Boil, thicken with flour, place them in a dish, and pour the gravy sauce over them; then serve hot.

Asparagus Omelet.—Take fifty heads of asparagus and six eggs. Boil the asparagus in the usual way; cut the green ends in small pieces, as far as they are tender; mix them with the eggs, well beaten; make some clarified butter hot in a small frying-pan, and put in the omelet; sprinkle it over with a little pepper and salt, and fry it of a nice brown. It should be rather thick, and ought to be served immediately, with butter, sauce, and vinegar.

Bean Soup.—Take a quart of full-grown green beans, a large handful of spinach, an ounce of parsley, and two ounces of butter. Boil the beans; skin and bruise them in a bowl till quite smooth; put them in a pan with two quarts of vegetable broth; add the butter, with a little flour dredged in it, pepper, and salt; stir it over the fire till it boils; then put in the spinach and parsley (previously boiled and rubbed through a sieve), to make the soup a proper colour.

Beet-Root, Boiled.—Wash and brush the roots, being careful to avoid breaking off the fibres, that the juice may not escape and spoil the appearance and flavour; put them into a pan of boiling water, adding salt and a small piece of soda; let them boil for one or two hours, according to size; put them into cold water and rub off the skin with the hand; cut them in slices; lay them neatly on a dish, and serve either with vinegar or mustard sauce.

Beet-Root, Fried.—Wash the roots perfectly clean; bake them whole till tender; put them into cold water; rub off the skin with the hand; cut into thin round slices; season with pepper and salt; fry them in butter; place on a flat dish, and garnish with parsley.

Cabbage, Red, Stewed.—Take a red cabbage, an onion, an ounce of butter, and three tablespoonfuls of vinegar. Remove the outside leaves of the cabbage, and wash the cabbage well; cut it in thin slices, and put it in a pan of boiling water; add a little salt; when about half boiled, drain the water entirely away, leaving the cabbage as dry as possible; then put it into a pan with a quarter of a pint of boiling water, together with the onion cut in thin slices, and the butter; season with pepper and salt; let it stew gently until the cabbage is perfectly soft, then add vinegar.

Calecannon.—Boil potatoes and greens, separately; mash the potatoes; squeeze the greens dry, and then chop them into small pieces and mix them with potatoes, adding a little butter, pepper, and salt; put them into a well-buttered mould, and let it stand in a hot oven for five or six hours, turn it out, and serve in a vegetable dish.

Cardoons Fried.—Cut the cardoons about ten inches long, string, and tie them in bundles like asparagus, and cut them into dice; boil the same as peas; add some butter, pepper, and salt, and serve hot.

Cardoons with Cheese.—String the cardoons, then cut them an inch long, place them in a saucepan, and stew in some port wine, enough to cover them, until tender; season with pepper and salt, and thicken with floured butter; pour into a dish, add the juice of an orange, and grate some Cheshire cheese over the whole; brown with a salamander, and serve hot.

Carrot Fritters.—Take a quarter of a pound of carrot, two ounces of bread crumbs, two tablespoonfuls of cream, and two eggs. Boil and mash the carrot till perfectly smooth; add the bread crumbs and cream; season with pepper and salt; add the eggs, well beaten, immediately before frying; fry in fritters, and serve with brown sauce.

Carrot Soup.—Take eight good-sized carrots, two roots of celery, one large turnip, one large onion, six ounces of crumb of bread, two ounces of butter, and half a pint of cream. Set over the fire, three quarts of water, with a piece of soda the size of a small nut; when it boils, put in the vegetables, previously sliced, the bread, salt, a little cayenne pepper and mace; boil the whole till the vegetables are perfectly soft; rub it through a sieve; return it into the pan; and, whilst boiling, stir in the cream, not allowing it to boil afterwards. The soup should be of the consistency of good cream. The green part of the celery should not be used.

Carrots Stewed.—Take a pound and a half of carrots, an ounce of butter, a quarter of an ounce of parsley, a teaspoonful of flour, and four tablespoonfuls of cream. About half boil the carrots, then scrape and slice them; put them into a pan with half a teacupful of vegetable broth or water; season with salt and pepper; let the whole simmer till quite tender, without being broken; add the chopped parsley, and stir in the flour and the butter, previously mixed; simmer them ten minutes longer; add the cream, and serve immediately.

Cauliflower Fried.—Boil a cauliflower quickly for a few minutes, then boil it gently until nearly tender; drain it well; cut it in slices; dip them in butter; fry them a light brown colour, and serve with brown sauce.

Cauliflower, with White Sauce.—Boil a cauliflower in milk and water till nearly tender, separate it into small pieces, and put it into a saucepan with white sauce, and either a few small mushrooms or very small onions, previously boiled, and serve with toasted sippets put round the dish.

Celery Fried.—Take three heads of celery, cut off the green tops, remove the outside stalks, wash thoroughly, and pare the roots clean; then have ready a gill of white wine, the yolks of two eggs beaten fine, and a little salt and nutmeg; mix all well together with flour, so as to form a good batter; dip each head into the batter, and fry a nice light brown in lard. When done, lay in the dish, pour melted butter over them, and serve hot.

Celery, with Cream.—Take the white part of celery, wash it clean, and cut in pieces three inches long, boil it tender, and strain it off; then beat up the yolks of four eggs, strain them into half a pint of cream; add a little salt and nutmeg. Put all into a pan, set it over a stove until it boils, and is of a proper thickness; serve with toasted bread underneath.

Cucumber Stewed.—Take a pound of cucumbers, half a pound of onions, an ounce of butter, and a teaspoonful of flour. After peeling the cucumbers and onions, cut them in slices about the eighth of an inch thick, and fry them in butter till well browned; put them into a saucepan with a quarter of a pint of hot water or vegetable broth; season with pepper and salt; let them stew till quite soft, add the flour and butter, mixed well together, and boil gently for five minutes.

Endive Stewed.—Boil endive in four different salt waters, to extract the bitter taste, and when tender, throw it into cold water, squeeze it well, and chop fine; then put it into a stewpan, with a piece of butter, and a few young onions chopped fine; let it dry; dredge with a dessertspoonful of flour, add some pepper and salt, a little gravy, two teaspoonfuls of sifted sugar, and stew the whole gently for a quarter of an hour.

French Bean Omelet.—Take four eggs, two

tablespoonfuls of grated Parmesan cheese, two tablespoonfuls of French beans, two ounces of butter, two saltspoonfuls of salt, and half a saltspoonful of pepper. Beat the eggs well, add the cheese, pepper, and salt; mix all together, and put in the beans, cut small and well boiled. Melt the butter in a pan, and fry the omelet in the usual way.

French Beans, with Cream. — String the beans, cut them into slips, and boil them in plenty of water with salt in it; when done, drain them. Put them into a stewpan with two ounces of fresh butter, the yolks of three eggs, beaten up in a gill of cream, and set over a slow fire. When hot, add a tablespoonful of vinegar and the beans; simmer for five minutes, stir with a wooden spoon, to prevent burning or curdling, and serve hot.

Haricot Bean Omelet.—Take half a pint of haricot beans, two tablespoonfuls of bread crumbs, four eggs, half an ounce of parsley, half a teacupful of milk, and a tablespoonful of olive oil. Steep the beans several hours in cold water; boil them in fresh water till quite soft; mash them with milk, and rub them through a fine sieve; add the bread crumbs, the parsley chopped fine, the eggs, well beaten, the olive oil, salt, and pepper; pour the omelet into a buttered dish, bake it for about an hour in a moderately hot oven, and serve with brown sauce.

Haricot Beans Stewed. — Take a pint of beans, three ounces of butter, the juice of a lemon, and an ounce of parsley. Steep the beans in cold soft water for two hours; drain them, and set them over the fire in two quarts of cold soft water, adding a saltspoonful of salt, and an ounce of butter; when the mixture boils, simmer it slowly for two hours or more, put it into a stewpan, with a little pepper, salt, chopped parsley, two ounces of butter, and the lemon-juice; set the whole over the fire for a few minutes, and stir them well till done.

Herb Pie.—Pick two handfuls of parsley from the stems, half the quantity of spinach, two lettuces, some mustard and cress, a few leaves of borage, and a little mint. Wash and boil them a little, then drain them, press out the water, and chop them small; mix a batter of flour, two eggs well beaten, half a pint of milk, and a pint of cream, and pour it upon the herbs. Cover over with a good crust, and bake.

Herb Soup.—Take a quarter of a peck of spinach, an ounce of parsley, half a pound of bread crumbs, a quarter of a pound of butter, and a few green onions. Parboil the herbs, drain them, and cut them into small pieces; stew them in the butter for half an hour, and dredge in a little flour. Put the bread crumbs into a pan with two quarts of water; boil till smooth; add the herbs; season with pepper and salt, and boil for ten minutes.

Lentil Soup.—Take one quart of lentils, two pounds and a half of parsnips, two pounds of celery, two ounces of shallots or leeks, an ounce of chopped parsley, and two ounces of butter. Wash and pick the lentils; steep them for twenty-four hours in soft water; set them over the fire in four quarts of spring water; add the vegetables and some salt; boil till quite soft; rub through a fine cullender or coarse sieve, adding boiling water as required; return it to the pan, season with pepper and salt, stir in the butter, and boil for a few minutes.

Lentils Stewed.—Take a quart of lentils, three ounces of butter, one onion, a tablespoonful of chopped shallots, and a small bunch of parsley. Wash and steep the lentils an hour or two in cold soft water; set them on the fire in two quarts of soft cold water, with an ounce of butter, shallots, the onion sliced, the parsley chopped, and a little salt; simmer the whole over the fire for about two hours; drain in a sieve; put the lentils into a stewpan, with two ounces of butter, mixed with a little flour; stir it well over the fire, boil gently for ten minutes, and serve in a flat dish, with a border of mashed potatoes.

Mushroom Pudding.—Take a pint of mushrooms, half a pound of bread crumbs, and two ounces of butter. Rub the butter in the bread crumbs, adding pepper and salt, and as much water as will just moisten the bread; add the mushrooms cut in pieces; line a basin with paste; put in the mixture; cover with paste; tie a cloth over, and boil for an hour and a half.

Mushrooms Baked in Cups.—Take a pint of mushrooms, six eggs, and a quarter of an ounce of chopped parsley. Boil the stalks and parings of the mushrooms, strain the water from them, and put half a pint of it into a pan with the mushrooms, well cleaned and chopped; add the parsley; season with pepper and salt, and let them boil gently over a slow fire or stove about half an hour; add the eggs, well beaten, and mix all well together; butter some small cups, put in the mixture, and bake quickly; turn them out on a dish, and serve with mushrooms, stewed white, or white sauce.

Mushrooms Broiled.—Peel some good-sized mushrooms, and cut off the stalks; put them in a tin with a small piece of butter on each; season with pepper and salt, and let them remain in the oven till rather brown on both sides; take out the mushrooms, pour out a little of the water, in which the stalks and parings have been boiled, into the tin, and, when boiling, pour it on the dish.

Mushrooms Fried.—Pare the mushrooms, which should be large ones, and put them in water, the brown side downwards; drain them carefully on a sieve or cullender; lay between them two cloths till nearly dry; sprinkle them with salt and pepper, and fry them of a light brown.

Mushrooms Stewed.—Wipe dry some large button mushrooms; boil them quickly in a little water, then let them stew gently for twenty minutes, adding a piece of butter, mixed with a dessertspoonful of flour, a little pounded mace, cayenne pepper, and salt; boil them, frequently shaking the pan round during the time, and, when done, add a little good cream.

Onion Pudding.—Take half a pound of

onions, half a pound of bread crumbs, a teaspoonful of dried sage, half a teaspoonful of thyme, and two ounces of butter. Peel and cut the onions in two, boil them about ten minutes, drain away the water and chop them, but not very small, put them to the bread with the herbs, and the butter melted, season with pepper and salt, and boil it for an hour and a quarter in a buttered basin.

Onion and Sage Fritters. — Take twelve ounces of onions, twelve ounces of bread crumbs, two teaspoonfuls of chopped sage, previously boiled a little, one teaspoonful of chopped parsley, three eggs, and two tablespoonfuls of cream. Chop the onions, fry them with the sage till nicely brown, mix eight ounces of them with the bread crumbs, add the parsley, season with pepper and salt, beat the eggs, adding the cream, mix all together, and fry in fritters over a clear fire; place the remaining four ounces of fried onion on the dish round the fritters, and serve with brown sauce and apple sauce.

Onions and Sage on Toast.—Peel and cut some onions in two, boil them for five minutes, drain away the water, chop them and add sage, previously minced small, season with pepper and salt, and fry them in butter till tender, but not brown; lay the mixture on buttered toast, pour a little brown sauce over, and serve with apple sauce.

Onions, Fried.—Peel some large onions; cut them in slices, season with pepper and salt, and fry them in butter till nicely browned.

Onions, Stewed.—Peel and slice some onions, put them into a dish with some butter, previously browned; set them in a moderately hot oven, and when they are nicely browned, pour over them some rather thin melted butter, season with pepper and salt, and let them stew for a quarter of an hour longer. If the onions are strong, they should be boiled about five or six minutes before they are stewed.

Onions, to Ragout.—Peel a pint of young onions, then peel four large ones, and cut them very small; put some good dripping or butter into a stewpan, and when melted, add the onions, and fry till of a light brown; then thicken with flour, and give them a shake until thick. Add a quarter of a pint of gravy, a little pepper and salt, and a teaspoonful of mustard; stir all together, and when tolerably thick, pour into the dish, and garnish with fried bread crumbs.

Parsnips, Baked. — Scrape or pare some parsnips, and, if large, cut them into quarters, lay them in a flat baking-dish, add a little water, dredge with flour and salt, and bake till soft, and slightly browned. A little butter may be put on the top, just before serving.

Parsnips, Mashed.—Boil the parsnips in plenty of water, adding a little salt; when soft, take them out, scrape and wash them, put them into a saucepan with a little cream, stir them over the fire till thickened, add an ounce of butter, and a little suet; when the butter is melted, put the mixture into a hot basin, and turn it out into a vegetable dish.

Dried Peas, Stewed.—Take an ounce of peas, and an ounce of butter; pick and wash the peas; steep them in water for twelve hours, put them into a pan with just sufficient water to cover them; add the butter and a teaspoonful of salt; let them boil, afterwards stew the peas gently till they are quite soft, and add a further seasoning of pepper and salt, if required.

Green Peas with Cheese.—Take a pint and a half of green peas, a quarter of a pint of new milk, two tablespoonfuls of cream, an ounce of butter, and an ounce and a half of cheese. Put the milk, cream, and butter, with the cheese, grated, in a saucepan on the fire; add a little cayenne pepper; stir the whole till the butter and cheese are dissolved, put in the peas; when well boiled and drained, stir it on the fire for two minutes, and serve quite hot.

Potatoes Fried with Onions.—Take a pound and a half of cold boiled potatoes; three onions, one ounce of chopped parsley, and three ounces of butter. Melt the butter in a frying-pan, put in the onions, sliced; fry them to a light brown; add the potatoes, cut into thin slices; fry them till of a nice yellow colour, turning them occasionally, and then add the parsley, salt, and pepper.

Potatoes, Hashed. — Take four pounds of potatoes, a tablespoonful of fine oatmeal, two ounces of butter, a dessertspoonful of chopped parsley, and a quarter of an ounce of chopped leeks. Set a pint and a half of water on the fire, with the oatmeal, pepper, and salt; stir till it boils, then put in the potatoes, parsley, and leeks, and when nearly done, stir in the butter.

Potatoes, Stewed.—Cut the potatoes as for a pie; place them in a pan in layers, with a little chopped onion, and a seasoning of pepper and salt between each layer; put butter on the top, allowing about half an ounce to each pound of potatoes, and a quarter of a pint of water; cover the pan, and let them stew moderately for about thirty or thirty-five minutes.

Scorzonera, Fried.—Wash and scrape the scorzonera, taking off the tops; boil it till tender, then dip it in butter, and fry it; lay two or three of the roots together, and serve with brown sauce.

Spinach Omelet.—Take a quarter of a pound of spinach, a quarter of a pound of beet-root, half an ounce of parsley, half an ounce of leeks and lemon-thyme, mixed, a large tablespoonful of flour, four spoonfuls of milk, four eggs, and two ounces of butter. Chop the herbs all together, season with pepper, salt, and nutmeg or mace; add the flour, milk, and the eggs, well beaten, and the butter melted; mix the whole well together, and bake twenty minutes in a quick oven.

Turnip Hash. — Take three-quarters of a pound of turnips, three-quarters of a pound of potatoes, two tablespoonfuls of flour, two ounces of butter, one large onion, and a tablespoonful of salt. Put three quarts of water into a well-tinned pan; set it over the fire; put in the turnips (cut into small square pieces), and the onion, cut

small; add the salt, and let it boil for an hour. Then put in the potatoes, also cut in pieces, and after boiling three-quarters of an hour longer, add the butter; rub the flour in a quarter of a pint of cold water till perfectly smooth; pour it into a pan, and let it boil slowly for a quarter of an hour longer, when the liquid part of the hash will be of the consistency of thin butter sauce; boil it for two hours, and keep it covered the whole time

Vegetable and Rice Soup. — Take half a pound of turnips, half a pound of carrots, half a pound of parsnips, half a pound of onions, half a pound of potatoes, and two tablespoonfuls of rice. Slice the vegetables, put them into a pan with a quart of boiling water; add the rice, previously washed, a dessertspoonful of salt, and a small piece of soda. After boiling for an hour, add the potatoes sliced, and two quarts of boiling water; continue boiling till all are well done. If the soup is too thin, mix a tablespoonful of rice flour with a little milk; stir it well in, adding white pepper and more salt, if required; boil it for fifteen minutes, and add a quarter of a pint of cream.

Vegetable Broth. Half-fill a pan, which will contain about four quarts, with turnips, carrots, onions, and other vegetables, cut in pieces; add seasoning, herbs, mushrooms, and salt; nearly fill the pan with water, and boil all together till the vegetables are tender; then strain it and use as required.

Vegetable Marrow, Baked with Onions and Sage.—Pare, and cut in two, a good-sized marrow; scrape out the seeds and fibres; rub the marrow inside and outside with a little salt; let it drain for an hour; fill up the halves with onions, previously boiled a little, and chopped with some sage; add a little butter, pepper, and salt; close them, and tie them together with a little twine; butter a dish, and bake in a moderately hot oven; if not nicely browned, dredge it with a little flour, brown it in a Dutch oven before the fire, and serve with brown sauce.

Vegetable Pie.—Take some carrots, turnips, onions, celery, and two ounces of butter. Cut the vegetables in pieces, put them in the pan with the butter, and very little water; season with pepper and salt, stew them over the fire, and when nearly tender, pour them into a pie dish; when cool, cover with paste and bake it

VEIL, BLACK, TO WASH.—Mix bullock's gall with sufficient hot water to make it as warm as you can bear your hand in. Then pass the veil through it. It must be squeezed, and not rubbed. It will be well to perfume the gall with a little musk. Next rinse the veil through two cold waters, tinging the last with indigo. Then dry it. Have ready in a pan some stiffening, made by pouring boiling water on a very small piece of glue. Put the veil into it, squeeze it out, stretch it, and clap it. Afterwards pin it out to dry on a linen cloth, making it very straight and even, and taking care to open and pin the edge very nicely. When dry, iron it on the wrong side, having laid a linen cloth over the ironing-blanket. Any article of black lace may be washed in this manner.

VEIL, WHITE LACE, TO WASH.—Put the veil into a strong lather of white soap and very clear water, and let it simmer slowly for a quarter of an hour. Take it out and squeeze it well, but be sure not to rub it. Rinse it in two cold waters, with a drop or two of liquid blue in the last. Have ready some very clear and weak gum arabic water, or some thin starch, or rice-water. Pass the veil through it, and clear it by clapping. Then stretch it out even, and put it to dry on a linen cloth, making the edge as straight as possible, opening out all the scallops, and fastening each with pins. When dry, lay a piece of thin muslin smoothly over it, and iron it on the wrong side.

VEINS, VARICOSE. — This is a term applied by surgeons to a permanently distended state of one, or a group of veins, attended with an accumulation of dark coloured blood, and a retarded circulation, causing the formation of knots beneath the skin, which becomes discoloured, livid, and the part remarkably sensitive and painful. Varicose veins may occur in any part, though they are most frequently found in the legs, and are in general the result of pressure on some of the larger veins above, obstructing the return of the blood to the heart. Of this description are the varicose veins in the legs of females before confinement; they also attend weak and relaxed constitutions, and frequently follow much fatigue and long standing. The chief danger to be apprehended in this disease of the veins, is the fear of their bursting, and the hazard resulting from the hæmorrhage that ensues. Many remedies have been devised for this disease, but interference has generally proved more hurtful than beneficial. Foremost among the favoured remedies, was the excision of a small piece of the vein with ligatures, and next, the simple tying of the vein, as in aneurism; but the danger which attended this treatment, soon put a check on its employment. The best and safest measures to pursue, are to discover what causes the pressure, and at once remove it; if it proceeds from the bowels, a course of aperient medicine is to be employed, at the same time as much rest is to be enjoined as possible, by lying in a horizontal position, and whenever the erect posture is assumed, or any walking attempted, the limb is to be supported by a long bandage, commencing from the toes, and carried well up the thigh, first laying a compress of folded lint, enclosing a piece of lead, or a penny-piece, over the most protuberant portion of the vein. The bandage, when well put on, is a very excellent support, but the elastic lace-stocking, to those who can afford it, is unquestionably the best of external remedies, and should be worn as long as any danger from bursting is to be apprehended; this, with rest, and such medicine as the exciting cause may demand, is the only safe and rational treatment for varicose veins, which, when not proceeding from disease of the vessels, is always to be so cured.

VELVET, TO IRON.—Having ripped the velvet apart, damp each piece separately, and holding it tightly in both hands, stretch it before the fire, the wrong side of the velvet being towards the fire. This will remove the creases, and give the surface of the material a fresh and new appearance. Velvet cannot be ironed on a table, for, when spread out on a hard substance, the iron will not go smoothly over the pile.

VELVET, TO RAISE THE PILE OF.—Hold the reverse side of the velvet over a basin of water, and the pile of the velvet will be gradually raised.

VELVET, TO REMOVE GREASE FROM.—Get some turpentine, and pour it over the place that is greasy, rub it till quite dry with a piece of clean flannel; if the grease be not quite removed, repeat the application, and when done, brush the place well, and hang up the garment in the open air, to rid it of the smell.

VENETIAN CAKE.—Take of sound Jordan almonds, blanched and well dried at the mouth of a cool oven, or in a sunny window, seven ounces, full weight, and one of bitter almonds with them; pound the whole to a perfect paste with a few drops of white of egg, or orange-flower water, then mix them thoroughly with one pound of flour, and eight ounces of butter (which should be cool and firm, or it will render the paste too soft), and break this down quite small; then add eight ounces of pounded sugar, on part of which the rind of a fine lemon has been rasped, previously to its being crushed to powder. Make these into a paste, with the yolks of four eggs, or rather less, should they be large, for if too moist, it will adhere to the board and roller. To make a Venetian cake of moderate size, roll the paste less than a quarter of an inch thick, and cut with the larger fluted cutter, six or seven portions of equal size, lay them on lightly floured or buttered tins, and bake them in a slow oven until they are firm and crisp, and equally coloured of a pale brown. Should they seem to require it, lay them one on the other, while they are still warm, and place a baking tin with a slight weight upon them to render them quite level. When they are cold, spread upon each a different kind of choice preserve, and pile the whole evenly into the form of an entire cake. The top may be iced, and decorated with pistachio nuts, or grains of coloured sugar, or with a wreath of almond-paste leaves. To make the small Venetian cakes, roll the paste directed for the large one at the commencement of this receipt, into balls, flatten them with the hand, to about the third of an inch thick, brush them with beaten eggs, and cover them plentifully with white sugar-candy, crushed about half the size of a pea; bake them in a slow oven.

☞ Almonds, 8ozs.; flour, 1lb.: butter, 8ozs.; sugar, ½lb.; lemon, rind of 1; yolks of eggs, 3 to 4; preserve as needed.

VENETIAN FRITTERS.—Wash and drain three ounces of whole rice, put it into a full pint of cold milk, and bring it very slowly to boil, stir it often, and let it simmer gently until it is quite thick and dry. When about three parts done, add to it two ounces of pounded sugar, and one of fresh butter, a grain of salt, and the grated rind of half a small lemon. Let it cool in the saucepan, and when only just warm, mix with it thoroughly, three ounces of currants, four of apples chopped fine, a teaspoonful of flour and three large, or four small well-beaten eggs. Drop the mixture in small fritters, fry them in butter, from five to seven minutes, and let them become quite firm on one side before they are turned; do this with a slice, drain them as they are taken up, and sift white sugar over them after they are dished.

☞ Whole rice, 3ozs.; milk, 1 pint; sugar, 2ozs.; butter, 1oz.; grated rind of ½ a lemon; currants, 3ozs.; minced apples, 4ozs.; flour, 1 teaspoonful; a little salt; eggs, 3 large or 4 small.

VENISON BROILED.—Cut thin slices of venison, mix stale crumbs of bread with salt, pepper, and spices, egg the slices, dip in the seasoned bread, broil over a clear fire, and serve with a gravy sauce.

VENISON FRIED.—Cut the meat into thin slices, and make a gravy of the bones. Fry it of a light brown, and keep it hot before the fire. Put butter rolled in flour into the pan, and stir it till thick and brown. Put in half a pound of powdered sugar with the gravy made from the bones, and some red wine. Have it the thickness of cream; squeeze in a lemon, warm the venison in it, put it in the dish, and pour the sauce over.

VENISON HASHED.—Cut nice slices from the venison which may have been left cold, not forgetting to put plenty of fat with it, flour it, place it in a saucepan, pour over it three half pints of stock gravy, a gill of port wine, a little currant jelly, and two tablespoonfuls of ketchup; let it simmer gently, it must not boil, or it will make the venison hard; as soon as it is thoroughly hot, add a little salt and cayenne pepper; serve with sippets round the dish. There should be currant jelly on the table.

VENISON, HAUNCH OF, ROASTED.—Take a haunch weighing twelve pounds, and require the butcher to trim off the chine-bone and the end of the knuckle; wrap two or three folds of buttered paper, or the caul of a lamb, closely around the haunch to prevent the fat from burning; spit the haunch, set it before a slow fire, and roast it three hours, basting it frequently with salt and water, to prevent the paper from burning off; then remove the paper or caul, baste the haunch with butter, set it nearer the fire, and give it a light brown; continue to baste with butter; dredge it lightly with flour, and when it is well frothed and browned on all sides, it is done; wrap a ruffle of cut paper round the knuckle bone, and send the haunch to table with a plain gravy, made from the trimmings of the venison, and seasoned only with a little salt, served with currant jelly. If the venison has hung three or four weeks (and it ought to hang as long before cooking), it will be necessary to remove the outer skin before roasting.

VENISON, JOINTS OF.—The principal

joints are: 1, Haunch. 2, Neck. 3, Shoulder. 4, Breast.

VENISON, MOCK, STEWED.—Take a fat loin of mutton, the outer skin must be stripped off, and the bones cut out. Put the bones into a stewpan with a good-sized onion stuck with cloves, one anchovy, some peppercorns, and a bunch of sweet herbs. Stew for three hours in a small quantity of water, then strain. The mutton should be beaten with a rolling-pin, and nutmeg grated over the inside the previous night. Before it is put in the stewpan, it must be rolled up tight, beginning at the tail end, and tied with a strong string. Add half a pint of port wine to the gravy, and let it stew together for three hours at least. When done, the fat must be skimmed off, and the gravy thickened with a little flour and butter, and a small quantity of ketchup added. A large loin or saddle will require four hours.

VENISON, NECK AND SHOULDER.—The neck and shoulder of venison may be roasted without the paper or caul mentioned above. Lard it with thin slices of salt pork or boiled ham; garnish with sorrel, and make a gravy as above. A shoulder of ten pounds will roast in two hours.

VENISON PASTY.—A shoulder boned, makes a good pasty, but it must be beaten, and seasoned, and the want of fat supplied by that of a fine well-hung loin of mutton, steeped twenty-four hours in equal parts of rape, vinegar, and port. The shoulder being sinewy, it will be of advantage to rub it well with sugar for two or three days; and when to be used, wipe it perfectly clean from it and the wine.

VENISON POTTED.—Cut a piece of venison, fat and lean together; lay it in a dish, and stick pieces of butter all over; tie brown paper over, and bake it; when done, take it hot out of the liquor, drain, lay it in a dish; when cold, take off all the skin, and beat it in a marble mortar; season with mace, cloves, nutmeg, black pepper, and salt; when the butter that it was baked in is cold, take a little of it and beat in with it to moisten it, after which proceed in the usual manner.

VENISON STEAKS.—The best venison steaks are cut from the saddle; they should be cut three-quarters of an inch thick, and treated like beef steaks; serve with currant jelly.

VENISON, TO CHOOSE.—When good, the fat is clear, bright, and of considerable thickness. To know when it is necessary to cook it, a knife must be plunged into the haunch, and, from the smell, the cook must determine on dressing or keeping it.

VENTILATION.—The importance of ventilation, as applied to the rooms we ordinarily inhabit, is a most important consideration in connection with our health and comfort. When the breath of the human body issues from the chest, being heated to nearly the temperature of the body, it is dilated, and consequently rendered specifically lighter than the surrounding atmosphere: hence it instantly ascends, as wood from the bottom of water, and, before the next inspiration, it is removed out of the way, giving place to purer air. But this natural ventilation, as it may be called, is complete only while we are in the open air: when we are shut up in an apartment, the vitiated air rises, but it is stopped at the ceiling, and preserves its lofty situation only so long as its elevated temperature remains; when it has gradually given out its surplus heat to the walls of the room, it becomes of the same density as the rest of the air, mingles with it, and thus descends to our level, where we are liable to inhale a part of it again, together with a purer portion. From this it is evident that the upper part of a room, next the ceiling, is the place where, in general, the worst air is collected, and of course that is the place for letting it out; but it must be recollected that no air can make its escape from a room, except an equal quantity enter to supply its place; and it follows that there should be a provision made for the entrance of fresh air, as also for the egress of the foul atmosphere. Where a fire is burning in the chimney of an apartment, a certain degree of ventilation is going on constantly, and must go on of itself, without the thought or attention of any person; and this shows the advantage of open chimney fire-places. It is obvious that the current of air, necessary to feed the fire, produces a continual change of all that part of the air which is below the level of the mantel-piece; but this cannot happen without a partial change at least of what is above that level. If the vitiated air be not removed with sufficient rapidity, by the draught of the chimney alone, then some other mode will be necessary in addition. The better class of houses are now constructed with the rooms lofty, and the sashes of the windows made to open at

top and at bottom; and ventilation thus becomes comparatively easy. The warm vitiated air, ascending to the ceiling, finds there sufficient space above our heads, till t cools, and mixes gradually with the rest, as before stated; and if we desire to change the air more completely, we have only to pull down a small part of the upper sash, that the hot air near the ceiling may escape. But this escape of foul air will not always take place while a fire is burning, except certain circumstances be attended to. Should the aperture made by pulling down the top sash be greater than the area of the crevices in the apartments from which the fire was supplied, some cold air will come in by the window, to supply the fire, instead of hot air going out, and the effect of this will be unpleasant. It is, therefore, necessary that some other apertures, at the lower part of the room, should furnish this necessary supply of air to the fire, and permit the warm atmosphere to go off: opening the door for a short time will effect this, or lifting up the lower sash. But this mode of ventilation, though perfectly effectual and easy, cannot be always conveniently put in practice while persons are in the room, on account of the draughts of cold air which must enter. To obtain air without draught is the great object in view. This desirable result may be secured by a contrivance known as the "obliquely perforated glass ventilators." These consist of strips of plate glass, varying from one and a half inches to two inches or more in width, and by means of revolving cutters producing a series of notches in the edges of the strips. By this means, they effectually supply fresh air in any required quantity without draughts, the currents being so

FIG. 1

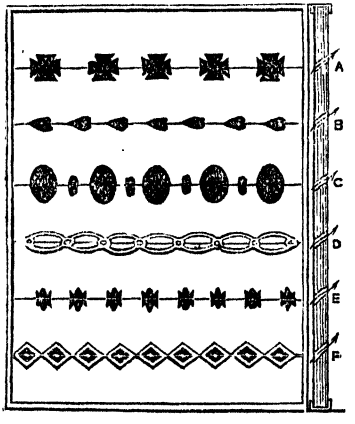
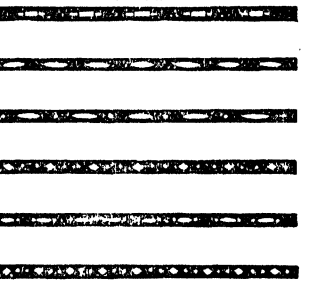


FIG. 3

broken up and divided as to enter the room in a continuous but imperceptible manner; besides which, any entering current of air is necessarily deflected upwards towards the ceiling, where, mixing with the warmest strata of air, it is gradually diffused throughout the apartment. The manner in which this desirable result is obtained, will be made intelligible by the accompanying illustrations. *Fig.* 1 is a front view of a window pane perforated on the principle alluded to, the openings in which are not, however, visible. *Fig.* 2 is a plan view of the perforators; and *fig.* 3 an edge section of the pane, showing the form of the openings, and the upward direction of the entering currents of air. This beautiful arrangement is produced by simply cutting any approved pattern on the opposite sides (upper and lower edges) of a series of strips of glass, which, being brought together, form a window pane, impervious alike to rain or direct currents of air. The elegant appearance capable of being produced by the great variety of changes that can be made in the colours and patterns, is almost inexhaustible. The designs shown in *fig.* 1 are but a few of those already in use. The three first patterns, marked A B C, are well

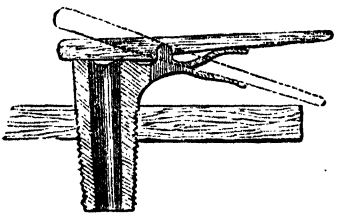
FIG. 2.



adapted for public buildings, shops, &c.; while the patterns D E F are suitable for sitting-rooms or bedrooms, and for the latter purpose are strongly recommended by the faculty. In the pattern B, the entering currents are deflected sideways as well as upward, at an angle corresponding to the inclination of the heart-shaped pattern of the cuts. In these ventilators, although the wind blows through a hole, it cannot possibly blow upon a person, unless he is in an unusually elevated situation, or the ventilator is misplaced. For ventilating the rooms of an ordinary dwelling-house in which gas is used, the following contrivance is made use of. Through an opening in the ceiling is passed a wide tube, one end of which conveys the foul air to the outside of the house, and the other projects a little below the level of the ceiling. The gas-pipe enters on one side, and is bent so as to hang perpendicularly in the centre of the tube, and carries a ring-shaped burner at the lower extremity. The burner is surrounded by a glass chimney, which is supported at its top on a metal cone-piece, and secured to the lower extremity of the tube by

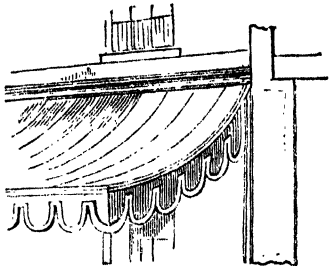
screws. The whole of this arrangement is surrounded by a hemispherical glass shade, the mouth of which is uppermost, and its upper edge is a few inches below the level of the ceiling. The shade is attached at its upper edge by screws to a metal ring, and is hinged to a second ring fixed to the ventilating tube by radial arms. This outer shade can be lowered by means of a cord, for the purpose of lighting or cleaning. A highly polished metal reflector is also added, to increase the effect of the light. The air of the apartment passes off in the strong draught occasioned by the burner, and a fresh supply of air is admitted to the lower part of the room.

VENT-PEG.—The proper management of the vent-peg is always of great importance in the draught of malt liquors, the object being to avoid the entrance of much air to the vacant space above the liquor in the barrel. Unless some is admitted, the tap will not act. The common vent-peg is perfectly efficient, if it is closed immediately after each draught, and only slightly lifted when more is required, or in fact only when the liquor from the tap ceases to flow freely. A vent-peg which answers its purpose perfectly, is shown in the accompanying figure.



It opens like the key of a flute, and closes itself immediately the hand is withdrawn. Nothing more is required than a small metal tube with a hole through it, closed by a flat key, which works on a side-arm, and is pressed down fast like a flute key.

VERANDAH.—This portion of the dwelling may be constructed of wrought-iron sash bars, cut to the proper length, the upper end let into the wall, and made secure by cement, and the lower ends notched into a cast-iron gutter. The verandah may have an apron in front formed by cast-iron ornaments, screwed to the under side of the gutter, or to the upper part of the iron prongs which support it. No simpler or more durable form of verandah can be well constructed; its roof may be glazed with panes of ground glass, from five inches to ten inches wide, according as the locality is more or less subject to violent hail storms. Where light is not an object, and blue slate abounds, it may be used in plates of any convenient size, stucco, or Roman cement, being employed instead of putty; sheets of copper, zinc, tinned plates, or rolled iron, may be fixed in the same manner as the glass; or even tarpauling well painted, or oil-cloth, may also be fixed between the bars. The lightness of appearance may be increased, by bending the bars so as to give a concave form to the upper surface of the roof, as seen in the annexed figure; concave surfaces reflecting more light, and therefore being always lighter or more varied to the



eye, than plain or convex ones. In this and in various other cases of a like nature, where the width of the verandah is not more than four feet, it may be supported by cast-iron brackets of elegant architectural design, firmly built into the wall.

VERB.—A verb is the principal or most important member of a sentence. Whenever we speak or write, we assert or affirm something, or we command or ask a question; and the word in the sentence that does any of these, is called the verb. Thus in the sentences, "James *lives* in Scotland," "Mary *died* last year," the words *lives* and *died*, which make assertions, are verbs. There are many different kinds of verbs, each of which is divided into a number of distinct parts, and has a variety of inflexions. For example, in the verb *love*, we have *love*, *loves*, *loved*, *loving*, besides *lovest* and *lovedst* and also various combinations with the auxiliary verbs, as *did love*, *have loved*, *will love*, *is loving*, *is loved*, *may love*, *may have loved*, *would love*, *would have loved*, &c. Verbs are divided into active, neuter, and passive; or, as they are sometimes called, transitive and intransitive. A verb is considered transitive or active when it means some action which passes on to a noun or pronoun immediately following it, as I *love* him; she *wrote* a letter. Hence, when a verb is used transitively, the nominative or subject does something to an object; that is, *acts* upon it. Thus the action of *loving* is done to him, and that of *writing* to the letter. A verb is considered intransitive or neuter when there is no action upon an object, or when the action is confined to the subject or nominative, and does not require a noun or pronoun to follow immediately, as he *sits*, she *stands*, they *eat*. In these examples there is no transition or passing over to an object. A verb is said to be *passive* when the nominative or subject is acted upon, or in a state produced by something else, as the letter *is written*; she *is deceived*. A passive verb is

always a compound verb in the English language, and consists of the past participle of some transitive verb used along with the auxiliary verb "to be." The regular English verb is divided into two principal parts, *moods* and *participles*. The word "mood" is derived from the Latin word *modus*, a manner or mode, and is applied in grammar to express the manner in which the leading idea of the verb is used There are the *indicative*, the *conditional* or *potential*, the *imperative*, and the *infinitive* moods. Participles are parts of the verb which participate in the nature of both verbs and adjectives, from which their name is derived. They are of the present and past tenses, and mostly end in *ing* or *ed*, as she *is walking*, he *was frightened*. The *indicative* and *potential* moods are divided into parts called tenses, from the Latin word *tempus* (time). In the regular English verb there are three tenses, the *present*, the *past*, and the future, as I *see*, I *saw*, I *shall see*. Each tense has two *numbers*, the singular and the plural, as he *sees*, they *see*; and each number has three parts, called *persons*, the *first*, *second*, and *third*, as I *see*, thou *seest*, and he *sees*. A verb is said to be *regular* when it forms its past tense and past participle in *ed*, by adding *d* to the radical form if it ends in *e*, and *ed* in other cases, as *love*, *loved*. A verb is called *irregular* when the past tense and past participles are formed in any other mode than by adding *d* or *ed* to the radical form, as *see*, *saw*, *seen*. The *conjugation* of a verb is the regular enumeration of all its parts according to the mood, tense, number, and person, as, indicative mood, present tense, singular number, first person, *I love*: second person, *thou lovest*; third person, *he loves*. Plural number, first person, *we love*; second person, *ye* or *you love*; third person, *they love*. Past tense, first person singular, *I loved*, &c. Future tense. *I will love*, &c. Potential mood, present tense, first person singular, *I may love*, &c.; and the simple infinitive mood, *to love*. In the above regular verbs, it may be observed that there are but six inflexions, namely, *lovest*, *loves*, *loveth*, *loved*, *lovedst*, and *loving*; and from the irregular verb *write*, seven inflexions are produced, namely, *writest*, *writes*, *writeth*, *wrote*, *wrotest*, *writing*, *written*. It should be observed that there are many words in the English language which are spelt in precisely the same manner, and fulfil the two-fold office of verb and noun, as, for instance, *absent*, *compound*, *concert*, *detail*, *extract*, *frequent*, *insult*, *object*, *perfume*, *rebel*, *subject*, *transfer*, &c When these words are used in the character of verbs, the second syllable must be accented, as absent′, compound′, concert′, detail′, &c.

VERBENA.—This flower should be round, with scarcely any indentation, and no notch or serrature. The petals should be thick, flat, and bright. The plant should be compact, the joints short and strong, and distinctly of a shrubby habit, or a close ground creeper, or a climber; those which partake of all are bad. The trusses of bloom should be compact, and stand out from the foliage, the flowers touching each other, but not crowding. The foliage should be short, broad, and bright, and enough of it to hide the stalks. The colours should be perfectly clear and distinct; in self colours, no shade should prevail, and in stripes the line where the colours separate should be well defined. The form of the truss should be as nearly flat as possible, so as to show off every individual flower to advantage. The best soil is a mixture of old turfy loam, leaf mould, and peat, in equal parts. If vegetable mould cannot be had, use the loam and sand, and about a sixth part of very rotten dung or good hotbed manure. Beds are best in an open exposure, sheltered by hedges or walls from the north-west, north, and north-east winds. The bed or beds should be long, and not more than four feet wide, and these would contain two rows, allowing them space to spread out a little every way. *The pot culture* of this flower should be practised as follows:—To have good plants, select in April healthy cuttings of the present year's growth, which will soon root with a little bottom heat. When rooted, pot off into four-inch pots and replace them where they previously were for a few days, when they may be removed to a cool frame to be gradually hardened. Then shift them into six or seven-inch pots, and place them where they are to bloom. Water at this stage may be given by syringing them in the evening; and as they get established in their pots, more water will be required. Rain-water is preferable; but whether it is rain-water or spring, let it be well exposed to the atmosphere, and take care to have it of the same temperature as the plants are in. As soon as they commence to grow freely, pinch out the tops of the leading shoots. When the lateral eyes have broken sufficiently, thin them out to five or six; as soon as they require support, let them be tied to neat stakes at a proper distance, so that light and air may act on every leaf. If early blooms are not wanted, it will strengthen them very much if they are divested of all trusses as soon as such appear, until the plants get a little advanced. Weak manure water, free from all sediment, may be applied once a week, and when the pots become full of roots, twice a week, which will greatly invigorate them. Decaying trusses should be cut off as soon as the pips begin to drop, and the plants be frequently turned round. When aphides make their appearance, recourse must be had to fumigation with tobacco immediately. A calm evening is best suited for this operation, and two gentle smokings on successive evenings will be found the most effectual. Should mildew make its appearance, dust the affected parts with flower of sulphur the moment the least speck is observed. The best soil for verbenas is composed of equal parts of turfy loam, leaf mould, and cow-droppings (the latter rotted to a black mould), with a small portion of fine river sand, used as rough as the potting will permit.

VERJUICE.—The expressed juice of unripe grapes. It is occasionally used in cooking, and is said to be very serviceable.

used externally, for bruises, where there is no abrasion of the skin. It is made as follows:—Having gathered the grapes when they are fully large, but still quite sour, remove the seeds, and pound the fruit in a mortar with a little salt; having squeezed out the juice, by wringing the bruised grapes in a cloth or putting them into a press, filter it through a jelly-bag several times, until it is perfectly bright; the juice is to be put into very dry and clean bottles, which have been previously exposed to the fumes of brimstone, in the following manner:—Suspend by a wire a small piece of lighted brimstone in the bottle, and when it is burnt out, and there is still a small portion of the vapour left, withdraw the wire, and put in the juice; then cork it immediately.

VERMICELLI.—This is a dried paste, manufactured chiefly in Italy, in the form of smooth round strings. The name has been given to it on account of the worm-like appearance of it, vermicelli in Italian signifying little worms. Maccaroni is manufactured of the same kind of paste as vermicelli, and in a similar manner; but it is rather larger in diameter, and is hollow like the tube of a tobacco-pipe.

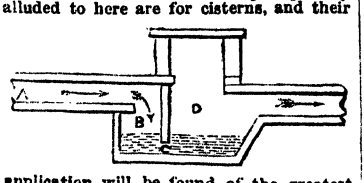
VERMICELLI A LA REINE.—Blanch about a quarter of a pound of vermicelli in boiling water, drain it, and throw it into some rich well-seasoned stock; when tender, take it out of the soup, and put it into the tureen; thicken the soup with eight well-beaten eggs, mixed with half a pint of cream, and pour it when quite hot upon the vermicelli.

VERMICELLI PUDDING.—Boil a pint of milk with lemon-peel and cinnamon, sweeten with loaf-sugar; strain through a sieve, and add a quarter of a pound of vermicelli; boil ten minutes, then put in the yolks of five, and the whites of three eggs; mix well together, and steam it one hour and a quarter.

VERMICELLI SOUP.—Take three quarts of common stock and one of the gravy, mixed together; put a quarter of a pound of vermicelli, blanched in two quarts of water, into the soup, boil it up for ten minutes, and season it with salt if requisite; put it in a tureen with a crust of French roll baked.

VERMICELLI WHITE SOUP.—The same as the above with the addition of the yolks of four eggs, half a pint of cream, and a little salt, mixed well together; simmer it for five minutes. Be very careful to stir it all the time it is on the fire, otherwise it will curdle.

VERMIN TRAPS.—The traps especially alluded to here are for cisterns, and their



application will be found of the greatest benefit. The accompanying engraving represents one of these, which, as will be seen, is simple and efficacious. The drain A may be of any form; the trap D is a sunk area as it were, in its bottom, in which the water will stand as high as represented at C, provided this area be made water-tight, which should be the case. From the bottom of the drain at D, a piece of pavement, if the drain is large, or a tile, if it is small, should project about five or six inches over the sunk part, which will prevent vermin passing that way. The drain should drop in level five or six inches at the other end of the trap, which will keep the water sufficiently low. Another piece of pavement or iron plate may be suspended from the roof of the drain, and of sufficient length to dip three or four inches into the water, which will not only act also as a barrier to vermin, but at the same time will prevent the ascent of noxious effluvia. An eye or opening should be placed immediately over the trap, with a moveable stone or cast-iron cover, closely fitted into a stone or wooden plinth, to admit of the trap being cleaned out or examined occasionally.

VERTIGO.—This distressing malady, which is characterised by giddiness or swimming in the head, is generally only a symptom of some prior disease or functional disturbance. When vertigo arises in cases of fever, or after a lengthened sickness, it is usually the precursor of delirium, and sometimes of coma, and should be met according to the nature of the disease by bleeding, blisters, leeches, or cupping. Sometimes it is the result of fatigue or exhaustion, and frequently proceeds from a debilitated state of the digestive organs; in such cases a small quantity of wine, with a biscuit, will at once relieve it, or where continuous, a little soda and rhubarb, or any stomachics prescribed for DYSPEPSIA, will be found beneficial. When vertigo suddenly attacks a person of robust constitution and florid complexion, apoplexy may be apprehended, and aid should be at once obtained; in the mean time, the patient should be placed in a horizontal position, hot water applied to the feet, and cold to the head; a dose of Epsom salts and a calomel pill taken, and if leeches are at hand, three or four should be placed on either temple. By these means valuable time will have been saved, and probably a fit of apoplexy averted.

VICARAGE CAKE.—Mix a pound and a half of fine flour, half a pound of moist sugar, a little grated nutmeg and ginger, two eggs well beaten, a tablespoonful of yeast, and a tablespoonful of brandy. Make it into a light paste, with a quarter of a pound of butter, melted in half a pint of milk. Let it stand for half an hour before the fire to rise; then add three-quarters of a pound of currants, well washed and cleaned, and bake the cake in a brisk oven.

☞ Flour, 1½lb.; sugar, ½lb.; nutmeg and ginger, sufficient; eggs, 2; yeast, 1 tablespoonful; brandy, 1 tablespoonful; butter, ½lb; milk, ½ pint.

VICTORIA CAKE.—Take three pounds of flour well dried, two pounds and a half of fresh butter, one pound of loaf sugar pounded,

three-quarters of a pound of candied citron and lemon-peel cut into thin strips, half a pound of sweet almonds, blanched and sliced, three pounds and a half of currants well dried and cleaned, one nutmeg grated, a blade of mace pounded, the yolks of twelve eggs, and the whites of six, beaten separately, half a pint of fresh yeast, a pint and a half of cream, and a tablespoonful of orange-flower water; first mix the spice with the flour, melt the butter and the cream together, and when cold, add it gradually to the flour, stirring it all the time, add the yeast to the eggs, and strain them into the flour, then add the other ingredients, and beat the whole together for half an hour; line a well-buttered tin with paper, also well buttered, pour in the cake, and bake it in a moderate oven from an hour and a half to two hours.

☞ Flour, 3lbs.; butter, 2½lbs.; sugar, 1lb.; citron and lemon-peel, ¾lb.; almonds, (sweet) ½lb.; currants, 3½lbs.; nutmeg, 1; mace, 1 blade; eggs, 12 yolks, 6 whites; yeast, ½ pint; cream, 1½ pint; orange-flower water, 1 tablespoonful.

VINE LEAF VINEGAR.—Take fresh gathered vine leaves with their foot stalks, and any vine shoots of the season that have not at all become woody; of these drop into the cask intended to be used as many as will fill it lightly. These should not be gathered till the liquor is ready to add to them, prepared as follows:—For every gallon of water add two pounds of the coarsest moist sugar, boil it half an hour, skim over a sieve, so that what runs through may be restored. The addition of shells and whites of eggs, or shells only, will assist the leaves. Boil them in the sugar and water, and strain off when done; cool quickly, and work with yeast. When the working begins to subside, the liquor sinks, and the froth draws together in a sort of flat cake; skim it, and put the liquor to the vine leaves in the cask; bung it down, and leave it in a cellar or other convenient place for a month or six weeks; then draw off the liquor clear, empty the cask of the vine leaves, soak, scald, and thoroughly dry it; return the liquor, and with it one pint of vinegar, a handful of chervil, and two ounces of raisins to every gallon. It is now to be treated just as the treacle vinegar.

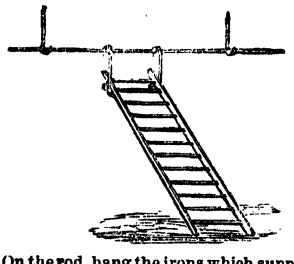
VINE LEAF WINE.—The leaves are best when young; at any rate they should not be full grown, and must be plucked with their stems; the tendrils are equally useful; they may be taken from vines from which no fruit is expected, or from the summer prunings; when tainted with soot, they must be carefully washed. Forty or fifty pounds of such leaves being put into a tub, seven or eight gallons of boiling water are to be poured on them, in which they are to infuse for twenty-four hours; the liquor being poured off, the leaves must be pressed in a press of considerable power; and being then washed with an additional gallon of water, they are again to be pressed. Thirty pounds of sugar and a quarter of a pound of tartar are now to be added to the mixed liquor, and the quantity being made up to seven gallons, the process recommended in the case of gooseberries is to be followed; or that for ripe currants, if a sweet wine is desired.

VINEGAR FROM APPLES.—Take a bushel of sour apples, cut them up or pound them, place them in a large tub, they will shortly begin to ferment; then add some water, which they will soon absorb; keep adding, day by day, as much water as they will absorb. At the end of a month strain off the liquor into a cask; to every gallon of liquor add half a pint of vinegar, hot, that has been previously boiled and reduced from one pint; let it remain for six weeks, and there is an excellent vinegar.

VINEGAR OINTMENT.—Take a pound of olive oil and four ounces of white wax, allow them to cool partially, add two ounces of vinegar, and stir till cold. This forms a cooling astringent dressing to irritated and inflamed eyelids.

VINEGAR WHEY.—Pour into boiling milk as much vinegar as will make a small quantity quite clear, dilute with hot water to an agreeable sharp acid, and add a little sugar. This preparation is less heating than if made of wine; and if the exciting of perspiration is all that is desired, it will answer the purpose very well.

VINERY LADDER.—This is used for thinning grapes. The three-quarter inch iron rod, which reaches from one end of the vinery to the other, is suspended about two feet from the rafters by the iron rods, the ends of which are turned up to support



it. On the rod, hang the irons which support the ladder. This ladder is very useful for pruning vines and thinning grapes, which are on a roofed trellis over a stage of greenhouse plants.

VINGT-ET-UN.—The game of vingt-et-un, or twenty-one, may be played by two or more people; and, as the deal is advantageous, and often continues long with the same person, it is usual to determine it at the commencement by turning up the first ace, or any other mode that may be agreed upon. The cards must all be dealt out in succession, unless a natural vingt-et-un occurs, and in the mean time the jeune, or youngest hand, should collect those that have been played, and shuffle them together, ready for the dealer, against the period when he shall have distributed the whole pack. The dealer is first to give two cards, by one at a time, to each player, including himself; then to ask every person in rotation, beginning with

the eldest hand on the left, whether he stands or chooses another card, which, if required, must be given from off the top of the pack, and afterwards another or more, if desired, till the points of the additional card or cards, added to those dealt, exceed or make twenty-one exactly, or such a number less than twenty-one as may be judged proper to stand upon; but when the points exceed twenty-one, then the cards of that individual player are to be thrown up directly, and the stakes to be paid to the dealer, who also is, in turn, entitled to draw additional cards; and, on taking a vingt-et-un, is to receive double stakes from all who stand the game, except such other players likewise having twenty-one, between whom it is thereby a drawn game, and when any adversary has a vingt-et-un, and the dealer, not then the opponent, so having twenty-one wins double stakes from him. In other cases, except a natural vingt-et-un happens, the dealer pays single stakes to all whose numbers, under twenty-one, are higher than his own, and receives from those who have lower numbers; but nothing is paid or received by such players as have similar numbers to the dealer; and when the dealer draws more than twenty-one, he is to pay to all who have not thrown up. Twenty-one, whensoever dealt in the first instance, is styled a natural vingt-et-un, should be declared immediately, and entitles the possessor to the deal, besides double stakes from all the players, unless there shall be more than one natural vingt-et-un; in which case the younger hand or hands, so having the same, are excused from paying to the eldest, who takes the deal of course. *Observe:*—An ace may be reckoned either as eleven or one; every court card is counted as ten, and the rest of the pack according to their points. The odds of this game merely depend upon the average quantity of cards likely to come under or exceed twenty-one; for example, if those in hand make fourteen exactly, it is seven to six, that the one next drawn does not make the number of points above twenty-one; but if the points be fifteen, it is seven to six against that hand; yet it would not, therefore, always be prudent to stand at fifteen, for as the ace may be calculated both ways, it is rather above an even bet that the adversary's two first cards amount to more than fourteen. A natural vingt-et-un may be expected once in seven coups, when two, and twice in seven, when four people play, and so on, according to the number of players.

VIOLET.—The sweet violet (*viola odorata*) as a native of this country, is quite hardy; and the single Russian variety, which will blow all winter, even during frost and snow, is still hardier, and from producing a few runners, requires little room; but the Neapolitan variety is rather more delicate, and apt to perish. There are eight varieties, which may be cultivated, either in the open border, or in frames or pots, when required to flower in winter, the Neapolitan being the best for this purpose. The white is both the earliest and latest in blowing, and is very sweet scented. The single Banksian is an early bloomer, but rather tender. *Soil and seed sowing.* The seed which ripens in summer from apetalous flowers, may be sown in the same manner as already directed for heart's ease. The seedling plants must be managed precisely like runners, as shall presently be stated. *Runners.*—As it is important to have a good supply of runners as early in the year as possible, these may be promoted by sifting a little soil or leaf mould over the old plants, and then watering them, as soon as they have done showing petalous flowers, in May, or the end of April; apetalous flowers produce all summer. The runners, when taken off, should be planted in light garden mould, or loam and peat, without any manure, at the foot of a south wall, in rows six inches apart, and four inches from plant to plant in the rows. They will soon strike root, and be ready about the end of July for removal to any part of the garden, where the soil is light. They may now be planted nine inches asunder, and the soil ought to be frequently loosened with the hoe, to allow their roots to extend. *Planting out.*—The first week in August, prepare a bed, in a western exposure, of the size of the frame to be placed over it, by digging out the old soil about two feet in depth, and lay in the bottom, about nine inches thick of broken pots, or brick rubbish, in order to drain it thoroughly. Upon this, lay one foot thick of a compost, composed of two barrow-loads of leaf mould, one barrow-load of sandy loam, one barrow-load of well rotted dung, and half a barrow-load of sharp sand; the whole well incorporated, and turned over frequently for twelve months before it is used. When the bed has been allowed to settle for a few days, the plants must be carefully taken up, their runners trimmed off, and planted four to six inches apart every way. If possible, they should not, according to Paxton, whom we have followed, be more than fifteen inches from the glass, giving them occasional gentle waterings before sunset. *After-management.*—When the nights begin to be cold, place the frame over them, and put on the lights at night and in rough weather; but during the whole autumn, with these exceptions, the lights should be kept off. The frame will require to be well lined with dry litter, to exclude frost, and mats will also be required. As soon as the plants show flower, it is not necessary to give them any air, except to dry them occasionally, if the weather should prove wet. By this means longer stalks are obtained, while the moisture of the frame, caused by evaporation, induces the buds to expand more freely. They will come into flower in December, and continue flowering till February or later. In a southern aspect, the frames will require shading from the mid-day sun in March and April. To insure a succession of flowers, transfer some plants

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to another bed, about six weeks after the first. More hand-glasses, also, may be filled with cuttings, these are required for the frames, and if cuttings are allowed to remain under them without protection, they will flower exceedingly well after those in the frames are over.

VIOLET PASTE.—A preparation of this name, used for confectionery, may be made as follows:—Take two pounds of violet flowers, and reduce them to pulp in a mortar, adding the juice of two lemons; boil two pounds of sugar to a thick syrup, and then add the mixture from the mortar, and with it a pound of apple jelly; let them simmer until they are sufficiently thickened to form a paste, which is to be rolled out, and dried on plates in the sun, or in a slow oven.

☞ Violet flowers, 2lbs.; lemons, juice of 2; sugar, 2lbs.; apple jelly, 1lb.

VIOLET PERFUME. — Drop twelve drops of oil of rhodium on a piece of loaf-sugar, grind this well in a glass mortar, and mix it thoroughly with three pounds of orris-root powder. This will resemble the perfume of violet. If more oil of rhodium be added, a rose perfume, instead of violet, will be produced.

VIOLET POWDER, TO APPLY.—Violet or baby's powder affords the best dressing for a blister, after having first poulticed the place for a few minutes. Instead of the ointment generally employed for the healing process, dust the blistered surface frequently with violet powder; and the pain and tedium usually attending the healing of a blister will be quite avoided.

VIOLETS, SYRUP OF.—Infuse a pound of fresh violet flowers in two pints and a half of water for a day, press out the liquor, and in every pint dissolve four pounds of sugar; skim and boil to a syrup.

VIPER, BITE OF.—Above the part bitten a ligature or bandage should be applied tightly, as quickly after as possible, so as to prevent the absorption of the venom, and its passage into the blood; the puncture should then be washed with constantly changed warm water, sucked or cupped, and lastly some caustic, the nitrate of silver, rubbed into the punctures, and the part dressed with a warm emollient poultice; the ligature being kept on for some hours after these precautionary measures have been adopted. There is, generally, much constitutional anxiety, faintness, retching, and very great debility, attended often with the vomiting of a large quantity of dark-coloured bile. To counteract these depressing symptoms, a good draught of hot brandy and water, with twenty drops of sal volatile and ten drops of ether, should be given immediately, and repeated according to circumstances every quarter or half hour, with or without a *one* grain opium pill with the first two doses; a large mustard plaster, made of equal parts of mustard and flour, laid on the stomach. The patient should be placed in bed in a darkened room, kept remarkably quiet, and the feet of a steady heat, with hot bricks or bottles of water.

VIRGINIAN CREEPER.—This is another plant that is not indebted to its flowers for its beauty; but its leaves assume a rich red tint during the autumn months. It is an exceedingly free grower, and all its pruning merely consists in keeping it within regular bounds. Any good, rich, loamy soil is suitable for this plant. It is necessary, however, that they should have a border of such soil extending at least three feet from the base of the wall to which they are attached, and that this soil should have been well dug previous to planting. The winter months are the best for planting this species of creeper.

VISITING, ETIQUETTE OF. — Friendly visits may be made in the forenoon; the toilet should be neat without being costly. Visits to give invitations to dinner-parties or balls, should be of short duration, and made in the afternoon. Visits of condolence should be paid within from a week to a fortnight after the funeral of the deceased; friends of less intimacy should make inquiries, and leave cards. A formal visit should never be made before noon. If a second visitor is announced, it is proper for the first visitor to retire, unless he is very intimate both with the host and the visitor announced, or unless the host expresses a wish that the first visitor shall remain. Visits after balls or parties should be made within a month. In the latter, it is customary to enclose your card in an envelope, bearing the address outside; this may be sent by post, if you reside at a distance; but, when residing in the neighbourhood, it is polite to send your servant, or to call. In the latter case, a corner of the card should be turned down. When a new visitor enters a drawingroom, if it be a gentleman, the ladies bow slightly; if a lady, the guests rise. On such occasions, the hat should be held in the hand, unless requested to place it down; then lay it beside you. The last arrival in a drawing-room takes a seat left vacant near the mistress of the house. A lady is not required to rise on receiving the visit of a gentleman, nor to accompany him to the door. When the visitor retires, ring the bell for the servant; you may then accompany your guest as far towards the door as the circumstances of your friendship seem to demand. Request the servant, during the visits of guests, to be ready to attend to the door the moment the bell rings. When you introduce a person, pronounce the name distinctly, and say whatever you can to make the introduction agreeable, such as, "an old and valued friend," "a schoolfellow of mine," "an old acquaintance of our family." Never stare about you in a room, as though you were mentally taking stock of its contents. Be hearty in your reception of guests, and when you detect diffidence, assist the stranger to throw it off. A lady does not put her address on her visiting card.

VITRIOL, ACCIDENTS FROM, TO REMEDY.—Such accidents are not uncommon in kitchens, as when oil of vitriol (improperly used for cleaning copper vessels) is let

fall on the hands, &c. In this case, if a little soda or potash be dissolved in water, or some fresh soap-boilers' lees, and instantly applied, no injury whatever will occur to the person or clothes.

VOICE, MANAGEMENT AND PRESERVATION OF.—A weak voice is often the effect of general weak health, and in proportion as the body can be strengthened, so will the voice become stronger. Perhaps medical advice may be requisite as to the general health of the body or state of the lungs; if so, it should be obtained; but, under any circumstances, avoid quacks and advertised nostrums. The following rules for *strengthening the voice* will be found useful:—1. Be very temperate in eating and drinking. 2. Avoid causes of excitement, mental or bodily. 3. Read or recite daily about five hundred lines, in the highest speaking tone which you can comfortably maintain. *Speeches delivered in public* are often marred by unpractised speakers, from the want of attention to the simplest rules, as follows:—Speak slowly, and give every word its due emphasis. Pitch the voice in the proper key, neither too high nor too low, otherwise the whole of the speech will prove harsh and ineffective. Direct the voice to about the centre of the room, and about midway from the floor; by this means every word will reach the ears of all present. *The following hints to vocalists* will be also found beneficial:—When about to sing, let the body be in a simple unconstrained posture. Practise two or three times a day, but at first not longer than ten minutes at a time, one of which should be before breakfast. Exercise the extremities of the voice, but do not dwell upon those notes you reach with difficulty. Open the mouth widely at all times, in the higher notes especially; open it to the ears, as if smiling. Never dwell upon consonants. When you are about to sing, read the words, and master their meaning, so as to give them the proper expression. Let every word be heard distinctly: disregard of this rule is a common fault among singers of every kind and degree. Children should never be allowed to sing much, or to strain their voices; the age of fifteen or sixteen is soon enough to begin to practise constantly and steadily the two extremities of the voice. The voice is said to have gained its greatest power at the age of twenty-eight, and to begin to decline soon after forty. Never force the voice in damp weather, or when in the least degree indisposed; persons often sing out of tune at such times, when they do not at others. Take nothing to clear the voice but a glass of cold water, and always avoid pastry, rich cream, coffee, cake, nuts, &c., when you intend to sing.

VOL AU VENT.—Roll off tart paste till about the eighth of an inch thick; then, with a thin cutter made for that purpose (about the size of the bottom of the dish you intend sending to table), cut out the shape, and lay it on a baking-plate with paper, rub it over with yolk of egg; roll out a good puff paste an inch thick, stamp it with the same cutter, and lay it on the tart paste, then take a cutter two sizes smaller, and press it in the centre nearly through the puff paste; rub the top with yolk of egg, and bake in a quick oven about twenty minutes of a light brown colour; when done, take out the paste inside the centre mark, preserving the top; put it on a dish in a warm place, and when wanted, fill it with a white fricassee of chicken, rabbit, ragout of sweetbread, or any other entrée you may wish.

VOLATILE BISCUITS.—Mix one pound of flour, half a pound of loaf sugar, and a quarter of a pound of butter into a paste, with two eggs and a teaspoonful of carbonate of ammonia dissolved in a little milk.

VOMITING.—When not the consequence of accidents or injuries to the head, or from hernia, or some affection of the bowels, vomiting or sickness generally proceeds from some derangement of the stomach, or else from the effect of some irritating or poisonous substance received into it through accident or design. In such cases as the latter, an emetic of antimony or ipecacuanha should be taken to expel the noxious substance as quickly as possible, as explained under the head of POISONS. For repeated and exhausting sickness, such as attends a bilious attack, the following draught should be taken every half hour. Take of

Camphor water	1 ounce
Sal volatile	20 drops
Spirits of lavender . . .	½ drachm

Mix. A small mustard plaster should be applied to the pit of the stomach, the patient at the same time keeping in an inclined position on his back, as frequently as possible. Sometimes simply lying on the back, drinking a copious draught of cold water, with cold wet napkins applied to the stomach, will relieve the most aggravated cases of vomiting. But where no relief can be obtained, a medical man should be instantly sent for.

VOWELS.—These parts of speech are frequently mispronounced or altogether omitted by careless speakers; and the truth of this assertion will be borne out by a glance at the following examples of error. For instance, *a* is often made to take the sound of *e*, and we hear—

*k*etch	for c*a*tch
g*e*ther	for g*a*ther
th*e*nk	for th*a*nk
*e*xceptable	for *a*cceptable

Or of *u*, as:—

veter*u*n	for veter*a*n

The sound of the vowel *e* is often changed into *i*, as:—

k*i*ttle	for k*e*ttle
forg*i*t	for forg*e*t
*i*ntirely	for *e*ntirely

Or into *a*, as:—

*a*rrand	for *e*rrand
v*a*rjuice	for v*e*rjuice

All the other vowel sounds are equally confounded, hence we hear:—

sens*a*ble	for sens*i*ble
poss*a*ble	for poss*i*ble
st*oo*pid	for st*u*pid
g*a*l	for g*i*rl
j*e*st	for j*u*st
ev*i*l	for ev*i*l
reg'l*a*r	for reg*u*lar
redic'l*ou*s	for rid*i*c*u*lous
pertic'l*a*r	for p*a*rtic*u*lar
impedence	for impudence
mischiev*i*ous	for mischiev*ou*s
mountaineous	for mountain*ou*s
tremend*u*ous	for tremend*ou*s

These are not so much the mistakes of ignorance as of carelessness, and might easily be avoided by remembering to give each vowel its full, simple, and proper sound.

W.

WADDING FOR GUNS.—Gun waddings are as varied as most of the other gun appendages. Whatever wadding is chosen, the gauge of the barrel should be borne in mind; a stiffer wadding should be employed for a large than a small bore; and it is always essential to comfort as well as safety, that whatever wadding be used, it should exactly fit the barrel. Different waddings have different effects on both the range and the force of the delivery of the shot. In the use of waddings of any kind it should be especially observed, that where there is no vent-hole to the breech, a resistance is offered to the descent of the wadding, and in the attempt to force the wad down, the powder is liable to be either pressed or disturbed. It also happens that some considerable impediment is experienced to the passage of the shot wad of some of the kinds in vogue; in such a case, a small hole made in either or both of the waddings will obviate the inconvenience. Although there are many kinds of ready-made waddings in existence, which are all more or less excellent in their way, the great difficulty is to obtain them of an exact fit. To obviate this drawback, it is not unusual to have a wadding punch made for each gun. In using these instruments, it is common to use lead to punch on; but close-grained wood will be found preferable, and answer the purpose better. Let a wooden block be firmly placed, presenting so large a surface that it may not become worn into cross ridges, which will prove unfavourable to either the scraping or planing of it when it becomes necessary to gain a level surface; for unless the block be level, the wads will not be cut clean.—See SPORTING, GUN, &c.

WAFER BISCUITS.—Add one ounce of butter and the white of one egg well beaten to one pound of flour; mix them with as much cream or good milk as will make a thick paste; work the paste up well till it is as fine as glass; then cover it over, and set it before the fire for twenty minutes; break it in pieces the size of a walnut, roll it out as thin as a wafer, using as little flour as possible in doing it. Bake about three minutes in a quick oven.

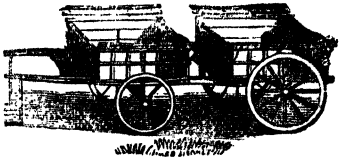
WAFERS.—In making common wafers for securing letters, wheat flour is mixed with isinglass and white of egg into a paste; the paste is spread evenly over tin plates, several of which are piled one on another and put into an oven. The layer becomes thus both baked and polished. When baked, the layers are taken from the tins, piled into a heap an inch or more in depth, and cut into wafers by means of hollow punches. They are coloured with the usual mineral colouring materials. Medallion wafers are made of very pure glue, coloured to any desired tint. A seal or medallion is moistened with a weak solution of either white or coloured gum, which gum is wiped off all except the sunken part. The glue is then poured over the medallion in a thin layer; and the result produced is a medallion wafer, either white or coloured, but standing out in relief from the ground of another colour. Isinglass or gelatine wafers are made of a coloured solution of isinglass, which is poured in a very thin layer on a glass plate, and afterwards cut into any desired form.

WAGES.—The following table shows at a glance the daily, weekly, and monthly rate of wages, according to the sum paid for the year:—

Per Year.	Per Month.	Per Week.	Per Day.
£ s. d.	£ s. d.	£ s. d.	£ s. d.
1 0 0	0 1 8	0 0 4½	0 0 0⅝
1 10 0	0 2 6	0 0 7	0 0 1
2 0 0	0 3 4	0 0 9¼	0 0 1½
2 2 0	0 3 6	0 0 9⅝	0 0 1⅝
2 10 0	0 4 2	0 0 11¼	0 0 1⅞
3 0 0	0 5 0	0 1 1⅝	0 0 2
3 3 0	0 5 3	0 1 2¼	0 0 2
3 10 0	0 5 10	0 1 4½	0 0 2½
4 0 0	0 6 8	0 1 6½	0 0 2¾
4 4 0	0 7 0	0 1 7¼	0 0 2¾
4 10 0	0 7 6	0 1 8⅝	0 0 3
5 0 0	0 8 4	0 1 11½	0 0 3½
5 5 0	0 8 9	0 2 0¼	0 0 3⅝
5 10 0	0 9 2	0 2 1⅝	0 0 3⅝
6 0 0	0 10 0	0 2 3⅝	0 0 4
6 6 0	0 10 6	0 2 5	0 0 4¼
6 10 0	0 10 10	0 2 6	0 0 4½
7 0 0	0 11 8	0 2 8½	0 0 4⅝
7 7 0	0 12 3	0 2 10	0 0 4⅝
7 10 0	0 12 6	0 2 10½	0 0 5
8 0 0	0 13 4	0 3 1	0 0 5¼
8 8 0	0 14 0	0 3 2⅝	0 0 5⅛
8 10 0	0 14 2	0 3 3¼	0 0 5⅛
9 0 0	0 15 0	0 3 5½	0 0 6
9 9 0	0 15 9	0 3 7¼	0 0 6¼
10 0 0	0 16 8	0 3 10	0 0 6½
10 10 0	0 17 6	0 4 0⅛	0 0 7
11 0 0	0 18 4	0 4 3	0 0 7¼
11 11 0	0 19 3	0 4 5¼	0 0 7½
12 0 0	1 0 0	0 4 7½	0 0 8

Per Year.			Per Month.			Per Week.			Per Day		
£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
12	12	0	1	1	0	0	4	10	0	0	8¼
13	0	0	1	1	8	0	5	0	0	0	8½
13	13	0	1	2	9	0	5	3	0	0	9
14	0	0	1	3	4	0	5	4½	0	0	9¼
14	14	0	1	4	6	0	5	8	0	0	9¾
15	0	0	1	5	0	0	5	9	0	0	10
15	15	0	1	6	3	0	6	0½	0	0	10⅓
16	0	0	1	6	8	0	6	2	0	0	10½
16	16	0	1	8	0	0	6	5½	0	0	11
17	0	0	1	8	4	0	6	6½	0	0	11½
17	17	0	1	9	6	0	6	10	0	0	11¾
18	0	0	1	10	0	0	6	11	0	0	11¾
18	18	0	1	11	6	0	7	3	0	1	0¼
19	0	0	1	11	8	0	7	3½	0	1	0½
20	0	0	1	13	4	0	7	8	0	1	1½
30	0	0	2	10	0	0	11	6	0	1	7½
40	0	0	3	6	8	0	15	4½	0	2	2½
50	0	0	4	3	4	0	19	3	0	2	9
60	0	0	5	0	0	1	3	0½	0	3	3½
70	0	0	5	16	8	1	6	11	0	3	10
80	0	0	6	13	4	1	10	9	0	4	4½
90	0	0	7	10	0	1	14	7½	0	4	11
100	0	0	8	6	8	1	18	5½	0	5	5¾
200	0	0	16	13	4	3	16	11	0	10	11½
300	0	0	25	0	0	5	15	4½	0	16	5½
400	0	0	33	6	8	7	13	10	1	1	11
500	0	0	41	13	4	9	12	3½	1	7	4½
600	0	0	50	0	0	11	10	9	1	12	10⅛
700	0	0	58	6	8	13	9	2¾	1	18	4½
800	0	0	66	13	4	15	7	8½	2	3	10
900	0	0	75	0	0	17	6	1½	2	9	3¾
1000	0	0	83	6	8	19	4	7½	2	14	9½

WAGGON.—This vehicle is constructed in a variety of forms, and of various dimensions. Rood's patent waggon, as shown in the engraving, is a contrivance whereby in a few minutes the same carriage may be changed by the driver into two complete carts of the common dimensions, and applicable to all the uses of carts in general; or into one waggon, so complete that a narrow inspection is necessary to distinguish it from an ordinary waggon. The carts have a contrivance to render them more safe and



easy to the horse in going down a hill, and have moveable side-ladders, which will be found of great use in carrying corn, bark, &c. The one-horse waggon is an excellently designed machine. The wheels are cylindrical, and the breadth of six inches. The draught is by what is called a draught spring. By these draught springs, the inventor says, a carriage will be put in motion by little more than half of the power that would be necessary without them, and the benefit will continue during all the time that the carriage may be continued in motion.

WAINSCOT, TO CLEAN.—Mix together four ounces of powdered quick-lime and four ounces of potass, and boil them for half an hour in three quarts of water; let the mixture stand until it is quite cold and clear; then pour the clear liquid off, dip a painter's brush into it, and pass it over the surface of the wood in the same manner as for painting; immediately afterwards washing with cold water. This mode of cleaning will frequently render a fresh coat of paint unnecessary, and it has the advantage of being destructive to the eggs of insects which may be deposited in the crevices of the wood. Where there is reason to suspect that bugs are in the wood, it may be well as an additional precaution to add to the mixture two drachms of corrosive sublimate.

WALKING, AS AN EXERCISE.—Walking is perhaps the readiest mode of taking exercise, and the one most extensively resorted to. If it brought the upper part of the body as thoroughly into exertion as the lower, it would be perfect, for it is gentle and safe with nearly all except the much debilitated. To render it the more effectual in the upper part of the body, it were well to walk at all times, when convenient, singly, and allow the arms and trunk free play. It is best to walk with a companion, or for some definite object, as the flow of nervous energy will be by these means promoted, and the exercise be rendered, as has already been explained, the more serviceable. Very long or rapid walks should not be attempted by individuals of sedentary habits, nor by weakly persons; their frames are totally unprepared for such violent exertion. When a person who has been long confined at still employments finds himself at liberty to indulge his inclination for a ramble of a few days in the country, he should begin with slow and short marches, and be content therewith till his body is hardened for greater efforts. Every summer many youths, from ignorance, do themselves great injury by undertaking pedestrian excursions much beyond their strength. Jaded to the last degree, and incapable of enjoying anything presented to their observation, they nevertheless persist in making out some appointed number of miles per day, never once thinking of the outrage they are committing upon themselves, and only looking to the glory of executing their task, the only pleasure they find in the journey. Serious consequences—consumption—not unfrequently follow such ill-advised and senseless efforts.

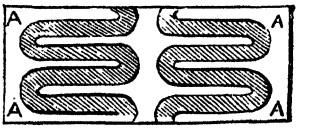
WALKING, CORRECT METHOD OF.—To walk gracefully, the body must be erect, but not stiff, and the head held up in such a position that the eyes are directed forward. The tendency to bend forward the head, and stoop the shoulders, which many persons have, must be avoided, as being not only awkward, but injurious. At the same time, strutting and pomposity are not to be indulged in. An easy, firm, and erect posture is alone desirable. In walking, it

is to be borne in mind that the locomotion is to be performed entirely by the legs, not rolling from side to side, and helping forward each leg alternately by advancing the haunches. In placing the foot down, the toe must first touch the ground, and not the heel, which mode of proceeding gives a very awkward appearance to the gait. The toes are to be turned out, but not excessively, a habit almost as unsightly as turning the toes in. The arms should move simultaneously with the legs, but easily, and with a moderate degree of motion only. Ladies generally present a more graceful appearance, with one or both of the arms partly raised when walking. Custom leads us to regard the hanging of the arms by the side, on the part of a female, as somewhat too masculine.

WALL-FLOWER.—The double varieties of this plant, require some protection through severe weather in winter such as a mat, or if scarce, a cold frame is sometimes awarded them; for these the Lancashire growers are celebrated, and we have seen some really magnificent specimens in their gardens. To make fine plants of these, cuttings should be taken in July or August, and struck under a hand-light on a shaded border, following them, as soon as it is known they are rooted, in sandy loam or leaf mould; such plants become well established before the winter, and in spring, when placed in the open borders, grow luxuriantly, and are speedily covered with flowers. The single kinds are usually treated as annuals; a sowing is made about the time recommended for striking the double varieties, and they are afterwards removed to final stations.

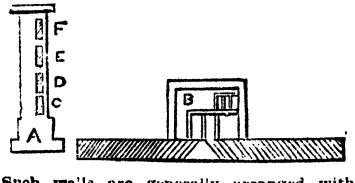
WALL FRUIT, TO PROTECT.—For this purpose, the following contrivance will be found to answer:—Lay a board one foot wide, on brackets under the coping of the wall, supporting it by uprights, two and a half inches square, which rest on sheds driven into the ground, at eighteen inches' distance from the wall. These uprights are ten feet apart the whole length, and the two ends are close boarded with half-inch stuff. Two inches under the top board a rod of iron should be fastened from upright to upright, and on these curtains fitted, which are formed of two breadths of coarse, close, stout canvas, having large tinned-iron rings fastened on the top. One side of each curtain is then fastened to each upright, and they draw and meet in the middle, lapping well over, and are tied together with a few pieces of tape, or else a few large hooks and eyes. The whole apparatus is moveable, and with care, will last many years.

WALLS.—In the construction of walls, it is essential that the stones be either taken from the quarry, or consist of the largest land-stones, broken in such a manner as to have a good flat surface, in order that they may bind well; that they be built by masons, and well pinned; that they have as dry and deep a foundation as possible in order to guard against frosts, &c.; that they may be made wide at the bottom, and tapering upwards when the coping is to be applied; that the coping consists of materials that cannot be readily overturned or removed, for, upon the manner in which it is finished, much of the future value and durability of the wall will be found to depend. Independently of the ordinary walls of stone, there are others, made of various materials, and constructed in several ways. *Turf walls* form a fence for enclosing fields, and for the formation of folds, pens, or other places of confinement for cattle during the night. In general they are made with turf only, pared off from the adjoining surface, and used without any mixture of earth; in other cases, the wall consists of a fencing of turf on each side, while the space between is filled up with loose earth. *Stone and turf walls* are also very common in many situations, and are frequently employed from neccessity, when other materials are expensive or procured with difficulty. *Mud walls with a mixture of straw* are also used. In the construction of these, a small quantity of straw should be taken, and incorporated with a sufficient proportion of clay; the straw in this case, answering the same purpose as hair in lime-plaster; when a sufficient number of small masses are made, the work is begun by laying a stratum at the bottom of the embedded wall; this being done, and the different pieces firmly kneaded together upon the hand, a flat deal board is applied on each side, which, being properly pressed and rubbed against the building in a horizontal direction, not only serves to consolidate the work, but gives it a degree of smoothness and uniformity; successive strata are added, till the wall is raised to the intended height, care being taken to taper it gradually upwards. Walls made in this way will last for many years; and, if washed with lime at the proper season of the year, will have an appearance no way inferior to such as are made with stone and lime. Walls may also be made of rammed earth. In constructing them, the earth is previously pounded, in order to crumble any stones therein; clay is added in a small quantity, about one eighth part. It is all beaten and mixed up together by repeated blows of the mallet. The earth being thus prepared, and slightly wetted, the foundation of the wall is dug. This is laid with stone; and, when it is about one foot high above the surface of the ground, planks are arranged on each side, and the space between filled with earth intended for the wall; this method is continued successfully until the wall is completed. Stamped earth walls are prepared by the earth being put into a mould or box of any size, as seen in the engraving.



This mould is a strong oaken or iron box, and the earth being placed in it, is com-

pressed either by the action of a press acted upon by a lever or screw, or great forge-hammer. The stone, or solid body of earth thus acquired, is then used in the same way as common hewn stone, and either bedded or merely jointed with lime-mortar; it is then washed with lime, both for effect and duration. Walls for gardens, orchards, and general horticultural purposes are usually built in panels, from fifteen to thirty feet in length, one brick thick, with pillars at specified distances, for the purpose of adding to their strength, and the foundation of a brick and a half thick. The following plan of building a wall is worthy of adoption, as it is equally durable as the ordinary kind, and saves one-third of the expense. Form the wall hollow, nine inches in breadth, by placing the bricks edgewise, so as to represent two facings, lay them in good mortar, and carefully finish the joints. The bricks are placed alternately, with their faces and ends to the outside, so that every second brick is a tie, and on each succeeding course, a brick with its end outside is placed on the centre of one laid lengthwise on either side. The top of the wall must be covered with a coping of stone or bricks projecting eight inches. It is strengthened at every twenty feet by pieces of fourteen-inch brick-work, built in the same manner with bricks laid on edge. In no instance, should a wall be lower than eight feet. The thickness usually varies with the height of the wall -being nine inches if it is not higher than eight feet; thirteen and a half inches if above eight, and under fourteen feet; and eighteen inches from fourteen up to twenty feet. Walls so constructed, become dry after rain much more rapidly than a solid wall of the same or any other thickness, whilst they ripen the fruit equally well. Inclined or sloping walls have been recommended, but have always failed in practice; for although they receive the sun's rays at a favourable angle, they retain wet, and become so much colder by radiation at night than perpendicular walls, that they are found to be unfavourable to the ripening of fruit. The *flued wall* or *hot wall* is generally built entirely of brick, though where stone is abundant and more economical, the back or north side may be of that material. A flued wall may be termed a hollow wall, in which the hollow part is thrown into compartments A, to facilitate the circulation of smoke and heat from the base or surface of the ground, to within one or two feet of the coping.



Such walls are generally arranged with hooks inserted under the coping, to admit of fastening some description of protecting covers, and sometimes for temporary glass frames. A length of forty feet, and from ten to fifteen feet high, may be heated by one fire, the furnace of which, B, being placed one or two feet below the surface of the ground, the first course or flue, C, will commence one foot above it, and be two feet and a half, or three feet high, and the second, third, and fourth courses, D, E, F, narrower as they ascend. The thickness of that side of the flue next the south, or preferable side, should, for the first course, be four inches of brick and bed, and for other courses, it would be desirable to have bricks cast in a smaller mould; say, for the second course, three inches, for the third, two and three-quarter inches, and for the fourth, two and a half inches in breadth. This will give an opportunity of bevelling the wall, and the bricks being all of the same thickness though of different widths, the external appearance will be everywhere the same.

WALLS, TO PREVENT DAMPNESS IN.—First dry the walls thoroughly, and then varnish them with the following: mix a pint of linseed oil, an ounce and a half of ground litharge, and two ounces of finely-powdered resin. Apply this in successive coats, which, after the fifth time, will form a varnish on the wall, so hard and compact as to effectually exclude moisture. Or, when the walls are papered, place under the paper sheet lead, rolled very thin, and fastened up with copper nails. It may be immediately covered with paper.

WALNUT, CULTURE OF.—They succeed only in a deep, alluvial, rich soil; their roots spread far and deep, and as most vegetation refuses to grow beneath their shade, the most proper position for them is the outside of the orchard, or corner of a field; their habit unfits them for the garden. The necessity of gathering the fruit by thrashing it from the tree with poles, renders any further pruning unnecessary; and the management of mature trees may be said to be confined to the removal of decaying limbs, nor is that of younger plants of much more trouble; after being grafted, which should be done in March, in the manner usual with other trees of the class, they will only require to be trained to the height sufficient to obtain the desired stem before the head is allowed to be formed. The list of kinds cultivated by name is, as before mentioned, very limited; from them we select the following: *Fulham*—Nuts large, very full and double, shell thick; a good bearer. *Highflyer*—Nuts of medium size, well filled, shell very thin, so that it may be broken between the fingers. *Prolific*—Nuts large, well filled; tree bears very young. *Thin-shelled*—Nuts double, full, shell thin; a moderate bearer. *Yorkshire*—Nuts well filled, but do not double, shell stout; bears well.

WALNUT KETCHUP.—See KETCHUP.

WALNUT VINEGAR.—Put green walnut shells into a brine of salt and water strong enough to float an egg; let them lie covered in this ten or twelve days; then take them out, and lay them in the sun for a week; put them into a pan and pour boil-

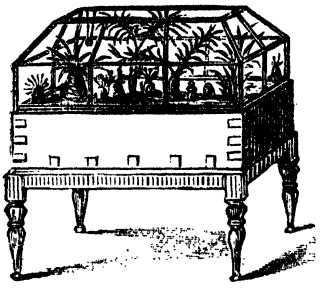
ing vinegar on them; in about a week or ten days pour off the vinegar, making it boiling hot, and pour over them again. In a month it will be fit for use, and will be found excellent to eat with cold meat, and particularly useful in making sauces.

WALNUTS, TO PICKLE.—The walnuts for this pickle, must be gathered while a pin can pierce them easily, for when once the shell can be felt, they have ceased to be in a proper state for it. Make sufficient brine to cover them well, with six ounces of salt to the quart of water; take off the scum, which will rise to the surface as the salt dissolves, throw in the walnuts, and stir them night and morning; change the brine every three days, and if they are wanted for immediate eating, leave them in it for twelve days, otherwise, drain them from it in nine, spread them on dishes, and let them remain exposed to the air until they become black; this will be in twelve hours or less. Make a pickle for them, with something more than half a gallon of vinegar to the hundred, a teaspoonful of salt, two ounces of black pepper, three of bruised ginger, a drachm of mace, and from a quarter to half an ounce of cloves (of which some may be stuck into three or four small onions), and four ounces of mustard-seed. Boil the whole of these together for about five minutes; have the walnuts ready in a stone jar or jars, and pour it on them as it is taken from the fire. When the pickle is quite cold, cover the jar securely, and store it in a dry place. Keep the walnuts always well covered with vinegar, and boil that which is added to them.

WALTZ.—This kind of dance includes the following:—*Waltz Cotillon:* Places taken the same as for a quadrille; first couple waltz round inside, first and second ladies advance twice and cross over, turning twice; first and second gentlemen do the same; third and fourth couples do the same; first and second couples waltz to places, third and fourth do the same; all waltz to partners and turn half round with both hands meeting the next lady, perform this figure until in your places; form two side lines, all advance twice and cross over, turning twice: the same, returning; all waltz round; the whole repeated four times. *Waltz Cellarius:* The gentleman takes the lady's left hand with his right, moving one bar to the left by glissade, and hopping twice on the left foot, while the lady does the same to the right, on her right foot; at the second bar, both repeat this movement with the other foot. This is repeated for sixteen bars; they then waltz sixteen bars, glissade and two hops, taking care to occupy the time of two bars, to get quite round. The gentleman now takes both the lady's hands, and makes the grand square, moving three bars to his left, at the fourth bar making two beats while turning the angle; his right foot is now moved forward to the other angle three bars, at the fourth beat again while turning the angle, the same repeated for sixteen bars, the lady having her right foot forward when the gentleman has his left foot forward, the waltz is again repeated, after which several other steps are introduced, but which require to be seen to be understood. *Circular Waltz:* The dancers form a circle, then promenade during the introduction; all waltz sixteen bars—set, holding partner's right hand, and turn—waltz thirty-two bars, rest and turn partners slowly—face partner and chassez to right and left—pirouette lady twice with the right hand—all waltz sixteen bars, set, and turn—all form a circle, still retaining the lady by the right hand, and move round to the left, sixteen bars: waltz for finale. *Polka Waltz:* The couples take hold of hands as in the usual waltz. First waltz: the gentleman hops the left foot well forward, then back; and glissades half round. He then hops the right foot forward and back, and glissades the other half round. The lady performs the same steps, beginning with the right foot. Second: the gentleman hopping strikes the left heel three times against the right heel, and then jumps half round on the left foot; he then strikes the right heel three times against the left, and jumps on the right foot, completing the circle. The lady does the same steps with reverse feet. Third: the gentleman raises up the left foot, places it lightly on the ground, then strikes the right heel smartly twice, and glissades half round. The same is then done with the other foot. The lady begins with the right foot. *Waltz à deux temps:* This waltz contains like the common waltz, three times, but differently divided, the first time consists of a gliding step; the second a chassez, including two times in one. A chassez is performed by bringing one leg near the other, and moving it forward, backward, right, left, and round. The gentleman begins by sliding to the left with his left foot, then performing a chassez towards the left with his right foot without turning at all during the first two times; he then slides backwards with his right leg turning half round, after which he puts his left leg behind, to perform a chassez forward, turning then half round for the second time. The lady waltzes in the same manner, except that the first time she slides to the right with the right foot, and also performs the chassez on the right, and continues the same as the gentleman, except that she slides backward with her right foot, when the gentleman slides with his left foot to the left. To perform this waltz gracefully, care must be taken to avoid jumping, the movement consisting of a mere slide, and the knees being kept slightly bent.

WARDIAN CASE.—An invention which facilitates and favours the growth of plants where, owing to the vitiated state of the air in crowded towns, or close apartments, it is impossible to cultivate plants in open pots. The Wardian case may be constructed of every shape and size, according to the taste or means of the grower. By aid of these, any one inhabiting a dwelling freely exposed to the sun's light, has it in his power to cultivate a miscellaneous collection of plants at a very trifling expense. One of these cases, of a very complete structure, is represented with its collection of plants, in the annexed figure. On the stand, or table is a strong box, lined with zinc or

lead, and filled with well-moistened loamy soil, underlaid by a thin subsoil of turfy



loam, and this rests on a porous stratum of gravel or broken earthenware. This composition is intended to represent a natural fertile soil, which it does to perfection, the water lodging among the gravel, all the wants of the plant in the superior mould require it. Over this box is placed a close-fitting glass cover, which completes the apparatus. The lighter and thinner the glass frame, and the finer the glass, the better are the plants exposed to view, and the more ready to receive the sun's light. When the moisture of the soil within is vaporized by the heat of the sun, it collects on the inside of the glass, and trickles down again, so that the plants are never subjected to irregular or capricious watering, while their own respiration and decomposition of water afford them nearly all the atmosphere they require. The case, however, is not absolutely air-tight; if it preserves a certain regular amount of moisture, warmth, and air, while it excludes dust, smoke, soot, and noxious fumes, it does all that is required. Wardian cases may be used either for in-door or open culture; and answer as well for a little front garden-plot, or back court, as for a drawing-room. They can be also conveniently put up in balconies, or even over the entire window, so that the panes may serve for one side of the conservatory. The plants to be sought after need not be rare exotics, but such as grow abundantly in woods, and in the neighbourhood of towns and cities. Of these, the common ivy grows most beautifully, and can be trained over any part of the case, agreeably to the pleasure of the owner. The primroses in early spring, will continue to flower for seven or eight weeks in succession; so likewise does the wood sorrel, the anemone, the honeysuckle, and numerous other plants, independently of numerous species of mosses and ferns. There are, likewise, many cultivated plants procurable at a small cost, which grow without the slightest trouble, as the common musk-plant, myrtle, jasmines, &c. All the vacant spaces in the case may be employed in raising small salads, radishes, &c. These remarks apply chiefly to situations where there is but little sunshine; where there is more sun, a greater number and variety of flowering plants will be found to thrive, such as several kinds of roses, passion flowers, geraniums, &c., with numerous beautiful annuals. Case-grown plants, after the first preparation, require little or no care; the case need only be opened for the removal of dead leaves, or for a little trimming when required. Plants in open flower-pots are exposed to the alternations of climate, but the plants in these cases seem to be independent of any change of temperature in the air, and water themselves.—See WINDOW GARDENING.

WARDROBE.—An article of furniture in which clothes are kept. For this purpose, it is more convenient than chests of drawers, for in them, dresses and coats may

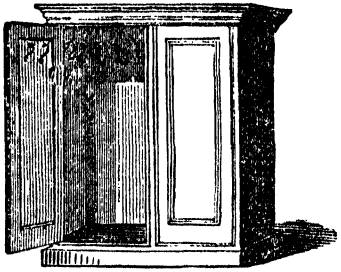


Fig. 1.

be put away without folding; or light and delicate articles may be laid by themselves on sliding trays, and so kept from all pressure. The simplest kind of wardrobe is an upright press, as shown in *fig.* 1. It may be made of mahogany, oak, or walnut; they

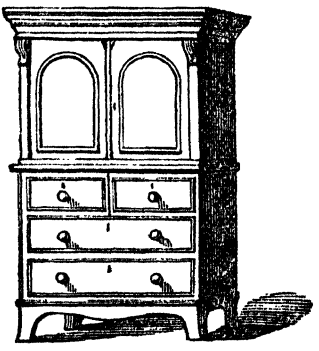


Fig. 2.

are also made of pine and painted, to suit

purchasers who cannot afford to pay a high price. In the engraving, one of the doors of the wardrobe is left open, to show the position of the pegs on which clothing is hung, by having a row on the inside of the door, the whole four sides will be filled, and no space wasted. A partition which divides the wardrobe into two, runs from top to bottom, where the doors meet, and the space covered by the closed door is generally fitted with sliding trays or drawers. The lowest drawer of all is a very deep one for holding bonnets. Sometimes pegs are placed inside, so that the bonnets may hang apart from each other. *Fig.* 2, combines the advantages of a wardrobe and chest of drawers; it is suitable for a small room, and will stand conveniently in a recess. When the doors are opened, the whole contents of the upper part are exposed at one view. This part is generally fitted up with five sliding shelves, or with sliding trays, which run in grooves made in the end of the carcass. *Fig.* 3 is what is called a winged wardrobe, and is the

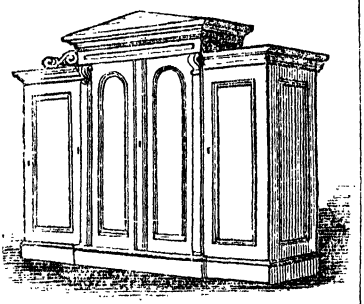
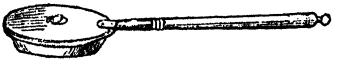


Fig. 3.

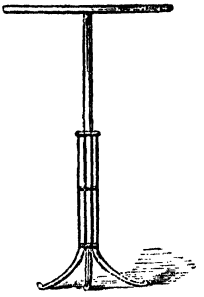
most serviceable of all, but it can only appear to advantage or be used with comfort in a large room. One convenience of a wardrobe over a chest of drawers is, that one lock on the door secures the things inside as well as the five or six locks on the drawers, and with far less trouble.

WARMING-PAN. — This well-known implement of domestic economy is usually filled with live coals when it is required for use, but care is needed not to leave smoke or suffocating fumes, independently of the



danger of scorching the sheets. A superior warming-pan illustrated by the annexed figure, obviates these inconveniences by being filled with boiling water instead of coal.

WARMING STANDARD. — A contrivance adapted for certain culinary processes, constructed as follows:—Procure a hollow iron tube, of three-quarters or half an inch outside diameter; to the lower part, weld or solder a tripod, on which it may rest firmly; near the upper part provide a thumb-pinching screw-bite in the inside of



the tube. Procure a long rod of a diameter to go easily into the diameter of the lower tube; let this rod be of sufficient length to reach the second bar of the grate, where the lower end inserted in the tube is just caught by the pinching-screw. At the top of the bar or rod, fasten a circular plate of iron, on which to place the plates or articles to be warmed It is evident that the pinching-screw, fastening the internal rod, will keep the circular plate at any elevation requisite; thus, it may be kept opposite the hottest and brightest portion of the fire. The whole article may be made cheaply of tin.

WARRANTY — In all cases of express warranty, if the warranty prove false, or the goods are in any respect different from what the vendor represents them to be, the buyer is entitled to compensation, or he may return them. But a *general* warranty does not extend to guard against defects which are obvious to ordinary circumspection, or where the false representation of the vendor is known to the vendee. Neither does the law, upon the sale of goods by sample, with a warranty that the bulk of the commodity answers the sample, raise an implied warranty that the commodity should be marketable; therefore, if there should be a latent defect then existing in them, *unknown* to the seller, and without fraud on his part, he is not answerable. But a sale of goods by sample, is such a warranty that, if the bulk be inferior to the sample, the purchaser is not bound to accept or pay for the goods. Warranty must be upon the sale; if it be made afterwards, it must be reduced to writing, otherwise it will not be binding on the vendor. With respect to the sale of horses, a warranty of *soundness* may be defined in an enlarged sense, an assurance from constitutional defects; but in its practical import is construed so as to exclude every defect by which the animal is rendered less fit for present use and enjoyment; the horse is not, on that account, to be held unsound, still less if the purchaser be informed of it, and admits the exception

into the terms of the contract. The agreement for the sale of horses has been held to be an agreement "relating to the sale of goods," within the Statute of Frauds; therefore, a written receipt for the price, containing the warranty or other condition of sale, is admissible in evidence, stamped with a common receipt stamp, without an agreement stamp, and is the usual mode in which the contract is made and proved. A verbal representation of the seller to a buyer of a horse in the course of dealing, that he "may depend upon it the horse is perfectly quiet and free from vice," is a warranty; or that he "could warrant." If the seller says, at the time of the sale, "I never warrant, but the horse is sound as far as I know;" this is a qualified warranty, and the purchaser may maintain an action, if he can show that the horse was unsound to the knowledge of the seller.

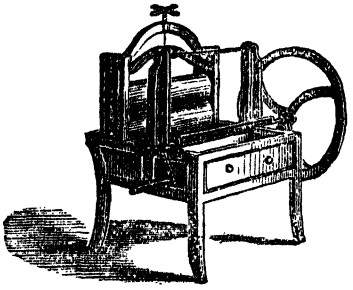
WARREN.—A place privileged either by prescription or grant from the Crown, to keep beasts and fowls of warren in, as rabbits, hares, partridges, pheasants, &c. The statute declares that a warren may be open, and there is no need of closing it in, as there is in the case of a park. In the forming of a warren, great caution is to be used for the fixing upon a proper place and a right situation. It should always be upon a slight ascent, if possible, and exposed to the east or the south. The soil that is most suitable is that which is sandy; for when the soil is clayey or hard, the rabbits find great difficulty in making their burrows, and never do it so well; and if the soil be boggy or marshy, there would be very little advantage from the warren, for wet is very destructive to these animals.

WASH BALLS.—Shave thin two pounds of new white soap into about a teacupful of rose-water; then pour as much boiling water on as will soften it. Put into a brass pan a pint of sweet oil, four pennyworth of oil of almonds, half a pound of spermaceti, and set all over the fire till dissolved, then add the soap, and half an ounce of camphor that has first been reduced to powder by rubbing it in a mortar with a few drops of spirit of wine or lavender water, or any other scent. Boil ten minutes, then pour it into a basin, and stir it till it is quite thick enough to roll up into hard balls, which must then be done as soon as possible. If essence is used, stir it in quickly after it is taken off the fire, that the odour may not evaporate.

WASHING.—The process of washing is one of the most important in the practice of domestic economy, and requires considerable management to conduct it properly. Before proceeding to wash, all the articles must be carefully looked over and sorted, taking care to tie the pairs together. Articles much torn should be mended, as a rent begun before the wash is sure to be increased by scrubbing. All stains should be attended to, using the proper application for each kind. The house-linen, body-linen, coloured articles, and flannels, are all washed separately, and must, therefore, be sorted accordingly. When this is done, the operation may be proceeded with as follows:—Take a pound of yellow soap and three ounces of patent washing-powder, dissolve in two quarts of water, and boil to a jelly. Add this quantity to twelve gallons of cold water in the furnace, then put the finest of the clothes into the water while cold, heat the furnace, and allow them to remain till they have boiled for half an hour. Take them out, and rinse them twice, in two clear waters. In taking them out of the furnace, lay them in the narrow-bottomed basket over the furnace, that the water may drain back into it before putting them into clear water. After rinsing them the first time, pour the water back into the furnace to boil the second lot of clothes in, and let the second water be used for the first rinsing of the next lot of clothes, and so on, bluing each lot after being rinsed twice. When the water in the furnace becomes too weak, add three-quarters of a pound of soap and an ounce of washing-powder, boiled to a jelly, as before. If the wristbands, or any part of the clothes, are very dirty, rub a little soap on, and soak them one or two days beforehand. They must be carefully looked over when in the first rinsing tub, and any dirty places washed out and rinsed again. If the furnace is small, a less quantity of soap and soda must be used. This plan requires a plentiful supply of water. When there are many coloured things, dissolve half a pound of soap into the water to make a lather, instead of rubbing soap on them. And to wash flannels, make a good lather with yellow soap and warm rain water; rub them, and put very little soap upon them. Wash them in this way in two waters, and then in a clear lather with a little blue in it; squeeze them in a cloth, and shake them well. When water is hard, and will not readily unite with the soap, it will always be proper to boil it before use; which will be found sufficiently efficacious, if the hardness depends solely upon the impregnation of lime. Even exposure to the atmosphere will produce a softening effect, leaving it much fitter for washing purposes. In both cases, the water ought to be carefully poured off from the sediment, as the neutralized lime, when freed from its extra carbonic acid, falls to the bottom by its own gravity. Boiling, however, has no effect when the hardness of the water proceeds from lime united with the sulphuric acid; and it must be brought to its proper state, by the application of common wood-ashes from the kitchen grate, or of barilla, or pearlash. To economise the use of soap, put any quantity of pearlash into a large jar, covered from the dust; in a few days, the alkali will become liquid, which must be diluted in double its quantity of soft water, and with an equal quantity of newly-slacked lime. Boil it for half an hour, frequently stirring it, adding as much more hot water, and drawing off the liquor, when the residuum may be boiled afresh, and drained, until it ceases to feel acid to the tongue. Soap and labour may be saved by dissolving

alum and chalk in bran-water, in which the linen ought to be boiled, then well rinsed out, and exposed to the usual process of bleaching.

WASHING MACHINE. — A machine designed for washing articles, with a saving of labour and expense. There are various constructions of this kind in existence; that shown in the annexed engraving may



be explained as follows:—It is furnished with a wash-tub, and a tap to draw off water; also with rollers for wringing and mangling, and a drip-board to convey water from the rollers back into the tub, without spilling the water. There is a mangling board, which slides out, a fall-down table, with inclined back, and wheels by which the whole can be removed by the merest child. The washing-tub is fitted with internal ribs, and represents an oblong box, with a water-tight lid. The action is semi-rotary, causing the clothes to rub backwards and forwards over the ribbed sides of the tub, which is a perfect imitation of the hand-rubbing mode of washing, and which causes the least amount of friction. In this machine, therefore, the finest muslins can be washed without the slightest injury. Its great advantage, however, is that it excludes atmospheric air, and confines the steam, during the operation of washing, the steam acting more powerfully upon the clothes, as it bleaches them more effectually than though they were boiled. The dirt, under these circumstances, is more effectually loosened, and less friction is required to free from it the article washed. The wringing powers of this machine are also excellent. The clothes are much better in colour when wrung by this process, than by the hand, the dirty water being completely pressed out of them; while, by the ordinary mode, it is left to dry in the clothes. Another advantage of this machine is, that it occupies very little space, and may be easily worked.

WASHING THE BODY. — Although many persons may not find it convenient to use a bath, every one is in a position to keep the skin sweet and healthy by washing. It is highly conducive, not only to bodily health but to mental vigour and cheerfulness, to submit the whole of the body to an ablution daily. Immediately a person leaves his bed in the morning, he should sponge himself thoroughly with cold water, afterwards drying well, and using vigorous friction for some time. This will ensure a healthy action of the skin, and prevent numerous diseases which arise from the neglect of this wholesome habit. If a person be at all delicate, or the weather be very severe, the water may be made lukewarm. In the case of invalids, where it is desirable to cleanse the body, but dangerous to expose it too much, a little vinegar and water, slightly warm, will be found a very refreshing application. There exists a great prejudice with some people against washing the feet and head, under the impression that doing so renders a person liable to colds, whereas it is just the reverse; for the habitual washing of these parts of the body will render a person almost free from these affections.—See ABLUTION, BATHING, SKIN, &c.

WASH-LEATHER GLOVES, TO CLEAN. —These should first have the grease spots taken from them, by rubbing on them either magnesia or cream of tartar; then make a lather of white soap and lukewarm water, wash and wring the gloves through this, and then squeeze them through a second suds. Rinse them first in lukewarm water, and then in cold, and stretch them to dry before the fire, or in the sun.

WASHSTAND.—For the proper furnishing of a bedroom, it is necessary to be careful in the choice of washstands. The variety of these articles of furniture is so great, that whatever be the style of room to be fitted up, there can be little or no difficulty in selecting the right kind. For small or common rooms, the smallest and simplest kind of washstand will be the best; one of these is shewn at *fig.* 1. It occupies but little

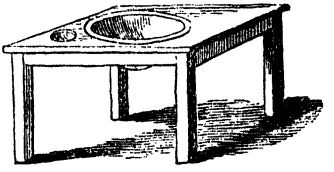
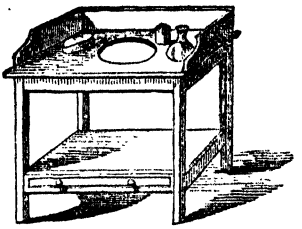


Fig. 1.

space, being, in fact, scarcely wider across than the basin, about fifteen inches square; and, if required, it may be still further reduced by being made triangular, so that it will adapt itself to a corner. By placing the shelf on which the pitcher stands lower, room would be gained for an additional one, with a drawer between the two; the top may be also enclosed with washboards, as *fig.* 2. *Fig.* 2 represents a washstand superior in style and appearance to the foregoing, and affording more room for the soap and brush, trays, washbottle, &c.,

which are generally placed upon it. The length should be from two to three feet, according to the capacity of the bedroom. Three feet will be found the most convenient length if there be space enough in the apartment; or if there be room enough for a double washstand, then four feet or four



ig. 2.

feet and a half will not be too long. On a small stand, the washboards should be from three to four inches deep, and increased in proportion to the size to six or seven inches for a three feet stand, and ten or twelve inches for a double stand; in the latter case, a shelf, four inches wide, and the whole length of the stand, is usually fixed to the back washboard, about four inches below its upper edge. The diameter of the basin-hole should be from nine inches to ten inches and a half, as it is most convenient for lifting the basin in and out, and better than fitting closely. *Fig.* 3 shows a pedestal

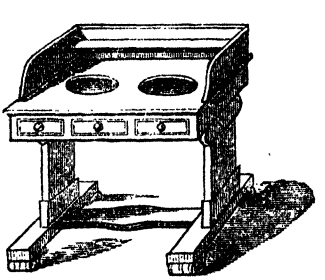


Fig. 3.

washstand, the appearance of which, when well finished, is very handsome, and is preferred by many persons to one having legs. The best kinds are made of mahogany, with a marble top; but the painted and commoner sort are much used, and cost much less. The colour of the paint or japan depends much on taste; the most frequent is drab and green, or drab and blue, with imitation marble top. In addition to the paint, it is not a bad plan to cover the top with a piece of light marbled floor-cloth, which looks well, and lasts a long time, with care. *Fig.* 4 represents the upper part of an enclosed washstand, which, in some cases, is more suitable than one of the ordinary make. The hollow lids conceal the basin, and the jug and other vessels are kept in the receptacle below; the whole may be shut out of sight; the stand may, consequently, be placed in a sitting-room, if required, or in a bedroom much used in the day-time. Washstands should not be made more than twenty-eight inches high, or they will be inconvenient to those who stoop to wash their face over the basin. This is a matter which should be carefully considered in buying a washstand, as many persons do not discover the inconvenience until too late. For a married couple, a double washstand

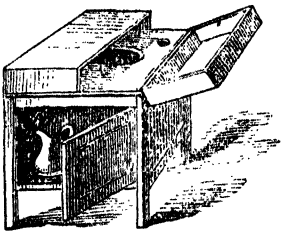


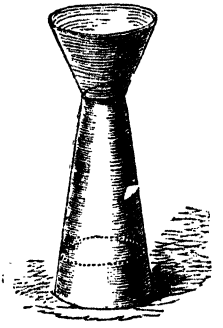
Fig. 4.

is obviously much more convenient than a single one, as it obviates the necessity of waiting, emptying the basin, &c. In washing, some of the water used is necessarily spilt upon the washstand, and, when this is in considerable quantities, it is apt to rot the wood, unless it be dried immediately. The paperhanging in the immediate vicinity of the washstand, is also liable to be soiled by the soap and water: and to avoid this, a piece of paper should be pinned against the wall during the process of ablution.

WASP STINGS, TO HEAL.—It is a fact worth knowing, that at the season of the year when wasps are troublesome with their stings, no application will afford such instantaneous relief as a drop of liquor potassæ—potash-water; indeed, its effects are so unfailing, that it may be called a specific cure. It operates by neutralizing the injected poison, which is undoubtedly of an acrid nature. Families and persons who have the care of children, will do well to have always at hand a small quantity of this solution, which should be kept in a stoppered phial. It is not an expensive application; a quarter of an ounce will be quite sufficient to order at once, and a single drop placed on the wound (which should be first slightly opened) is all that is required.

WASP TRAP.—A glass, shaped similarly to that seen in the engraving, forms an excellent trap for this troublesome insect. These glasses are to be about half-filled with

sugar and water, or honey and water, with a little of the mixture placed at the mouth,



to entice the wasp to enter. Once in, there is, of course, no extrication.

WATCH, MANAGEMENT OF.—1. Wind your watch as nearly as possible at the same hour every day. 2. Be careful that the key is in good condition, as there is much danger of injuring the works when the key is worn or cracked: there are more main springs and chains broken through a jerk in winding than from any other cause, which injury will sooner or later be the result, if the key be in bad order. 3. As all metals contract by cold and expand by heat, it must be manifest that to keep the watch as nearly as possible at one temperature, is a necessary piece of attention. 4. Keep the watch as constantly as possible in one position, that is, if it hangs by day, let it hang by night, against something soft. 5. The hands of a pocket chronometer or duplex watch should never be set backwards; in other watches, this is a matter of no consequence. 6. The glass should never be opened in watches which set and regulate at the back. One or two directions more it is of vital importance that you bear in mind. On regulating a watch, should it be fast, move the regulator a trifle towards the slow; and if going slow, do the reverse; you cannot move the regulator too slightly or too gently at a time, and the only inconvenience that can arise is more than once. On the contrary, if you move the regulator too much at a time, you will be as far, if not farther than ever, from attaining your object, so that you may repeat the movement until quite tired and disappointed, stoutly blaming both watch and watchmaker, while the fault is entirely your own. Again, you cannot be too careful in respect of the nature and condition of your watch-pocket; see that it be made of something soft and pliant, such as washleather, which is the best, and also that there be no flue or nap that may be torn off when taking the watch out of the pocket. Cleanliness, too, is as needful here as in the key before winding; for, if there be dust or dirt in either instance, it will, you may rely upon it, work its way into the watch, as well as wear away the engine-turning of the case.

WATER BISCUITS.—Into one pound of flour rub three ounces of butter, add a sufficient quantity of water to make it into a stiff dough; well knead it, and roll it as thin as wafers; prick with a biscuit-pricker, and bake a very pale brown.

WATER-COLOUR DRAWINGS, TO VARNISH. — Boil some clean parchment-cuttings in water, in a clean glazed pipkin, till a very clear size is produced; strain it, and keep it for use. Give the drawings two coats of this mixture, passing quickly over the work, so as not to disturb the colours; when dry, proceed as previously directed for varnishing.

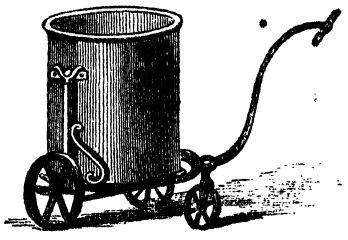
WATERCRESS, CULTURE OF. — This excellent salad plant is extensively cultivated in the counties bordering on the metropolis, for the supply of the London markets. It may be had wherever there is a moderate but continual stream of clear water. In Kent, where the finest are produced, the beds are formed by widening the natural stream to an extent that will secure a depth of about three inches, to be regulated by dams placed at intervals across the stream; the bottom is covered with chalk or gravel, and the plants placed in rows parallel with the course of the stream. When it is desired to gather a bed, as the spaces between the dams are called, and which is done successively from the head of the stream downwards, the upper dam is secured, and the lower one opened, the water is thus drained off, and the cress is gathered. It is also necessary to lay them dry several times in the season, to clear the plants of weeds, and to make good, deficiencies that may have occurred; after receiving the requisite attention, the water is again admitted, and the plants begin to grow again. In this way they are gathered almost throughout the year; and, in order to afford protection from the severest weather, coppice-wood is grown on the banks of the stream, which breaks the cutting wind in winter, and the fierce sunshine of summer. The watercress may be grown in still water that can be occasionally changed by sluices, but they are inferior to those from constantly running water.

WATERCRESS STEWED. — The following receipt will be found to produce an agreeable and wholesome dish. Lay the cress in strong salt and water, to clear it from insects; pick and wash nicely, and stew in water for about ten minutes; drain, and chop; season with pepper and salt; add a little butter, and return it to the stewpan until well heated. Add a little vinegar just before serving; put around it sippets of toast or fried bread. The above, made thin, as a substitute for parsley and butter, will be found an excellent covering for a boiled fowl. There should be considerably more of the cress than the parsley, as the flavour is much milder.

WATER, DIETETIC PROPERTIES OF.—Water is an inestimable benefit to health, and as it neither stimulates the appetite to excess, nor can produce any perceptible effect on the nerves, it is admirably adapted for diet, and we ought, perhaps by right, to make it our sole beverage, as it was with the first of mankind, and still is with all animals. Pure water, flavours the food we eat better than any other liquid, and more certainly preserves the juices in their natural purity; it penetrates more easily through the smallest vessels, and removes obstructions in them. Water is to be recommended as an ordinary beverage on two conditions. The *first* is, that it should be drunk as pure as possible. Impure water is of itself impregnated with foreign matters, which may prove prejudicial to health. Hence it loses all the advantages it possesses in its pure state, and in such a case it would be preferable to drink beer or any other beverage, that is saturated with nutritive particles, rather than impure water. The signs of good water are, that it easily becomes hot and cold, that in summer it is cool, and in winter slightly lukewarm; that a drop dried on a clean cloth leaves not the slightest stain behind; and that it has neither taste nor smell. It is also a sign of good water, that when boiled, it becomes hot, and afterwards grows cold, and sooner than any other water. The water of standing pools and wells is in general extremely impure, and is accounted the worst of all. River-water differs according to the variety of the soil over which it runs, and the changes of the weather; but, though commonly drunk, it is never pure. Next to well and river-water, both of which are always impure, rain-water follows in the scale of preference. It is very impure, and a ready vehicle for all the pernicious matters that are constantly floating in the atmosphere. Snow-water is much purer. The water to be most strongly recommended is a spring-water which descends from lofty hills, through flints and pure sand, and rolls gently along over a similar bed of rocks. Such water leaves behind all its coarse impurities in the sand; it is a purified rain and snow-water, a fluid crystal, a real cordial, and the best beverage for persons in good health. The *second* condition attached to water-drinking is, that such persons only choose it for their constant beverage, to whom warming, strengthening, and nutritive liquids are hurtful; and that, if they have not been in the habit of drinking it from their youth, they use some caution in accustoming themselves to it. Those who have been in the habit of drinking water from their youth, cannot choose a more wholesome beverage, if the water be pure.

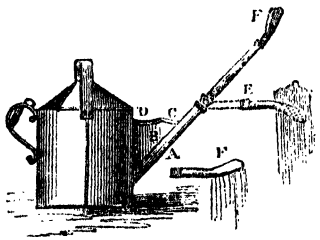
WATER, HARD, TO SOFTEN.—Half-fill a tub or barrel with wood ashes, and then fill it up with water; by this means, ley may be obtained whenever it is wanted. A gallon of this ley, put into a large kettle of hard water, will make it as soft as rain-water.

WATERING BARROW.—This implement is intended for large establishments where much watering is ordinarily done by



the watering-pot. By its use, much time and labour of the gardener are saved, particularly where the tank, pond, or pump is at a distance from the garden.

WATERING POT.—The essential operation of watering plants is considerably facilitated by the employment of a well-contrived watering pot. The one represented in the annexed figure has the spout



made in three distinct parts. The first, A, is fixed to the body of the pot in such a manner as not to become easily out of repair. This is effected by filling up the angle between the spout and the pot by the hollow compartment, B, in the top of which are two openings, C and D; the larger, C, for holding, when not in use, the middle piece of the spout, or larger rose: and the other, D, for the smaller rose. The larger rose, E, is for using without the middle piece of the spout, and it delivers the water upwards; the smaller rose, F, which can only be used with the middle tube of the spout, delivers the water downwards, exactly over the object or space to be watered. The advantage of this rose, therefore, consists in the definitiveness of its action, as the advantage of the larger rose consists in the gentleness of its action. An additional value is given to this part by the screw-joints, which render the spout perfectly water-tight; and therefore, among other uses, it is particularly suitable for lady gardeners.

WATER ON THE BRAIN.—Hydrocephalus, or dropsy of the brain, is a disease more generally found in infancy and ver-

early youth than at any other period, and is usually divided into *acute* and *chronic*, and external and internal, or a collection of fluid between the membranes of the brain, or in the ventricles or cavities of the brain itself. This disease is almost always found existing in a scrofulous state of the system; and is either born with the child in a greater or less degree of development, or produced subsequent to birth, either commencing immediately, or concurrent with the irritation of teething; sometimes it is later in its attacks, and depends upon some special irritation, as of worms in the stomach and bowels, when the enlargement goes on with remarkable rapidity. The size to which the bones of the skull may be parted, and the dimensions the head sometimes assumes are, in many instances, extremely remarkable; the head, from its great size, being obliged to be supported on pillows, and lifted with the child. The most obvious symptoms indicating this disease, before the size of the head declares the nature of the mischief, are, pains over the eyes and forehead, heaviness and stupor, dilation of the pupils, nausea, vomiting, great debility and slowness of the pulse, and very often convulsions. In acute hydrocephalus, the disease commences with inflammation of the membranes of the brain, and terminates by an effusion of serum into the ventricles, or between the coats of the organ, and is usually fatal in a few days; but by far the most ordinary form is that of the chronic state, which may occur at any time between birth and eight years of age, and very seldom after that period. This form of the disease is characterised by the following special symptoms: drowsiness, languor, squinting, vomiting, confined state of the bowels, coma, and lastly convulsions. The bones of the skull separate, the natural openings, or separations existing in infancy, enlarge, and the whole head becomes considerably expanded. The acute hydrocephalus is generally excited by some irritating cause in the bowels, and is first indicated by languor, loss of appetite, vomiting, and a dry parched tongue, succeeded by a hot dry skin, flushings of the face, pain over the eyes, extreme sensibility to light, redness of the eyes, and contracted pupils. The pain on the brows and forehead becomes extremely acute, and comes on at intervals in fits of intolerable pain, causing the patient to shriek out, and compress the head with the hands. In a short time the pupils cease to contract, and become enlarged, the dilation gradually increasing till at length the iris becomes insensible to the influence of light, and will neither contract nor dilate; a permanent squint of one or both eyes sets in, the pain in the head gives way to a state of drowsiness and coma, and the pulse, from being quick and small, falls to a faint, almost imperceptible, beat or flutter, till loss of sight, and a universal lethargy, terminates the case. In the treatment of acute hydrocephalus, or water in the head, there are two indications or courses to be pursued, to reduce the inflammatory action, and promote absorption of the effused fluid. The first is to be effected by bleeding, blisters, cathartics, and other similar means; and the second, by mercurial applications, diuretics, and tonics. The treatment of the chronic form consists in a modification of both these means; but as this disease, in either form, can only be undertaken by a professional person, and must be watched by an experienced eye, and as the different phases of both forms demand a practised judgment in knowing when and how to meet the various symptoms, it is unnecessary here to give modes of procedure for so serious a disease.—See DROPSY, TEETHING, &c.

WATER-PIPES, TO PREVENT FREEZING.—The tying up of the ball-tap with straw or flannel during severe weather, will, in general, prevent the freezing of water-pipes. But the surest method is to have the main-pipe higher than the cistern or other receptacle; and, being thus of a regular incline, the pipe will immediately be exhausted when the supply ceases. When water remains in the pipes, if each tap be left dripping, the circulation of the water will prevent it freezing in the pipes.

WATERPROOF BOOTS.—Boots may be made impervious to water by the following composition:—Melt three ounces of spermaceti in a pipkin, or other earthen vessel, over a slow fire; add six drachms of India-rubber, cut into slices, and let the whole remain till it dissolves; then add eight ounces of tallow, two ounces of lard, and four ounces of amber varnish. Incorporate these ingredients thoroughly, and the mixture will be then fit for use. The boots which require waterproofing must have two or three coats, with a common blacking-brush, and a fine polish is the result.

WATERPROOF CLOTHES. — Procure some weak size, such as is used by paper-makers, make it hot, and stir into it a little piece of alum, and a small quantity of soap-lather. Apply this mixture with a brush equally all over the article. Or, melt an ounce of white wax, add to it a quart of spirits of turpentine, into which, when thoroughly mixed and cold, dip the cloth, and afterwards hang it to dry.

WATERPROOF LEATHER. — Boil a neat's foot in two quarts of linseed oil for two hours, then add six ounces of India-rubber, and let it boil till thoroughly dissolved. Apply this to the leather with a soft brush, a little at a time.

WATER SOUCHY. — This is a very simple and inexpensive dish, much served at the regular fish-dinners. It is excellent if well prepared; and as it may be made with fish of various kinds, when they are too small to present a good appearance, or to be palatably dressed in any other way, it is also very economical. Flounders, perch, tench, and eels are said to answer best for water souchy; but delicate soles, and several other varieties of small white fish, are often used for it with good effect. It is also often made with slices of salmon, or of salmon-trout, freed from the skin. Throw into rather more

than sufficient water to just cover the quantity of fish required, from half to three-quarters of an ounce of salt to the quart, a dozen corns of white pepper, a small bunch of green parsley, and two or three tender parsley roots, first cut into inch lengths, and then split to the size of straws. Simmer the mixture until these last are tender, which will be in from half to a whole hour, then lay in the fish delicately cleaned, cleared from every particle of brown skin, and divided into equal portions of about two inches in width. Take off all the scum as it rises, and stew the fish softly from eight to twelve minutes, watching it that it may not break from being over-done. Two minutes before it is dished, strew in a large tablespoonful or more of minced parsley, or some branches of the herb boiled very green in a separate saucepan; lift out the fish carefully with a slice, and the parsley roots with it; pour over it the liquor in which it has been boiled, but leave out the peppercorns. For a superior water souchy, take all the bones out of the fish, and stew down the inferior portions of it to a strong broth; about an hour will be sufficient for this. Salt, parsley, and a little cayenne may be added to it. Strain it off clear through a sieve, and use it instead of water for the souchy. The juice of half a good lemon may be thrown into the stew before it is served. A deep dish will, of course, be required for it. The parsley roots can be boiled apart when more convenient, but they give an agreeable flavour when added to the liquor at first. Slices of brown or white bread and butter must be sent to table always with water souchy; the first is usually preferred, but, to suit all tastes, some of each may be served with it.

WATER STAINS, TO REMOVE FROM CRAPE.—When a drop of water falls on a black crape veil or collar, it leaves a conspicuous white mark. To obliterate this, spread the crape on a table (laying on it a large book or a paper-weight, to keep it steady), and place underneath the stain a piece of old black silk. With a large camel-hair brush, dipped in common ink, go over the stain, and then wipe off the ink with a little bit of old soft silk. It will dry immediately, and the white mark will be seen no more.

WATER, TO PURIFY.—Filter river-water through a sponge, more or less compressed, instead of stone or sand, by which the water is not only rendered more clear, but wholesome; for sand is insensibly dissolved by the water, so that, in four or five years, it will have lost a fifth part of its weight. Powder of charcoal should be added to the sponge, when the water is foul or fetid. Or, take a large flower-pot, and put either a piece of sponge or some cleanly-washed moss over the hole at the bottom. Fill the pot three-quarters full with a mixture of equal parts of clean sharp sand and charcoal, in pieces the size of peas; on this lay a piece of linen or woollen cloth, large enough to hang over the sides of the pot. Pour the water to be filtered into the basin formed by the cloth, and it will come out pure through the sponge or moss at the bottom.

WAX, TO MELT AND PURIFY.—Where six or eight stocks of bees are kept, it will be most profitable and convenient to have a tin vessel made to fit a duly proportioned kettle or pot, the sides of which should be quite straight, so that, when it slides down, there may be no vacancy for the farina or bee-bread to rise up between. The holes in the tin division should be as numerous and small as possible in the bottom, and about two inches up the sides; the bottom should be quite flat, without a rim, like that of a quart tin pot, that it may press the dregs closer down when near the bottom. Set the pot on the fire, with about five or six inches depth of water therein, in which is to be mixed single aqua-fortis, in the proportion of half an ounce for each quart of water. In this put as many combs as will conveniently boil when melted. As soon as they begin to melt, they should be frequently stirred, until all be thoroughly melted; let it then boil without stirring, that the wax may rise clear. It should be made to boil briskly during the whole process. As soon as the yellow froth rises, put in the division, and press it down in the liquor, until it be about full; with a wooden spoon, or what is better, a tin ladle, first dipped in cold water, lightly skim off the wax as it rises upon the surface, and put it in a narrow-bottomed pan previously rinsed in cold water, set as near as may be to the pot on the fire; and continue skimming the wax off as long as it rises, depressing the separater in proportion as the liquor rises. When the liquor in the pan is nearly cold, the wax is to be taken out, and what dross adheres to it scraped off. The wax is then to be reboiled in a small quantity of water, and about a fourth part as much aqua-fortis as before to a quart; as soon as it boils, take it off, and let it stand until cold. The wax will concrete at the top, and the remaining dross, being scraped off, may be further purified with other combs. Another and less expensive method is, to put the combs loosely into a canvas, or rather a fine hair bag, tied up close at the end, and put into a kettle with a due proportion of aqua-fortis and water; a leaden or iron weight is to be laid on the bag, to keep it down to the bottom. It must be made to boil so as to throw up the froth briskly, which is to be taken off with a ladle; a thick board, with a handle in the middle, is then to be put in, to press out the wax that may be still adhering; it is afterwards to be re-melted, as in the first method. It should be carefully observed, that in these processes of skimming off the froth, the rising of a clear yellow should be reserved by itself, as often requiring no further purification. The more forcibly the froth is thrown up, the purer it will be, and the operation the sooner finished. The very old brood combs are not worth melting; but such refuse as has been pressed, may be kept in a close tub or vessel for five or six weeks, in which time the impurities will

ferment and decay, and the wax will be in a better state for melting.

WAX, TO REMOVE.—Wax is removed by spirits of turpentine, using it on a piece of woollen cloth, and afterwards getting off the turpentine by continuing the friction with a clean piece of cloth, or, if necessary, follow it up by soap and water, or spirits of wine. When the wax is abundant in quantity, a hot iron should be held near the cloth till the wax melts, then scrape it off, lay a clean piece of blotting-paper over the place, and press it with a cooler iron till it has taken up as much as possible, after which, proceed as above.

WAXEN FLOWERS AND FRUIT.—The modelling of flowers and fruit in wax is an easily acquired art, and one which is encouraging in its results. The materials for commencing the process will cost from twenty to thirty shillings; they may be obtained at most fancy repositories, and specimens of the latest improvements and novelties may be seen at the same time at these places. The petals, leaves, &c., of flowers are made of sheets of coloured wax, which may be purchased in packets of assorted shades. The stems are made of wire of suitable thickness, covered with silk, and overlaid with wax; and the leaves are frequently made by pressing thin sheets of wax on leaves of embossed calico. Leaves of various descriptions are to be obtained of the persons who sell the materials for wax-flower making. The flowers, leaves, and buds of artificial flowers will serve as the base of their wax models. The best guide to the construction of a flower is to take, say a tulip, a rose, or a camelia (procuring, if possible, two flowers nearly alike), and carefully picking one of them to pieces, lay the petals down in the order in which they are taken from the flower, that you may know their relative positions. The natural flower will be a guide in getting the wax petals together, and will enable the operator to give not only to each petal, but to the contour of the flower, the characteristics which are natural to it. In most cases, they are merely pressed together, and held in their places by the adhesiveness of the wax. From the paper patterns, the wax petals or other portions of the flowers, may be cut. They should be cut singly by scissors, rather loose at the points, and the scissors should be frequently dipped into water, to prevent the wax from adhering to the blades. The scraps of wax which fall from the cutting will be found useful for making seed vessels and other parts of flowers. Very few and very simple instruments are required, and those may be purchased at the places where the other materials are obtained. Where the manufactured formations of leaves cannot be obtained, patterns of them should be cut in paper, and the venous appearance may be imparted to the wax by pressing the leaf upon it. In the construction of sprigs, it is most important to be guided by sprigs of the natural plant, as various kinds of plants have many different characteristics in the grouping of their flowers, leaves, and branches. For the tints, stripes, and spots of variegated flowers, colours will be supplied from amongst the other materials, and the application of them is precisely upon the principle of water-colour painting.

For the making of waxen fruit, the following instructions are to be observed:—The materials of which moulds are composed should be of the best plaster of Paris, which can be bought from the Italian figure-makers. If this cannot be procured, the cheaper plaster from the oil-shops may be substituted, if it can be procured quite fresh. The mould must be made by an impression from the object to be imitated, made upon the plaster before it sets; and, for early experiments, an egg, boiled hard, will be found efficient. Having filled a small pudding-basin about three-quarters full of fine damp sand, lay the egg lengthwise in the sand, so that it is above, and half below, the level of the sand, which should be perfectly smooth around it. Then prepare the plaster in another basin, which should be half full of water; sprinkle the plaster in quickly till it comes to the top of the water, and then, having stirred it for a moment with a spoon, pour the whole upon the egg in the other basin. While the half mould thus made is hardening thoroughly, carefully remove every particle of plaster from the basin in which it was mixed, and also from the spoon which has been used. This must be done by placing them both in water, and wiping them perfectly clean. This is highly important, since a small quantity of mortar which has set will destroy the quality of a second mixing. In about five minutes, the half mould will be fit to remove, which may be done by turning the basin up with the right hand (taking care not to lose the sand), so that the mould falls into the left hand; the egg should then be allowed to fall back gently on the sand out of the mould. The egg being removed and laid aside, the mould must be trimmed; that is, the sand must be brushed from the flat surface of the mould with a nail-brush, very slightly, without touching the extreme and sharp edges, where the hollow of the mould commences. Then upon the broad edge, from which the sand has been brushed, make four equidistant hollows, with the round end of a table-knife; these are to guide hereafter in the fixing of the second half of the mould. The egg should now be replaced in the mould, and the edge of the cast, with the holes, thoroughly moistened with sweet oil, laid on with a feather or camel-hair brush. Into the basin from which the sand has been emptied, place, with the egg uppermost, the half mould, which should fit closely at the edges to the side of the vessel, then prepare some more liquid plaster as before, and pour it upon the egg and the mould, and, while it is hardening, smooth it round with a spoon, as with the first half. In due time, remove the whole from the basin; the halves will be found readily separable, and the egg being removed, the mould is ready to cast in, after it has been set aside for an hour or two, so as to harden

completely. For the first experiment, common yellow wax may be used, or the ends of partially used wax or composite candles. Every large object to be imitated in wax should be cast hollow; and therefore, although the transparent lightness required in the imitation of fruits is not requisite in an artificial egg, yet, in this instance, in order to render the instructions conformable with the principle, the egg will be cast as if it were fruit. The operator must now proceed as follows:—Soak the two pieces of plaster of Paris in hot water for ten minutes. In the mean time, melt the wax very slowly in a small tin saucepan with a spout to it, care being taken not to allow the wax to boil, or it will be discoloured; a lump of wax, the size of the object to be imitated, will be sufficient for casting twice at least. As soon as the wax is thoroughly melted, place the saucepan by the side of the fire, and, taking the parts of the mould from the hot water, remove the moisture from their surfaces by pressing them gently with a handkerchief or soft cloth. The mould must not be wiped, but only pressed. Having laid the two halves of the mould so that there can be no mistake in fitting the one in its exact place quickly on the other, pour from the saucepan into one of the half moulds nearly as much wax as will fill the hollow made by the model, quickly fit the other half on the top of it, squeeze the two pieces tightly together in the hand, and, continuing to hold them thus, turn them over in every possible position, so that the wax, which is slowly congealing in the internal hollow of the mould, may be of equal thickness in all parts. Having continued this process for at least two minutes, the hands (still holding and turning the mould) may be immersed in cold water, to hasten the cooling process. The perfect congealment of the wax may be known, after a little experience, by the absence of the sound of fluid on shaking the mould. As soon as the mould is completely cooled, the halves may be separated carefully, the upper half being lifted straight up from the under half, and if the operation has been properly conducted, a waxen egg will be turned out of the mould. The egg will only require trimming, that is, removing the ridge which marks the line at which the halves of the mould were joined, and polishing off the scratches or inequalities left by the knife with a piece of soft rag, moistened with spirits of turpentine or spirits of wine. It is always desirable, when the materials and moulds are prepared, to make several castings of the same object, as the moulds are apt to become chipped when laid by in a cupboard; and for this reason, as well as for the sake of practice, beginners are advised to make at least a dozen waxen eggs before any other object is proceeded with. If success attends these first efforts, every difficulty in subsequent operations will be easily overcome. To colour wax, stir into it, while it is by the side of the fire, a little flake white in powder, and continue to stir the mixture while it is being poured into the half mould. The fixing and shaking of the moulds must be performed quickly, or the colouring matter will settle on the side of the half into which the mixture is poured. To produce a good imitation of the surface, in the first place, very slightly prick with a fine needle the surface of the object, and then, having smeared it with spirits of turpentine, rub the surface all over, so as nearly to obliterate the marks of the needle-point. The simple operation thus described constitutes the fundamental process of waxen fruit and flower making; and in the same manner as the egg is treated, oranges, lemons, large gooseberries, small cucumbers, &c., &c., may be operated upon.

WAYS AND MEANS.—This well-known term is specially applied to the receipt and expenditure of national income, but it may be equally brought to bear on private resources and outlay also. In the first place, it is necessary to determine what sum may be spent, as well as the total expenditure which may be safely and properly incurred. When it is definitely settled, the next thing is to curtail the expenses of each department to an amount proportioned to the total expenditure, and here scope is afforded for considerable variation according to the extent of the establishment. Generally speaking, about one-half of a moderate income must be set apart for the supplies of the house, the other moiety to be devoted as follows:—one-eighth of the whole to rent and taxes, one-eighth to clothing, one-eighth to wages and incidental expenses, and one-eighth to medical attendance, entertainment of visitors, and other superfluities. The next thing is to apportion the items of expenditure into weekly, monthly, or quarterly payments according to need. Thus, when the housewife has carefully set down the whole sum to be spent, and divided it suitably, she will be able at once to see how to accommodate herself to circumstances, and to raise one item or lower another accordingly. These calculations should be made upon paper, and a determination come to, to abide by such calculations at all hazards. Should the expenditure in any one department fall below what has been presupposed, a fund may be created therefrom to meet the excess of expenditure in another department where the apportionment has not been high enough.

WEAKNESS.—There is no derangement of the human economy more prevalent than that known under the general term of weakness; and none that requires a more persistent and direct mode of self-discipline. Such being the case, it has been deemed advisable to enlarge upon this topic, in order that the approaches of this malady may be warded off, and its attacks rendered less formidable. By weakness is meant that state wherein the ordinary actions of health are performed feebly, or below the usual limit. By it, must be understood a variation of amount, and not of kind. Weakness may exist by itself, and it may be accompanied with disease, or associated with oppression. Lastly, in some complicated cases, it may be

present in some of the normal actions when others are redundant. In the full enjoyment of health, the well-nourished body is neither thin nor fat; and the muscular substance is neither attenuated, nor is it wasted; and the brightness of the eye, the well-coloured skin, and general beauty of form, with quickness of thought, aptitude for action, and ability for rest, indicate normal health and absence of weakness. One of the first symptoms which betrays itself in connection with weakness, is a loss of muscular power, or sense of intense fatigue after ordinary exertion. The patient complains that, after he has done his work, he feels excessively tired—a symptom not to be neglected, as it is often the beginning of a train of circumstances, which may terminate fatally. Another symptom is a failure of the faculties of sensation. In some cases the vision is impaired, or power of adjustment to distances lessened. In others, a tendency to deafness exists, and frequently the palate is so far injured, that the appreciation of the quality of food is deteriorated. Again, the capacity for long-continued thought is materially lessened. The active imagination is diminished; the memory of certain circumstances and objects is impaired; and at other times, with the full possession of mental faculties, there is an unwillingness of action, and difficulty of being aroused, not at all consistent with the healthy subject. Inability to rest and take sleep sufficient for the restoration of the body, is another symptom to be noted. Where it exists, the body cannot be sufficiently refreshed to take on its usual state; and an absence of sound sleep cannot continue with impunity. Sometimes the appetite is capricious or flags; but besides the diminution in the power of taking food, there is a failure of the power of nutrition when food sufficient for the object is taken; a state which cannot long exist unaccompanied by a failure of the powers of performing the usual functions. Sometimes the failure of nutrition takes place in the muscular system; at others, the fatty tissue passes away; and lastly, certain specific parts may be observed to be unnourished, as the corner of the eye, or the substance of the teeth. As manifold as are the conditions of vigour and health, so complex are the causes of debility and want of strength: such as irregularity of food, external influences, deprivation of rest and sleep, irregularity of the work performed, and hereditary defect. With regard to food, the quantity should be sufficient, the quality good, and the intervals at which it is taken appropriate. These points should be most fully considered. It may be here observed that persons who indulge to excess in alcoholic drinks, are practically starving, by taking an insufficiency of one kind of food, and excess of others. With regard to external influences, it is well known that purity of atmosphere, and a sufficiency of light are most important. Deprivation of rest and sleep have been already alluded to, but it should be known that an excess of these is equally liable to produce weakness. Irregularities in the performance of work, require to be carefully guarded against. Muscular exertion may be carried on to absolute exhaustion; or it may be so neglected as to produce the most debilitating influence on the body. Monotonous occupation has, also, a deleterious effect upon the system, so much so that all persons require to be brought into monotonous work by degrees, and no one suffers more than a strong, healthy, well-nourished person, when suddenly subjected to such a course of life. Of all the causes of weakness, however, none equals in power anxiety and distress of mind; so much so, that an utter prostration of strength sometimes follows a severe affliction, or distress of mind. Where weakness has been inherited from the parents, or is likely to present itself, the patient should systematically regulate the various operations of life; and a stock of health and strength be laid up for probable emergencies.

As debility is the state in which the powers of man are lessened, the consequence of further diminution acts upon the system to his detriment. In a state of nature our muscles are given to us to procure our food; but when debilitated, labour cannot be performed, food cannot be procured, and inanition ensues. When food is procured, the system is called upon to perform very hard work to digest and adapt it to the use of the body. In weakness this necessary work cannot be given; the stomach does not perform its labour, and there is not sufficient nervous power to carry on this necessary work. The blood thus becomes enfeebled, the heart is unable to drive the blood perfectly over the system, and this debility engenders more and more debility, till disease ensues.

Weakness requires various modes of treatment, and in order to restore the strength and vigour of the system, considerable tact and attention are frequently required over a very long period. The first thing to be effected is the removal, as far as possible, of the causes and external influences which have produced the result; and this being accomplished, the human frame will frequently spontaneously return to health and strength. In all cases, a careful nursing of the system is demanded, and care should be taken to avoid exposure to cold, excessive exercise, or any other violent mode of treatment. The strength-restoring remedies should progress gradually and step by step, until the frame is hardened and the health brought to its normal condition. Great mischief is frequently done by exposing the feeble frame suddenly to external influences of too exacting or boisterous character. When considerable weakness exists under circumstances of great prostration, food in a liquid form is favourable for the moment; beef tea and rice-milk, being both excellent forms of this class of nourishment. Eggs contain all the proper elements of nutrition, the yolk especially, mixed with wine, representing all the elementary substances required for aliment by the human frame. Passing in order from the partially fluid articles of diet, the next kind of food which

has to be considered is that which is suitable for the system when it will bear but little, and yet that little must be of the lightest and most nutritious description. In this department may be reckoned, rice thoroughly baked, pure bread, toast, game, poultry, mutton, with the addition of mealy potatoes. These contain all elements necessary for nutrition, and are generally most easy for the stomach to digest. The administration of fish, at this stage, is objectionable on account of its difficult digestion. Beef may be regarded as too heavy where much weakness exists, and pork, under such circumstances, should be absolutely abstained from. It is necessary that the meat should not be tainted; and even the game may be more advantageously eaten fresh. As soon as possible, however, the patient should discard all limited diet, and take all the ordinary articles of food which the general experience of mankind finds adapted for nutrition. In great weakness, food should be taken more frequently than in health, but generally a certain bulk is good, as assisting the stomach to action. In all cases where weakness exists, as much care must be exercised in the fluid as in the solid food, large potations of pure water should be avoided, except in extraordinary cases. Where the case does not call for direct stimulus, tea and coffee, with milk and sugar, answer extremely well to represent the great part of the bulk of the necessary fluid. Some weakly persons require a gentle stimulant with their dinners; for this purpose, hock will be found the most suitable. When the stimulus of a more generous nature is needed, claret will prove acceptable. When a still more invigorating auxiliary is demanded, port wine is the most potent. In purchasing wine for medicinal purposes, great pains should be taken to procure it genuine, otherwise more harm than good will result. Next in order to wine, is fermented liquor, of which table-beer, bitter ale, and porter, or stout, may be taken as types. Where these are applicable, they act as both meat and drink, having a sustaining power far beyond wine or alcoholic stimulants. Bottled stout effects speedy restoration of the system. The highly dried malt, which gives colour and flavour, is grateful to the stomach. In cases where the pure stimulus of alcohol is required, brandy may be resorted to, and for this purpose, French brandy is the best. Spirit is particularly applicable in cases of sudden or great prostration. As for the treatment of weakness, the variety of food and drinks is limited, so are the medicines restricted. Ammonia and ether may be demanded in cases of great prostration, bark and quinine to restore the tone of the system, and the preparation of iron to renovate the blood. Weakness, which can be treated by other means than these, can be treated as successfully without any medicine at all, by careful diet and nursing. The particular value of ether and ammonia is to maintain the action of the heart for the time being. The first is particularly valuable, where it requires rousing; the latter, where the heart is too feeble and too frequent. Perhaps the quickness of the pulse is the best guide for the use of ammonia; for, as a rule, the quicker and more feeble the pulse is, above a hundred, the more frequently may ammonia be administered. Bark and quinine come to our aid as restoratives of strength. They do not act exactly alike. The tincture of bark, or concentrated decoction, is invaluable in many instances, whilst quinine is as preferable in others. In that form of debility which is seen in consumptive patients, more benefit is derived from the long-continued use of quinine, either with or without the occasional use of cod-liver oil, than from the use of any other simple remedy. With the exception of consumptive weakness, where quinine is so useful, iron, as a medicament, takes the first rank in the cure of debility. The union of quinine and iron is very valuable over large ranges of cases, and for very long periods. In the weakness attending scrofulous joints, maladies of the eyes, all forms of tubercular diseases, except those of the lungs, the last-mentioned treatment may be safely adopted for weeks, months, and in some cases for even a year or longer, with great advantage. In all these cases it is better to use this remedy in small quantities, over a long period, than to apply it in large quantities over a shorter period. However, it is preferable to administer it immediately before food, so that one may mix with the other, and both be absorbed in the system at the same time. Weakness depending upon or attending want of rest, requires narcotics. When opium is inadmissible, the application of cold must form the chief reliance; and there are very few cases which do not yield to the proper use of cold to the head; sometimes warmth may be also applied to the feet. Where weakness is combined with disease, the former should have the first share of attention; for, if the disease be violent, and the weakness severe, death may inevitably be expected. The support of the system during illness probably saves more lives than any other exercise of the medical art, and the success of the practitioner in a great measure depends upon the skill with which this support is in each case effected. Weakness, combined with oppression, cannot be remedied without the removal of the matter which oppresses the system; and sometimes the oppression cannot be remedied without the removal of the weakness.

In all forms of debility, or its complications, the conditions of health must be carefully regulated, as the patient regains his strength. Fresh air is highly useful, and the state of the atmosphere, as to its wetness or dryness, is of consequence. Light is another powerful agent in the cure of the debilitated. The appropriate exercise of the powers of the body is another important feature in the treatment of weakness. As a general rule, too much rest is not to be enjoined; for while overwork is to be carefully avoided in any part of the economy, a moderate degree of exer

cise is of great value in promoting health. Moderate exercise, moderate thought, and even a moderate attention to ordinary business, are conducive to the restoration of health. All the functions should be exercised in a similarly moderate manner. As a rule, the extent of the exercise should be proportionate to the strength and diminution of the weakness. When persons in an extreme state of weakness require out-door exercise, the easiest motion will be obtained by a sailing-boat or yacht. The easiest of all forms of carriage exercise is the Hansom cab. In other instances, the Bath chair or donkey chaise answer the purpose, before invalids are strong enough to have recourse to ordinary vehicles.

Weakness is important in its relation to every period of life. In infancy, many diseases arise from irregularities connected with suckling; and, during the first year, diarrhœa and water on the brain are the principal maladies which arise from debility. The weaned child relies more upon its own resources; and, up to five years of age, these complaints gradually decline in frequency. When twelve years of age is attained, many dangers have passed away, and the greatest mean value of life exists. Nevertheless, weakness has its influence, and diseases of the eyes, tegumentary system, and joints, are of frequent occurrence. The well-nourished youth passes through the diseases incident to childhood, whilst those who are imperfectly fed, are unable to withstand the effects. Next comes a period of great trial to the frame, the growth into puberty, upon which the welfare of the future adult so much depends. Excessive over-growth, without corresponding bulk, is a serious defect, which may be of lasting injury, decreasing the value of life, and increasing most seriously the liability to disease. The period of puberty requires the utmost care; a change in the system occurs, which, if rightly managed, makes the man; if wrongly, mars him. At this period, the mental and bodily labour should be most carefully adjusted to the powers of the system. Where this development takes place with undue rapidity, the studies should be lessened, the exercise of the bodily powers lowered, and the work adjusted to the capacity of performance. At this period, scrofula is triumphant, and obtains its greatest power. Consumption also runs its destructive career, and the frequency of the malady continually increases during manhood, till the middle period of life, when the reproductive functions cease. The conditions of health should be rigorously followed. All external agencies, especially heat, should be duly regulated, and the diet should be most carefully adjusted to the powers of digestion, and the requisite amount of food. In incipient old age, the administration of quinine and iron in small doses is attended with good results; in addition, wine, ale, stout, and spirits, according to the peculiarity of habit in each case, may be employed at meal-time with benefit. Finally, weakness is not to be considered only as a bodily ailment, but as affecting the fortunes, and influencing the career of the individual. Where debility takes possession of a man, even in a modified degree, he is no longer able to attend to his business, and the ordinary pursuits of life, to which himself and those dependent upon him look for their support. The daily task is performed with difficulty, and at a further sacrifice to health, until utter exhaustion sets in, and all kinds of labour have to be abandoned. Most important is it, therefore, to regulate the human economy, so as to ensure an immunity from weakness; or, if existing, to have the power of applying remedies, to resist any further encroachments of this insidious malady.

WEANING INFANTS.—The age of nine months is about the average time for weaning, but the best guide is the nature of the milk, joined to the strength of the child, and its progress in teething. If the milk of the mother or nurse is becoming poor, it is not nearly so nutritious as cow's milk, and is positively prejudicial, from its tendency to produce irritation of the lining membrane of the stomach and bowels. If, therefore, the material supply is scanty, or of bad quality, weaning is desirable for the sake of the child, and for the mother's sake. But when the time can be selected, that is to say, if the milk is good, and the mother and child both healthy, it may be deferred until the teething is in great measure completed, which is on the average about the twelfth month. Whenever it is decided upon, it will be necessary to separate the nurse and child, whether suckled by the mother or a substitute, because the constant pining for the breast is increased, to a great extent, by the sight of its possessor; while in her absence, the child is much more contented, and will take its food, and fall asleep in comparative ease and comfort. When the nurse has to wean the child without any assistance, it is generally a very troublesome affair, and often takes a long time and begets many struggles before it is accomplished. Almost all children are partly fed upon cow's milk and oatmeal, or flour, before they are weaned, and only require the extra allowance of that particular kind which has been found most suitable. By this age, biscuit-powder, or tops and bottoms, or rusks, will generally agree better than oatmeal, gruel, or milk thickened with flour. In many cases, however, oatmeal seems to suit to a much later age; and when it can be procured fresh ground and quite sweet, it is a most valuable kind of diet. By proper attention, the infant may be managed until it is two years old, at which time it may be treated in the ordinary manner. Particular care is to be taken to conduct the process of weaning gradually, that is to say she should, by degrees, give less and less of the breast, and more and more of artificial food; at length, she should only suckle the child at night. The autumnal months, in consequence of the prevalence of bowel complaints, should not be chosen for the period at which to commence weaning, if it can be avoided. In cases where the supply of milk becomes prematurely deficient, or

depraved in quality, it may be desirable, before deciding on weaning, to try to restore and increase the natural nutriment by such measures, dietary and medicinal, as are known by experience to have been effective in similar emergencies. The remedies most effectual for such purposes are some of the preparations of iron: the carbonate, the wine, and the metallic powder called Quévenne's iron. Of the carbonate, as much as will lie on a sixpence, or two grains of Quévenne's iron, or a dessertspoonful to a tablespoonful of the wine of iron (steel wine), in water, may be taken three times a day. These preparations, and the doses of them named, may be used with safety for almost any length of time, due care being taken to use aperients, when required, as the medicines before mentioned are apt to prove constipating. The object may be further promoted by drinking infusions of anise or fennel seeds, a strong infusion of borage, decoction of marsh-mallows, or infusion of arrack, all quite harmless. Cod-liver oil, if well tolerated, may also prove very beneficial. It may be here remarked that the inability of the mother to suckle her offspring, is in many cases, the result of exposing the frame to tight pressure at that period of life when the female figure is advancing to maturity, and when the vanity of acquiring a slender shape, tempts many young girls to sacrifice not only their present ease, but their future health and usefulness.

WEASEL.—This little animal possesses a long flexible body, and an extraordinary length of neck; this, together with the closeness of its fur, its extreme agility and quickness of movement, combine to adapt it for the hunting of rats and mice in wheat ricks, in which way it is particularly serviceable to the farmer. In pursuing a rat or a mouse, the weasel not only follows it as long as it remains in sight, but continues the chase after it has disappeared, with the head raised a little above the ground, following the exact track taken by its destined prey. Should it lose the scent, it returns to the point where the scent was lost, and quarters the ground with great diligence till the scent is recovered; and thus, by dint of perseverance, will ultimately hunt down a swifter and even a stronger animal than itself.

WEATHER BOARDING, TO PRESERVE.—A composition for preserving weather boarding may be made as follows:—Take three parts of slacked lime, two of wood ashes, and one of fine sand; pass them through a fine sieve, and add as much oil to the composition as will bring it to a proper consistence for working with a painter's brush. Particular care must be taken to mix the materials thoroughly, and with this view, they should be ground on a stone slab with a proper muller; but where these conveniences are not at hand, the ingredients may be mixed in a large pan, and well beaten up with a wooden spatula. Two coats of this composition being necessary, the first may be rather thin; but the second should be as thick as it can be conveniently laid on.

WEATHER PROGNOSTICS.—Persons in every position in society are led by motives of necessity or comfort to study the indications of the weather in the various appearances of the skies, the atmosphere, vegetation, &c. The most reliable indications of the weather are afforded by the formation and position of the *clouds*. When their elevation is very great; when their forms are small, well defined, and thread-like, they indicate rain. When they become lower and denser, losing their curl-like form, and spread into long dark streaks, they indicate wind and rain. the near or distant approach of which may be sometimes estimated from their greater or less abundance and permanence. Sometimes the clouds present a dense structure, are formed in the lower atmosphere, and move along with the current which is next the earth. The formation of these clouds to leeward in a strong wind indicates the approach of a calm with rain. When they increase rapidly, and appear lower in the atmosphere, with their surfaces full of loose flues, they indicate rain. When they do not disappear or subside about sunset, but continue to rise, thunder may be expected. The sheet cloud is the lowest of the clouds, its inferior surface commonly resting on the earth or water. The sheet cloud has long been regarded as a prognostic of fine weather and it is generally indicative of calmness Wane clouds appear to arise from the subsidence of mare's tales to a horizontal position; but curl clouds do not always precede them. They are always thickest at one extremity, or in the middle. Their form and relative positions, when seen in the distance, frequently give the idea of a shoal of fish. At other times they appear like parallel bars, or interwoven streaks like the grain of polished wood. They precede wind and rain. They are almost always seen in the interval of storms. Sonder clouds are usually formed by curl clouds collapsing as it were, and passing into small roundish masses, in which the thread-like texture of the curl is no longer discernible. These clouds are very frequent in summer, and attendant on warm and dry weather. They are occasionally seen in the intervals of showers, and in winter. The train cloud is formed in the interval between the first appearance of the fleecy pile cloud, and the commencement of rain, while the lower atmosphere is yet too dry, also during the approach of thunder-storms. The indistinct appearance of it is chiefly in the longer or shorter intervals of showers of rain, snow, or hail. Nimbus clouds are attended by, or productive of heavy showers, accompanied by lightning or storm. The nimbus generally spreads a sudden and almost impenetrable gloom over the horizon, in the direction from which the storm approaches. Although it is one of the least beautiful of the clouds, it is frequently superbly decorated with its attendant the rainbow, which can only be seen in perfection when backed by the widely extended gloom of the storm cloud. The nimbus is known to be formed of two sheets of cloud,

in different electrical states, and hence it is so commonly attended with thunder and lightning. Clouds in any of the preceding forms may increase so as to completely obscure the sky, and at times put on an appearance of density, which, to the inexperienced observer, indicates the speedy commencement of rain. But, before rain falls, the clouds are generally seen to undergo a change. These appearances, when the rain happens over our heads, are but imperfectly seen. We can then only observe, before the arrival of the lower or denser clouds, or through their insterstices, that there exists at a greater altitude a thin light veil, or at least a turbid haziness. When this has considerably increased, we see the lower clouds spread themselves till they unite at all points, and form a uniform sheet. The rain then commences, and the lower clouds arriving from the windward, move under this sheet, and are successively lost in it. When the latter cease to arrive, or when the sheet breaks, every one's experience teaches him to expect an abatement or cessation of rain. As the masses of cloud are always blended, and their arrangement destroyed before rain comes on, so the re-appearance of these is the signal for its cessation. The thin sheets of cloud, which pass over during a wet day, receive from the humid atmosphere a supply proportionate to their consumption, while the latter prevents their increase in bulk. Hence it will sometimes rain for a long time without any apparent alteration in the state of the clouds.

The sun appearing whitish or ill-defined and setting in the midst of a haze, betokens rain. A morning sun rising surrounded by a bright and lurid sky, is an indication of rain, because, rising in the east, it shines directly on the rain falling in the west, and thereby foretells approaching wet weather with this humid wind. But the sun setting in the midst of a bright light is a symptom of fine weather, because, when the sun sinks in the west, its rays fall on the rain in the east, whence the storm is departing. If, also, the sun's rays appear like horns—if shorn of his rays, or if he goes down into a bank of clouds in the horizon, inclement weather is to be expected.

The moon is another well-known indicator of the weather. If it looks pale and dim, we may expect rain; if red, wind; and if of its natural colour, with a clear sky, fair weather. Generally speaking, if the moon is rainy throughout, it will clear at the change, and the rain will probably return in a few days subsequently. If fair throughout, with rain at the change, the fair weather will probably return on the fourth or fifth day.

The winds exert the chief influence over the atmospheric condition which produces rain. Thus, if the winds blow from, instead of to a hilly country, the clouds will be carried elsewhere, and be precipitated in lower regions at a distance. But if the low-lying regions be warm, the clouds will be radiated, and their particles in a refined state, will be carried onward by the wind, till they come over a cold high-lying country, where they will drop in heavy showers. The direction of the wind must evidently affect the state of the weather; if it come to us after blowing over a large surface of land, it will not be overcharged with moisture, and there will be dry weather: whereas, if the wind come from the ocean, it will bring the vapours of the ocean with it, and, of course, frequently moist weather. Thus, in England, a north-east or east wind is not so apt to bring rain as a south-east, or south, or south-west wind. Cold and warm weather, too, depend much upon the direction of the wind. As it blows from the cold regions of the north, or the warm and sunny districts of the south, most persons are sensible of the changes then produced, and will expect cold or warm, dry or wet weather, as the wind veers round to any of these points. But, beyond these general laws, speculations on the chance falling of rain in such countries as Britain are exceedingly hazardous, in consequence of the variability of the winds, and the conditions of the atmosphere at points far beyond our knowledge. In all countries, however, particular winds are noted for being accompanied either by wet or dry weather: thus, the south and the south-east winds bring much moisture into Britain, while those from the north and north-east are cold, dry, and penetrating. Not only does this arise from the immense surface of ocean over which these winds sweep south of the equator, but from these southerly winds being of a higher temperature, whereby they hold a greater quantity of vapour in suspension or solution, the condensation of which must be proportionately greater, on arriving in this colder climate. Accordingly it has been observed, that the wind will turn from the north to the south quietly, and without rain; but on returning from the south to the north, will blow hard, and bring much rain. Again, if it begin to rain from the south, with a high wind for two or three hours, and the wind falls, but the rain continues, it is likely to rain for twelve hours or more, and does usually rain until a strong north wind clears the air. For the same reason, winds from the west and south-west are considered to bring with them wet weather.

The seasons as at present existing, afford indications of what their followers will probably be. Thus, a moist autumn with a mild winter, is generally followed by a cold and dry spring, which greatly retards vegetation. If the summer be remarkably rainy, it is probable that the ensuing winter will be severe; for the great evaporation will have carried off too much heat from the earth. Wet summers are generally attended with an unusual quantity of seeds on the white-thorn and dog-rose bushes; hence the unusual fruitfulness of these shrubs betokens a severe winter; the cause being the moisture of the earth, and the consequent coldness by evaporation. When it rains plentifully in May, it will rain but little in September, and the reverse. When the wind is south-west during summer or

autumn, and the temperature of the air unusually cold for the season, both to the feeling and the thermometer, with a low barometer, much rain may be expected. A rainy winter redicts a cold spring, and therefore an upproductive year. The March winds causingnreat evaporation of moisture from wet soil, chill it so much that it is in a bad state for vegetation, and the crops must suffer accordingly. If, therefore, much or frequent rain falls in winter, the above-mentioned bad consequences will follow; whereas, if the winter had been dry, the injurious process of excessive evaporation in the following spring would not be undergone by the soil. When there has been no storm before or after the vernal equinox, the ensuing summer is generally dry. When a storm happens from an easterly point on the 19th, 20th, or 21st of May, the succeeding summer is generally dry. When a storm arises on the 25th, 26th, or 27th of March (and not before), in any point, the succeeding summer is generally dry. If there be a storm at south-west, or west-south-west, on the 19th, 20th, 21st, or 22nd of March, the succeeding summer is generally wet.

The animal creation affords many indications of the forthcoming weather. The low flight of swallows is a sign of approaching rain. The cause of this is, that they pursue flies, which delight in warm air; and these flies escaping from the excess of moisture above, descend nearer to the surface of the earth, and are there pursued by these birds. The appearance of cranes and other birds of passage early in autumn announces a very severe winter, for it is a sign that winter has already begun in the northern countries. Ducks, geese, and other water-fowls, before the approach of rain, may be seen to throw water with their bills over their backs, and dive frequently, the cause of which is, that although so much in the water they do not like being wetted to the skin; to avoid which, when warned by the peculiar sensation foretelling rain, they close their plumage together, by throwing a sudden weight of water upon their bodies, in the direction of the growth of their feathers. Cattle, before the approach of rain, may be seen stretching out their necks, and snuffing in the air with distended nostrils, which doubtless is occasioned by the odours of plants being more powerful than usual when the air is saturated with an excess of moisture. Dogs closely confined in a room, become drowsy and stupid before rain; the same is observed of cats in a less degree; horses neigh much; donkeys bray; cattle low; the fallow-deer becomes restless; and many other animals from the uneasiness they feel, owing to the altered condition, prognosticate the approach of rain. Insects being very sensible of every change in the state of the atmosphere, are good weather-guides; hence, fine weather may be predicted when many spider's webs are seen in the open air; also when bees are found far beyond their hives. On the contrary, when spiders remain hidden, and bees do not range abroad as usual, rain may be expected.

Many plants and flowers are excellent indicators of atmospheric changes. The opening and shutting of some flowers depend not so much on the action of light as on the state of the atmosphere, and hence their opening and shutting betoken change. The common chickweed or stitch-wort may be considered as a natural barometer; for if the small upright flowers are closed, it is a certain sign of rain. During dry weather they expand freely, and are regularly open from nine in the morning till noon. After rain they become pendent, but in the course of a few days they again rise. The purple sand-wort is another indicator of the weather; its beautiful pink flowers expand only during the sunshine, and close at the approach of rain. The pimpernel has been justly named "the poor man's weather-glass." When its small brilliant red flowers are widely extended in the morning, a fine day may be expected; on the contrary, it is a certain sign of rain when the delicate petals of the flower are closed. If the Siberian sow-thistle shuts at night, the ensuing day will be fine, and if it opens, the weather will be cloudy and rainy. When the African marigold remains closed after seven o'clock in the morning or evening, rain may be expected. The stalks of the trefoil swell and grow more upright previous to rain, and the speedwell, so universal a favourite in every hedge-row, closes its blue corolla before rain comes on, opening again when it ceases.

Natural phenomena serve in a variety of ways to foretell the weather. Thus, when mountain ranges or distant objects appear nearer to us than usual, when sounds are heard more clearly from a distance, when the dust blows in eddies on the ground, rain may be expected.

Personal sensations act as weather predictors, to a certain extent. In certain habits of body, pain in the head, toothache, irritability of temper, pains in old sores which have healed, aching of the limbs, shooting of the corns, and excessive nervousness, are all signs of approaching wet weather. Headache, drowsiness, and general lassitude, frequently precede thunderstorms.

Domestic phenomena prognosticate the weather in various ways. The continued dampness of the balustrades betokens heavy rain; the dampness of salt in the salt-cellars affords the same indication; the cracking of furniture, and the creaking of the boards of the floor and the stairs also, foretell rain. The fire burning dull is generally a sign of wet weather, but when it burns brightly dry weather and frost may be expected.

The following *weather proverbs* of various countries, are given for the purpose of familiarizing the various theories to the mind and assisting the memory:—

English.

A rainbow in the morning is the shepherd's warning.
A rainbow at night is the shepherd's delight.

Evening red, and next morning gray
Are certain signs of a sunny day.

When the glow-worm lights her lamp
Then the air is always damp.

If the cock goes crowing to bed,
He'll surely rise with a watery head.

When you see the gossamer flying
Be ye sure the air is drying.

When black snails cross o'er your path,
Then a cloud much moisture hath.

When the peacock loudly bawls
Soon there'll be both rain and squalls.

When ducks are driving thro' the burn
That night the weather takes a turn.

If the moon shows like a silver shield
Be not afraid to reap your field;
But if she rises haloed round
Soon shall we tread on deluged ground.

When rooks fly sporting high in air
It shows that windy storms are near.

A cold May and a windy
Makes a fat barn and findy.

FRENCH.

When it thunders in March, we may cry alas!

A dry year never beggars the master.

January and February do fill or empty the granary.

A dry March, a snowy February, a moist April, and a dry May, presage a good year.

To St. Valentine the spring is neighbour.

At St. Martin's, winter is in his way.

A cold January, a feverish February, a dusty March, a weeping April, a windy May, presage a good year and gay.

ITALIAN.

Dearth under water, bread under snow.

When the cock drinks in summer, it will rain a little after.

As Mars hasteneth, all the humours feel it.

January commits the fault, and May bears the blame.

A year of snow a year of plenty.

SPANISH.

April and May, the keys of the year.

A cold April, much bread and little wine.

A red morning, wind or rain.

The moon with a circle brings water in her beak.

Bearded frost, forerunner of snow.

Neither give credit to a clean winter nor a cloudy spring.

Clouds above, water below.

An easterly wind carries water in his hand.

A March sun sticks like a lock of wool.

When there is a spring in winter, and a winter in spring, the year is never good.

When it rains in August, it rains wine or honey.

The circle of the moon never filled a pond, but the circle of the sun wets a shepherd.

In conclusion, it may be observed that prognostications respecting the weather must necessarily be more or less uncertain. It has been seen that the winds are the grand disturbers of the weather, and that to them we may proximately ascribe the occurrence of clear skies, fogs, clouds, rain, &c. As the winds originate from circumstances frequently far beyond our horizon, and cannot consequently be foreseen, every prognostic of either fine or bad weather is liable to total derangement.—See BAROMETER, RAIN-GAUGE, THERMOMETER, ETC.

WEATHER-PROOF COMPOSITION.—Mix some sand with double the quantity of wood ashes, well sifted, and three times as much slacked lime; grind these with linseed oil, and use the composition in the same manner as paint; the first coat thin, the second thick; and in a short time it will become so hard as to resist effectually all influences of the weather.

WEDDING CAKE.—Take five pounds of flour, dried and sifted, two pounds of fresh butter, five pounds of currants, carefully washed, picked, and dried, a pound and a half of loaf-sugar, two nutmegs, a quarter of an ounce of mace, and half that quantity of cloves, all beaten and sifted; sixteen eggs, yolks and whites kept separate; a pound of blanched almonds pulped in orange-flower water, and a pound each of candied citron, lemon, and orange-peel, cut into slices. Mix these ingredients in the following manner:—First, work the butter with the hand, till it is of the consistence of cream, then beat in the sugar for ten minutes, whisk the whites of the eggs to a froth, and add the butter and sugar; next beat the yolks for ten minutes, and the flour and spices, and beat the whole together for half an hour, or until the oven is ready; then mix in lightly the currants, almonds, and candied peel, with the addition of a gill of white wine and a gill of brandy. Line a hoop with paper, rub it well with butter, pour in the mixture, and bake the cake in a tolerably quick oven.

☞ Flour, 5lbs.; butter 2lbs.; currants, 5lbs.; sugar, 1½lb.; nutmegs, 2; mace, ½oz.; cloves, ½oz.; eggs, 16; almonds, 1lb.; orange-flower water, sufficient; candied citron, lemon, and orange-peel, 1lb. each; brandy, 1 gill; white wine, 1 gill.

Almond Icing for Wedding Cake.—Beat the whites of three eggs to a strong froth; pulp a pound of almonds very fine with rose-water, mix them with the eggs, lightly together; add by degrees a pound of loaf sugar in powder. When the cake is sufficiently baked, take it out of the oven, and lay in this icing; then put the cake in the oven again, to brown.

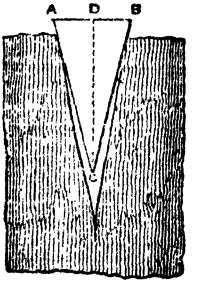
☞ Eggs, 3 whites; almonds, 1lb.; rose-water, sufficient; sugar, 1lb.

Sugar Icing for Wedding Cake.—Beat two pounds of double-refined sugar with two ounces of fine starch, sift the whole through a gauze sieve, then beat the whites of five eggs with a knife, upon a pewter dish, for half an hour; mix in the sugar a little at a time, or it will cause the eggs to subside, and will injure the colour; when all the sugar is put in, beat it for half an hour longer, and then lay on the almond icing, spreading it evenly with a knife. If put on as soon as the cake comes out of the oven, it will harden by the time the cake is cold.

☞ Sugar, 2lbs.; starch, 2ozs.; eggs, 5 whites.

WEDDING CEREMONY, ETIQUETTE OF.—*The order of going to church* is as follows:—The bride, accompanied by her father, not unfrequently her mother, and uniformly by a bridesmaid, occupies the first carriage. The father hands out the bride, and leads her to the altar, the mother and the bridesmaid following; after them come the other bridesmaids, attended by the groomsmen, if there are more than one. The bridegroom occupies the last carriage, with the principal groomsman, an intimate friend, or brother; he follows, and stands facing the altar, with the bride at his left hand. The father places himself behind, with the mother, if she attend. The chief bridesmaid occupies a place on the left of the bride, to hold her gloves, handkerchief, and flowers; her companions range themselves on the left. If any difficulties occur from forgetfulness, the pew-opener can set everything right. Remember to take the licence and ring with you. The fee to a clergyman is according to the rank and fortune of the bridegroom; the clerk expects five shillings, and a trifle should be given to the pew-opener and sexton. When the ceremony is concluded, the bride, taking the bridegroom's arm, goes into the vestry, the others following; signatures are then affixed, and a registration made, after which the married pair enter their carriage and proceed to the breakfast, every one else following. *The order of return from church* differs from going, in the fact that the bride and bridegroom now occupy the same carriage, the bride being on the bridegroom's left, and a bridesmaid, and a groomsman, or the father and mother of the bride, occupying the front seats of the carriage. *The wedding breakfast* having been already prepared, the wedding party return thereto. If a large party, the bride and bridegroom occupy seats in the centre of the long table, and the two extremities should be presided over by elderly relatives, if possible, one from each family. Everybody should endeavour to make the occasion as happy as possible. One of the senior members, of either the bride or bridegroom's family, should, some time before the breakfast terminates, rise, and in a brief but felicitous manner, propose "Health and happiness to the wedded pair." It is much better to drink their healths together than separately; and, after a brief interval, the bridegroom should return thanks, which he may do without hesitation, since no one criticises a speech on such an occasion. A few words, feelingly expressed, are all that is required. The breakfast generally concludes with the departure of the married pair upon their wedding tour. *Cards are generally sent out* about a week or two previous to the return of the travellers, stating when the newly-wedded couple will be "at home." Plain cards are now most fashionable, but questions relative to them ought to be referred to the person who supplies them, as in this respect fashions are changing continually. *Reception:*—When the married pair have returned from their trip, and the day of reception arrives, wedding cake and wine are handed round, of which every one partakes, and each expresses some kind wish for the happiness of the newly-married couple. The bride ought not to receive visitors without a mother, sister, or some female friend being present, not even if her husband is at home. Many gentlemen are prevented, by their pursuits and engagements, from being present at these receptions; when such is the case, they should be represented by some old friend of the family, and an apology offered for the absence of the principal.

WEDGE.—A simple implement, of great utility in cases where an immense pressure and little motion are required. The wedge is frequently employed for splitting masses of timber or stone. Ships are raised in docks by wedges driven under their keels. Sometimes they have been applied to restore a declining edifice to a perpendicular position. In the annexed engraving, A C B is employed in cleaving wood, and its mechanical power is estimated by the proportion of A B to D C. This is sometimes



differently stated, and it is difficult to say

positively what is the exact power obtained by the use of the wedge, as it is generally driven by blows of a mallet or hammer; there can, however, be no doubt that the penetrating power is increased by increasing the length, D C, in proportion to the breadth, A B. The wedge, in part, owes its value to a quality which, in most machines, is a diminution of their effect, that is, the friction which arises between it and the substance it divides. Were it not for the immense friction which prevails in the use of the wedge, it would recede to its original position, between the successive blows, and thus no progress would be made. Instead of this, however, the pressure and adhesion of the surfaces prevent the recoil, and thus a succession of slight blows effect a result which previously might have been supposed beyond human power to realise.

WEEDING.—All lands are more or less infested with weeds, which injure the crops and vegetation, by extracting the nourishment from the ground, and greatly impede the cultivation by spreading their entangled roots beneath the surface. The manure deposited on the soil is destined exclusively for the support of what is meant to be raised, and every useless plant, which lives upon it, is so far noxious, and ought to be extirpated. The surest method of keeping away weeds is to prevent their growth, and thus cut off the vicious produce at its source. All embankments and boundaries of fields, and all road sides in the locality, should be cleared of every species of weed. It is also desirable to sow clean seed, and to use, if possible, such as are free from the seeds of noxious vegetables. Notwithstanding all ordinary precautions, lands will develope a crop of weeds, because some weeds will be uninjured for centuries in the soil, and the winds will waft others from great distances. Annuals and biennials may be partially extirpated by a well-wrought summer fallow, or if the soil be light, by the culture of potatoes or turnips, for the land in that case is well cleaned in spring, as well as hoed in summer. Hand-hoeing for this purpose is sometimes necessary, and the implement known as the weed-hook as seen in the engraving is effective. If, however, no ordinary process of tousing and cleaning the land extirpate the weeds, the more tedious and expensive operation of hand-pulling must be resorted to. Weeds are the insidious enemies of agriculture, and it is to their subtle growth that may be ascribed, much of the indifference to their extermination. Slovenliness is too often the rule; and sometimes for the want of the expenditure of a very trifling sum, whole acres are over-run with weeds, and reclaimed only by an outlay of many pounds. Manure is lavished; whereas, by an unremitting attention to the autumn stubbles, the task of keeping a clean soil is comparatively easy, less cultivation will be required, and more abundant and superior crops yielded.

WEEDS, DISPOSAL OF.—There are three methods of disposing of the vegetable matter of weeds, after the soil has been pared, and the refuse dragged into rows: First, to burn the heaps and spread the ashes; second, to mix lime with the vegetable matter, when carted to some convenient spot; third, to cart it to the homestead, where it serves to form the bottom of the cattle yard. With regard to the first plan, fine weather is indispensable to its practicability; but, when this prevails, it is the best and cheapest means of destroying all weeds, and, consequently, the one to be adopted, when the soil is not liable to be injured by the addition of ashes as a manure. With regard to the second method, in the event of rain, the application of lime will be the most efficacious means of destroying the vegetable matter, and converting it into a valuable manure. With regard to the third, the expense of carrying to and fro is a great objection. Some farmers send men into the stubbles with a fork to dig out the patches of couch, which are thrown into a cart, laid in a long heap on the field, then carted on dung, and the whole being turned, it is applied to the next crop. This is an expeditious method, but the treading is detrimental to the land, and the operation would be better performed by the scarifier.

WEEKLY PROVISION.—The providing for the week is affected by many causes. Thus, at a distance from market, numerous articles are of necessity purchased at intervals which would be bought as they are wanted, where the proximity to good shops admits of such a convenient mode. In the country it is often impossible to procure butcher's meat, or even butter, except on market-days; so that even in the sultry summer weather, a stock sufficient for the interval must either be laid in at those times, or the articles must be altogether dispensed with. The chief purpose of this article is to show the most advantageous method of laying out money, when the income is limited. Supposing, therefore, that the annual amount to be expended in housekeeping is £65, it may be calculated that the manager will have the following materials to work upon; namely, about eleven pounds of fresh and salt meat, twenty pounds of bread, three pounds of flour, three shillings' worth of milk, butter, and cheese, three shillings' worth of grocery, two shillings' worth of green-grocery; two shillings for beer, and ninepence per week for washing materials. All these limited items will necessitate the greatest care to make them meet the various requirements. The great item of expenditure in housekeeping is the daily dinner, an economical programme for which will be found as follows:—

Sunday.—Sheep's head roasted, with chopped liver and roasted potatoes.

Monday.—Remainder of sheep's pluck fried, with dish of fried potatoes.

Tuesday.—Half a pound of bacon, fried with cabbage, and eaten with boiled potatoes; suet pudding.

Wednesday.—Bouilli, cabbage, and potatoes.

Thursday.—Stew made from beef-skirting, and potatoes.

Friday.—Two pounds of mutton minced with vegetables.

Saturday.—Pea-soup made without meat, fried potatoes and suet pudding.

When a smaller family requires a very economical fare, the case is somewhat difficult, because less variety can be obtained from those joints which are well known to be the only really economical ones. Nevertheless a good deal may be effected by management, as for instance in the case of a leg of mutton, from which the dinners of a whole week may be obtained without having any two dinners precisely alike, and without extra cost in any way. The following is the method proposed:—

Sunday and Monday.—Cut some steaks from off the large end, and broil them.

Tuesday.—Cut off the knuckle and boil it with turnips, and serve with caper sauce.

Wednesday.—Take some cutlets from off the side next to the knuckle, and fry with egg and bread-crumb.

Thursday.—Bone and stuff the fillet, and roast it.

Friday.—Eat part cold with salad.

Saturday.—Hash or mince the remainder.

Upon somewhat similar principles, a sirloin of beef may be treated in the following manner:—

Sunday.—Cut off the thin end, and stew with carrots, peas, and potatoes.

Monday.—Cut a thin steak from off one side, and broil it.

Tuesday.—Roast.

Wednesday.—Hash part of the remainder.

Thursday.—Eat part cold.

Friday and Saturday.—Mince part with carrots.

Supposing the amount set aside for housekeeping to be one hundred and fifty pounds a year, the housewife may lay in a weekly stock of eighteen pounds of meat, two shillings' worth of fish, thirty pounds of bread, two pounds of flour, six shillings' worth of milk, butter and cheese, seven shillings' worth of grocery, four shillings' worth each of greengrocery and beer, and five and sixpence to meet the expenses of the laundry. The eighteen pounds of meat may consist of a leg of mutton and a piece of the buttock of beef, which, allowing for one day's dinner on fish, will be three pounds per day on the whole. The bread will allow three-quarters of a pound per meal per day, with two pounds of flour during the week; and if the bread be made at home, there will be an extra quantity of flour, or a saving to the extent of about sixpence. The breakfast for the children must be confined to oatmeal porridge or flour milk, alternately with bread and butter, and bread and dripping, and also tea and sugar; for which last item sixpence may be allowed for breakfast and tea, and sixpence for the sugar, rice, raisins, &c., used at dinner for puddings. About sixpence or sevenpence is allowed per day for greengrocery and beer respectively, which is quite sufficient for these items. The chief difficulty is in the management of the meat, which requires to be economized with great care to cause it to go as far as possible. The leg of mutton and the piece of beef must each last three days, and with a family of four or five children this may be found a somewhat difficult task. But this may be rendered easier by employing puddings as an auxiliary, so that the week's bill of fare will be somewhat as follows:—

Sunday.—Leg of mutton roast, potatoes and greens, Yorkshire pudding.

Monday.—Cold mutton, potatoes and salad, rice pudding.

Tuesday.—Hashed mutton, fried potatoes, cauliflower, apple dumplings.

Wednesday.—Boiled beef, carrots and potatoes, suet pudding.

Thursday.—Pea-soup made from the mutton bones and beef boilings, fish and potatoes, currant dumplings.

Friday.—Cold boiled beef, potatoes and salad, bread, and batter pudding.

Saturday.—Bubble and squeak, potatoes yeast dumplings.

In this economical way, a family of children may be kept well-fed and in good health, without suffering a particle of waste.

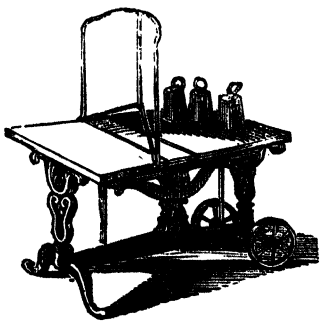
Until a housewife has gained some experience in catering, it is perhaps better in all cases either to buy a week's consumption, or that for a month, or a quarter, or half year, so that it may be divided into distinct portions, one of which may be easily set apart for each week. This is not possible with all articles of housekeeping, as some are perishable, and others are not in such great demand at one time as at another. Coals and candles, for instance, are needed in larger quantities in the winter than in the summer, so that usually in the latter part of the season one-half, or one-third at least, may be subtracted from the weekly sum, and put by to be afterwards added to that demanded in the winter months. The remedy, however, is simple enough, for though the expenses of each single week are not to be taken as the exact fifty-second part of the whole annual cost, yet after a time it will be found that one week will correct another, and that the cost of thirteen will give as nearly as may be the fourth part of the year's expenses; and by proceeding further on the same principle, the outlay made in four weeks will show, though not so accurately, the thirteenth part of the annual expenditure. The keeping of a book for the purpose of entering the week's expenses is very much to be recommended; for this purpose half a quire of writing paper will do, or a school copy-book, or something of the kind—only it is best to have order in the book as well as elsewhere. There are several publications brought out for this purpose, in which the names of the various articles of consumption are printed with columns opposite to them, in which are to be set down the various sums expended for such articles during the week. Say, for instance, bread: opposite to this word you write 4s., or more or less, as the case may be. Then meat, 8s.; soap, 5d.; tea, 1s. 4d.; coffee, 1s.; sugar,

9d., and so on. When all the purchases are set down, then the different sums are added up, and their total amount cast. In three months the history of thirteen weeks' outlay will be thus obtained; and this acts beneficially in more ways than one, for, in looking over these items, opportunity is afforded for reflection, and for correcting such expenditure as may be considered extravagant, excessive, or unnecessary.

WEEVIL.—A beetle which generates a larva very injurious to fruit and grain. To destroy these insects, examine the suspected trees about ten o'clock at night, and if the beetles are discovered, they may be easily caught by laying a newspaper on the branches, into which the weevils will fall, if the tree be shaken vigorously. Toads are very effectual in keeping down the number of these destructive creatures.

WEIGHING CAGE.—A contrivance made in the form of a sort of open box or cage, by which any small animal, as a pig, sheep, calf, &c., may be very easily and expeditiously weighed, and with sufficient accuracy for general purposes. It is constructed with a strong wooden frame and steel centres, in which the pivots of the lever are hung; and upon the short side of the lever is suspended a coop, surrounded by strong network, in which the animal intended to be weighed is placed. The point of suspension is connected with the coop by means of two curved iron rods, which at the same time form the head of it; a common scale being hung on the longer side of the lever.

WEIGHING MACHINE.—A weighing machine well adapted for ordinary purposes, and generally used as a convenient contrivance, consists of a scale, which lies close on a cross-piece. The weights are put into a square dish, and when it descends it gives the weight required. The annexed figure



represents a weighing machine generally used for domestic purposes, where larger and heavier articles are to be weighed.

WEIGHTS AND MEASURES.—The following tables exhibit some of the most important measures of weight:—

AVOIRDUPOIS WEIGHT.

27·11-32grs.	=	1dr.
16drs.	=	1oz.
16ozs.	=	1lb.
28lbs.	=	1qr.
4qrs.	=	1cwt.
20cwt.	=	1 ton.

This weight is used in almost all commercial transactions, and in the common dealings of life.

PARTICULAR WEIGHTS BELONGING TO THIS DIVISION.

		cwt.	*qr.*	*lb.*
8lbs.	= 1 stone, used for meat or fish.			
7lbs.	= 1 clove.			
14lbs.	= 1 stone =	0	0	14
2 stones	= 1 tod =	0	1	0
6½ tods	= 1 wey =	1	2	14
2 weys	= 1 sack =	3	1	0
12 sacks	= 1 last =	39	0	0

The above is used in the wool trade. A pack of wool contains 240lbs. A truss of hay weighs 56lbs.; and of straw 36lbs. A stone of glass is 5lbs.; a seam 24 stones.

8lbs.	= 1 clove.
32 cloves	= 1 wey in Essex.
42 cloves	= 1 wey in Suffolk.
36lbs.	= 1 firkin.

The above weights are used for cheese and butter.

TROY WEIGHT.

24grs.	= 1 pennyweight.
20dwts.	= 1oz.
12ozs.	= 1lb.

These are the denominations of troy weight, when used for weighing gold, silver, and precious stones, except diamonds. But troy weight is also used by apothecaries for compounding medicines, and by them the ounce is divided into eight drachms, and the drachm into three scruples, so that the latter is equal to twenty grains. For scientific purposes the grain only is used, and sets of weights are constructed in decimal procession from 10,000 grains downwards to one-hundredth of a grain. By comparing the number of grains in the avoirdupois or troy pound and ounce respectively, it appears that the troy pound is less than the avoirdupois in the proportion of fourteen to seventeen nearly, but the troy ounce is greater than the avoirdupois, in the proportion of seventy-nine to seventy-two nearly. The *carat* used for weighing diamonds is 3½ grains. The term, however, when used to express the fineness of gold, has a relative meaning only. Every mass of alloyed gold is supposed to be divided into twenty-four equal parts; thus, the standard for coin is twenty-two carats fine, that is, it consists of twenty-two parts of pure gold and two parts of alloy. What is called the new standard, used for watch-cases, &c., is eighteen carats fine.

Apothecaries Weight.

1 grain	=	1·0978 gr. avoir.	
20 grains	= 1 scruple =	21·94	,,
3 scruples	= 1 drachm =	65·32	,,
8 drachms	= 1 ounce =	526·628	,,
12 ounces	= 1 pound =		,,
	13oz. 2dr. 1scr. 9½gr. avoird.		

Measures used by Apothecaries.

1 minim	= 0·05915 of a millilitre.
20 minims	= 1 fluid scruple.
3 fluid scruples	= 1 fluid drachm.
8 fluid drachms	= 1 fluid ounce.
20 fluid ounces	= 1 pint.
8 pints	= 1 gallon.

A few brief notices of *Foreign* Weights and Measures are given herewith, as they are often useful while reading industrial statics of foreign countries :—

France.—The new French system is called metrical, as derived from the measurement of the earth. Its first measure, the metre, is presumed to be the ten-millionth part of a line drawn from the pole to the equator, and is 39·37079 English inches. All the multiples and subdivisions of every measure are decimal, and are formed by the same prefixes. For 10, 100, 1000, 10,000, the Greek syllables *deca*, *hecto*, *kilo*, and *myria* are prefixed; and for tenths, hundredths, and thousandths, the Latin syllables *deci*, *centi*, *milli*. Greek prefixes indicate multiplication, Latin prefixes division. Thus, the hectometre is 100 metres, and the centimetre the hundredth part of a metre. The metre being thus settled, the other fundamental measures are formed as follows :—For surface or area, the *are*, which is a decametre square, or 100 square metres, or ·02471143 of an English acre, or 3·9538 English perches. For solidity the *stere*, or cubic metre, 35·32 cubic feet English, or 220·09687 imperial gallons English. For liquid measures, the *litre*, or cubic decimetre, ·22009687 of an imperial gallon, or a very little more than a pint and three-quarters English. For weight, the *gramme*, a cubic centimetre of distilled water at the freezing point, ·00220606 of an English pound avoirdupois, or, roughly, 50 kilogrammes make a hundredweight.

Austria.—In Austria proper, gold and silver are weighed by the *Vienna marc* of 4333 grains. The *pfund* is 1·2351b. avoirdupois. The *metzen* is 1·691 of the English bushel; the *fuder* is 1·24 bushels. The *foot* (half the short ell), is 11·667 inches. The long ell is 24 inches.

Belgium.—The French metrical system.

Constantinople.—The *chequee* is 4957 grains. The *oke* is 2·832lbs. avoirdupois. The *killow* (dry), is 7·296 gallons. The *almud* is 1·150 of the English gallon. The *pike* is 27 inches.

Denmark.—The pound for gold and silver is 7266 grains. The *commercial pound* is 1·1028lbs. avoirdupois. The barrel is 3·8264 bushels. The *viertel* is 1·701 of the English gallon. The *foot* or *half-ell*, is the Rhineland foot of 12·356 English inches. The *toende* of corn is 5¼ acres.

Florence and Leghorn.—The *cantaro* is 150 pounds of ·74864lbs. avoirdupois each. The *stajo* is ·6702 of the English bushel. The *barile* is 10·033 gallons. The *braccio* is 22·98 English inches. The *saccata* is 1 acre 36 perches.

Frankfort.—For gold and silver, the *Cologne marc*. The common pound is 1·03lbs. avoirdupois. The *centner* is 112·25lbs. avoirdupois. The *malter* is 2·9705 bushels. The *ohm* is 32·454 gallons. The *foot* is 11·27 inches, the *ell* 21·24 inches.

Genoa.—The *pound sottile* for gold and silver is 4891·5 grains. The *pound grosso* is ·76875lbs. avoirdupois. The *mina* is 3·321 bushels. The *mezzarola* is 32·57 gallons. The *palma* is 9·725 inches.

Hamburg.—The *Cologne marc* is 3608 grains. The *pound troy* is 2 *marcs*; but the *commercial pound* is 1·0683lbs. avoirdupois. The *last* of wheat (30 *sheffels*) is 10·9 quarters. The *ahm* is 31·85 gallons. The *foot* is 11·289 inches. The *scheffel* of land is 1 acre 6 perches.

Holland.—The *marc* is 3798 grains; the pound is 2 *marcs*; but the *commercial pound* is 1·0893lbs. avoirdupois. The *last* is 10·231 quarters. The *aam* is 34·16 gallons. The *Rhineland foot* is 12·36 inches. The *Rhineland perch* is 12 Rhineland feet; and the Rhineland *morgen* or *acre* is 2 acres 16 perches.

Lubeck.—For gold and silver, as at Hamburg. The *commercial pound* is 1·0685lbs. avoirdupois. The *sheffel* is ·92 of the English bushel. The *ahm* 31·85 gallons. The *foot* or *half-ell* is 11·346 inches.

Malta.—The *pound* for gold and silver is 4886 grains. The *commercial pound* is 1·745lbs. avoirdupois. The *salma* is 7·968 bushels. The *foot* is 11·167 inches. The *canna* (8 *palmi*), is 81·9 inches.

Milan.—The mark is 3627 grains. The *pound sottile* is 72·06lbs. avoirdupois; the *pound grosso* is 1·682lbs. avoirdupois. The *moggio* (37 *quartari*) is 4·0234 bushels. The *brenta* (12 *quartari*) is 15·71 gallons. The *braccio* is 23·42 inches. The metrical system is also introduced.

Naples.—The *pound* for gold and silver is 4950 grains. The *cantaro grosso* is 196·5lbs. avoirdupois; the *cantaro piccolo* 106 pounds avoirdupois. The *tomolo* is 1·407 of the English bushel. The *barile* is 9·172 gallons. The *palmo* is 10·38 inches. The *moggia* is 3 roods 12 perches.

Netherlands.—The French metrical system.

Portugal.—The *marc* is 3541·5 grains. The *commercial pound* is 1·0119lbs. avoirdupois. The *moyo* is 22·39 bushels. The *almude* is 3·6407 gallons. The *foot* is 12·944 inches.

Prussia.—The *Cologne marc* is 3609 grains; 2 *marcs* are a *commercial pound*, or 1·0311lbs. avoirdupois. The *scheffel* is 1·5116 of the English bushel. The *eimer* is 15·11 gallons. The *foot* is 12·356 inches; the *ell* two-thirds of a metre. The *morgen* or *acre*, is 2 roods, 21 perches.

Rome.—The *pound* is 5234 grains, or ·7477lbs. avoirdupois. The *rubbio* (4 *garte*) is 8·1012 bushels. The *barile* (32 *boccali*) is 12·841 gallons. The *foot* is 11·72 inches. The *builder's canna* of 10 palms, is 87·96 inches.

Russia.—There is but one *pound*, ·9026lbs. avoirdupois. The *pood* is 36lbs. avoirdupois. The *chertwert* is 5·7698 bushels. The *vedro* is

2·7048 gallons. The *inch* is the same as in England; the *arshine* is 28 inches; the *foot* is 13·75 inches, but the English foot is in common use. The Russian *verst*, or *werst*, is 0·664 (or about two-thirds) of an English mile. The *dessentia* is 2 acres, 2 roods, 32 perches.

Sardinia.—Adopts the French metrical system.

Saxony.—For gold and silver, the *Cologne marc.* The *commercial pound* is 1·0294lbs. avoirdupois.

The *Dresden wispel* (24 *scheffels*) is 69·85 bushels; the *Leipzic wispel* is 91·747 bushels. The *Dresden eimer* is 14·89 gallons; the *Leipzic eimer* 16·75 gallons. The *Dresden foot* is 11·14 inches; the *Leipzic foot* is 11·13 inches. The *acre* is 1 acre, 1 rood, 18 perches.

Sicily.—The *pound* is 7lbs. avoirdupois. The *cantaro grosso* is 192·5lbs. avoirdupois; the *cantaro sottile* is 175lbs. avoirdupois. The *salma grossa* is 9·46 bushels; the *salma generale* 7·59 bushels. The *salma of wine* is 19·23 litres. The *palmo* is 9·5 inches.

Smyrna.—The *chequee* is 495 grains. The *rottolo* is 1·2748lbs. avoirdupois. The *killow* is 11·3 gallons. The *pike* is 27 inches.

Spain.—The *Castilian marc* for gold and silver is 4800 grains; the *commercial pound* is ·0144lbs. avoirdupois. The *fanega* is 1·55 of the English bushel. The *arroba* of wine is 3·538 gallons. The *foot* 11·128 inches; the *vara* is 33·384 inches. The *fanegada* (for corn land) is 1 acre, 21 perches.

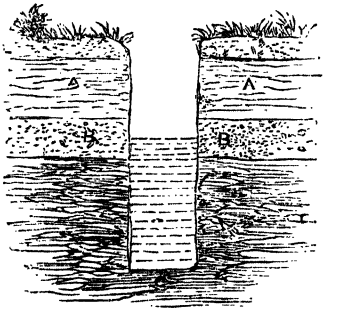
Sweden.—The *mint marc* is 3252 grains. The *commercial pound* is ·93761bs. avoirdupois. The dry *tunna* is 4·028 bushels; the *liquid tunna* is 48 *kanns* of ·5756 of the English gallon each. The *foot* or *half-ell* is 11·684 inches. The *tunneland* is 1 acre, 35 perches.

Switzerland adopts the French metrical system.

United States.—The weights and measures are those of England before the introduction of the imperial standard.

WEIGHTS AND MEASURES, LEGAL SUPERVISION OF.—Persons who own, possess, or use weights and measures, are held responsible for their integrity. An Act of Parliament provides that every person who shall use or possess any weights or measures which are light, deficient, or otherwise unjust, shall, on conviction, forfeit a sum not exceeding five pounds. To ensure the fidelity of weights and measures as much as possible, certain government inspectors are appointed, who are empowered to enter the premises of persons using weights in the ordinary course of trade, to test them, and if found deficient to impound them, and lay an injunction against the offender.

WELL.—A vertical excavation in the earth; always of such a depth as to penetrate the porous stratum charged with water, and mostly as much deeper as to form a reservoir in this stratum or in that beneath it. The form of the well is generally circular, and to prevent the crumbling down or falling in of the sides, this circle is lined with timber, masonry, or zones of metal. The earthy materials, being thus pressed on equally in every point of this circle, are kept in equilibrium. When the well is not very deep, and is in firm ground, this casing is built from the bottom to the top, after the excavation is finished; but when the soil is loose, the excavation deep, or its diameter considerable, it is built on the top in zones, sometimes separated by horizontal sections of thin oak boards, which, with proper management, sink down as the excavation proceeds. Wells are of two kinds:—1. Common shallow wells, which are often only reservoirs. 2. Artesian wells, or constantly flowing wells, depending upon a high source. Shallow wells often penetrate a thin stratum or two, A A, and enter another of sand or some porous substance B B, in which water is contained.



When this stratum is pierced, water appears, and is called a spring. Should this not communicate with any higher source, the water that drains into the well sunk down to C will not rise upwards, and therefore it is necessary to sink this well deeper, so as to form a reservoir for the water that runs into it from the stratum B. In some cases, the well is a mere tank, into which the water may ooze from the gravel on the surface. An Artesian well is a well sunk down to some stratum fed by a high source. When the stratum with water is arrived at and pierced, the water suddenly rises in the well as high as the source of the spring, which may even be higher than the ground where the well is sunk, and then the water will pour out as a fountain or overflow. A great variety of methods of raising water from wells has been practised at different times and in various countries, each of which may have some convenience or advantage to the locality, and other circumstances. The lever and bucket, is one of the most primitive of these contrivances. A long pole, supported by a post, acts as a lever to raise the bucket; and from the end of the lever the water may be raised even by a child, with very trifling exertion. But it is only calculated for those cases where the water is very near the surface. It may be constructed by any person who can make a lever and upright post. The next method is the bucket raised by a windlass. When

the well is very deep, or a large supply of water is wanted, this may be assisted by machinery turned by any of the ordinary powers. An old, but ingenious mode of raising water from a well to the upper part of a house may not be unworthily adopted. A post is fixed close to the well; this is connected by a fixed cord with the window or other opening in the upper part of the house where the water is to be introduced. On this cord a wooden collar is placed, and slides freely from one end to the other; the bucket rope is put through the hole in the collar, and over a pulley in the window, and thus the bucket is raised, first perpendicularly from the water in the well till it comes in contact with the collar, when, the power being continued, the collar slides along the fixed rope, till, together with the bucket, they reach the operator in the window. A chain of buckets consists of a number of these receptacles fastened to a chain or rope, the two ends of which are united; the chain goes over a wheel and hangs down into the well, with its buckets having their mouths downwards as they descend. On arriving there, the buckets become filled with water, and, by the turning of the wheel and the motion of the chain, they are brought up, while those on the other side of the chain go down empty. The endless rope is a most simple contrivance for raising a small quantity of water. A coil of soft hemp rope is made to pass over a wheel at top, and another at the bottom of a well. The rope is put in motion by a handle, and so much water adheres to it in rising that it is sufficient to make a constant small stream. To prevent the water from descending again with the rope, it is made to pass through a tube at the top to squeeze off the water.

WELSH ALE.—Pour on four bushels of fine pale malt, twenty-one gallons of hot water (but not boiling). Let it stand for three hours closely covered: in the mean time, infuse two pounds of hops in a little hot water, run the wort upon them, and boil the whole for three hours, then strain off the hops.

WELSH PUDDINGS.—Take four eggs, and an equal weight of butter, flour, and sugar. Whisk the eggs for ten minutes, or until they appear extremely light; then add the sugar by degrees, and continue the whisking for four or five minutes; next, strew in the flour, also gradually, and when it is smoothly blended with the other ingredients, pour the butter to them in small portions, beating each portion in, until all traces of it have disappeared. It should be previously just liquefied with the least possible degree of heat: this may be effected by putting it into a well-warmed saucepan, and shaking round until it is dissolved. A few grains of salt should be thrown in with the flour, and the rind of half a lemon rasped on sugar or grated; but in lieu of this, pounded mace or any other flavouring may be substituted. Pour the mixture directly it is ready into well-buttered cups, and bake the puddings for about twenty-five minutes. They should be served with wine sauce.

☞ Eggs, 4; flour, sugar, and butter, of weight equal to the eggs; salt, a few grains; flavouring, to taste.

WELSH RABBIT, OR RAREBIT.—Toast a slice of bread on both sides and butter it; toast a slice of Gloucester cheese on one side, and lay that next the bread, and toast the other with a salamander; rub mustard over, and serve very hot, and covered.

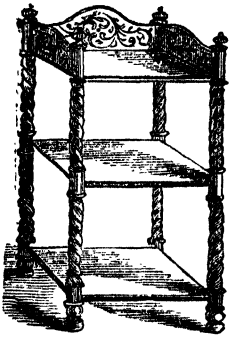
WEN.—A chronic tumour, though chiefly confined to the disease of the glands of the throat known as goître.—See TUMOURS, THROAT.

WESTPHALIA HAM, TO CURE.—Rub each ham well with an ounce and a half of pounded saltpetre, and an equal quantity of coarse brown sugar. The following day, boil in a quart of strong stale beer or porter, a pound of bay salt, the same of common salt, half a pound of coarse brown sugar, of pounded black pepper and cloves an ounce each, and a small bit of sal prunella. Pour it boiling hot over the ham, and let it lie a fortnight, rubbing and turning it twice or thrice daily, when it should be smoked for a fortnight.

WET-NURSE, CHOICE OF.—In the selection of a wet nurse there is some difficulty, since there are not always mothers who have been bereaved of their babies, or one who has milk and strength sufficient for two infants. Many points are to be considered in making this choice. The age of the foster-parent should not exceed thirty years, nor should her milk be more than three months old. She should be in health, free from scorbutic or scrofulous taints, and from cutaneous scurf or eruptions, cleanly in her person, and extremely neat and orderly in her management of whatever concerns the infant. She must be sober and temperate, for persons addicted to the habitual use of stimulants and intoxicating drinks are not suitable for nurses; the diet should be wholesome, and neither scanty nor too full. The best evidence of freedom from taint of specific disease in the habit of a wet-nurse, will be furnished by her freedom from cutaneous eruptions, from sore throat and other mucous affections; having a cheerful and contented expression of countenance, a healthy-tinted skin, clear voice, sound teeth, sweet breath, and healthy functions. Her infant should be found to be plump, rounded, contented, with smooth skin, clean mouth, unobstructed nostrils, and dependent upon the food of the breast alone. Should there still remain any doubt as to the suitableness of the wet-nurse, the testimony of a medical man as to the nutritive properties of the milk, and general fitness, should be solicited.

WHALEBONE.—This material is very useful for a variety of purposes; its combined properties of pliancy and strength, rendering it well adapted to enter into the articles of manufacture which require to be so made.

WHAT-NOT.—This somewhat eccentric name is given to an article of furniture, such as seen in the engraving; it is



designed as an elegant and convenient stand for drawing rooms, on which to place miscellaneous articles.

WHEAT.—This is the most important of all grains, and its varieties are numerous. A general division of wheat is made into white and red, with several shades between, and winter and summer. Winter wheat may be brought into the nature of summer, by altering the time of sowing. If winter wheat be sown at the period for putting summer wheat into the ground, in the course of two seasons the winter will become of a similar habit as the summer, and the same process will bring a summer wheat to a winter one. In general, the fine white wheats are preferred to the brown and red; but the latter is most profitable for wet adhesive soils and unfavourable climates, on account of its hardness and ripening early. The variety of wheat most profitable to be produced, must depend upon the nature of the soil, as land which has produced an indifferent crop of one kind, may yield an abundant crop of another kind; and the land is frequently found to yield better crops if the varieties be alternately changed. The richer description of clays and strong loams are the best adapted for the production of wheat; but, if properly cultivated and well manured, any variety of these two soils will produce excellent crops of this grain. Good wheat land ought always to possess a large quantity of clay, and little sand; for although light soils may be made to produce good crops, yet strong clay lands in general yield the heaviest grain. The season for sowing wheat is necessarily regulated by the state of the land as well as of the season; on which account it is not always in the grower's power to choose the moment, he would prefer. After fallow, as the season allows, it may be sown from the end of August till the middle of November. On wet clays it is proper to sow as early as possible, as such soils, when thoroughly drenched with moisture in autumn, are seldom in a proper state for harrowing till the succeeding spring. In the opinion of many experienced husbandmen, the best season for sowing wheat, whether on fallow, rag-fallow, or ploughed clover stubble, is from the beginning of September till the 20th of October; but this must depend on the state of the soil and the weather. On dry gravelly loams, in good condition, after a clover crop, and well prepared, wheat may be sown till the end of November. After turnips, when the crop is consumed or led off, and the ground can be properly ploughed, wheat may be sown any time betwixt the 1st of February and the middle of March; and it is customary to plough and sow the land in successive portions as fast as the turnips are consumed. It is only on turnip soil of a good quality, verging towards loam, and in high condition, that winter wheat, sown in spring, can be cultivated with success. When circumstances are favourable, however, it will generally happen that such lands, when wheat is not too often repeated, will nearly produce as many bushels of wheat as barley.—See CORN.

WHEAT PICKLING.—A process by which wheat is prepared for sowing, is conducted as follows:—For some two or three weeks let a tub, be placed to receive a quantity of chamber-lye, and whenever the ammonia is ascertained to be disengaged from the lye, it is ready for use. It is better that the ammonia should be of such strength as to cause the eyes to smart and water be added to dilute it, than that the lye should be used fresh. This tub should be removed to the straw-barn, as also the wheat in sacks to be pickled, and part of the floor swept clean, to be ready for the reception of the wheat. Let two baskets be provided, capable of holding easily about half a bushel of wheat each, these baskets having handles standing upright above the rim. Pour the wheat into the basket, from the sack, and dip the basketful of wheat into the tub of lye, as far down as completely to cover the wheat, the upright handles of the baskets preventing the hands of the operator being immersed in the lye. After remaining in the liquid for a few seconds, lift up the basket, let the surplus liquid run out of it, and then place it upon the drainer, which stands on the empty tub, so that the liquid may drip to its fullest extent, till the empty basket is filled with wheat and dipped in the tub. Now empty the drained basket of its wheat on to the floor; and as every basketful is emptied, riddle a little slaked caustic lime upon the wheat, through a wire wheat riddle. Thus all the wheat wanted at one time is pickled and emptied on the floor, when the pickled and limed heap is turned over and over again, till the whole mass appears uniform. The mixing by turning is best managed as follows:—Let two men be each provided with a square shovel, and let them turn over the heap, one bearing the helve of his shovel in the right hand and the other in his left—both making the shovels meet in thin edges upon the floor.

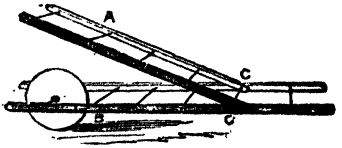
under one end of the heap of wheat, and, on lifting each shovelful of wheat, turn it over behind them, proceeding thus by shovelfuls, to the other end of the heap. Let the operators return in a similar manner in the opposite direction, and sufficiently often to cause the heap of wheat to be completely mixed and dried with the lime. The pickled wheat is then put into sacks, and carried to the field in carts.

WHEAT-EAR.—A bird very common in England, and especially at certain seasons, when it frequents newly-tilled grounds, and is a close attendant on the plough in search of insects and small worms, which are its principal food. In length, the white-ear is about five inches and a half. The bill is black; eyes hazel; over the eyes, cheek, and ears, is a broad black streak, and above it a line of white; the top of the head, hinder part of the neck, and the back, are bluish gray; the wing-coverts and quills are dusky, edged with rusty white; the legs and feet are black. The wheat-ear breeds under shelter of a tuft or clod, in newly-ploughed lands or under stones, and sometimes in old rabbit-burrows. In some parts of England, large numbers are taken in snares made of horse-hair, placed beneath the turf. These birds are also known by the name of ortolans.

WHEAT-EARS, TO DRESS.—These may be dressed in the same manner as larks; or when trussed for roasting, brush each bird over with the yolk of an egg, or what is better, dip them in batter; roll them in fine bread-crumbs, and spit them on a wooden or silver skewer, a dozen upon each. When spitted, brush them again with the egg, and dredge them with the bread crumbs; tie the skewers upon a spit, and roast them before a brisk fire, basting all the time with fresh butter; they will take about twelve minutes. They should be dressed the same day on which they are killed.

WHEELBARROW.—A well-known implement used in the practice of agriculture, horticulture, and for building purposes.—See BARROW.

WHEELBARROW LADDER.—This utensil comprises a wheelbarrow and a ladder. Half the ladder, A, may either



remain on the barrow frame, B, where it will serve, by its pressure, to keep down any light bulky matter, such as pea haulms; or it may be removed altogether by withdrawing the bolt, C C. A man standing on the third step, and holding with one hand by what forms the train of the barrow, may easily gather fruit or flowers at the height of ten or twelve feet from the ground.

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WHEELS.—These parts of a vehicle are usually made of a number of pieces of ash, with a centre-piece of oak called the nave, twelve radiating spokes, and an iron tire. The axle is the most important part of the carriage in connection with the wheel, and numerous inventions have been introduced to render the working of this agent more perfect. The simplest form of axle is the common kind, which consists merely of a bar of iron having a slight shoulder at the part where it comes in contact with the nave of the wheel, and a screw and nut to keep the wheel on. A plain iron box is made to fit this, and is "boxed" into the wheel. To obviate the noise of this axle, and its tendency to come off, several contrivances have been designed, which, if carefully attended to, are equal to all that is required. It is essential to watch the wear and tear of wheels, as their breaking, when in use, may be the cause of serious accidents, and in all cases create inconvenience. The tires of wheels especially require guarding; when the irons are getting thin, have them taken off before they become too weak to protect the woodwork; the best plan is, when the irons are half-worn out, and before the joints in the woodwork get loose, as they wear most on the outer edge, to have them taken off and turned; if the woodwork is sound, they will run half as long as they did at first; then, if the woodwork continues sound, have new irons put on. When new wheels are put on to old carriages, they should be made a fortnight before they are painted, and should not be put on for use till a fortnight after they have been painted.

WHEEZING.—An affection peculiar to new-born infants, arising from a collection of mucus in the air-passages. It is not a dangerous symptom, if it occur immediately after birth, and generally leaves the child as soon as the functions begin to perform.

WHELKS.—A small kind of shell-fish which are generally eaten with a pickle of vinegar and salt; they are extremely indigestible, and it is only the very strongest stomachs that can admit of their being eaten.

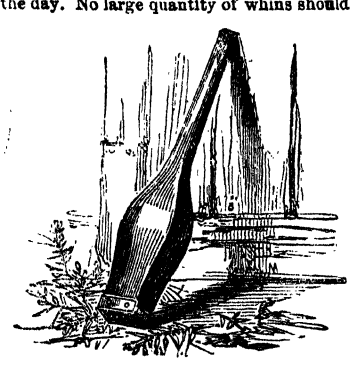
WHEY.—A mixture chiefly composed of water and lactic acid, with a slight proportion of casein, butter, and sugar. It is therefore highly nutrient, but forms an excellent diluent in inflammatory complaints, and also greatly promotes the secretions.—See ALUM, LEMON, MUSTARD, WINE, ETC.

WHEY, A LA FRANÇAISE.—Mix together equal parts of vinegar and cold water; a tablespoonful of each will suffice for a pint of milk. It is not, however, all to be put in, whether necessary or not; but when the milk just boils, pour in just as much of the acid as will turn it, and no more. Beat up together the white and shell of one egg, which boil up in the whey; then set it aside till quite clear. Pour it off very steadily through a muslin strainer, and sweeten to taste with loaf sugar. This whey is very pleasant and answers every good purpose of white wine whey, while it is not liable to the objection of being heating, and is also very much less expensive.

WHIGS.—A kind of cake made in the following manner:—Rub a quarter of a pound of butter into two pounds of flour; with half a pint of warm cream, and a gill of ale yeast, make it up into a light paste and set it before the fire to rise. Grate a nutmeg with some beaten mace and cloves, a quarter of an ounce of carraway seeds, and a quarter of a pound of sugar: work all thoroughly together, roll the dough out tolerably thin, and make the cakes up into any size and form desired. The usual way is to make a large round cake, and to cross it so that it may be easily divided into quarters when made up, put them on tin plates, set them before the fire, or in front of the oven, till they rise again, then bake them in a quick oven.

☞ Butter, ¼lb.; flour, 2lbs.; cream, ½ pint; yeast, 1 gill; spice, sufficient; carraway seeds, ½oz.; sugar, ¼lb.

WHIN.—A plant, known also by the names of furze and gorze, to be found wild on dry light soils, and rather hilly situations. It is known as a nourishing food for cattle, and is sown in some parts of England for that purpose. Few plants deserve the attention of the farmer more than the whin; horses are peculiarly fond of it, it tends to fatten them, and if mixed with grain, fits them admirably for the performance of hard labour. Cattle eat it perfectly well, provided it be thoroughly bruised; this operation of bruising is performed by a rammer, as seen in the engraving; it is a bulky and heavy instrument, shod with iron cutters, properly sharpened, and fastened by their ends. With this instrument as much whin may be bruised by one man in the space of twenty minutes, as will serve a pair of horses for the day. No large quantity of whins should



be bruised at one time, as under these circumstances, the mass will heat and ferment, and become unpalatable food. The following is an economical method of cultivating the whin:—Let the farm be enclosed by means of a ditch all round, with a bank thrown up on one side, and if stones can be had, let the face of that bank be lined with stones, from the bottom to near the top, this lining to slope backwards. Any kind of stones, gathered from the land will answer the purpose very well; upon the top of the bank, sow whin seeds rather thick, and throw a few of them along the face of the bank. Young plants will quickly appear. Suffer them to grow for two years, and then cut them down, and as the seeds freely insinuate themselves among the crevices of the stones, the whole face of the bank will become a close hedge, sending forth luxuriant shoots. If another ditch be made on the opposite side of the bank, and if this be managed in a similar way to the foregoing, and the hedge cut down only once every second year, the inside and outside being cut down alternately, the fence will at all times continue good, and the hedge will remain complete.

WHIP.—In the selection of this well-known implement, the pliability of the handle, the secure fastening of the thong, and the clean nature of the whip-cord, are essential requisites.

WHISKERS.—The growth of the whiskers cannot well be accelerated by artificial means, but they may be preserved and kept in order by brushing and occasional oiling. They also require trimming from time to time, to keep them neat.

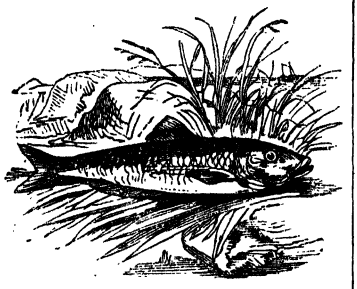
WHISKY.—A corn spirit agreeing in most of its properties with gin, but somewhat lighter and more stomachic. The peculiar flavour of potteen whisky is supposed to be caused either by the practice of drying the malt from which it is made by turf, or it depends on the nature of the fermentation, and the greater quantity of essential oil produced by low distillation.

WHIST.—One of the great principles in playing this game is, that the players shall observe silence, and pay strict attention to what is going on. Four persons cut for partners; the two highest are against the two lowest. The partners sit opposite to each other, and the person who cuts the lowest card is entitled to the deal. The ace is the lowest in cutting. Each person has a right to shuffle the cards before the deal; but it is usual for the elder hand only, and the dealer after. The pack is then cut by the right-hand adversary, and the dealer distributes the cards one by one to each of the players, beginning with the person who sits on his left hand, until he comes to the last card, which he turns up, being the trump, and leaves on the table till the first trick is played. The person on the left-hand side of the dealer is called the elder, and plays first; whoever wins the trick becomes elder hand, and plays again, and so on, till the cards are played out. No intimations, or signs of any kind, during the play of the cards are permitted between the partners. The mistake of one party is the game of the adversary, except in a revoke, when the partners may inquire if he has any of the suit in his hand. All above six tricks reckon towards the game. The ace, king, queen, and knave of trumps are called honours; and when either of the partners have three separately, or between them, they count two points

towards the game; and in case they have four honours, they count four points. The game consists of ten points. Lead from your strong suit, and be cautious how you change suits, and keep a commanding card to bring it in again. Lead through the strong suit and up to the weak, but not in trumps, unless very strong in them. Lead the highest of a sequence; but if you have a quart or cinque to a king, lead the lowest. Lead through an honour, particularly if the game is much against you. Lead your best trump, if the adversaries be eight, and you have no honour; but not if you have four trumps, unless you have a sequence. Lead a trump if you have four or five, or a strong hand, but not weak. Having ace, king, and two or three small cards, lead ace and king, if weak in trumps, but a small one if strong in them. If you have the last trump, with some winning cards and one losing card only, lead the losing card. Return your partner's lead, not the adversary's; and if you have only three originally, play the best, but you need not return it immediately when you win with a king, queen, or knave, and have only small ones, or when you hold a good sequence, have a strong suit, or have five trumps. Do not lead from ace queen, or ace knave. Do not lead an ace, unless you have a king. Do not lead a thirteenth card, unless trumps be out. Do not trump a thirteenth card, unless you be last player or want the lead. Keep a small card to return your partner's lead. Be cautious in trumping a card when strong in trumps, particularly if you have a strong suit. Having only a few small trumps, make them when you can. If your partner refuses to trump a suit, of which he knows you have not the best, lead your best trump. When you hold all the remaining trumps, play one, and then try to put the lead in your partner's hand. Remember how many of each suit are out, and what is the best card left in each hand. Never force your partner if you are weak in trumps, unless you have a renounce, or want the odd trick. When playing for the odd trick, be cautious of trumping out, especially if your partner be likely to trump a suit; and make all the tricks you can early, and avoid finessing. If you take a trick, and have a sequence, win it with the lowest. The following are the principal *laws of whist:*—If a card be turned up in dealing, the adverse party may call a new deal, unless they have been the cause; then the dealer has the option. If a card be faced in the deal, the dealer must deal again, unless it be the last deal. If any one play with twelve cards, and the rest have thirteen, the deal to stand good, and the player to be punished for each revoke; but, if any have fourteen cards, the deal is lost. The dealer to leave the trump card on the table till his turn to play; after which none may ask what card was turned up, only what is trumps. No person may take up the cards while dealing; if the dealer in that case should miss the deal, to deal again, unless his partner's fault; and if a card be turned up in dealing, no new deal, unless the partner's fault. If the dealer put the trump card on the rest, with face downwards, he is to lose the deal. *Playing out of turn.* If any person play out of his turn, the adversary may call the card played at any time, if he do not make him revoke; or if either of the adverse party be to lead, may desire his partner to name the suit which must be played. If a person supposes he has won the trick, and leads again before his partner has played, the adversary may oblige his partner to win it, if he can. If a person lead, and his partner play before his turn, the adversary's partner may do the same. If the ace, or any other card of a suit, be led, and any person play out of turn, whether his partner have any of the suit led or not, he is neither to trump it nor win it, provided he do not revoke. *Revoking.* If a revoke happens to be made, the adversaries may add three to their score, or take three tricks from them, or take down three from their score; and, if up, must remain at nine. If any person revoke, and, before the cards be turned, discover it, the adversary may cause the highest or lowest of the suit led, or call the card then played at any time, if it do not cause a revoke. No revoke to be claimed till the trick be turned and quitted, or the party who revoked, or his partner, have played again. If any person claim a revoke, the adverse party are not to mix their cards upon forfeiting the revoke. No revoke can be claimed after the cards are cut for a new deal. *Calling honours.* If any person call, except at the point of eight, the adverse party may consult and have a new deal. After the trump card is turned up, no person may remind his partner to call, on penalty of losing one point. If the trump card be turned up, no honours can be set up unless before claimed, and scoring honours not having them, to be scored against them. If any person call at eight, and be answered, and the opposite parties have thrown down their cards, and it appear, they have not their honour, they may consult, and have a new deal or not. If any person answer without an honour, the adversaries may consult and stand the deal or not. If any person call at eight, after he has played, the adversaries may call a new deal. *Separating and showing the cards.* If any person separate a card from the rest, the adverse party may call it if he name it, but if he call a wrong card, he or his partner are liable for once to have the highest or lowest card called in any suit led during that deal. If any person throw his cards on the table, supposing the game lost, he may not take them up, and the adversaries may call them, provided he do not revoke. If any person be sure of winning every trick in his hand, he may show his cards, but is liable to have them called. *Omitting to play to a trick.* If any person omit to play to a trick, and it appear he has one card more than the rest, it shall be at the option of the adversary to have a new deal. *Respecting who played a particular card.* Each person ought to lay his card before him, and if either of the adversaries mix their cards with his, his partner may demand each person to lay his

card before him, but not to inquire who played any particular card. These laws are agreed to by the best judges.

WHITEBAIT.—A species of herring or sprat. About the end of March or early in April, whitebait begin to make their appearance in the Thames, and are then small,



apparently but just changed from the albuminous state of very young fry. In September, specimens of whitebait, the young fish of the year, may be taken of the length of four or five inches. But they are even then mixed with others of a very small size, as though the roe had continued to be deposited throughout the summer. In their habits, they appear to be similar to the young herring, always keeping in shoals, and swimming occasionally near the surface of the water.

WHITEBAIT, TO DRESS.—Spread a clean napkin upon a table, cover it within half an inch of the edge with a fine sifted flour (say half an inch thick); next sprinkle lightly by small handfuls, about a pint or more of the bait, taking care that it is spread all over the flour, having ready about three pounds of good and sweet lard in a deep frying-pan; let this be getting hot while you proceed as above. Observe carefully when the last vapour rises from the lard, for it then is hot enough. Now hasten to toss the flour and bait together from end to end upon the napkin, have ready a coarse cane sieve, throw the whole into it, sift away the flour quickly, and throw the bait into the hot lard, or rather shake it in by degrees, but quickly, or part will be dressed and the other not, moving the frying-pan backwards and forwards to spread the whole and prevent the fish from adhering, keeping the pan upon the fire. Having a wire slice or ladle ready at hand, apply this cautiously among the fish, and if they sound crisp and hard, remove them quickly into a cullender, drain one minute, sprinkle lightly with fine salt, toss them over and serve upon a dish, with a napkin, instanter. The whole process should not take more than six or seven minutes.

WHITEBAIT, WINTER.—Select sprats of a large size. Shake them in flour to remove the scales, then egg them over with a brush, shake them in equal quantities of flour and bread crumbs, and fry them in boiling fat for three minutes. Serve them on a napkin, perfectly plain. Brown bread and butter, and a lemon cut into wedges should be placed on table with them, added to which a little cayenne pepper and salt is all that should be taken as sauce to them.

WHITE CAKE.—Take of dried and sifted flour, of fresh butter, and of finely pounded loaf sugar, one pound each; five well-beaten eggs, a quarter of a pint of cream, of candied orange and lemon peel, cut small, three quarters of an ounce each, one ounce of carraway seeds, half a grated nutmeg, a glass of brandy, and a little rose water; then beat the butter to a cream, and add all the ingredients to it; and finally mix in one tablespoonful of fresh yeast; let the cake rise before the fire for half an hour. Bake it in a buttered tin. Instantly upon taking it out of the oven, with a feather brush the top all over with the beaten white of an egg, and then sift loaf sugar upon it. Let it stand at the mouth of the oven to harden.

☞ Flour, 1lb.; butter, 1lb.; sugar, 1lb.; eggs, 5; cream, ½ pint; candied orange and lemon-peel, 4ozs. each; carraway seeds, 1oz.; nutmeg, ½ of 1; brandy, 1 wineglassful; rose-water, sufficient; yeast, 1 tablespoonful.

WHITE CUSTARDS.—Boil a pint of cream with a blade of mace, let it simmer for about five minutes, then take it off the fire and add three ounces of sugar, beat the whites of four eggs to a complete froth, put them into the cream, set it on the fire again, and let it boil gently, stirring constantly till it becomes thick, take it off the fire, add a tablespoonful of orange-flower water. Serve in custard glasses.

☞ Cream, 1 pint; mace, 1 blade; sugar, 3ozs.; eggs, 4 whites; orange-flower water, 1 tablespoonful.

WHITE PAINT.—A paint which will dry in about four hours, and leave no smell, may be compounded as follows:—Take a gallon of spirits of turpentine, and two pounds of frankincense; let them simmer over a clear fire till dissolved, then strain and bottle the mixture. To a quart of this, add a gallon of bleached linseed oil, shake these well together, and bottle them likewise. Grind any quantity of white lead very fine with spirits of turpentine, then add a sufficient quantity of the last mixture to it, till it is fit for laying on. If it becomes thick in working it must be thinned with spirits of turpentine.

WHITE POT.—Mix three pints of milk, half a pint of spring water, five eggs well beaten, three ounces of butter, a French roll sliced, white sugar and nutmeg to the taste. Bake it in a bowl two hours in a quick oven.

WHITE PUDDINGS.—To two parts of beef-suet chopped, add one part of oatmeal previously toasted before the fire; boil an onion or two, and chop them with pepper and salt; mix the whole well together, put the ingredients into skins, and boil them for an hour, pricking them as they boil, to prevent their bursting. They will keep for

some time in bran after they have been allowed to become cold. Parboil when wanted, and then broil them on a gridiron. The quantity of suet may seem disproportioned to the oatmeal; but unless there are two-thirds of the former to one of the latter, the puddings will be dry and tasteless. They require to be highly seasoned with pepper and onions.

WHITE SAUCE.—Boil a stick of celery and a bunch of parsley, in a pint of milk, adding white pepper and a little salt, then put two ounces of butter into a saucepan, let it melt, add to it an onion sliced thin, dredge in flour until it is a paste, but do not let it brown. Strain the milk, and add it by degrees to the butter and flour, stirring all the time, and boiling it until it is quite thick and smooth; pass it through a fine sieve or tammy. If wanted to be very rich, let it cool a little, and then add an egg, previously beaten, and mix very gradually, warm it over the fire, stirring it well, but do not let it boil, or it will curdle.

WHITE SOUP.—Put into a clean saucepan two or three quarts of water, the crumb of a two-penny loaf, with a bundle of sweet herbs, some whole pepper, two or three cloves, an onion or two cut across, and a little salt; let it boil covered till it is quite smooth; take celery, endive, and lettuce, only the white part, cut them into pieces not too small; boil them, strain the soup off into a clean stewpan; put in the herbs, with a good piece of butter stirred into it till it is melted; then let it boil for some time till it is very smooth; if any scum arises, take it off very clean. Soak a small French roll, nicely rasped, in some of the soup, and send it to table.

WHITE SWELLING.—This is a popular name for a peculiar diseased condition of the ligaments, and bones of the knee-joint, causing it to swell and assume a white, shining, inelastic appearance—a form, however, it only assumes in the early stage of the disease. White swelling is, in fact, a very serious condition of scrofula, in which that disease puts on a local character, demanding the utmost vigilance of the surgeon, who has little chance of curing it but by an operation.—See SCROFULA.

WHITE-WASHING.—The act of cleansing ceilings and walls with a solution of lime in water, to which a portion of size is generally added. The practice of white-washing apartments, eminently contributes to the preservation of health, hence it is an operation which should be performed periodically, and never less frequently than once a year. It is to be observed that the hot or quick lime is the best for this process, and should be employed as soon as possible after it is slaked; for in this condition it is more effective in destroying vermin, and removing infection.

WHITE WINE WHEY.—Put half a pint of new milk on the fire; the moment it boils up, pour in as much sound raisin wine as will completely turn it, and make it look clear: let it boil up, then set the saucepan aside till the curd subsides, and do not stir it. Pour the whey off, and add to it half a pint of boiling water, and a bit of white sugar. Thus you will have a whey perfectly clear of milky particles, and as weak as you choose to make it.

WHITING.—A well-known fish belonging to the cod tribe, and valuable on account of its delicacy and lightness as an article of food. It does not usually exceed a pound and a half in weight. It abounds on all British coasts, and comes in large shoals towards the shore in January and February, for the purpose of depositing its spawn. It is easily distinguished from the haddock by the absence of the barbule on the chin, and from the pollack and coal-fish by having the under-jaw shorter than the upper, and the tail even at the end.

WHITING BAKED.—Open the fish only so much as will permit of their being emptied and perfectly cleansed. Wash and wipe them dry, then fold them in a soft cloth, and let them remain in it awhile; replace the roes, and put the fish into a baking-dish of suitable size, with a table-spoonful of wine, a few drops of chili vinegar, a little salt and cayenne, and about half an ounce of butter, well blended, with a saltspoonful of flour for each fish. They must be turned round with the heads and tails towards each other, that they may lie compactly in the dish; and the backs should be placed downwards, that the sauce may surround the thickest part of the flesh. Lay two buttered papers over, and press them down upon them; set the dish into a gentle oven for twenty minutes, take off the papers, and send the fish to table in their sauce. Port wine is always used for the sauce; a seasoning of chili vinegar, cayenne, and pounded mace, is added, but sherry, bucellas, or any other dry wine can be used instead. It is an advantage to take off the heads of the fish before they are dressed, and they may then be entirely emptied without being opened. When preferred so, they can be re-dished for table, and the sauce poured over them. The dish in which they are baked should be buttered before they are laid in.

WHITING BOILED.—Having scraped, cleansed, and wiped them, lay them on a fish-plate, and put them into water at the point of boiling; throw in a handful of salt, two bay-leaves, and plenty of parsley, well washed and tied together; let the fish just simmer from five to ten minutes, and watch them closely, that they may not be over-done. Serve parsley and butter with them, and use, in making it, the liquor in which the whitings have been boiled, just simmered from five to ten minutes.

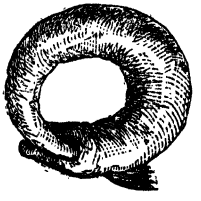
WHITING BROILED.—Clean and wash the fish, dry them in a cloth, and rub a little vinegar over them, which will prevent the skin from breaking. Dredge them with flour, rub a gridiron with beef suet, and heat it previously to putting on the fish. While broiling, turn them two or three times. Serve them with plain melted butter or shrimp sauce.

WHITING DRIED.—Choose them of two or three pounds weight; take out the gills, eyes, and entrails, and remove the

blood from the back-bone; wipe them dry, and put some salt into the bodies and eyes; lay them on a board for a night, then hang them up in a dry place, and, after three or four days, they will be fit to dress. Skin and rub them with egg, and strew crumbs of bread over them; lay them before the fire, and baste with butter until brown enough. Serve with egg sauce.

WHITING, FILLETS.—Empty and wash thoroughly, but do not skin the fish; take off the flesh on both sides close to the bones, passing the knife from the tail to the head; divide each side in two, trim the fillets into good shape, and fold them in a cloth, that the moisture may be well absorbed from them; dip them into, or draw them through, some beaten egg, then dip them into fine crumbs mixed with a small portion of flour, and fry them a fine light brown in lard or clarified butter; drain them well, press them in white blotting-paper, dish them one over the other in a circle, and send the usual sauce to table with them. The fillets may also be broiled after being dipped into egg seasoned with salt and pepper, then into crumbs of bread, next into clarified butter, and a second time into the bread crumbs (or, to shorten the process, a portion of clarified butter may be mixed with the egg at first), and served with good melted butter, or thickened veal-gravy, seasoned with cayenne, lemon-juice, and chopped parsley. Five minutes will fry the fillets, even when very large; rather more time will be required to broil them.

WHITING FRIED.—Clean, skin, and dry them thoroughly in a cloth, fasten their tails to their mouths, brush, slightly, beaten eggs equally over them, and cover them with the finest bread crumbs mixed with a

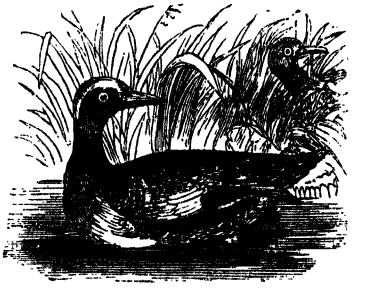


little flour; fry them a clear golden brown in plenty of boiling lard, drain and dry them well, dish them on a hot napkin, and serve them with good melted butter, or with well-made shrimp or anchovy sauce. A small half-teaspoonful of salt should be beaten up with the eggs used in preparing the whitings: two will be sufficient for half a dozen fish. Fry from five to eight minutes, according to their size.

WHITING, TO CARVE.—Whiting are usually fried and curled. They should be cut in half down the back, and served. The shoulder part is the best.

WHITLOW.—Whitlows are very painful, deep-seated abscesses, in general confined to the fingers, and usually the last joints of the fingers. The distinctive feature of whitlow is that, unlike other suppurations, the matter forms deep, under the fascia and muscles, and often in the sheath of the tendon that moves the fingers. From this cause, the unresisting nature of the part, and the difficulty of the pus or matter reaching the surface, the pain is very protracted and intense, attended with a dry burning heat, and pulsating throbs of acute anguish. As these symptoms, with great tenderness, and pain of the surrounding parts, continue long before the matter shows on the surface, the best course to pursue, after having poulticed well with bran, is to cover the extremity or tender part of the finger with a good rubbing of lunar caustic, and renew the poultices; repeating the caustic, if necessary, till the abscess is fit to open, when it should be lanced freely, encouraging the after-discharge by hot linseed-meal poultices.

WIDGEON.—A species of migratory birds, bred in the morasses of the north, which they quit on the approach of winter, and, as they advance towards the end of their southern journey, they spread themselves along the shores, and over the marshes and lakes in various parts of the continent, as well as those of the British Isles. They are easily domesticated in places where there is plenty of water, and are much admired for their beauty and sprightliness. The female is of a sober brown, the fore part of the neck and breast paler. The young of both sexes are grey, and continue so till February, when the plumage of the male begins gradually to



assume its rich colourings; but after the month of July the feathers become dark and grey, so that he is hardly distinguishable from his mate.

WIDGEON, TO DRESS.—These birds are roasted like common ducks, but without stuffing, and with a rather less allowance of time for cooking. Before carving, the knife is drawn along the breast in the situation of the slices; and upon these a lemon is squeezed, and a little cayenne pepper is sprinkled. They require a made gravy, with port wine.

WIDOW, LEGAL RIGHTS AND RESPONSIBILITIES OF.—A widow is entitled absolutely to one-third of the deceased husband's personal estate, which will pass to any

future husband she may marry; and the children will be entitled to the remaining two-thirds of such property, or which the widow, as the administratrix of the husband, will be entitled to the legal interest as trustee for her children. When a husband dies intestate, and without children, one-half of the personal property goes to the widow. A widow is always entitled to letters of administration to her deceased husband's personal effects, which will give her absolute and sole control over the same; but when she has possessed herself of her deceased husband's effects, and administered to the estate, she may be at once sued for the recovery of any debt due from the deceased.

WIDOWS, CHARITIES FOR.—There exist various asylums and other charities for the relief and assistance of widows. Sometimes these take a parochial form, and are specially meant for the widows of householders in particular parishes, the control thereof being vested in the churchwardens. There are also pension charities for widows who are above the age of fifty or sixty.

WIFE, LEGAL POSITION OF.—A wife can, under no circumstances, be made liable for her husband's debts, although he may have gone abroad, but all his available property in this country may be seized to discharge such debts. The wife of a convicted felon cannot re-marry. The transportation of the husband will not justify the wife in marrying again during his lifetime, the conviction and sentence of the husband not operating as a dissolution of the marriage. A wife is competent and compellable to give evidence for or against her husband in legal proceedings, where either is party to a suit; but in any *criminal* proceeding, the wife is not competent or compellable to give evidence. A wife may make a will without her husband's consent, but only under what is called a power of appointment, that is, an authority in some instrument by which she is possessed of the control of property in her own right.—See HUSBAND AND WIFE.

WIG.—An article made to represent the natural head of hair. A very great improvement has taken place in the construction of wigs, of late years, and they may now be obtained in close resemblance to the natural covering of the head. In choosing a wig, attention should be paid to the cast of the features, complexion, &c. Respect should also be had to age, as it would be a manifest absurdity for a person bordering on three-score and ten, to wear a head of hair such as is usually displayed in youth. Dark-complexioned persons should also wear dark-coloured wigs, and light-complexioned persons light ones.

WILD DUCK SHOOTING.—This may be considered legitimate sporting as soon as the young ducks take wing, which occurs towards the middle of August, until which time they are not worth shooting, for edible purposes, unless they be the produce of a very early hatch. To ensure good sport, the best plan is to walk in a very deliberate manner along the side of a brook or rivulet. If it be not too deep, the chances of success will be increased by walking up the brook itself, in company with one or more well-broken water-spaniels, which, if mute, so much the better. The fens of Lincolnshire, Cambridge, and Martin Mere, in Lancashire, are excellent localities for wild fowl shooting.

WILD FOWL.—These include birds of the goose and the duck species. Wild geese, when on the wing, may be distinguished by always forming a figure in their flight. In their winter visits to us, they feed on the coast, and often enter inland to seek for such grasses as suit them; more particularly they are fond of green wheat. The wild duck is rather smaller than the tame duck, but its plumage is nearly the same. The wild mallard, or drake, weighs usually about two pounds and a half or three pounds. The bill is yellow; the head and upper part of the neck are ornamented by a deep glossy green, terminating in a white ring. The female is less in size, and not distinguished by any splendour in the colours of her plumage. The parent birds pair in the spring, and the hens incubate in some slight shelter, and lay from ten to fourteen eggs, which they sit on for about thirty days.

WILD FOWL SAUCE.—Simmer a teacupful of port wine, the same quantity of good gravy, a little shallot, pepper, salt, nutmeg, and mace, for ten minutes; put in a bit of butter and flour, give it all one boil, and pour it over the birds.

WILD FOWL, TO DRESS.—Half-roast them; when they come to table, slice the toast, previously prepared, strew on pepper and salt, pour on a little port wine, and squeeze the juice of a lemon over; put some gravy to this, set the plate on a lamp, cut up the bird, let it remain over the lamp till done, turning it.

WILL, DIRECTIONS FOR MAKING.—Every person who has attained the age of twenty-one years, and is his own master, is qualified to make a will. Anything may be bequeathed by will that is at the disposal of the testator. Although there is no peculiar form of will, it is nevertheless unwise for a person to make one without professional assistance. A person may sit down to make his will, with his intentions perfectly clear in his own mind as to the disposal of his property, but which, owing to the merest literal omission, may be rendered not only obscure in its meaning, but even capable of being totally misinterpreted. The cost of drawing up a will is but small, and, therefore, ought not to be begrudged by those who wish to be assured that their intentions may be strictly carried out. A will must be in writing, and signed at the foot or the end thereof by the testator, or by some other person in his presence by his direction; and such signature must be made or acknowledged by the testator, in the presence of two or more witnesses present at the same time, and such witnesses must attest and subscribe the will in the presence of the testator, but no attestation clause is now necessary. The rule that every will must be signed at the foot or the end thereof, appears to be a very simple one, but numbers of wills have been set aside on the

ground that this rule had not been strictly complied with. No disposition or direction following the signature, or below it, or inserted after it has been made, will be operative; and all alterations and interlineations in the body of a will, should be signed in the margin with the initials of the testator, or noticed in the attestation, so as to show that they were made before the signing. If an addition is necessary after the signing and attestation, it must be re-signed and re-attested. An attesting witness may sign the will for the testator by his direction, and where a party so acting signed his own name, but expressed it to be on behalf of the testator, the will was held to be valid. A testator may sign by a mark, and it forms no objection to such a mode of signature, that he is able to write his name. The signature must be made or acknowledged in the presence of witnesses. If it has been affixed in their absence, it is a sufficient acknowledgement, if the testator produce the paper to them as his will, so that they can see that it is signed. Two attesting witnesses are sufficient. The signature of the attesting witnesses must be made in the presence of the testator, which means in a place where, if he looked towards it, he could see them sign; they need not be in the same room or house with him; if he can see them in the act of signing through a window, it is sufficient. If they are in the same room with him, but in such a position as to make it physically impossible that he see them sign, it is insufficient. Every person should execute a will as soon as he is in the possession, however small it may be; in such a juncture, a properly qualified lawyer should be called in, your intentions divulged to him, and he will give proper expression to your wishes. Then, when the instrument is sent home to you, execute and have it attested as previously directed, and all will be well. It will frequently happen that a testator having executed his will, desires to modify its provisions, revoking former gifts, and selecting other objects of his favour. The better way is to make a new will altogether, if the modifications are numerous or complex. Often, however, this may be, and very frequently is effected by a codicil, which is a testamentary paper, as its name implies, of a smaller character than a will. It must, however, be signed and attested with the same solemnities, and when executed, will be read together with the will as one instrument. When a testator, at various periods of his life, has executed several testamentary papers, each purporting to be the last will, that one which was executed most proximately to his decease, will be admitted to probate, and acted upon. It is, therefore, important that a will should be accurately dated with the day, month, and year of its execution. A testator may, however, make several wills, each disposing of different property, and they will all stand together as a single will. If a testator who has made one will, execute a paper duly attested, expressly revoking that will and saying no more, he destroys it as completely as though it had been consumed by fire; and should he make no further disposition of his property, he will die intestate. But if he has made two or more wills, and revokes the last, the last but one is thereby revived exactly as it stood.

WILL, DIRECTIONS FOR PROVING.—The will of every deceased person is to be proved in that court within the jurisdiction of which he shall have died, being possessed of personal property of the value of £5; but if he shall have died possessed of personal property within more than one jurisdiction, or have died in one diocese, leaving personal estate in another, the will must be proved in the prerogative court of the province within which the several jurisdictions are situated. Thus, if part of the property should be in Surrey, within the diocese of the Bishop of Winchester, and the jurisdiction of his consistorial court, or any inferior court in his diocese, and partly in London, within the diocese of the Bishop of London, the will is not to be proved in either of the courts of the Bishops of Winchester or London, but in the prerogative court of the Archbishop of Canterbury at Doctors' Commons, both the dioceses of Winchester and London being within the province of Canterbury. But, if some part of a testator's personal property lie in the province of Canterbury, and another part in the province of York, the will must be proved in both provinces, though not necessarily in the prerogative court of each province; for if the property in each province should be entirely within one jurisdiction, the probate in each case must be taken out in the court to which the jurisdiction belongs. An executor should have a general knowledge of these matters, in order, that if he do not at once satisfy himself of the court in which the will is proved, he may be aware of the difficulty when it occurs, and know whom to consult upon the point, and likewise be able to collect the information necessary for forming a correct opinion. If, however, after obtaining the best advice within his reach, the executor should still entertain a doubt whether the will should be proved in the prerogative court, or any inferior court, he should decide in favour of a probate from the prerogative court. For even if the deceased had not property in several inferior jurisdictions, a probate from the prerogative court is not void, but only liable to be made so; while a probate taken out improperly in an inferior court is absolutely void. What sort of things, being the property of the deceased, shall be accounted "notable goods," for the purpose of founding the jurisdiction of the courts with respect to probate, is a question of much nicety. Household furniture, and all other articles in and about a dwellinghouse, warehouse, or manufactory; stock in trade, and cash, are property in the place in which they happen to be at the testator's death. A policy of insurance or a debt on bond is property where the policy or bond happens to be deposited. A debt or mortgage is property where the mortgage deed is situated. Simple contract debts (among which are included bills of exchange

and cash at a banker's) are property where the debtors reside. Judgments, statutes, recognizances, are property where they have been given or acknowledged. Leases for years are property where the land is, and not where the lease happens to be. Shares in canals and railways running through several dioceses, are property in the diocese where the office stands for transferring the shares and paying the dividends. If the deceased shall have died on a journey, the property about him, if his death shall have happened within the jurisdiction of a different court from that which possesses authority over the place where all the rest of his goods are, will not render it necessary to take out probate in the prerogative court, as it would have done in any other case than that of his dying on a journey. Having collected full information of the extent and value of the deceased's personal property, and decided on the court in which application for probate is to be made, the executor's next step is to apply to a proctor of the court, if the will is to be proved in either of the prerogative courts, or to the registrar or deputy registrar, or other acting officer, if it be in any of the inferior courts, and if the executor live near it; but if he live at a distance, he may do the business through the medium of the nearest surrogate of the court. It is not necessary that the executor should previously make himself acquainted with all the forms of proceeding in the court, with respect to granting the probate. But he should take especial care to have his stamped probate delivered to him within a few weeks from the date of his affidavit. He is required to swear to the gross value of the personal estate without any deduction for debts; and in the estimate, he must not fail to include the following descriptions of property:—Leasehold estates for years, or leaseholds for lives, if they should be applicable by law as personal estate; or copyholds, if by the custom of the manor they descend to the executor, and are assets in his hands. In the case of a partnership, the executor is not to include the whole gross amount of the testator's share of the partnership property, but must obtain from the surviving partners a balance-sheet exhibiting both the property and the liabilities of the firm; and the sum to be included in the estimate of the testator's property will be his share of the net balance only. Articles which fall under the denomination of fixtures, if attached to real estate, whether house or land, are commonly accounted as part of the real estate, and therefore to be excluded from the estimate. The executor's right to such articles will, in some measure, depend on the question whether his testator was the tenant in fee, or the tenant for life only in the real estate. Property of which the testator was only a trustee, must, of course, be left out, unless such property shall have been so mixed up with the testator's own estate, that no particular part can be said to be the trust fund. In this case no deduction of the trust money must be made in the first instance, the deceased being merely a debtor to the object of the trust; but a proportionate return of duty may be claimed when the trust debt shall have been paid. Where the trust fund has been kept separate, and it is consequently left out of the estimate as above directed, the executor will obtain a transfer of it by making an affidavit of the facts. Every executor is bound to exhibit, when called on, a full and perfect inventory and valuation of the testator's effects, in the court in which the probate is granted; and though he may never be called upon to do so, the executor should not neglect to make such an inventory, and preserve it, in order that he may be able to answer any call upon him for an account in whichever court it may be made. The property is to be valued at the time of taking out the probate; and all rents, interest, and dividends accrued between the death of the testator and that time, must be included in the estimate.—See EXECUTOR, PROBATE, &c.

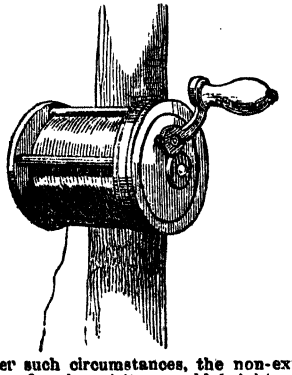
WILLOW TREE.—The cultivation of willows for useful purposes, is on the whole profitable, and the growth of rods particularly so; the returns are certainly quicker than those derivable from any other wood, and, proportioning them with the management and demand, seem at least equal in amount. The ground most suited to the formation of osier beds, as they are called, is found on the margins of streams; it should be of considerable depth, and partake largely of a loamy character. Gravelly beds or banks entirely of an argillaceous nature are not fitting. The land should be sufficiently high to prevent more than an occasional submersion; for though all willows thrive in damp soils, few of them are naturally bog, or even marsh plants, and never succeed when frequently saturated. The preparation of the ground is confined to a deep summer trenching, to destroy weeds and pulverise it. As it is usual to plant only cuttings, this operation had better be deferred till spring, when pieces of about two feet in length, taken from the bottom of the strongest recently cut rods, may be thrust into the ground for about half their length at distances of about a yard from each other; their subsequent management through the summer being merely an occasional hoeing to remove weeds, though at the beginning it will be well to look over them and replace any that have failed. The produce of the first year will, of course, be small, but the rods must be cut to within three joints or buds of their origin. The most proper time for cutting, is as soon as the leaves have fallen, because the remaining buds have then time to consolidate, and are better prepared to meet the winter; and though for convenience the rods are sometimes allowed to stand all the winter, it may be observed the shoots that have been cut over in autumn, always break in the succeeding spring with the greatest vigour. With regard to the planting of willows, nothing can be more easy. They may be increased to almost any extent by cutting in the manner before described for osiers. Their after-management must of course depend upon the uses they are destined for. The very common

mode of pollarding them is objectionable on several accounts; they are then spoiled either for timber or poles; the crowd of small stuff which rises on the head after each cutting suffocates one the other, and the trunk is rendered of little value by its being foreshortened. It must be decidedly more profitable, either to cut them over near the ground, as is practised with shoots of ash, chestnut, and other coppice wood; the subsequent shoots to be thinned according to the strength of the shoot and the space they are allowed to occupy, or at once to let them run up into perfect trees, taking only such lateral branches as may be required for repairs, &c., before the principal growths have attained a marketable size.

WILSON'S LOAN FUND.—This fund is devoted to the assistance of young beginners in trade in the City of London; and sums of not less than £100 are lent. The borrower must have been in business one year, must be able to pay all he owes, and find three or four sureties for the repayment of the loan, each of these sureties having to furnish references of their respectability.—See LOAN.

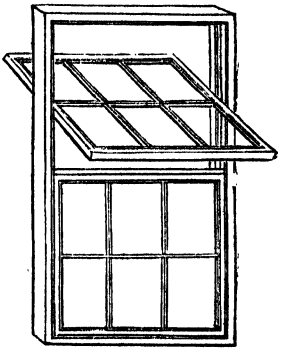
WILTSHIRE PUDDING.—Mix with three well-beaten eggs a pint of milk, as much flour as will make it a thick batter, and a little salt; beat for some minutes, stir in gently a large teacupful of picked red currants and half the quantity of fresh raspberries, boil it in a cloth for two hours, turn it out upon the dish it is to be served in. Cut it into slices about three-quarters of an inch thick, but do not separate them; put between each a thin slice of butter and some brown sugar, and serve it hot, with pudding sauce in a sauce tureen. It is very good without the raspberries.

WINCH.—In angling, an apparatus almost indispensable to anglers on every occasion. In very fine fishing for dace, roach, &c., it is sometimes dispensed with. But in ordinary cases, the angler can never ensure himself against hooking a fish of which he did not meditate the capture, and which, without a winch, he has no means of taking. As



under such circumstances, the non-expectance of such a visitor would heighten the pleasure of his appearance, so the disappointment would be doubly mortifying if, instead of being a gainer, the angler found himself minus hook, line, and perhaps float. It is wise, therefore, to be always provided with a winch and a running line, so that the disappointments alluded to may be avoided.

WINDOW.—In the construction of windows several improvements have taken place of late years. A kind of window which may be readily cleaned, and is not likely to cause accidents, is shown in the engraving.



In appearance, the sashes resemble those of the common window, and the upper and lower sash may be moved up and down in a similar manner. The outside of the sash may also be turned into the room, so that it may be easily painted, glazed, or cleaned, by a person standing within the room, without the necessity of removing the slips or beadings. The frame of the window is fitted with grooves, weights, and pulleys, in the usual manner, the fillets on the sash are not made in the same piece with the sash frame, but fastened to it by pivots, about the middle of the sash; upon these pivots the sash revolves at pleasure, so as to enable the outside to be reached without disturbing the fillets or grooves. When the sash is placed vertically, as the lower one in the figure, a spring catch on each side, shoots into and takes hold of the sliding fillets, so that in this case the sash slides up or down in the usual manner, but can be immediately released and turned inside out by pushing back the springs, and at the same time pulling the sash inwards.

WINDOW GARDENING.—In considering the culture and treatment of plants adapted for windows, it should be observed that the sort of plants most suitable will, in a great measure depend on the aspect and even the form of the window; also its liability to, or exemption from exposure to chilling draughts of air, and likewise on the possession or non-possession of a piece of ground, to which the florist can transfer his potted plants from the window when he

pleases, so as to ensure continued successions within doors. Any one who has a parlour or drawing-room with a bow window on the south side of the house, is almost in the favourable position of a person who has a green-house; he can regulate the temperature of the room; and as his window admits the rays of the sun, from early in the morning until night, and yet can be shaded by a blind at will, he can cultivate a great variety of tender green-house plants without any difficulty. Among the plants suitable for windows are some of the bulbous order, which blow early, and are easily cultivated, such as the snow-drop, spring-crocus, early tulip, hyacinth, jonquil, and narcissus. These, after flowering, should make way for others. It must be borne in mind, however, that the odours of flowers are very injurious to health, if the plants are confined with us in closed rooms. During the night, plants generally give out a gas, which is especially hurtful to human beings in a sleeping apartment of which the door and window are closed. The effluvium, also, which sometimes arises from our bodies during sleep, has an unhealthy effect on the plants, besides the injury they suffer from having light altogether kept out at night by a shutter or window-curtain. In this unnatural state, plants cannot thrive; therefore, if they are to have places in bed-rooms, they should only have outside ones, which will suit them well in mild weather. Indeed, in all cases, it will be found that, for window-culture, plants in moderate weather will thrive better on the outer than the inner ledge of the window, or on a stage within a room during the night, when air, light, and moisture, will be as necessary to them as in the day-time. The plants to replace bulbs, may consist of the double primrose, hepatica, anemone, ranunculus, tuberose, and candytuft. The last-named plants should be removed to outside quarters when they cease to please the eye or regale the senses, and give place to the more valued geraniums, fuchsias, perpetual roses, and sweet-scented myrtle, which will blow the greater part of the year. These plants need not be displaced at any time from the window—except to receive genial showers out of doors—as they are always ornamental and never lose their foliage: if, however, there be a convenient place for them outside the house, their temporary removal there will invigorate them, unless in cold weather, and their place can be advantageously occupied by other plants. Carnations, picotees, ten-week stocks, double wall-flower, and Chinese rose, are desirable summer plants and may be surrounded by the autumn-blowing campanula, petunia, verbena, calceolaria, and Chinese chrysanthemum. The cultivation of window plants must be guided altogether by a person's extent of space within and without: if he cannot shift his plants, when out of blooming, he must be content to keep such plants as the fuchsia or the geranium and those roses which preserve their bloom longest and afford the greatest ornament. In cottages, however, above the lowest order, there are usually windows enough to accommodate all the kinds of plants before named, so as to keep up continued successions, more especially as the bulbous sorts will want no pot nor need any care: when their season has passed, they may make room for others. Even a window on a north side of a lattice will serve at all times for saxifrage, the musk plant, winter phloy, purple cytisus, and hounds'-tongue. A north window, also, will be useful in summer to preserve the bloom of the tender plants longer than would be the case if they were exposed to the stimulating effects of the sun. In no circumstances of aspect, then, is a person debarred from cultivating window plants; in any point of the compass there will be either sun or light sufficient for some sorts of beautiful and interesting flowers; and there is no month in the year in which sweet flowers or green foliage may not gladden the eyes of any person who has the command of a window. Some instructions are necessary as to the soil that should be provided for plants, and the mode of potting them. Plants cannot be cultivated in pots with complete success unless the soil in which they are put is suitable to their nature, and contains a considerable proportion of nourishment, as the quantity of mould in a pot is necessarily very small, and the plant in it cannot extend its roots in search of food as it does in open ground culture. It is not only necessary that the plant should have the proper kind of soil, but also that this be duly prepared before it is used, by repeatedly turning it, so that the whole shall be thoroughly and frequently exposed to the air and the separate parts of which it is composed perfectly blended together. This work should be done in some place where the mould will not be exposed to heavy rains. The seasons for doing this are the autumn, winter, and early spring months. Summer is not the proper period for this operation, because the heat of the season would dissipate some of the most active properties of the compost. A soil suitable for pot plants generally is a good sound loam or garden mould, completely rotted manure, leaf mould or leaf earth, silver sand or drift sand blended together; for some plants, the pink tribe especially, old mortar rubbish; and for other plants, as heaths, or peat earth. The next thing to be considered, both in order and importance, is the potting of plants. If the plant requires to be repotted, the mould in the pot in which the plant is, must be in a dry state, and therefore can be very easily removed. Give the pot two or three smart blows with the palm of the hand, on every side, to loosen the earth from the inside; then spread out your fingers around the stem of the plant, turn the pot bottom upwards, and the plant, with the roots and mould undisturbed, will fall into your hand. Previous to doing this, however, the pot into which the plant is about to be transferred should be prepared, quite clean, and otherwise ready; its drainage should not only be perfect when the plant is moved into it, but should be so managed as to continue as long as possible, for the plant will speedily sustain injury

when the drainage becomes obstructed; and if this be not attended to, the plant will be seriously damaged, if not ultimately destroyed. The best plan of drainage is formed of two pieces of tile, with the edge of each piece straight on one side; these two straight edges should be placed in contact over the middle of the hole at the bottom of the pot; immediately over these pieces of tile, where they meet, there should be placed an under oyster-shell with the hollow side downwards; around and over these should be put bits of broken potsherds, the larger pieces below, and the smaller above; over these, some broken and partially rotted pieces of wood, such as may be found at the bottom of an old wood-stack; over these some broken dried leaves, or rough fibrous peat; next to this the coarsest mould, then a little of the finer mould. This will fill up a third part of the pot. When the plant is being re-potted, the roots, if they be found matted round the ball of earth, should be carefully drawn out by a smooth pointed stick, and freely cut back up to the larger roots, taking care not to injure them. If the ball of mould be hard, it should be loosened by cautiously pressing it between the fingers and the thumb. These roots must be placed regularly in the pot, and the prepared mould strewed in amongst them, and pushed down gently where it may be necessary with the stick, the sides of the pot being occasionally patted to get the soil more completely among the roots and the loosened ball of earth. Care should be taken to place the plant perfectly upright, and the stem exactly in the middle. The plant should be put at the same depth in the new pot as it was in the former one. If the roots be perfectly covered after the settling of the mould in the pot, the plant is sufficiently deep. Having thus filled up with mould, press it down equally over the whole surface with moderate firmness, then moisten the mould thoroughly and gradually through the fine rose of a water-pot, with some rain-water raised a little above the temperature of the atmosphere, either by exposing it for some time to the rays of the sun, or by mixing a little hot water with the cold. This finishes the potting. The plant should now be put in a sheltered situation, where it will be safe from the extremes of heat and cold, until it has recovered the effects of the operation. The plant may now be left out of doors, if the weather be mild and not windy, or put under shelter where the air circulates freely until the leaves become perfectly dry. Whether the washing be given or not to the plants, they must be examined before they are placed in the window, to see where it requires pruning or disbudding, to regulate its growth, and clear it from insects. In pruning, remove those buds which are growing where shoots are not wanted; cut away the worst placed branches where they are crowded or crossing each other; cut back or shorten such shoots as are disproportionately strong to those growing at the same joint on the opposite side of the branch, so that the two shoots may be brought to an equal growth. In shortening the branch, the situation of the buds must be considered just below where the cut is to be made; this should be so made, that when the buds grow to branches, they will fill up various spaces, and thus perfect the form of the plant. An examination of the leaves must then be made, to see if there are any green flies upon them. If only a few of the leaves are affected by them, the flies may be easily destroyed by pressure of the finger and thumb, but when they exist in considerable numbers, the plant must be fumigated with tobacco smoke. This should be repeated three times, at intervals of three or four days, the foliage being washed each time, in the way before described, on the day after fumigation. Or, the branches affected by the flies, may be dipped in strong tobacco water, instead of fumigating the plants. In course of time, the cultivator of window flowers will be repaid for his care by a beautiful array of geraniums, Chinese roses, ten-week stocks, wall-flowers, heliotropes, carnations, pinks, and mignonette. Of the last-named plant, there is a superior variety, which, being longer lived, and more strongly scented than the common sort, is especially desirable for the window stand. Fuchsias and geraniums continue sometimes so long in flower, that they should have the first claim to standing room in any house where growing flowers are kept. In summer, fuchsias should be transferred to the outside of the window-sill or to a balcony, where they will continue to bloom until the frost nips them; and in order that they may not suffer from lack of moisture, the strong healthy plants should be potted in six-inch pots in a light rich soil, and these pots dropped into others just large enough to admit the space of about half an inch all round, the inserted pot standing in moss or leaf-mould, until its rim is on a level with that of the pot containing it. By this contrivance, the hottest sun will be unable to scorch the roots of the plants; they will retain moisture longer, and will flourish more luxuriantly. All hardy woody window plants should be kept in due form and vigour by stopping the buds, rather than by pruning after shoots have struck out, as the strength of the plant will be better preserved by the nipping of vegetation in its first stage, than by allowing it to grow at all. Watering should be carefully attended to. When plants are watered from a watering-pot, a sufficiency of water should be given to soak the roots completely. In the case of newly-potted plants, however, a second supply of water should be withheld until the first has been thoroughly absorbed; for the roots of plants not yet established are able to imbibe moisture in but a trifling degree, therefore, the moisture not taken up by the plants, would harden the soil into a dry crust. Whenever the soil is in such a condition, it should be loosened with a convenient instrument, and a supply of suitable mould should be always ready to top dress the sinking earth in a pot, in order that fresh nourishment should be filtered

down to the roots, in place of that which they have consumed. Carnations, and all their tribe should be carefully treated as to striking, the petals being supported either by tying the flower-stems to a stake, or by supporting them with slip cards fixed beneath them, and fastened to the stake by worsted or strips of bass matting. These

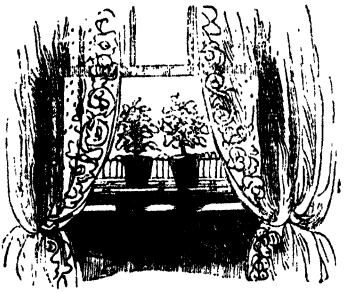


Fig. 1.

cards will keep the flowers in a safe position while in bloom. August is the best month for dividing roots or taking off slips, in order to obtain new plants, and also for shifting the old plants into new pots, which should be placed in the shade until the roots have struck. Pots about seven inches deep, six inches wide at top, and four at bottom, are the most convenient in size for the plants that are to blow in the following spring. Offsets may be grouped into smaller pots until they take root, after which they will require separate pots. As a general rule, do not re-pot any plants when they are budding or in bloom, as the shifting checks their progress and deranges their health. In order to afford sufficient space for potted plants, where the cultivator is limited to the breadth of a window sill without, or within the glazed sash, a moveable platform of bars for the

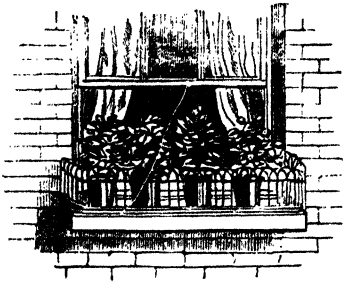


Fig. 2.

outside is to be recommended. This structure is composed of iron bars one inch thick and one inch in width, and twelve or fifteen inches long, with holes for screwing the frame to the window sill; also bars of thin iron; and a curved bar of wood into which the wire is inserted; the whole finished off by a wire fence. This may be constructed of wood or iron, screwed into the sill, and painted green. Green-coloured pots are more appropriate and pleasing to the eye than red ones. Covering the surface mould in the pot with loose and moist moss, is both tasteful and beneficial to the plant, by preventing the evaporation of the moisture from the earth by which it is surrounded and fed. The ordinary mode of window-gardening is illustrated in *figs.* 1 and 2. The Belgian window garden furnishes one of the best modes of this kind of culture. It is within reach of all, and will be understood by referring to the annexed engraving. In *fig.* 3 it will be seen that the sill of the window is extended in breadth beyond the face of the wall of the house by brackets; two or more shelves are placed across the window, which

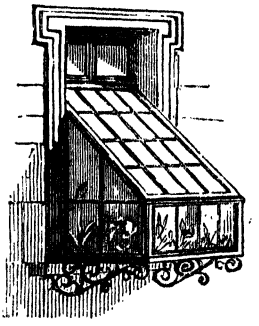


Fig. 3.

with the sill, are covered with plants in pots. A roof of glass is hinged to the window-frame at any convenient height. These sloping roofs fall down upon a stone or wooden front, either solid or filled with glass, and are opened and shut for ventilation by raising up the bottom part of the roof, and securing it at any point of elevation desired, by a curved handle. The plants are watered and arranged from the room within, as the windows are hung on hinges in two parts, and do not generally move up and down as in England. In cases where the sloping roof extends to the top of the window, as is sometimes the case, the window being thrown open, the owner can enjoy the fragrance and beauty of the plants, while they are not subjected to the dust, heat, and dry air of the room, and with the large squares of glass used, they lose little of their effect, even when the window is shut altogether. *Fig.* 4 is another example of the same kind of window garden, placed opposite the centre window of a drawing room, and extending considerably beyond the breadth of the window on both sides. It is supported on highly ornamental

metallic brackets, and the bottom part in which the pots are set or plants planted in,

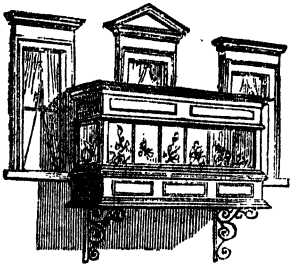


Fig. 4.

is of stone, slate, cast iron, or wood. It should rise to the level of the window-sill, but no higher; indeed, a few inches lower would be no disadvantage. Large panes of glass are used both for the front, ends, and top; one or more of them may be made to open for ventilation; the wall of the house and the casement of the window serve for the back. The operation of arranging the plants is, of course, to be performed from

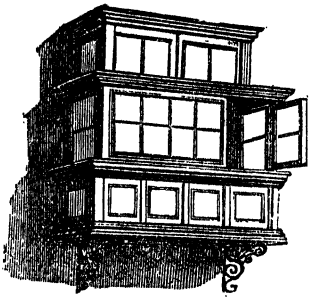


Fig. 5.

the room within, by opening the window. *Fig.* 5 is the same kind of case adapted to a single window, the ventilation, although shown in front, may without any detriment be placed in the ends.—See WARDIAN CASE.

WINDOW PAINTING.—The windows of a house may be very appropriately decorated, with the aid of a recent invention, termed *diaphanie*, which is a beautiful and inexpensive art, combining economy with perfect results. In carrying out this process, a peculiar kind of paper is rendered perfectly transparent, upon which designs are painted in glass colours, which will not change with the light. The paper is applied to the glass with a clear white varnish, and, when dry, a preparation is finally applied, which increases the transparency, and adds tenfold brilliancy to the effect. There is another design, painted in imitation of half-light; this is used principally for a ground, covering the whole surface with glass, within which (the necessary spaces having been cut out before it is stuck on the glass) are placed medallion centres of Watteau figures, perfectly transparent, which derive increased brilliancy from the semi-transparency of the surrounding ground. This is by far the cheapest method, though involving extra trouble. To ascertain the number of designs required, measure the glass carefully, and then calculate how many sheets of the transparent designs it will take. The sheets are arranged so that they can be joined together continuously, or cut to any size or shape. Choose a fine day for the operation, as the glass should be perfectly dry and unaffected by the humidity of the atmosphere. If possible, it is more convenient to work upon the glass before it is fixed in the frame. If you are operating on a piece of unattached glass, lay it on a flat table, or marble slab, over which must be previously laid a piece of baize, or cloth, to keep the glass steady. The glass being thus fixed, clean and polish the surface on which you intend to operate (on windows this is the inner side), then with the brush lay on it a thick and even coat of the prepared varnish; let this dry for an hour, more or less, according to the state of the atmosphere and the thickness of the coat of varnish. Meantime, cut out and trim the designs carefully to fit the glass; then lay on a piece of paper, face downwards, and damp the back of it with a sponge applied several times to equalize the moisture. In this operation, arrange the time, so that the designs may be left finally to dry for a quarter of an hour before application to the glass, the varnish on which will have become sticky, and in a proper state to receive the designs. Apply the painted side next to the glass without pressure; endeavour to let the sheet fall perfectly level and smooth on the glass, so that you may avoid leaving creases, which would spoil the whole. Take now your palette, lay it flat on the design, and press out all the air bubbles, commencing in the centre, and working them out from the sides. An ivory stick will be found useful in removing the creases. The work is now to be left to dry, and, after twenty-four hours, apply a slight coat of *liqueur diaphanie*, leaving it for another day, when, if dry, apply a second coat of the same kind as the first, which must be left undisturbed for several days: finally, apply a coat of varnish over all. If these directions are carefully followed, the glass will not be affected, either by time or the variations of weather; and it can be washed in the same manner as ordinary stained glass, to which in some respects it is superior. The materials used in the practice of this art may be obtained of any artists' colourman.

WINDOWS, TO CLEAN.—First dust the frames and the glass thoroughly, then wipe three or four panes at a time with a piece of wetted wash-leather, the corners of the panes being carefully cleaned out. The leather must, after this be rinsed and wrung

as dry as possible, and the panes which have been wetted must be rubbed dry with it, and then finished with a fresh leather as quickly as can be done. The leather must be washed in clean water, and hung to dry after the windows have been cleaned. When windows are required to appear particularly bright, a little whiting should be dusted over them after the first washing with the wet leather.

WINDOWS, TO RENDER OPAQUE.—In cases where persons are liable to be overlooked by their neighbours, or otherwise liable to have all their movements watched from without, it will be useful to know that windows may be rendered opaque or untransparent by the following simple process:—Cover the window-pane very equally with one or two coats of paste; when dry, take a small rag of cotton cloth, dipped in a varnish made of Canada balsam and turpentine; brush this over the paste, and the desired effect will be obtained.

WINDSOR SOAP.—Slice the best white soap as thin as possible, melt it in a pan over a slow fire, scent it sufficiently with oil of carraway, and then pour it into a frame, mould, or small drawer, adapted in size and form to the quantity made. When it has stood for three or four days in a dry situation, divide the mass into square pieces for use. By this simple mode, substituting any favourite scent for that of carraway, a person may obtain a good perfumed soap at a very small cost.

WINE BISCUITS.—Rub into one pound of dry flour four ounces of butter, four ounces of white powdered sugar, one egg, and a spoonful or two of thin cream to make it into a paste. When mixed, put currants into one half and carraways into the rest. Cut them as before, and bake on tins.

WINE CASKS, TO SWEETEN.—There are several methods of doing this. 1. If a cask, after the contents are taken from it, be well stopped, and the lees be allowed to remain in it till it is again to be used, it will only be necessary to scald it; taking care, before filling it, to see that the hoops are well driven. Should the air get into the cask, it will become musty, and scalding will not improve it; the surest way will be to take out the head of the cask, to be operated on, then burn it a little, and scald it for use. 2. Set fire to a pound or more of broken charcoal, put it into the cask, and immediately fill up the cask with boiling water. After this, roll the cask once or twice a day for a week; then pour out the charcoal and water, wash out the cask with clean cold water, and expose to the external air for some days. 3. Mix half a pint of the strongest sulphuric acid in an open vessel, with a quart of water, put it into the cask, and roll it about well; next day, add a pound of chalk, bring the cask down, and in three or four days, wash it out thoroughly with boiling water. To prepare a match, melt some brimstone, and dip into it a long narrow slip of coarse linen cloth, or of brown paper; when to be used, set fire to the match, put it in at the bung-hole of the cask, fastening one end of the bung, and let it remain for a few hours.

WINE DECANTING.—The flavour and appearance of wine are frequently injured by the agitation it undergoes when being transferred from the bottle to the decanter. At rest in the bin, the wine will be bright, but no sooner is the bottle altered from the position in which it has lain, than the disturbance of the deposit is apt to begin; if placed upright for drawing the cork, there will follow a partial subsidence of the rejected impurities, then follows the jolt attendant on extracting the cork, then the agitation inseparable from pouring off, and thus the condition of the wine is lost. The best means of palliating this inconvenience is by the aid of the instrument seen in the annexed engraving, called the Ellutriator.

It is furnished with a piece of mechanism by which means the bottle is sustained as it is raised, and its action follows the motion of the hand, and thus the person decanting is enabled to rest at will during the operation. This machine is also serviceable where wine is transferred at once from the original bottle to the drinking glass. By slightly releasing what is termed the cam, to stop the flow when the glass is filled, the last drop of bright wine may be taken from the lightest or muddiest deposit, and wine may be thus always drunk in condition.

WINE, DIETETIC PROPERTIES OF.—As a general rule, the less wine that is drunk the better it will be for the health. There are, however, exceptional cases, such as bodily infirmity and extreme debility, where the drinking of wine in moderate quantity is enjoined, and partaken of with considerable benefit. But when taken habitually and in excess, it produces derangement of the digestive organs, together with gout, apoplexy, and numerous other disorders. Wine is an unwholesome liquid to be drunk with food, because it stimulates the appetite in excess, and causes a person to eat such an amount of food, as to render the process of digestion tedious and difficult. When, however, wines are drunk, some sort of system should be observed as follows:—Wines

should vary with the seasons, light wines are best in summer; in winter, generous wines are preferred. White wine should be drunk with white meats, and red wines with brown meats. Light wines are suitable to light dishes, and stronger wines to more substantial dishes. In summer the wine may be advantageously diluted with water. Light dry wines, such as hock, claret, burgundy, Rhenish, and Hermitage, are, generally speaking, less hurtful than the stronger varieties, as port, sherry, or Madeira. When wine is ordered as a stimulant to debilitated subjects, it should be taken about mid-day, and the quantity swallowed at a draught, not sipped.

WINE GRAVY.—Make a strong rich gravy; heat about one-third of a sauce tureen of this, and when ready for use, add from two to three tablespoonfuls of rich and new port wine.

WINE JELLY.—Soak four ounces of gelatine in one quart of cold water for half an hour. In the mean time, mix with two quarts of cold, six tablespoonfuls of brandy, one pint of white wine, six lemons cut in with the peel on; the whites and shells of six eggs, the whites slightly beaten, the shells crushed; three pounds of white sugar; then mix the gelatine with the other ingredients, and put them over the fire. Let it boil without stirring for twenty minutes. Strain it through a flannel bag without squeezing. Wet the mould in cold water. Pour the jelly in, and leave it in a cool place for three hours.

WINE, MULLED.—Boil some cloves, mace, cinnamon, and nutmeg, in about a quarter of a pint of water till well flavoured with spice, then add it to a pint of port or home-made wine; sweeten to taste, and serve hot with thin toast or rusks. 2. Boil a small stick of cinnamon, a blade of mace, and three cloves, in a breakfast-cupful of water for a few minutes; add some grated nutmeg and a pint of home-made or port wine, sweeten to taste, boil for one minute, and serve hot. 3. Put a bottle of port wine, half a bottle of water, and sugar to taste, into a saucepan; then add allspice, cloves, and a blade of mace; boil all together, serve in a jug with grated nutmeg, and rusk or slips of thin toast. Some persons add lemon-juice to the mull, but it does not generally please.

WINE SAUCE.—Make thin a few ounces of melted butter, then add a tablespoonful or two of coarsely-pounded loaf sugar, and a glass of sherry, with half a glass of brandy; a little grated lemon-peel or nutmeg, or both together, are improvements.

WINE SOURS, TO PRESERVE.—Fill a jar with the plums, and place it over the fire in a pan of boiling water. Let it remain till the plums are perfectly tender, but unbroken, then remove it. Make a syrup of a pound of sugar, and a pint of water for every pound of fruit, boil and skim it well, then pour it boiling over the fruit; let it remain for five or six days, then re-boil the syrup, adding to each pint a quarter of a pound more sugar. Pour it again boiling over the fruit, and let it stand for a day before it is covered.

WINE, SPIRIT OF, USES AND PROPERTIES.—Spirit of wine is employed both internally and externally. For internal purposes, it is generally given mixed with other substances, and forming such preparations as tinctures. When it is thought necessary to administer ardent spirits internally, medicinally, brandy is the spirit usually given; this is frequently done to check vomiting, especially sea sickness. As a powerful excitant, it is used to support life during a tedious operation, and to assist in the restoration of a person from a state of suspended animation, as in drowning. In delirium tremens, the moderate use of a long-accustomed stimulus will be necessary to the welfare of the patient. Externally, spirit diluted with water is much employed as a lotion. It is applied, in a diluted state, to the back and sore parts of bed-ridden persons; to the nipples, when inclined to be sore during suckling; to the feet, when the skin is blistered by walking; on the chest, to excite the action of the heart in fainting, or suspended animation; and to relieve the pain arising from bruises; also, as a cold evaporating lotion in inflammation of the brain.

WINE STAINS, TO REMOVE.—Hold the articles in milk that is boiling on the fire, and the stains will soon disappear.

WINE TAKING, ETIQUETTE OF.—It is customary at dinner parties and other repasts among the higher classes, for the assembled guests to take wine with each other. This ceremony is performed when the more weighty business of the meal has passed, and the appetite is appeased. The following rules are generally observed in connection with this custom. When you are about to take wine with a person, you select a favourable moment, and say to the person, "Mr. So-and-so, I should be happy to take wine with you;" the person thus addressed replies, "With pleasure." The challenger and the challenged then fill their glasses, raise them at the same moment, and bow towards each other in silence. When you wish to take wine with a lady, you say, "Mrs. or Miss So-and-so, will you permit me the honour of taking wine with you?" and having received an acquiescent reply, you ask the lady what wine she would prefer; on receiving her answer, you call upon the gentleman sitting next to her to see that her glass is replenished with the wine named. Among relatives and friends, it is customary for mutual acquaintances to request permission to "join in," and in such cases each waits until all the glasses are filled, and the guests bow to one another in due order. In practising this custom, certain laws are laid down, which it would be considered very vulgar to break. For instance, a senior in age, or a superior in rank, always claims the initiative, for it would be regarded as an act of impertinence or presumption for a junior or inferior to challenge those older and higher than himself. The same person should not be asked to take wine twice. Some discretion should

also be observed in challenging, the calls being neither too frequent nor numerous. When a person is asked to take wine, he must on no account decline, as this would be considered a direct insult. Every time that a person is challenged he should replenish his glass, although it may be at the time nearly full. It is not etiquette to drink the whole of the contents of the glass, nor indeed to take a full draught, the merest sip being deemed a sufficient recognition of the compliment. In this ceremony, the timing of the raising of the glass, the catching of the eye, the bow, and the expression that accompanies it, are matters which, though trifling in themselves, are nevertheless worth studying, to avoid the appearance of awkwardness and uncouth behaviour.

WINE VINEGAR.—Take any sort of wine which has gone through the process of fermentation, and put it into a cask that has had vinegar in it; then take some of the fruit or stalks of which the wine has been made, and put them, in a wet state, into an open-headed cask, exposed to the sun; place a coarse cloth over the top, and let it remain for five or six days; after which, put the stalks thus prepared into the vinegar, and stir the whole thoroughly; then put it in a warm place, if in winter, or, if in summer, expose it to the sun, with a slate over the bung-hole. When the vinegar is sufficiently acid, rack it off into a clean sun cask, and bring it up; then put it in the cellar for use.

WINES, BRITISH, General Instructions for Making.—In addition to the several recipes which have already been given for making the various kinds of British wines, the following important points in wine-making generally are necessary to be observed in order to ensure successful results:—The fruit should be gathered in fine weather and early in the morning, as under those conditions it is in a much better state for the process it is destined to undergo. Making a careful selection of the fruit after it is picked is essential; reject any unsound or bruised fruit, as unsuitable for the purpose. The quantity of fruit for making a vintage of domestic wine is not so large, but it may be bruised in a tub, and thence removed into the vat, or if the quantity be very small, it may be bruised in the vat. Raisins should be put into the water in the vat, and on the following day taken out and bruised, and then returned to the vat. In vatting, the guard should be placed against the tap-hole, to prevent the husks escaping at the time the *must* or extract is drawn off. When all the fruit is in the vat, the water should be added, and the contents stirred with the vat staff, and left to macerate till the following day, when the tartar, sugar, &c., diluted with a portion of the liquor, are to be put in the vat, and the whole stirred up again. The situation of the vat should be such as to expose it to a free circulation of air, and if fermentation does not take place in a reasonable time, the contents should be stirred frequently, and the place in which the wine is made should be warmer. The time of fermentation cannot be very accurately specified; but, generally speaking, white wines will require at the rate of two or three days for eighteen gallons; and red wines a day or two more. Flavouring ingredients should be put into the vat when the fermentation is about half over. If the object be the production of a *dry wine*, the fermentation must be protracted by breaking the scum or head, and mixing it with the fermenting fluid, this also renders the wine stronger and better, by re-exciting the languid fermentation. If a *sweet wine* be desired, the fermentation must be checked, by separating the head as fast as it rises; and if the wine is to be brisk, the fermentation ought to be as much as possible carried on in a close vessel, and with this view the liquor should be bottled before the fermenting process is completed. Such wine should be bottled on the approach of spring; this period is also the best for adding flavouring substances or spirits, as they will now incorporate more readily with the wine. Fermentation is comparatively more rapid and more perfect in large than in small quantities; thus, two gallons would occupy a much longer time fermenting than ten gallons. Clean casks are very important. Before using, they should be washed with salt and hot water, and finally with a portion of the fermented liquor in a boiling state. A tendency to acidity may be checked by washing the vat with lime-water immediately after the lime has been perfectly slacked. After the liquor is removed from the vat, it will still undergo a slow fermentation in the cask, during which time some of the liquor will evaporate. The cask should, however, be kept filled, or the scum cannot work off at the bung-hole. When fermentation has completely subsided, close the bung-hole, and bore a hole with a gimlet for a peg to be withdrawn occasionally, otherwise there will be danger of the cask bursting. In the following spring, it should be determined whether the wine is to be then bottled, or to be kept in the wood for another year; the latter plan is to be recommended as improving the wine, provided the wine has fermented properly, and does not betray any signs of deterioration. Under such circumstances, however, it will be advisable to add brandy to the wine, to preserve it, at the rate of a gallon of spirit to twenty gallons of wine; and if the wine is deficient in flavour, sugar-candy may be added at the same time, in the proportion of five pounds to twenty gallons. For the process of bottling, dry weather should be chosen. If the liquor should prove to be not sufficiently fine, draw a quart of it off, and dissolve in it, isinglass, in the proportion of half an ounce to twenty gallons of wine; pour this solution in at the bung-hole, and stir it thoroughly with the contents of the cask. In about three weeks after this, the liquor will be sufficiently clear for bottling. In drawing off, care must be taken to tap the cask above the lees. When bottled, the wine should be stored in a cool cellar, and the bottles laid in saw-dust on their sides:

on no account must they be set upright. The fruits usually selected for making British wines are gooseberries, currants, sloes, damsons, elderberries, grapes, oranges, lemons, and raisins. The gooseberries and currants, when used in their green state, may be made to form light brisk wines, falling little short of champagne. Ripe gooseberries will make sweet or dry wines. Ripe currants, if properly managed, make a wine superior to gooseberries. These fruits are considerably improved by boiling previous to fermentation; this is particularly the case with black currants, which, when thus managed, produce a wine closely resembling some of the best of the sweet Cape wines. The strawberry and raspberry may be used to flavour other wines; but, alone they are hardly agreeable. Blackberries and mulberries may be used with similar advantage. The juice of the sloe and the damson is acid and astringent; hence, they are qualified for making dry wines. By a due admixture of currants and elderberries, with sloes or damsons, wine, resembling the inferior kind of port, may be produced. The elderberry makes an excellent red wine, which may be further improved by the addition of sloes. Grapes of British growth make excellent wines, and, from the unripe sort, mixed with sugar, a wine may be made closely resembling champagne. The grapes may be used in any condition, however unripe; when even but half-grown, and perfectly hard, they succeed perfectly. A knowledge of this fact will prove very useful, as, in England, grapes frequently fail to ripen, especially in inclement seasons. Raisins, oranges, and lemons, are fruits less in use than any of the preceding, as they contain an excess of acid. The following remarks, although occasionally opposed to generally received notions, emanate, nevertheless, from a reputable authority, and a wine-maker of considerable experience. The great radical defect in the manufacture of domestic wines, is using too small a portion of fruit compared with the sugar employed. It is this circumstance which renders the fermenting process incomplete, and imparts that sweet and cloying taste to most British wines, which renders them intolerable to many persons, unless brandy be added. The fermentative process being rendered tardy and incomplete, by the improper adjustment of the sugar to the fruit, is frequently incited by yeast, than which nothing can be more injurious. Yeast is apt to spoil wine, by imparting to it a certain unpleasant flavour which cannot be overcome. The only ferment to be employed in wine-making is that furnished by nature; or, when this is defective, as is sometimes the case in our domestic fruits, the ferment of the grape may be supplied artificially, by introducing a portion of crude tartar, in the proportion of from two to four pounds of tartar to a hundred pints of liquor, the sweetest kind requiring the larger proportion. The same authority declares that the addition of brandy or any spirit to wine is not only unnecessary but even injurious, unless it be kept for a certain number of years, or a

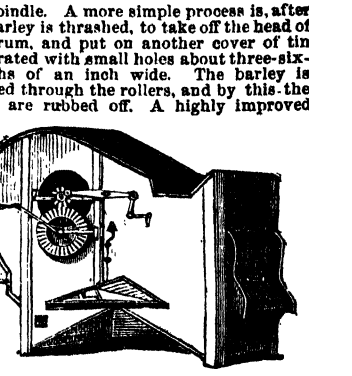
in very small quantity. Wine made t
true chemical principles will keep any le
of time without containing any other
hol than the product of the fruit, and su
There are numerous other theories and
tems respecting the art of wine-making
the foregoing hints are deemed sufficie
worthy of a trial. For the various
see BLACKBERRY, CURRANT, ELDE
GOOSEBERRY, LEMON, ORANGE, P
RAISIN, ETC.

WINES, HOME MADE, TO IMPI
Poor wine may be enriched by being
off, and afterwards returned into the
and then putting into the wine, ab
pound of raisins bruised, and a qua
brandy. An ounce of powdered roche
mixed in four gallons of the win
returned to the cask, will make th
fine and brisk in ten days. Pricke
may be restored by being racked o
fresh cask, which has contained som
same kind of wine. The cask is
matched or sulphured; and to eve
gallons, put two ounces of oyst
powder, and half an ounce of b
then stir it, and let it stand for a f
to fine; after which, rack it off into
cask also matched. A quart of
added to every ten gallons, will
improve the wine. Acidity may be
as follows:—Burn dry walnuts over a
coal fire, and when they are thor
lighted, throw them into the wine, q
up the cask; in forty-eight hours
will have departed. Mustines
agreeable flavour may be remov
medlars, or bruised mustard-seed,
bag and suspended from the bung-h
remedy ropiness in bottled wines, sh
for twenty minutes, uncork it, and p
the pith or scum, when the residue
wine will be drinkable.

WINES, NATURE AND TREATM
—Young wine is bright and red
owing to the presence of phospho
other acids. As these acids become su
the colour is subdued also, until a
raw brightness, indicative of immat
mellowed and ripened into the rich
hue—that mixture of glowing red an
brown, with the golden light
through, which every one takes as h
guide in the choice of port and re
The bouquet of wines depends u
proportion which they contain of
ether. It does not exist in the ju
grape, but is produced during ferme
and increases in quantity by keeping
odour of this substance is very po
and is one of the general character
all grape wines. The crust of wine
explained: Tartaric acid exists in t
of the grape in combination with
forming cream of tartar. When t
mented juice is left at rest, this cr
tartar gradually separates from the
and deposits itself as a crust, or t
the sides of the casks and bottles.
by long keeping, good wines becon
acid, and every year added to the
increases in proportion their mar

lue. A damp cellar aids the maturation wines. A factitious mode of bringing ward bottled port wine, is occasionally to ow over it cold water; but, after the ne has become ripe, it must be drunk edily, else it will soon become unfit for table. If newly-bottled wine be exposed the sun, it will begin shortly to deposit improve in flavour; and even the rawest of this kind, by placing the bottle in and boiling it, will cause it to assume ality it would have had after many keeping. The choicest wines are arily iced; whereas (with the exception ine which gains strength by cold), mon wines only should be iced; and n they would be better if merely cooled h water, which imparts sufficient coolness wine even at the hottest temperature of ner. But, it is not only the avoidance g choice wines that attention must be to; each separate kind requires a nt degree of cold and warmth. Thus, when just brought out of the cellar, not that soft and delicate flavour which this wine its peculiar value. Before ng it, the wine should be placed where y imbibe a degree of warmth. In r it should be placed before the fire. undy should be drunk fresh from the . A decanter of wine may be readily d by folding round it a wet cloth and ing it in a current of air.—See CELLAR, RET, FINING, PORT, SHERRY, ETC.

WINNOWING. — A process performed aid of wind, by which the chaff of eparated from the grain. Winnow- ines or fanners, as they are called, etimes attached to thrashing-mills, rately. Some farmers winnow their by hand-fanners, which are thought be steadier in the motion than when en by machinery, and consequently the is more thoroughly cleansed. After ing, the grain is regularly dressed in an corn room by means of fanners, s, and sieves; and this final dressing gulated according to the state in which grain comes from the thrashing-mill. he process of winnowing, chaff, bits of , the seeds of weeds, and other refuse, parated from the grain; and it is a precaution to boil the latter before g them on the dung-hill, which will ally destroy their vegetative powers. fferent qualities of grain are also ed from each other, by which it is d more valuable than when the good d are mixed together. The thorough ing and dressing of grain, are of great rtance to the farmer, and he will find it d to his profit in the end to have this tually done. Barley undergoes a s called hummelling, by which the are broken off from the grain. The ine is composed of a vertical spindle sed in a cylinder, and furnished with , which act upon the grain. It is times attached to the thrashing-mill ometimes driven by a separate power. grain is put at the top of the cylinder, as it passes through, the awns are broken by being struck by the arms attached to the spindle. A more simple process is, after the barley is thrashed, to take off the head of the drum, and put on another cover of tin perforated with small holes about three-sixteenths of an inch wide. The barley is pressed through the rollers, and by this the awns are rubbed off. A highly improved



form of a winnowing-machine is represented in the annexed engraving.

WINTER CRESS.—This is used as a substitute for water-cress, and to mix into salads; it should be sown in spring and autumn, the first on a shaded piece of ground and the latter in a warm border, and being afterwards thinned out to a distance of six inches one from another, will afford a gathering day for a long period: in hot weather it begins to run to seed, but if the flower-stems are snipped off as soon as they are discovered the plants will go on producing leaves, which are the parts desired to be eaten.

WINTER DRINKS.—The following list of recipes will be found to afford several warm and comforting drinks for the winter season:—

Aleberry.—Mix two large spoonfuls of fine oatmeal in a sufficient quantity of sweet small beer, two hours previous to using it; strain, well boil, and sweeten according to taste. Pour it into a warm jug, add wine, lemon-juice and nutmeg to taste, and serve hot with thin slips of toast or with rusks.

Ale Mulled.—Boil a pint of good sound ale with a little grated nutmeg and sugar. Beat up three eggs, and mix them with a little cold ale; then add the hot ale to it gradually, and pour the liquor to and fro from one vessel to another, several times, to prevent it curdling. Warm and stir till it thickens, then add a tablespoonful of brandy and serve hot with toast.

Crambambull.—Boil two bottles of light porter or ale in a pan. Then put into the liquor half a pint of rum, and about three-quarters of a pound of loaf sugar. When this has boiled for a few minutes, take the whole from the fire, and put into the mixture the whites and yolks of seven eggs, previously well whisked; stir the whole for a minute or two, and pour it into a punch bowl; serve out in tumblers.

Caudle.—This is variously made. 1. Make half a pint of fine gruel with the patent groats, add a piece of butter the size of a large nutmeg, a tablespoonful of brandy and white wine, and a little grated nutmeg and

lemon-peel: serve hot. 2. Put three quarts of water into a saucepan over the fire, and let it boil: mix smoothly as much oatmeal as will thicken the whole with a pint of cold water, and when the water boils, pour on the thickening, and add about twenty peppercorns finely powdered. Boil till rather thick, then add sugar to taste, half a pint of good ale, and a wineglassful of gin, all warmed up together. Serve hot.

Caudle Flummery.—Put half a pint of fine oatmeal, into a pint of spring-water, and let it stand all night. In the morning, stir it well, and strain through a coarse sieve into a saucepan, then add two blades of mace and some grated nutmeg; set it on the fire; keep it stirring, and let it boil for a few minutes longer; add half a pint of white wine, a tablespoonful of orange-flower water, the juice of an orange and of a lemon, sugar to taste, and a piece of butter about the size of a walnut; warm the whole together, thicken with the yolk of a well-beaten egg, and drink hot.

Caudle Oatmeal.—Take a quart of ale, a pint of stale beer, and a quart of water; mix all together, and add a handful of fine oatmeal, six cloves, two blades of mace, some nutmeg, and eight allspice berries bruised. Set the mixture over a slow fire, and let it boil for half an hour, stirring it well all the time: then strain through a coarse sieve, add half a pound of sugar, and a piece of lemon-peel. Pour the whole into a pan, cover close, and warm before serving.

Caudle Tea.—Make a pint of strong green tea, pour it into a saucepan, and set over a slow fire. Beat the yolks of two eggs well, and mix with half a pint of white wine, grated nutmeg and sugar to taste; pour this into the saucepan, stir the whole well till hot, then serve.

Egg Flip.—To make a quart of flip, put the ale on the fire to warm, and beat up three eggs with a quarter of a pound of moist sugar; remove the froth of the ale while on the fire, until it begins to boil, mix the froth with the sugar and eggs, add grated nutmeg or ginger to taste, and a gill of rum. When the ale boils, stir it gradually into the eggs and rum, until quite smooth, then serve.

Egg Wine.—Beat up an egg and mix it with a tablespoonful of spring water. Put into a small saucepan, a wineglassful of white wine, half a tumblerful of spring water, with sugar and nutmeg to taste, set it over a slow fire, and when it boils, add it gradually to the egg, stirring well; then return the whole to the saucepan, and place it over the fire again, stir it for a minute, remove it and serve it with toast.

Elder Wine Mulled.—Put a sufficient quantity of elder wine into a saucepan, warm it over the fire, adding if requisite, sugar, spice and water. Serve hot with sippets of toasted bread or rusks.

Jingle.—Roast three apples, grate some nutmeg over them, add sugar to taste and place the whole in a quart jug, with some slices of toasted plum cake; make some ale hot, fill up the jug with this and then serve.

Milk Mulled.—Boil a quart of new milk for five minutes; add two ounces of sugar and a piece of cinnamon; then pour it into a basin and let it remain till cool, beat the yolks of five eggs thoroughly, adding a little cream; pour the milk gradually upon the eggs, stirring constantly; return the mixture into the pan, and stir it over the fire till it thickens, but do not allow it to boil; strain it through a fine sieve into a jug; pour it several times from one jug to another, and it will then be ready.

Oxford Mixture.—Take half a tumbler of tea made as usual with sugar and milk, a slice of lemon, a wineglassful of new milk, and the same of rum or brandy; beat up a new-laid egg, and add it to the other ingredients while warm.

Poor Man's Drink.—Put two quarts of water into a saucepan with four ounces of pearl barley, two ounces of figs split, two ounces of raisins stoned, and an ounce of root-liquorice sliced: boil all together till only a quart remains; then strain and serve warm.

Posset.—This may be composed in various methods, as follows:—Cut a pound of bread into small pieces, boil it in three quarts of new milk, and when it has been about two minutes, take it off the fire; add a quart of lemonade, three tablespoonfuls of ginger syrup, and sugar to taste, in a large bowl or tureen; then put in carefully with a teacup, the bread and milk; let it remain undisturbed for two or three minutes; then put down the bread, very gently with a spoon, and sift powdered cinnamon on the top. 2. Boil a pint of new milk with a slice of toasted bread, sweeten a bottle of mild ale, and pour it into a basin with nutmeg or other spice, add the boiling milk, and when it froths up, serve. 3. Put a quart of ale and milk into a saucepan, and place it over a slow clear fire. When it boils, crumble four savoy biscuits into it; give it one boil, remove it from the fire, add grated nutmeg and sugar to taste, stir in half a pint of canary wine and serve. 4. Boil a pint of milk, add sufficient treacle to curdle it; allow the curd to settle, strain off the liquid, and drink it as hot as possible. 5. Mix half a pint of ale with a pint of cream; then add the yolks of four eggs, and the whites of two well beaten, sweeten to taste and flavour with nutmeg. Pour into a saucepan set over the fire, and stir well until thick, and before it boils, remove it, pour into a basin and serve hot. 6. Break a stick of cinnamon, and a quarter of a nutmeg, with a quart of new milk, and when it boils, remove the spice. Beat the yolks of ten eggs well, and mix gradually with the milk as it thickens; then beat the whites of the eggs to a snow with sugar and canary wine into a snow. Put a pint of canary into a saucepan, sweeten to taste, set it over a slow fire, and pour in the milk and snow into the saucepan, stirring all the time that it is over the fire, cover close, and set aside for a short time before drinking.

Punch.—Take two large fresh lemons and rough skins and full of juice. Rub some lumps of white sugar over the lemons till they acquire the oil from the rind, then put them into a bowl with as much more sugar as necessary to sweeten the liquor to taste, squeeze the lemon-juice on the sugar, and

bruise the sugar in the juice, add a quart of boiling water and mix well; then strain through a fine sieve, and add a quart of rum, or a pint of rum and a pint of brandy, or a pint and a half of rum and half a pint of porter; then add three quarts more of water and mix the whole well.

Toddy Buttered.—Mix a glass of rum-grog of considerable strength, sweeten it with honey, flavour with nutmeg and lemon-juice, and stir into it a piece of fresh butter about the size of a walnut.

Warm Drink.—Boil a quart of milk, and a quart of water, with the top crust of a penny loaf, a blade of mace, and sufficient sugar to sweeten, let the mixture stand for a quarter of an hour, then pour it off and drink it warm.

WINTER FLOWERS AND FRUITS, TO PROCURE.—The shrubs or trees should be taken up in the spring, when they are about to bud, and some of their soil preserved about the roots; they must then be placed upright in a cellar till the end of September; when, with some fresh earth, they are to be put into proper tubs or vessels, and placed in a stove or hot-house, where they should be moistened every morning with a solution of half an ounce of sal-ammoniac in a pint of rain-water. By this process, in the month of February, fruits and flowers will appear; if flowers are sown in pots at the end of September, and watered in a similar way, they will blow at Christmas time.

WINTER HOTCH-POT.—Wash and pick a pound of dried green peas, steep them for twelve hours in fresh soft water, put two carrots and two turnips sliced, and one carrot and one turnip whole, one savoy cabbage, four onions, and the peas into a pan with a gallon of water; let the whole boil for two hours, then take out the whole carrot and turnip, bruise them well, and return them with the remainder of the sliced vegetables into the pan, boil the whole gently for an hour, and when nearly ready add the white part of a root of celery cut into very small shreds.

WINTER PEA-SOUP.—Having saved the liquor in which a piece of meat has been boiled, take off the fat, and put it in a saucepan with as much water as may be required to take off the saltness and make up the quantity of soup, which for two days' consumption of six persons should be about a gallon; then add a pound of shin of beef, a pound of pork rinds, and carrots, turnips, onions, celery, and two parsnips, all browned in the usual manner: a little unchopped parsley, and two dozen black peppercorns. When the pot boils remove the scum, and put in two quarts of split peas which have been carefully picked and rubbed. Boil gently for three hours; skim off the fat, and strain the liquor through a fine sieve, beating the vegetables through with a wooden spoon. The pork rinds must be removed, but the pieces of meat should be put back into the pot with the liquor and the pulp; boil up for a minute or two, and serve with some shred mint, and toasted bread, cut in small pieces. If the saved liquor should be from fresh meat, three pounds of beef should be procured, and a little salt added. For this dish, young peas should be chosen; they may be known by the transparent brightness of their colour.

WINTER SALAD.—Wash very clean one or two heads of endive, some heads of celery, some mustard and cress; cut them all small, add a little shredded red cabbage, some slices of boiled beet-root and onion, if the flavour is not disliked; mix them together with salad sauce. In spring, add radishes, and also garnish the dish with them.

WINTER SOUP.—Take carrots, turnips, and a head of celery cut into dice, with a dozen button onions; half boil them in salt and water, with a little sugar in it; then throw them into the broth, and when tender, serve up the soup; or, use rice, dried peas and lentils, and pulp them into the soup to thicken it. With many of these soups, small suet dumplings, very lightly made, and not larger than an egg, are boiled either in broth or water, and put into the tureen just before serving, and are, by most persons, thought an improvement, but are more usually put into plain gravy soup than any other, and should be made light enough to swim in it.

WINWICK PUDDING.—Grate four large apples; add the rind and the juice of a lemon, two tablespoonfuls of bread crumbs; three ounces of butter, melted, and sugar to taste; immediately before putting it in the oven, add three eggs, well beaten, then bake in a puff paste.

☞ Apples, 4 large; lemon, 1; bread crumbs, 2 tablespoonfuls; butter, 3 ozs.; eggs, 3.

WIRE WORM.—This destructive insect is produced by the larva of a beetle; it commits considerable ravages on vegetation, and is a great enemy to the farmer. The best means of destroying this pest is, to apply to the land sulphate of magnesia in the proportion of a hundredweight and a half to the acre, to be used as a top-dressing in spring. A mixture of salt and lime is also an economical dressing for the land, and will greatly assist in the work of destruction.

WITNESSES, REMUNERATION, RESPONSIBILITY AND DEPORTMENT OF.—The remuneration of witnesses is usually regulated according to the trade, profession, or social position of the witness; and if he has come any distance, certain travelling expenses are allowed. It is customary, in actions at law, to serve a witness with what is called a subpœna, compelling his attendance under a penalty, and at the time the subpœna is served, the witness is entitled to receive one guinea, and he may even refuse to tender his evidence until this payment is made. A witness having been bound over to give evidence is compelled to do so, on pain of forfeiting his recognizances and rendering himself otherwise amenable to punishment for contempt of court. A witness is permitted to be sworn according to any form most binding on his conscience, and is not obliged to take the oath usually

presented. Thus, the Quaker may make affirmation, the Jew is permitted to kiss the Old Testament with his hat on, and the native of China to break a saucer, each form being considered equally binding. As most persons are, at some time of their lives, called upon to give evidence in a court of law, a few hints as to the manner in which a witness should conduct himself, will be found of service, as follows:—*Be truthful*; one deviation from the truth will lead to many others, until the witness becomes involved in a perfect labyrinth of misrepresentation, in the midst of which he is denounced by the counsel, reprimanded by the judge, and held up to scorn in the public journals. A witness who wilfully misrepresents facts, also renders himself liable to an indictment for perjury, the punishment for which is a most severe one. As a check to false swearing, it should be borne in mind that persons who make the receiving of evidence the business of their lives, are very nice discriminators of the true and the false, so much so, that in nearly every instance an experienced judge or counsel is able to tell by the manner of a witness whether he is speaking truly or falsely. *Give laconic, direct, and straightforward answers.* In tendering evidence, this is a most important feature. It will tend greatly to the advantage of the party for whom the witness appears, and will render the ordeal of the witness-box more bearable. State only what you know to be the facts, and do this in as few words as possible. When a question is put that requires either an affirmative or a negative answer, say "yes" or "no," and nothing more. Forbear to relate what you heard, or what was reported, or what you thought about the matter; these have nothing to do with facts, and facts are what are wanted. *Be calm and collected.* This is a direction which is perhaps more easily given than attended to. To a person of nervous or excitable temperament, the appearing in a witness-box with every eye suddenly turned towards him, is a most trying circumstance, and is apt to cause him to lose all presence of mind. Nevertheless, a witness may exercise considerable control over himself by attending to the following hints. Turn your face to the jury, and look neither to the right nor to the left; even when the counsel questions you, you are to return the answer, not to him, but to the jury. By this means, the eye will be kept from wandering, the thoughts will be concentrated, and the witness will escape being experimented upon by those extraordinary grimaces, gesticulations, and other forensic arts which counsel systematically employ by way of intimidation or cajolery. *Preserve your temper.* This is a very necessary caution to a witness, for the probabilities are that he will meet with much to disturb his equanimity and offend his self-respect, especially if he have important evidence to tender. But a witness ought to know that counsel are paid to act a part, and that they have also a certain licence; also, that inasmuch as they have not in all probability ever seen the witness before nor are likely to see him again, they cannot bear any malice or ill-will towards their interlocutor; their inuendoes and personal allusions being based upon this theory, that if they can establish any circumstance derogatory to the character of the witness, so much the better for their client, and if they fail in doing so, so much the better for the witness himself. Now, if the occupant of the witness-box suffers himself to be angered by the insinuations of the counsel, he does a very foolish thing, for in these cases the counsel occupies a superior position, and has the ear of the court, while the witness only succeeds in making himself appear weak-minded and ridiculous. *Be serious.* A person tendering evidence in a court of law is performing a grave duty, and he ought to divest himself of anything approaching levity or flippancy. Above all, let a witness abandon all attempts at witticisms or repartee, for counsel are mostly masters of those arts, and all attempts at supplanting them end in discomfiture.

WIVES, HINTS FOR.—The wife's proper domain is the household, and it is incumbent upon her, both for her own convenience, and for the comfort of her husband and other members of the family, to render home as attractive and agreeable as possible. In the first place, the rooms are to be neatly and orderly arranged, and the furniture so disposed that it may be rendered available for use rather than mere show. Again, there are many etceteras, trivial in themselves but important as a whole, which go far to render home comfortable. Among these may be mentioned a bright fire, a clean swept hearth, a well-trimmed lamp; if these be wanting, a husband will in the course of time become indifferent to his own fireside, and find out some other place where he can obtain the missing comforts. The better feelings of a husband may also be appealed to, through the medium of creature comforts; there are many nice dishes which a wife can prepare, and many an agreeable surprise which very limited knowledge in the art of cookery may enable the practitioner to contrive. These afford much gratification, not only in a mere animal point of view, but from the fact which makes itself known to the dullest apprehension, that to produce these effects, there must have been an exercise of consideration, thought, and kindly feeling. Another point for the wife to observe is the exercise of economy; comfort does not precisely depend upon the amount of money expended; for a shrewd and thoughtful woman will be able to show considerably more value for her money than another who is thoughtless and extravagant. The exercise of economy is not to be governed by present necessities only, but with a view to future emergencies. The most prosperous may at some time or other meet with a reverse, and wasteful expenditure cannot be defended under any circumstances. The wife, like all other persons in every situation of life, will possibly have her trials and troubles, and, to meet these, she must call philosophy to her aid. In the first place, she must not draw too highly

coloured a picture of her possible home, for if so, she is sure to be disappointed; much of the apparent unhappiness of wives, is owing to a view having been taken of human life, which is more poetical than practical. Under all circumstances, a wife must school herself to look at the bright side of things, and make the best of them—not vainly repining at wants and defects, but setting to work to contrive the means of remedying and repairing them. A due appreciation of the value of time is also well worthy of consideration; each day should have its work planned out, and each hour the performance of certain duties allotted to it. By this means, matters will progress regularly and smoothly, and all that bustle, disorder, and confusion, so frequently witnessed, will be avoided. To carry out this object more surely, a system of early rising must be adopted, and strictly adhered to; every one knows, how much more work can be done in the early part of the day than in the afternoon, and if this precious portion of time is frittered away, it can never be regained; and the consequence is that there is an incessant race all day long, in which work is fruitlessly endeavouring to overtake time. In the governing of her home, the wife should keep her dominion to herself, suffering no one to dictate as to what should or should not be done, and allowing no one to share her rule with her. The results of her individual management may not be perfection, but at any rate they will afford that feeling of satisfaction which attends all independent and well-directed efforts. On the other hand, she should not be constantly vexing her mind with the superiority, real or imaginary, of her neighbours. If a resident on the left hand has a more tastefully arranged and beautifully-stocked garden than appertains to her own house, she need not on that account be pained, and lose all pleasure in her modest plot of ground; or if the windows of her right-hand neighbour exhibit certain articles which she does not possess, there is no occasion for her to pine with envy, and neglect her own home in consequence. It is to this feeling that may be attributed much of the discontent, neglect, and indifference which prevails in domestic management. All that a wife has to do to secure substantial comfort and lasting happiness, is to turn her thoughts homeward, without suffering them to be distracted by extraneous matters, and determine within herself to make her little domain as pleasant and cheerful as the means and appliances at her command will permit. If a wife does this properly she will find her time fully occupied and something always to do, without mentioning the duties of maternity, the cultivation of accomplishments, and indulgence in amusements.

With regard to the manner in which a wife should consult the interests of her husband, and conduct herself generally towards him, much may be said. In the first place, she must not torment him with the petty cares of home, and vex his mind with trivial grievances which he cannot remedy, if she cannot. Neither should she harass him by preferring inconsiderate claims, and trying to persuade him either to expend money or sacrifice time, for the mere gratification of a whim. It must be borne in mind that a man has his especial cares connected with business pursuits, and instead of having this aggravated by household concerns, he looks to their being assuaged by finding in home a refuge and a place of quiet. A most important duty of every wife is to so order her domestic arrangements that the husband may calculate upon them. For instance, the hours of meals should never vary, if possible, one minute; dinner-time is in many cases, an interval snatched from weighty employment and important labours, and if the interval is unnecessarily delayed, business arrangements are upset, the temper is soured, and the food is neither grateful to the palate nor nourishing to the body. This uncertainty is not only disappointing and vexatious to one party, but to both; thus, the husband comes home to-day and finds his dinner behind time: to-morrow, in order to make allowance for his wife's unpunctuality, he delays the time of coming home, but it so happens that the dinner is on this day ready to the minute: it is now the wife's turn to be vexed. The next day, the husband, wishing to repair the former mischief, makes his appearance to the second, but the wife, taking the previous day as a precedent, is again behind; thus the couple go on playing at cross purposes and keeping alive a constant feeling of bitterness, from the want of punctuality. A wife should study her husband's tastes and distastes, and to a certain extent even gratify his whims; by pursuing this line of conduct, she will more surely retain the affection of her husband, and be enabled to exercise influence over him, than by the practice of antagonism. A wife should be good-tempered and cheerful; one angry look, one harsh word may embitter hours, or be the cause of a week's estrangement. Besides, this rule should be observed as much for her own sake as on her husband's account, a good temper sitting so much easier than a bad one. On the other hand, a wife ought to bear with patience an occasionally clouded brow or a hasty word on the part of her husband; these evidences are possibly owing to the reminiscences of some unpleasant commercial affairs, and if met in a conciliatory spirit, they will soon disappear, and be replaced by affectionate smiles and kind words. There are numerous other duties appertaining to a wife, but they are, for the most part, so well defined and obvious, as to need only the exercise of common sense and good feeling to ensure their execution.

WOAD.—This plant is cultivated for the sake of its leaves, which, after being properly prepared, are used as an ingredient in dyeing blue, and as a basis for black dye. Three or four crops are obtained in a year. After the leaves are gathered, they are ground in a mill to a sort of paste, which is then pressed into heaps. A blackish crust forms on the outside. After thus lying for about a

fortnight, the heaps are opened, the crust rubbed and mixed with the interior por-

tions, and the whole formed into oval balls, which are pressed close and solid in wooden moulds. When about to be used in dyeing, the balls are broken into fragments, and allowed to ferment, by which a dense fœtid fume is given off. By steeping the leaves in water, an infusion is obtained, which will impart a green dye; and this green changes to blue, on exposure to the air.

WOMEN'S UNINFLAMMABLE DRESSES.—See *The Practical Housewife.*

WOOD, AS FUEL.—Although wood is not commonly employed in this country as a domestic fuel, it will in many cases be found a most useful auxiliary to coal, and afford an excellent and cheerful fire at an economical rate. The best form in which to burn wood for this purpose, is that known as the log or chump; and one of these, placed on the fire in the after part of the day, when the grate is perfectly heated, will last for many hours. It should be observed that wood fires are more dangerous than coal, as the embers are apt to shoot out into the room, and, therefore, unless carefully watched, or protected by a screen, many accidents are likely to occur.

WOOD, CEMENTS FOR.—A cement for *joining wood to ivory or bone* is composed as follows:—Dissolve fine Russian isinglass in strong acetic acid until the consistence of a strong firm glue is obtained; this is applied to the articles which require joining by means of a brush. This cement will be found particularly serviceable in cases where the ivory keys of pianofortes and other inlaid pieces become detached. A cement for *uniting wood to metal* is compounded in the following manner:—Take two parts by weight of Portland cement, and the same quantity of clean silver sand, both sifted very finely, and intimately mixed with glass dust. Any quantity of this may be made at one time, and put by for use in air-tight vessels. When about to be applied it should be incorporated with white of egg, diluted with two-thirds its bulk of water, with every fluid ounce of which there had been previously mixed from twelve to fourteen drops of vinegar. To unite the materials most securely, the surface should be first moistened with the egg mixture, afterwards applying the cement, kneaded into a thick paste with the white of egg, also: finally, applying a portion of the paste made of a much thinner consistence. The parts to be joined must be very neatly adjusted, and where plain surfaces exist, the roughening them will facilitate the junction. The cement must be liberally applied, every crevice being filled up, and the superfluity squeezed out by strong pressure, continued for forty-eight hours.

WOOD, TO PAINT.—In performing this process, it is expected that the knots in the wood, especially deal, should be treated in such a manner as to prevent their giving out turpentine, which they will otherwise do, to the destruction of the paint. For this purpose, a composition is made with red and white lead, ground fine with water on a stone, and mixed with strong double glue size, in a warm state, and, in this condition, to be brushed over the knots. When turpentine exists to any extent, a second coat of white lead, ground in oil, with the addition of a fourth part of red lead, or litharge, will be necessary. This must be suffered to become quite dry, and then should be rubbed with pumice-stone. The next process is priming. For this purpose, a paint is composed, chiefly of white lead, mixed with a very small quantity of red lead, or linseed oil; the preparation to be laid on lightly, so that a pound ought to be made to cover eighteen or twenty yards of woodwork. A second coat is usually applied, still thinner than the first coat, and, in this condition, the work is said to be primed and coated, ready for painting. When this is dry, all holes and indentations, caused by the nails, must be filled with putty, and the whole surface brought, as nearly as possible, to the required condition of smoothness. After this, a coat of paint of the intended colour is laid on, and, a day or two subsequently, the finishing coat. The various colours are mixed with oil and turpentine, and a dryer, or with turpentine and a dryer without oil, if it be desired that the first coat shall appear dead, or flatted, as it is called. *For graining*, a groundwork of oil colour is first made by laying on two coats of a colour, much lighter than the wood which is to be imitated; and then with various tools, and by the aid of tricks, the veins, &c., in the wood, are laid on either with turpentine, coloured to match them, or with beer, and, sometimes, water. A varnish is finally laid upon this, and the process is complete.

WOOD, TO PRESERVE FROM FIRE.—Immerse in a solution composed of equal parts of alum and isinglass. Although wood is thus rendered incombustible, it still retains the power of transmitting heat; so that liquids may be boiled in a wooden vessel on a common fire, if this varnish be previously applied to it.

WOOD, TO PROTECT FROM THE INFLUENCES OF AIR OR WATER.—A composition for the preservation of wood under these circumstances is composed as follows:—Take ten parts of sulphuret of copper, two parts of sulphuret of antimony, and from five to thirty parts of the best drying varnish. These substances must be ground together, forming a kind of paint, which is then to be applied to the wood. Another means of protecting wood, peculiarly liable to the influences of damp, is, to heat twelve pounds of resin in a mortar, with three pounds of sulphur and twelve pints of sperm oil. This mixture is to be melted over the fire, continually stirring meanwhile. Ochre, reduced to a very fine powder by grinding it down with oil, must then be combined in the proportion necessary to impart either a darker or a lighter colour to the material. The first coat must be put on very lightly, having been previously heated; the second coat may be laid on two or three days afterwards; and a third after a similar interval.

WOOD, TO REMOVE STAINS FROM.—Stains of nearly every description may be removed from wood by the following method:—Mix a quarter of an ounce of oil of vitriol with two ounces of water, and rub the stained surface with a cork dipped in this liquid until the stains disappear; then wash the part with cold water. The colour of the wood will fade for some time after this application; but it may be restored by rubbing it with ordinary furniture paste.

WOOD, TO STAIN.—Any ordinary kind of wood may be stained of certain colours, or made to imitate other woods, by the following process:—*To stain wood of a black colour.* 1. Drop a little sulphuric acid into a small quantity of water, brush the wood over with this and hold it to the fire, a fine black colour will be produced, and it will receive a good polish. 2. Take half a gallon of vinegar, an ounce of bruised nutgalls, half a pound each of logwood chips and copperas, boil well, add half an ounce of the tincture of sesqui-chloride of iron, and brush it on the wood in a warm state. 3. Take half a gallon of vinegar, half a pound of dry lamp-black, and three pounds of iron-rust sifted. Mix, and let it stand for a week. Lay three coats of this on hot, and when dry with linseed oil, and a fine deep black will be produced. 4. Add to the above stain an ounce of nutgalls, half a pound of logwood chips, and a quarter of a pound of copperas; lay on three coats, oil well, and a black stain will result impervious to any kind of weather. 5. Take a pound of logwood chips, a quarter of a pound of Brazil wood, and boil for an hour and a half in a gallon of water. Brush the wood several times with this decoction while hot. Make a decoction of nutgalls by simmering gently for three or four days a quarter of a pound of the galls in two quarts of water. Brush the wood several times with this decoction while hot; give the wood three coats of this, and while wet lay on a solution of sulphate of iron, and when dry, oil or varnish. 6. Give three coats with a solution of copper filings in aqua-fortis, and repeatedly brush over the logwood decoction, until the greenness of the copper is destroyed. 7. Boil half a pound of logwood chips in two quarts of water, add an ounce of pearlash, and apply it hot with a brush. Then take two quarts of the logwood decoction, half an ounce of verdigris, and the same of copperas; strain, and throw in half a pound of iron-rust. Brush the work well with this, and oil it. *Blue colour.* 1. Dissolve copper filings in aqua-fortis, brush the wood with it, and then go over the work with a hot solution of pearlash (two ounces to a pint of water), till it assumes a perfectly blue colour. 2. Boil a pound of indigo, two pounds of wood, and three ounces of alum in a gallon of water; brush well over until thoroughly stained. *Imitation of Botany Bay wood.* Boil half a pound of the unripe berries of the *rhamnus infectorius*, in two quarts of water, till of a deep yellow, and while boiling hot, give two or three coats to the work. If a deeper colour be desired, give a coat of logwood decoction over the yellow. When nearly dry, form the grain with *No.* 7 *black stain*, used hot, and when perfectly dry, varnish. *Green colour.* Dissolve verdigris in vinegar, and brush over with the hot solution until of a proper colour. *Mahogany colour.* 1. Boil half a pound of madder, and two ounces of logwood chips in a gallon of water, and brush well over while hot. When dry, go over the whole with pearlash solution, two drachms to the quart. 2. Put two ounces of dragon's-blood, bruised, into a quart of oil of turpentine; let the bottle stand in a warm place, shake frequently, and when dissolved, steep the work in the mixture. *Light red brown.* Boil half a pound of madder and a quarter of a pound of fustic in a gallon of water; brush the work when boiling hot, until properly stained. 2. The surface of the work being quite smooth, brush over with a weak solution of aqua-fortis; half an ounce to the pint, and then finish with the following:—Put four ounces and a half of dragon's-blood, and an ounce of soda, both well bruised, to three pints of spirit of wine; let it stand in a warm place, shake it frequently, strain, and lay on with a soft brush, repeating until of a proper colour; polish with linseed oil or varnish. *Purple.* Brush the work several times with the logwood decoction used for *No.* 6 *black*, and when dry, give a coat of pearlash solution, one drachm to the quart, taking care to lay it on evenly. *Red.* 1. Boil a pound of Brazil wood, and an ounce of pearlash in a gallon of water, and while hot, brush over the work until of a proper colour. Dissolve two ounces of alum in a quart of water, and brush the solution over the work before it dries. 2. Take a gallon of the above stain, add two more ounces of pearlash, hot, and brush often with the alum solution. 3. Use a cold infusion of archil, and brush over with the pearlash solution used for *No.* 1, *mahogany colour*. *Imitation of rosewood.* 1. Boil half a pound of logwood in three pints of water till it is of a very dark red, add half an ounce of salt of tartar; stain the work with the liquor while

boiling hot, giving three coats; then with a painter's graining brush, form streaks with *No.* 8, *black stain;* let it dry, and varnish. 2. Brush over with the logwood decoction used for *No.* 6 *black*, three or four times; put half a pound of iron filings into two quarts of vinegar; then with a graining brush or cane, bruised at the end, apply the iron-filing solution in the form required, and polish with bee's-wax and turpentine when dry. *Yellow colour.* 1. Brush over with the tincture of turmeric. 2. Warm the work, and brush over with weak aqua-fortis, then hold to the fire. Varnish or oil as usual.

WOOD-ASHES.—These consist chiefly of potass united to carbonic acid; and as this is found in almost all plants, its efficacy as an ingredient of the soil is obvious. A part of the effects of wood-ashes may be owing to the slow and gradual consumption of charcoal, which seems capable, under other circumstances than those of actual combustion, of absorbing oxygen, so as to become carbonic acid.

WOODBINE.—This favourite plant is peculiarly fitted to ornament rustic porches and summer-houses. It grows well in common soil, and is easily propagated by cuttings of ripened shoots, taken off in autumn, and inserted in a shady border, or by layers made at the same season of the year. The woodbine should be pruned and trained annually, when intended to cover arbours and seats, laying the shoots along their full length until they have covered the space allotted them. All straggling branches, which cannot be properly trained, must be cut off. When this plant is trained to walls, it must have a regular pruning and training, by going over it twice or thrice in summer, laying in the most convenient shoots, some at their whole length, and others shortened as required, to preserve regularity and a due succession of flowers. In winter-pruning, the superfluous shoots left in summer should be thinned out, shortening those which are too long for the space assigned them, especially when straggling and weak.

WOODCOCK.—A bird which breeds in

many parts of Britain, and, of late years, in summer as well as in winter. The three essentials for the woodcock are solitude, shelter, and humidity; and its most favourite resorts for this purpose are the marshy woods to the north of the Baltic; and the farther north, so that the place be wooded, the better it is enjoyed by this bird, as, in those situations, the insect food is more plentiful, and the mud of the marshes is more exclusively the nest of the larvæ.

WOODCOCK POTTED.—Pluck and draw out the trail of six woodcocks, skewer their bills through their thighs, draw the legs through each other, and place the feet upon the breasts. Season the birds with mace, pepper, and salt. Put them into a deep pot, with a pound of butter, and tie a piece of stout paper over them. Bake them in a moderate oven, and, when done, lay them on a dish to drain. Then pot them, and pour all the clear liquor which the gravy yields upon them. Fill up the pots with clarified butter, and keep them in a dry place.

WOODCOCK RAGOUT.—Slit the birds down the back, but do not remove the entrails; stew them lightly with a little melted bacon-fat, season with pepper and salt, and a small quantity of mushroom ketchup. When done, add lemon-juice, and serve. Garnish with slices of toast and lemon.

WOODCOCK ROASTED.—Spit the birds without drawing them, dredge them with flour, and baste them well with butter; have in readiness a slice of toasted bread; lay this on a dish, and set it underneath the birds while roasting. When the woodcocks are done, take them up, place them on the toast, and serve on the dish, with good gravy and a garnish of lemon.

WOODCOCKS, TO CARVE.—Cut the bird right through the centre, from head to tail. Serve with it a piece of the toast upon which it comes to table.

WOODEN MODELS, TO FORM.—These are constructed roughly in deal, according to the desired design, and the various fine parts afterwards affixed with glue or brads. In forming the fine parts of the wooden model, a vast amount of unnecessary labour may be saved, and a better effect obtained, by burning much of the outline instead of carving it. By this plan, deeper tones of colouring, facility of operating, and saving of time and labour are the result. In common with other models, those constructed of wood, require the aid of lichen, moss, powdered slate, and colours to complete the effect. When water issues from the original cave, and it is desirable to copy it in the model, a piece of looking-glass should be glued on to the stand, and the edge surrounded by glue, and paper covered with sand. Sometimes it is requisite to cut away the wood of the stand, so as to let in the looking-glass; this, however, is only when the water is supposed to be much lower than the surface of the land.

WOODRUFF DRINK.—A very agreeable beverage may be composed chiefly from the fragrant little plant called woodruff. The following is the method employed:

Put into a large deep jug a pint of light white wine, or a quart of red wine, and dissolve in it sugar till sufficiently sweet. Cut a sound China orange into rather thick slices, without paring it, and add it to the wine; then throw in several bunches of the woodruff. Cover the jug closely to exclude the air, and leave it until the following day. One orange will be sufficient for three pints of wine. The woodruff should be thoroughly washed, and drained quite dry before it is thrown into the jug; and a moderate quantity only of it should be used, or the flavour of the beverage will be rather injured than improved by it. Lemon-rind may be substituted for orange. The woodruff grows wild in Kent and Surrey, and flourishes in many suburban gardens, in the neighbourhood of London.

WOOL, PROPERTIES AND USES OF.—The term wool is now applied almost exclusively to the fleece of the sheep. It is chiefly used for two purposes; one of which consists of the stuffing for mattresses, chairs, sofas, &c.; and the other for numerous textile fabrics connected with domestic economy and personal attire. The composition of wool is nearly the same as hair.

WOOL, TO DYE. *Blue colour.* Boil the wool in a decoction of logwood, and sulphate or acetate of copper. *Brown.* Steep the wool in an infusion of walnut-peelings. *Drab.* Impregnate with brown oxide of iron, and then dip in a bath of quercitron bark. If sumach be added, a dark brown colour will be produced. *Green.* First imbue with the blue, and then with the yellow dye. *Orange.* Dye first with the red dye, and then with the yellow. *Red.* Take four and a half pounds of cream of tartar, and four and a quarter pounds of alum; boil the wool gently for two hours; let it cool, and wash it the following day in pure water. Infuse twelve pounds of madder, for half an hour, with a pound of chloride of tin in lukewarm water, filter through canvas, remove the dye from the canvas, and put in the bath, which is to be heated to 160 degrees Fahrenheit; add two ounces of aluminous mordant, put the wool in, and raise to boiling heat. Remove the wool, wash, and soak for a quarter of an hour in a solution of white soap in water. *Yellow.* Cut potato tops when in flower, and express the juice; steep the wool in this for forty-eight hours.

WOOL, TO PURIFY.—Wool is apt to be infested with insects, and to contract various impurities. The process of purification consists of putting into three pints of boiling water a pound and a half of alum, and the same quantity of cream of tartar; these to be diluted in twenty-three pints of cold water. The wool is then to be immersed in the liquor, and left for four or five days, when it must be removed, washed, and dried. When this operation is completed, the wool will be perfectly clean, and no longer subject to be infested by insects.

WOOLLENS, TO CLEAN AND WASH.—In the washing of woollens, soft water must be used; and to make the necessary lather, a pound of soap must be put into a gallon of water, and boiled until quite dissolved; the articles are then to be washed in two waters, as warm as can be borne, adding, from time to time, as much of the soap lather as may be needed. Wring the woollens out each time, then throw them into a clean tub, and cover them with boiling water. Let them remain until cool enough to admit of handling, then rinse them thoroughly, and wring them dry. It should be particularly observed, that the water used for rinsing must be hard. This method is applicable to any kinds of woollens; but for large and heavy articles, such as blankets, rugs, &c., it is preferable to omit the wringing. In all cases, the articles should be spread out perfectly straight and smooth. Another method is as follows:—Grate six or eight large raw potatoes into a pan or other deep vessel, pour on two gallons of cold spring water, and let it remain undisturbed for forty-eight hours; then pour off the water clear into a capacious pan or tub, and take care that no portion of the sediment mingles with the water. Dip the articles into this clear liquid, and pass them to and fro in such a manner that they cannot become creased. Rubbing must be wholly avoided. By this process, woollen articles will remain perfectly smooth, and need no ironing, an operation which injures the colour of woollens. When thoroughly clean, hang them on a line to drip, and, when half dry, turn them, and if they require straightening, pull them out. When perfectly dry, their appearance will be improved by folding them, and placing them under heavy pressure for some hours. If the articles are greasy, but half the water should be used at first, and the remainder reserved for a second rinsing. If the colours of the articles are of a delicate nature, the potatoes used should be carefully pared previous to scraping.

WOOLLENS, TO PRESERVE. — When woollen articles are not in use, they may be preserved, first by drying them before a fire, then letting them cool, and afterwards mixing among them bitter apples, sewn in muslin bags, and placed between the folds of the articles.

WOOLLENS, TO REMOVE INK-SPOTS FROM.—First rub the spots with a composition, made of the white of an egg, and a few drops of oil of vitriol, properly incorporated; then immediately wash the part with pure water; and, lastly, smooth the fabric in the direction of the nap, with a piece of flannel, or white woollen cloth.

WORK, BEST METHOD OF DOING.—The law of order requires to be duly combined with the law of work, else we shall walk at hap-hazard, hindering our own usefulness, and irritating the feelings of others. There may be much diligence and zeal without order, but there can be only partial success. To do things in order, appears to be a thing of easy attainment, belonging to the essentially commonplace and uninteresting elements of work; hence, it is so frequently neglected, and any admonitions on the subject are generally received with weariness, if not contempt. Those, however, who have known the sadness of failure in their

work, without any apparent cause—unless it be a want of due regularity and design—will be convinced that there is a necessity for method, punctuality, earnestness, patience. *Method.* The very idea of living by rule is frightful to many, especially to those who pique themselves on possessing something of "genius," which they consider incompatible with method. Now if genius has accomplished much in the world without method, doubtless it would have accomplished much more with it; while those who have neither genius nor method will find themselves in but a melancholy plight. When we rise in the morning to the light and the work of a new day, unless we have some rules of action; unless we know what we have to do, and when it is to be done; unless we have the hours parcelled out in some measure, so that we need not waste large intervals in arranging and discussing; we run great risk of having our duties ill-balanced—giving undue space to the work that we like, and crushing into a corner the work that we do not like. While we allot, as far as possible, the different duties for the different hours, it is well to leave some but partially filled, to meet the emergencies of unexpected claims, reserving some lighter employment for these "corners of time." *Punctuality* is essential to method, but a distinction is here made between the two, because with some degree of growing method, as regards our own duties, we may yet be heedless regarding the work and the method of others. Time is a gift, and if we choose to undervalue and misapply our own portion, we certainly have no right to appropriate what belongs to those around us. Yet, when we forget to keep an appointment, when we arrive an hour too late for the work to be done in concert with others, we have robbed our neighbours of time that might have been usefully and profitably occupied. In some cases, this is tantamount to the crime of stealing silver and gold, for to many, time is money; to artisans and tradespeople especially, the want of punctuality is a positive injustice; and yet, how little is this social sin guarded against! *Earnestness.* Do not aim at more than you have strength or opportunity for; but what you attempt do well; it is better to do one duty thoroughly than half a dozen superficially. There is nothing too small to be done thoroughly, no work so insignificant that we can say "It is of no consequence how I do it." This thorough spirit will prevent procrastination—there will be no putting off till to-morrow the duty to be done, or the difficulty to be grappled with, which, with each succeeding day will grow more distasteful and more burdensome; it will also prevent the opposite tendency to undue taste, and the anticipation of future duty, when we ought to be absorbed in the present. *Patience.* If you measure your work by the work of others, you will grow impatient; they seem to do so much more, and to succeed so much better; but Providence has assigned to you one kind of work, and one kind of discipline in that work; to them it has given another, and it belongs not to you to judge which is the more useful, which the more successful. If you are over-anxious that the fruit of your work should look well to the world's eye, you will grow impatient speedily; but remember that the outside may be fair, while the inside is imperfect, and the imposture must one day be detected.

WORMS.—There is no enemy assailing the health and comfort of childhood so frequently and so injuriously as *worms;* and though all ages of life may be affected by them, it is principally in youth, and from the age of twelve months to that of twelve years, that these parasites are most frequently encountered. There are four kinds of worms usually found infesting the human body. 1. The *ascarides* or thread-worms, so called from their extremely thin bodies and thread-like appearance, almost always white, and bearing a not unapt resemblance to bits of white thread. These worms are almost always found in the straight or last intestine, the *rectum*, and are the species common to infancy and early childhood, 2. The *lumbrici* or long round worms, sometimes called the belly worm, and closely resembling the common earth worm. These parasites usually inhabit the small intestines and stomach, or the commencement of the bowels, as the ascarides do the termination of them. The lumbrici are most frequently met with in children between four and twelve years, and at any after period of life. 3. The *trichurides* or three-tailed thread worms, a reptile closely resembling the ascarides or thread worms, with the difference of having long hairy processes proceeding from their anal extremity. This variety of worm is most frequently met with in young children, and inhabits what is called the *cæcum* or blind intestine, being situated at the point where the small bowels terminate in the large ones; and between the ascarides and lumbrici. 4. The *tœnia* or tape-worm, the most troublesome and dangerous in its consequences, of all the parasites infesting the human body. The tape-worm, as its name implies, is, in appearance, strongly suggestive of a very long piece of the narrowest tape, being flat in its whole length, and, to a superficial observation, appearing to have neither head nor tail. This worm, though occasionally found in childhood, is much more frequently discovered in middle age, and in both sexes, but unlike the other varieties, which may be said to have a local habitation, and beyond which they seldom stray, the tape-worm is found indifferently in every part of the alimentary canal, from the stomach to the rectum; and, in consequence of its length, nature, and organization, not only gives rise to the most opposite and alarming symptoms, but is, at the same time the most difficult to kill or expel when its presence is at last detected. The existence of worms is usually denoted by the following chain of symptoms. Loss of appetite, restlessness, head-ache, pains in the stomach, fœtid breath, disturbed sleep, grinding of the teeth, itching and irritation in different parts of the body, inducing the child to pick the nostrils and scratch. The

body becomes emaciated, and the belly or abdomen large and tumid, the tongue is often of a bright red, or covered with a slimy mucus, the surface is either chilly or feverishly hot, the countenance is frequently pale, with a contracted expression on the features, the eyes especially having a sunken and peculiar character about them; at the same time there is usually a short dry cough, with either a ravenous desire for food, or a total apathy as to eating. The *treatment* of worms depends, in a great measure, on the nature and variety of the worm present; for the *ascarides* or thread-worms, inhabiting the rectum, and *trichurides*, or those in the blind intestine, the ordinary purgatives are such as are combined in the following prescription, or a dose or two of castor oil. Take of

Scammony, powdered . .	12 grains
Rhubarb, powdered . .	6 grains
Jalap, powdered . . .	9 grains
Calomel	6 grains

Mix, and divide into six powders. For a child of two years old, one of these should be given every morning for several successive days, till the system has been cleared of their presence. For an older child, according to the age, the strength of two, or even three of the above powders should be given for a dose. The *lumbrici* or round worms, lying in the small intestines, and forming themselves perfect nests or beds of thick slimy mucus, in which they congregate and adhere to the coats of the bowels, require a different and more energetic treatment, and this should commence by giving the child frequent draughts of lime-water, for some two or three days, which has the effect of dissolving the mucus in which they live, and that adhering to their bodies, leaving their unprotected skin to the assault of the next remedy. This should consist of an electuary made of powdered tin and treacle, or cowhage and honey, a teaspoonful of either of which should be given twice a day for two or three days, to be followed up by one or more doses of a strong aperient powder such as the one above, or when the child is old enough to take it, a dose of salts and senna, to complete the process; the first remedy destroying their nests and slimy covering, the second, by the sharp points or spiculæ of the grains of tin, or needle-like points of the cowhage, piercing the unprotected bodies of the worms as by hundreds of darts; and thereby killing them; and the third, by means of its active operation, expelling the whole from the body. Worms are sometimes destroyed by means of infusions of the herb known as Indian pink, wormwood, rue, and several other bitter drugs, each succeeded, after some days' use, by a dose of purgative medicine. The *treatment* adopted for the expulsion of the tape-worm is very various; and, when its existence is tolerably certain, should commence with daily doses of the male fern, followed on the fourth day by a powder composed of a scruple of jalap and five grains of calomel. If this does not effectually expel the worm, a dessertspoonful of turpentine is to be given on an empty stomach the first thing in the morning and an hour or two before the patient rises; and two hours after the turpentine, a large tablespoonful of castor oil is to be given, or else the above powder. This treatment is to be repeated every other day, till the tape-worm is expelled. The doses in the case of the tape-worm are for an adult.

WORMS, IN GARDENS, TO DESTROY.—Water the beds with a strong decoction of walnut-tree leaves where there are worm casts; the worms will immediately rise up out of the earth, when you may easily cut them to pieces, and fatten your poultry therewith, or feed fish in ponds with them. By laying ashes or lime about any plant, neither snails nor worms will come near it. As the moisture weakens it, you must, more or less, continue to renew the lime or ashes.

WORMS, IN HORSES.—The best remedy for this disease is the following:—Take a quart of new milk, and half a pound of honey; mix, and administer it to the horse in the morning; give no food for an hour and a half afterwards; and, at the end of that time, administer a pint of salt and water, succeeded by another fast of an hour. Repeat this treatment on three or four successive mornings, and the worms will be destroyed.

WORMWOOD.—An indigenous perennial plant met with on waste places, but that which is intended for medical use is mostly cultivated. For this purpose, the upper part of the stem, with the leaves and unexpanded flowers, should be collected, for these parts possess the peculiar aroma, with

a strong bitter taste; while the lower part of the stem is merely aromatic, and devoid of bitterness. Wormwood possesses the properties common to aromatic bitters, but

it seems to possess, also, some peculiar ones rendering it worthy of more attention than it receives.

WORSTED ARTICLES, TO WASH.—Take half the weight of soda that there is of soap; boil them with water, allowing a gallon to every pound of soap, and use it when perfectly cold. Wet the flannels in cold water, then wash them in fresh cold water with some of the boiled mixture amongst it; wash them in this, changing the water till they become perfectly clean; then rinse them well in cold water, and dry them in the shade. Worsted stockings washed in this manner will be made quite clean; but particular care must be taken to wet them in clean cold water previous to washing them in the cold suds. Blankets should be washed in this way also, and when nearly dry, frequently shaken, to raise the pile and to make them soft. All dirty clothes should be laid in cold water the night before being washed.

WOUNDS.—These are of various kinds, such as cuts, stabs, tears or rents, scratches, &c. *An ordinary cut* with a knife, chisel, axe, or other edged instrument, is, generally speaking, not attended with any serious consequences, provided the person wounded be of temperate habits and unexcitable disposition. In such case, the wound must be carefully cleaned from all dirt or other foreign matter, and dabbed with a sponge dipped in cold water, till the bleeding ceases. If the wound be extensive, it may be left open for half an hour, and then the corresponding edges are to be brought together as perfectly as possible, and while thus held, several strips of plaster are to be laid across the wound, with small spaces left between them alternately, so as to admit of the escape of an oozing fluid, which often continues for some hours. The edges of the wound should not be dragged tightly together, but merely kept in place by the plaster, and if the wound be in the finger, toe, arm, or leg, it is better that the ends of the plaster should not overlap. If common sticking-plaster be not at hand, court-plaster will do; or thin bands of tow may be wrapped round the part, and smeared with gum-water. Or, if nothing else is at hand, a bit of linen rag, by absorbing the blood, constitutes itself a plaster as the moisture dries. In other cases, the parts may be sewn together with a strong needle and silk, as many single stitches being employed as are necessary for that object, and no more. The needle, well oiled, should be thrust well through the skin, and each stitch should be secured by a knot. The stitches may be taken out in about twenty-four hours, by carefully cutting the thread on one side of the knot, and gently withdrawing the other end. The dressing is to be left on for several days, unless the wound grow painful, and throb violently; in which case, it is to be removed by the aid of warm water or a soft poultice. If a piece of flesh be cut out, wash it, and the part from which it was cut, without a moment's delay; replace into its precise position, and keep it there with a piece of sticking-plaster. If the piece cannot be replaced, bathe the part with cold water until the bleeding stops, and place over it a piece of soft linen. *Lacerated or torn wounds* are such as may be produced by a sharp-edged heavy piece of wood, iron, or stone, falling on a part. The first thing to be done is, to endeavour to unite the edges by the aid of plaster, as in a clean cut; but if the part be much bruised, this mode of treatment rarely succeeds; a slough or core forms, and this must oe separated before the wound can heal. In such cases it is best to apply a bread and water poultice first, in order to moderate the inflammation: and as soon as suppuration commences, and the extent of the slough is marked, a poultice of linseed-meal must be employed, and continued not only until the slough has come away, but till the gap is filled up by new flesh. When the new flesh rises above the edges of the wound, it is commonly known by the name of proud flesh; this should be suffered to remain, for it assists in the healing or the wound, instead of retarding it, as is very commonly supposed. When the wound has thus far progressed towards healing, the poultice may be discontinued, and the part tightly bound with strips of adhesive plaster or a linen bandage moistened with cold water, and bound round twice or thrice, will often answer the purpose. *A torn or rent wound*, such as may be caused by a hook or nail, frequently assumes a very serious character, and requires much care in its treatment. If the skin be merely torn without being stripped, the torn edges may be tenderly brought together with a piece of plaster, and a poultice afterwards applied. But if the skin be strapped up, then, after gently washing with warm water, the skin should be laid down in its place as nearly as possible, a single strip of plaster put across to confine it, and the whole covered with a bread and water poultice. The poulticing must, in either case, be continued till the slough of the torn edge or of the larger piece of skin has separated, and till the new flesh has formed, after which the wound must be treated as an ordinary sore, with poultice or dressing, as best suits. A distinct mode of treating this class of wound when it assumes aggravated proportions, is as follows:—Bind up the wounded parts with isinglass plaster, and place over it a light bandage; after which, cause a stream of water, at ninety degrees, to run slowly over the injured part, so as to reduce the temperature to slightly below that of the blood. A vessel containing water, heated to more than a hundred degrees, is then to be placed above the level of the wound, and, by fixing a tap in this, and turning it very slightly, a gentle stream of water may be conducted to the wound, and this being laid in a water-proof cloth, admits of the water being conducted from it to any convenient receptacle. In very serious cases, the stream of water may be continued for three or four days and nights, the temperature being regulated according to the sensations of the patient. After this, if the parts suppurate to any extent, and exhibit considerable slough-

ing, a poultice of linseed meal must be employed until the wound becomes clean. The principal danger of *a stab* is lest some important deeply-seated part be injured. The patient should be placed in bed as soon after the occurrence as possible, and perfect rest and quiet enjoined. The bleeding is to be stopped by cold water from a sponge, and *the edges* of the wound, if superficial, are to be brought together with strapping and bound up. In deep-seated stabs, however, it is better not to attempt to bring the edges together, but rather keep them asunder; and lay a rag over the wound, dipped in cold water, and changed every half hour. If inflammation set in, ferment with cold water for a day or two, then with warm water, and finally apply poultices. A stab will not heal so readily as a cut, because it often unites near the surface, whilst the seat of the wound is suppurating; and therefore, although for some days it may appear to be progressing steadily, yet it then becomes painful, the wound opens and discharges freely. This may occur once or twice before a cure is completed. *Scratches* are shallow rents not penetrating through the skin, and although commonly unheeded as not requiring attention, are, nevertheless, capable of producing serious results, if irritated by poisonous matter, or filth of any kind. These minor wounds, therefore, are not to be neglected, but should be covered and protected, and kept clean and dry until they have completely healed. If inflammation should set in, leeches must be applied to the adjacent swollen parts; and if leeches are not procurable, then the injured parts may be cut in several places with a clean sharp instrument, and poulticing afterwards resorted to. The latter instructions are chiefly applicable to cases where the services of a medical man are not available; but when the assistance of a surgeon can be obtained, it should be sought for immediately a wound of this nature exhibit any suspicious appearances. *Punctured wounds* are usually produced by a splinter, or a thorn, and being in the first instance of a trivial character, are commonly disregarded; but a punctured wound, like a scratch, may, if neglected, be sometimes attended by very alarming consequences. The first thing, in these cases, is to remove the splinter or thorn; but this must be done very tenderly, and with as little squeezing and pressure as possible; and the operation may be further assisted by the application of a poultice. If the intruder obstinately refuse to come away, the better plan is to make a cut with a knife or a lancet, along the course which the splinter or thorn appears to have taken, so as more completely to expose it, and allow of its being more easily grasped. Anglers often meet with this kind of accident by catching the fish-hook in their flesh. The readiest and least painful mode of extrication is, to grasp the stem of the hook tightly, and, with a sharp knife, rip off the line, and clear the stem of the binding-silk; then to press the stem of the hook downwards, so that the point shall be made to travel onward till it penetrates the skin, and free the barbed point, which is then to be taken hold of and drawn further out, in such a manner that the remainder of the hook follows through the last-made wound. This is a much better plan than the ordinary one of withdrawing the hook by the wound through which it has entered; and, if properly performed, does not occasion any pain or inconvenience beyond a few hours' smarting. If, however, the puncture should remain painful, a poultice must be applied. *Gun-shot wounds* demand, in the first instance, the removal of any pressure that may be upon them, and the air must be allowed to come freely to the injured part. If a fleshy part be wounded, sponge and bathe it well with water, to stop the bleeding, and to cleanse the wound; then apply a piece of lint, crossed by strips of plaster. A few spoonfuls of wine or spirits may be given to the patient, to allay his agitation. Afterwards, wet a few folds of linen with a simple lotion, apply it to the part, and cover with a light bandage. The patient must be kept perfectly quiet, and confined to his bed. A few days subsequently, the cloths should be moistened with warm water and removed. Inflammation will now have set in, and the wound must be dressed with cold water, provided the patient can tolerate the chilly sensation produced. On suppuration being well established, mild and slightly stimulating lotions must be applied, or poultices and bandages. When suppuration takes place beneath, it must be allowed egress by the knife, if poultices are not effectual; the accumulation may be often prevented by compression. Low diet, aperient medicines, and a state of quietude, are great assistants to recovery. Pieces of clothing or wadding should be carefully extracted from the wound.

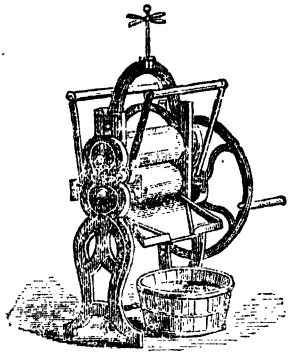
WOUNDS, IN HORSES.—Injuries of the joints or limbs, or superficial wounds, as they are termed, from thorns, splinters or other sharp bodies, are sometimes followed by a slight discharge, which, if abruptly stopped by medicine of repelling or discutient quality, will generally produce considerable inflammation, with other bad symptoms. In all such wounds, emollient fomentations should be employed, together with a poultice of bread and milk, or of oatmeal and the refuse of strong beer. Wounds of the skin will generally be cured by the simple application of lint, dipped in friars' balsam. All wounds, except gun-shot wounds, should be well cleansed with warm water, and the parts fomented with cloths wrung out in the water; if the wound be deep, a syringe and warm water must be employed. When swellings happen on the back, or the withers, from bruises of the saddle, the following lotion should be applied twice a day:—Spirit of wine, four ounces; camphor, two drachms; bole armenian, one drachm. Mix these ingredients thoroughly, and rub a portion of the mixture on the affected part, afterwards binding round some wetted lint or tow.

WOW-WOW SAUCE.—Chop parsley-leaves fine; take two or three pickled cucumbers or walnuts, divide them into

small squares, and set them by in readiness; put into a saucepan a piece of butter of the size of an egg. When it is melted, stir into it a tablespoonful of flour, and half a pint of beef broth; add a tablespoonful of vinegar, one of mushroom ketchup, a tablespoonful of port wine, and a teaspoonful of made mustard; simmer this mixture till it is of the desired consistence, put in the parsley and pickles to warm, and pour the sauce over the beef which has been stewed or boiled.

WREN.—A sprightly little bird, common in England, and to be seen on the wing in our severest winters. Its length is about three inches and a half. The bill is slender and slightly curved; upper mandible and tips of a brownish horn colour, the under one, and the edges of both, of a dull yellow; a whitish line extends from the bill, over the eyes, which are dark hazel; the upper parts of the plumage are clear brown, obscurely marked on the back and hinder parts with narrow, double, wavy lines of pale and dark brown colour. During the winter season, this little bird approaches near human habitations, and takes shelter on the roofs of houses, barns, and haystacks; it sings till late in the evening, and not unfrequently during a fall of snow. In the spring, it betakes itself to the woods, where it builds on the ground, or in a low bush, and sometimes on the turf, beneath the trunk of a tree, or in a hole in the wall. The wren may be domesticated and reared in the following manner:—Take the young birds when they are nearly fledged, and place the nest in a little basket with covers, and nearly filled with moss, which keeps the birds warm; feed them with moist bread and bruised hemp-seed, mixed together, and small bits of raw meat mingled with the moss. A little bread and milk may be also given them, and the yolk of an egg boiled hard; a few drops of water should also be let fall into the birds' mouths occasionally. The birds require to be fed several times a day, giving them as much as they will take at each time. They must also be kept clean, for if allowed to get dirty, they will not succeed. As soon as the feeding is finished, the covers of the basket must be shut down; and the birds will, in a few days, learn to peck, and to feed themselves. When they are perfectly fledged, a little fine gravel should be mixed with their food, as this is converted into lime, and in that capacity hardens the bones, and prevents the cramp. The house-wren greedily devours the various insects which commit depredations in gardens, and may thus be rendered useful to man. To encourage the wren to establish himself in a garden, or about a house for the above-named purpose, a small box should be fixed on to the end of a long pole, and placed in the most convenient position. In these boxes the birds will build and hatch their young; and when hatching is finished, the parent bird feeds its little ones with a variety of insects which it finds near its abiding place. By this simple means, an incalculable number of insects will be destroyed, and a commensurate amount of good effected.

WRINGING MACHINE.—An implement used in the laundry for the purpose of economising manual labour. The machine seen in the engraving is one of the best of



this class; it consists of rollers, between which the linen, &c., is put, and these rollers are pressed tight by the action of a wheel, which is moved by the hand. In this manner the heaviest and most bulky articles may be wrung completely dry, in a much shorter space of time, and with considerably less labour than when performed in the ordinary way.

WRIT.—When a person cannot obtain payment for a debt due to him, and thinks it worth his while to enforce payment, he may take out a writ against the debtor. This is a summons to the defendant to appear on a certain day and answer the complaint of the plaintiff, or judgment will be given against him, so that his goods may be seized or himself arrested to satisfy the claim. A writ may be also obtained by any person who imagines he has received an injury from the alleged offender. All actions are now commenced by writ of summons. A writ is demandable by common right, and any delay in granting it, or getting an exorbitant price upon it, would be a breach of Magna Charta.

WRITING, ERRORS IN.—The following rules will be found of great assistance in writing, because they relate to a class of words about the spelling of which doubt and hesitation are frequently felt:—All words of one syllable ending in *l*, with a single vowel before it, have double *l* at the close; as *mill, sell*. All words of one syllable ending in *l*, with a double vowel before it, have only one *l* at the close; as *mail, sail*. Words of one syllable ending in *ll*, when compounded, retain but one *l* each; as *fulfil, skilful*. Words of more than one syllable ending in *l* have one *l* only at the close; as, *delightful, faithful*; except befall, downfall, *recall, unwell*, &c. All derivatives from words ending in *l* have one *l* only; as, *equality*, from *equal*; *fulness*, from *full*; except they end in *er* or *ly*; as, *mill, miller*; *full, fully*. All participles in *ing* from

words ending in *e* lose the *e* final; as, *have, having; amuse, amusing*; unless they come from verbs ending in double *e*, and then they retain both; as, *see, seeing; agree, agreeing.* All adverbs in *ly*, and nouns in *ment*, retain the final *e* of the primitives; as, *brave, bravely; refine, refinement;* except *acknowledgment* and *judgment.* All derivatives from words ending in *er* retain the *e* before the *r*; as, *refer, reference*; except *hindrance*, from *hinder; remembrance*, from *remember; disastrous* from *disaster*; *monstrous*, from *monster*; *wondrous*, from *wonder; cumbrous* from *cumber*, &c. Compound words, if both end not in *l*, retain their primitive parts entire; as, *millstone, changeable, raceless;* except *always, also, deplorable, although, almost, admirable*, &c. All one-syllable words ending in a consonant, with a double vowel before it, have a single consonant in derivatives; as *sleep, sleepy; troop, trooper.* All words of more than one syllable ending in a single consonant, preceded by a single vowel, and accented on the last syllable, double that consonant in derivatives; as *commit, committer; compel, compelled; appeal, appalling; distil, distiller.* Nouns of one syllable ending in *y* preceded by a consonant, change *y* into *ies* in the plural; and verbs ending in *y*, preceded by a consonant, change *y* into *ies* in the third person singular of the present tense, and into *ied* in the past tense and past participle; as *fly, flies; I apply, he applies; we reply, we replied* or *did reply.* If the *y* be preceded by a vowel, this rule is not applicable; as *key, keys; I play, he plays*; we have *employed* ourselves. Compound words, the primitives of which end in *y*, change *y* into *i*; as *beauty, beautiful; lovely, loveliness.*

WRITING, FADED, TO RENDER LEGIBLE.—Put six bruised gall-nuts into a pint of white wine; set the vessel, containing these, in the sunshine for forty-eight hours. Dip a brush into the infusion, and pass it over the writing several times, until it appears sufficiently distinct to admit of being deciphered.

WRITING, TO OBLITERATE.—Recently written matter may be completely removed by the oxymuriatic acid (concentrated and in solution). Wash the written paper repeatedly with the acid: and afterwards wash it with lime-water, to neutralize any acid which may be left. The writing will be thus removed. If the writing is old, the preceding process will not be sufficiently efficacious, owing to the change which the ink has undergone. In such a case, the writing must be washed with sulphate of ammonia, before the oxymuriatic acid is applied. It may be then washed with a hair pencil.

WRITING FOR THE PRESS, DIRECTIONS FOR.—It would be a great favour to editors and printers, should those who write for the press observe the following rules. Write with black ink, on white paper, wide ruled. Make the pages small, one-fourth that of a foolscap sheet. Leave the second page of each leaf blank. Give to the written page an ample margin all round. Number the pages in the order of their succession. Write in a plain bold hand, with less respect to beauty. Use no abbreviations which are not to appear in print. Punctuate the manuscript as it should be printed. For italics underscore one line, for small capitals two, capitals three. Never interline without the caret to show its place. Take special pains with every letter in proper names. Review every word, to be sure that none is illegible. Put directions to the printer at the head of the first page. Never write a private letter to the editor on the printer's copy, but always on a separate sheet.

WRY-NECK.—This is an involuntary and fixed inclination of the head towards one of the shoulders, and the consequence of an unnatural contraction in one of the muscles attaching the chin and neck to the breast-bone and shoulder, and can in general be only cured by dividing the rigid muscle in a transverse direction, and sometimes by removing a portion of the muscle, so as to prevent the possibility of a reunion of the severed fibres, in which case the mischief would be reproduced.—See NECK, DEFORMITIES OF.

Y.

YAM.—A slender herbaceous vine, having large tuberous roots, and producing a fruit much used for food in the East and West

Indies. Yams may be eaten either roasted or boiled; they are mealy, palatable, nutritious, and easy of digestion; and the flour may also be used either for bread or for puddings.

YAWNING.—Although an ordinary sign of sleepiness and fatigue, yawning is frequently caused by a weak and disordered stomach; and sometimes amounts to what

may be termed fits of yawning. The principal danger to be apprehended, is dislocation of the jaw, and persons when thus attacked should be cautious to guard against this catastrophe.

YEARLY ROUTINE, FOR THE GARDEN.—Under the heads of the several months detached instructions will be found for the culture of the kitchen and flower garden. The object of the present article is to collect at one view, a few leading hints applicable to general garden culture, and to the year, taken as a whole, as follows:—

JANUARY. In this month but little can be done; the walks should be swept and the beds kept clean, so that all may have as neat an appearance as possible. In the *kitchen garden*, weather permitting, sow early peas in a sheltered border, early mazagan and long-pod beans; in the first and fourth week, short-topped radish; towards the end of the month, cos and cabbage lettuce. Transplant early York cabbage and lettuce. Earth up savoy, broccoli, &c.; also peas and beans, if any have made their appearance. In the *flower garden* the attention is to be chiefly directed to increasing the stock of potted flowering plants, some of which will require the assistance of a slight hot-bed to bring them forward.

FEBRUARY. In the *kitchen garden*, repeat the sowing of mazagan and long-pod beans. Sow Windsor beans in the last week; short-topped and salmon radish, spinach, mustard and cress twice; early York, sugar-loaf, and red cabbage near the end of the month. In the *flower garden* the operations are materially influenced by the state of the weather. If cold and wet, very little can be done in the open garden, except protecting the bed flowers; but if the weather be open and partially dry, the sowing of annuals may be attended to, as also the transplanting of some of the biennials and perennials. An extra bed of ranunculuses, and anemones may be put in to follow those planted in autumn; and all bulbs and tubers still left out of the ground, may now, especially the hardiest sort, be planted safely anywhere. A slight hot-bed will be required to raise seedlings of various sorts of annual flowers, and receive seedlings of former sowing. Any rough work may be performed during this month.

MARCH. In the *kitchen garden*, most of the common sorts of seeds may be now sown in sheltered borders, if the ground be in a fit state. Turnips and radishes will require a warm bed, sea-kale should have its shoots blanched, and Jerusalem artichokes may be planted. The seed of Brussels sprouts should be sown as well as that of savoy, brocoli, and successions of peas and beans. In the *flower garden*, there is much to be done this month; all the operations of the previous month should be continued. The bed-flowers, particularly tulips, must be sheltered from hail-storms and frost. All the plots and borders must be smoothed with a rake, preparatory to sowing the first general crop of hardy annuals. Dahlia seed may now be sown in pans, and the old tubers placed on dry leaf-mould on a mild hotbed, or on a bark bed in a stove, peg down roses and finish the pruning of them, lay some and take off suckers; slip and part roots of various plants.

APRIL. In the *kitchen garden*, conclude any of last month's operations which have been left unfinished. Sow peas, beans, cabbages, savoys, lettuces, small salad, spinach, leeks and onions. Plant potatoes, rhubarb, sea-kale, &c. Hoe and thin turnips, spinach, and all drilled crops which stand too thick. In the *flower garden*, the work calls for an equal amount of activity. Tulips and hyacinths require support and shelter from the wind, shading from the sun, and protecting from heavy rains. Many seedlings, which have been kept in frames will be fit for transplanting. Another sowing of annuals, both hardy and tender, must be made towards the end of the month. Seedling dahlias, and all the tender annuals, require attention at this time to bring them forward. Cuttings of dahlias, and the slips or cuttings of Chinese chrysanthemums must be brought forward by potting singly, and keeping them on a little heat till fairly rooted.

MAY. In the *kitchen garden*, sow successions; towards the end of the month, plant out celery in drills. Plant out cauliflowers under glasses; sow turnips, kidney beans, scarlet runners, and colewort. Plant late potatoes, and transplant cabbage. Hoeing is greatly required this month to thin crops, destroy weeds, and loosen the surface. Thin out carrots, turnips, parsnips, &c. The *flower garden* still demands an unusual amount of energy. Sow another succession of hardy annuals and biennials, and thin and transplant some of those which had been sown in previous months. Tender annuals, dahlias, chrysanthemums, &c., lately potted and in frames, must be guarded by mats against the cold nights and biting winds, and likewise shaded from the mid-day sun. All stage and bed-flowers now demand attention in shading, propping, and defending from insects. Carnation seed may be sown. A small bed of ranunculus may be planted to flower in August, and new beds of violets made. Rose trees may be now pruned back, and other shoots cut back.

JUNE. In the *kitchen garden*, the watering of newly-planted vegetables is, in this month, highly necessary; and, after watering, the application of the hoe. Remove cabbage-stalks not required for sprouts, and all decaying crops. Gather herbs for drying, just before they get into full flower. Sow turnips for autumn use, and endive for main crops; also vegetable marrows, gourds, and pumpkins. Plant more late potatoes, if required. Cabbages, savoys, &c., may be placed in rows to stand. In the *flower garden*, all the more tender kinds of flowering plants may be planted abroad with impunity. Dahlias must now, if not done already, be placed in their blooming stations: short stalks are indispensable for their support. Pot off seedlings, if not already done. Auriculas may now be shifted; and tulip, hyacinth, and ranunculus beds will still require attention. Carnations now need careful nursing. Con-

tinue to plant out tender annuals, and as many greenhouse plants as can be spared to add to the gaiety of the garden; transplant annuals previously sown and standing too thick; sow biennials, and propagate by cuttings every plant of which a supply may be wanted.

JULY. In the *kitchen garden*, remove the haulm of peas and beans immediately they cease to be useful, as they tend to exhaust the ground and to harbour slugs and snails. Sow endive and small salads twice, lettuce turnips for succession, and cabbage for winter coleworts. Earth up brocoli, cabbage, and potatoes. About the middle of the month, sow the last crop of peas and French beans: earth up and stake the preceding ones. Plant celery, tie up lettuces and endive, and execute whatever was omitted last month, or may be properly performed in preparation for the next. In the *flower garden*, all omissions of the preceding month should be remedied without delay. Take up bulbs and tubers when the leaves are withered; sow and transplant annuals to bloom late; propagate pinks, rockets, carnations, &c.; divide auriculas, and re-pot them, keeping them shaded as well as all other plants in pots. Propagate pansies by division; sow biennials; prop Chinese chrysanthemums, and lay down some of the long shoots, to make bushy plants of the tops. Regulate the patches of previously-sown annuals, and shift those of the greenhouse or stove.

AUGUST. In the *kitchen garden*, protect cucumbers from heavy rains, which sometimes occur in this month. Sow in the first week early York, dwarf, and sugar-loaf cabbage; in the third or fourth week, cauliflower, onions, prickly-seeded spinach, radish, and lettuce. In dry weather, earth up celery in trenches, and all other crops in drills or rows. Transplant cabbage, savoys, brocoli, borecole, Brussels sprouts, and endive. Plant out brown Dutch lettuces, taking precautions against the ravages of slugs, and brocoli for the successions in spring. In the *flower garden*, if any bulbs which have done flowering yet remain in the ground, they should now be taken up, dried, and stored in a safe place. Cuttings of azaleas and similar plants may be put in. Roses may be budded. Another bed or two of pansies should be formed, to bloom before the frost sets in. Mignonette should be sown in pots and window-boxes, to stand the winter in frames. Chrysanthemums, dahlias, and all other tall and climbing plants should have supports; carnations, whether on stage, bed, or border, neatly tied up and shaded, and layering for next year's stock furnished.

SEPTEMBER. In the *kitchen garden*, take up potatoes to stand the winter, sow onions, lettuce and carrots; small salad twice; radishes for the last crop. Gather seeds as they ripen. Prick out cauliflowers; also lettuce and endive under shelter. Transplant coleworts and the last crop of brocoli. In the *flower garden*, there is during this month, much irregularity of growth, and decayed flowers and stems; leaves require to be cleared away. The seedlings of biennials and perennials should be thinned, and some of them planted in pots, or transplanted to beds or places where they are intended to remain. All cuttings, pipings or layers, which are sufficiently rooted, should also be removed to their final or temporary stations. Seeds of fine annuals now ripe, should be gathered and saved; and valuable greenhouse plants which have flowered in the borders should be now re-potted. It is now proper time to prepare the beds intended for tulips, hyacinths, and ranunculuses, in order that they may be properly settled by planting time.

OCTOBER. In the *kitchen garden*, if the weather be favourable, continue to take up potatoes, carrots, parsnips, and beet. Blanch endive, and earth up the stems of all crops in rows; lay down brocoli, and hoe out winter spinach. Sow early peas and marjoram; beans to stand the winter, also lettuce, on warm borders. Transplant cabbage, a full crop, for spring supply; also lettuce and endive in frames. Cut down asparagus and dress the beds with litter or short dung. Dig, trench, and execute all routine work. In the *flower garden*, stake dahlias firmly against the wind. If any new seedlings have not yet flowered, and are expected to prove excellent, they should be guarded by some temporary covering, to escape being nipped by some unexpected night frost. Chinese chrysanthemums standing in open borders are in the same predicament. Pinks may be still bedded out, and carnation layers potted. These last, together with all flowers in pots, must be duly supplied with water. About the end of the month, prepare a heap of light, fresh, sandy loam, and a sufficient number of proper-sized pots for the reception of as many bulbs and tubers as may be required for early and late forcing; prepare, also, the beds for tulips, hyacinths, anemones, and ranunculuses, to be planted about the beginning of next month. Dig the clumps or pots intended for the hardiest sorts of bulbs and tubers, which now require to be put in, namely, narcissus of sorts, snowdrops, scillas, aconite, &c. Pot roses, Persian lilac, and the different sorts of American shrubs and other flowers to go into frames. Perennials may be taken up, parted, and replanted; some of the more showy sorts may be potted to go into frames to advance their flowering in spring. Roseries may be pruned and regulated, laying down the long shoots and straggling branches, keeping the whole pretty close to the ground. Standard roses require to be closely pruned and well staked.

NOVEMBER. In the *kitchen garden*, this is the most desirable month in the year for pruning and transplanting fruit trees and bushes. Clear off the old leaves from sea-kale and rhubarb; and cover the crowns with a layer of sand, dung, or any other protective substance. Finish earthing up all crops that require attention; cabbage may still be planted. Secure all such full-grown vegetables as are liable to be injured by frost, such as endive, lettuce, and

especially brocoli and cauliflower. The last two should be taken from the earth, and hung up by the stalks in an outhouse or shed. In the *flower garden* it is a busy month. The previously-prepared beds for tulips, hyacinths, polyanthuses, ranunculuses, and anemones, should all be planted during the first fortnight. Where the flowers are cultivated in the best style, the collections are named, and require much precision in placing them in the beds; but when executed according to the rules laid down, the success is never doubtful. The other business of the season is, taking up the tubers of dahlias, marvel of Peru, &c.; pruning shrubs, as well to keep them in form as to encourage the flowering; all dead or decaying stems and leaves must be cleared off; the ground dug, the patches of perennial flowers reduced, vacancies filled up, edges repaired; and the whole garden should receive a general brushing over, laying all as neatly for the winter as possible.

DECEMBER. In the *kitchen garden*, the general operations for this month are similar to those for November. When the weather permits, prepare the ground for spring crops. In frosty weather, dung may be got on the land. If the ground be not too wet, proceed with digging, trenching, and ridging. In the *flower garden*, there is but little to do. If very hard frost sets in, some of the beds planted in the two preceding months, may require an occasional covering of mats, supported by hoops. The young seedlings of mignonette, and other flowers in frames, must not be forgotten. Indeed, everything liable to be hurt by frost, must have some kind of protection. A few more pots of bulbs and tubers, and also another succession of annual flowers, may be sown in pots to go into frames, and be forwarded for planting abroad in the spring.

YEAST.—This forms an active agent in many of the processes connected with domestic economy. There are a variety of ways of making it, and the following will be found among the best:—1. Boil, say on a Monday morning, two ounces of the best hops in four quarts of water for half an hour; strain it, and let the liquor remain till lukewarm; then put in a small handful of salt and half a pound of sugar; beat up a pound of the best flour with some of the liquor, and then mix all well together. On Wednesday, add three pounds of potatoes, boiled and afterwards mashed; let these stand till Thursday; then strain the mixture, and put it into bottles, and it is ready for use. Observe to stir it frequently while being made, and keep it near the fire. Before using, shake the bottle well. This yeast will keep in a cool place for two months, and is in its best condition at the latter part of that time. One recommendation of this preparation is, that it ferments spontaneously, not requiring the aid of other yeast; and if it be allowed to ferment thoroughly in the earthen bowl in which it is made, it may be corked up tightly, immediately it is bottled. 2. Into two quarts of water, put a quarter of an ounce of hops, two potatoes sliced, a tablespoonful of malt, or sugar; boil for twenty minutes, strain through a sieve, let the liquor stand until milk-warm, then add a little German yeast for a first quickening; afterwards some of this yeast will answer the purpose. Let it stand in a large jar or jug till sufficiently risen. Then, put into an earthen bottle a part of the yeast for a future quickening, and let it stand in a cool place till required for a fresh making. This quantity is for a stone of flour; when using it, put the yeast to half or more of the flour, and two quarts of warm water, mix well; let it stand and rise; knead up with the rest of the flour, put the paste into or upon tins, let it stand to rise, bake, and a very good bread will be produced. 3. Boil a pound of flour, a quarter of a pound of brown sugar, and a little salt, in two gallons of water, for an hour; when milk-warm, bottle it, and cork it closely. It will be fit for use in twenty-four hours, and one pint of it will make eighteen pounds of bread. 4. Take a small teacupful of split or bruised peas, pour on them a pint of boiling water, and let it remain in a vessel in an oven or before the fire for several hours. After thus remaining, the water will have a froth on it, and produce sufficient good yeast for eight pounds of bread. 5. Boil in two quarts of water, a handful of hops, one apple, one potato, sliced; while hot, strain the liquor, and stir in coarse wheat flour until a thick paste is produced. Grate a large apple, and a large potato, put them into a gallon jar, and pour in the paste; when sufficiently cold, add a little yeast; in twelve hours it will be fit for use. 6. Put a handful of hops to three quarts of water, and let it boil for two hours; then strain the hops away, and mix a pint of flour with the liquor, and while hot, a teacupful of moist sugar; let it remain until it is lukewarm, then work it with a teacupful of yeast, stirring it constantly; let it stand for twenty-four hours, and then put it into jars for use. Quantity, one quart of the mixture to a bushel of flour.

With a view of placing the mode of making good yeast beyond all doubt, the following further instructions are given:—The vessel in which the yeast is made, should be a wide earthenware milk-bowl, capable of holding about six quarts, and in this, the mixture must be kept about the warmth of new milk, during the extra time of making; which will be most readily effected, by letting the vessel stand at a proper distance from the fire. When yeast is bottled, it must not be put into the bottles too soon, nor must the corks be forced in too tightly, or the bottles will burst. Seltzer-water bottles are excellent for this purpose. The bottles must be kept in a cool place, and allowed to remain undisturbed. When yeast is newly made, a larger quantity of it will be required to raise the bread than when it is six or eight weeks old.

YEAST CAKE.—Take two pounds and a half of flour, half a pound of sugar, ten ounces of butter, and four pounds of currants; set sponge, with half of the flour,

and three tablespoonfuls of yeast, in a pint of milk; work the butter and sugar in the other half of the flour with half a pint of milk; add the other ingredients, mix all together, and bake the cake in a hoop or tin for three hours.

Flour, 2½lbs.; sugar, ¼lb.; butter, 10ozs.; currants, 4lbs.; yeast, 3 tablespoonfuls; milk, 1½ pint.

YEAST DUMPLINGS.—Roll as much bread-dough as may be required into small balls, drop them into boiling water, and boil them for a quarter of an hour. These may be either eaten with gravy, or with melted butter and sugar, flavoured with wine, &c. They are also nice when eaten with treacle.

YEAST, GERMAN.—This substance is the product of the fermentation of grape wine. It is partially dried, and then exported in bags. Large quantities are imported into England, and forwarded to the various agents residing in the chief towns. If a person is desirous of obtaining this yeast, he should apply to the nearest baker or confectioner, who will either be able to furnish a supply, or to give information where it may be obtained. German yeast may be used for all the purposes for which the ordinary yeast from malt liquor is employed; it will not, however, keep very long.

YEAST POULTICE.—Mix five ounces of yeast with an equal quantity of hot water; with these, stir up a pound of flour, so as to make a poultice; place it by the fire till it swells, and use. This poultice acts as a stimulant and emollient, and is applied to indolent abscesses and sores.

YEAST, TO PRESERVE.—When the yeast is taken from new beer, it must be put into a clean linen bag, and laid in a vessel half-filled with dried and sifted wood-ashes; the whole is then to be covered to the thickness of three or four inches with similar ashes, and then pressed together; the yeast should be then suffered to remain for twenty-four hours, or longer, if necessary, when the ashes will absorb all the moisture, and the yeast acquire the consistence of a thick paste. It must now be formed into small masses or balls, dried by a moderate heat, and kept in bags in a cool, dry place; when required for use, as many of these balls as are necessary, are to be dissolved in warm water or warm beer, and they will be found to answer every purpose of fermentation. Another method is to beat up the newly-made yeast with a whisk until it is quite thin and smooth; then spread it in thin layers upon plates, adding coat upon coat, as the previous depositary becomes dry, and until a thickness of about half an inch is attained; the yeast is then removed from the plates, broken into small pieces, and kept for use, in air-tight bottles. Common ale yeast may be kept fresh and fit for use, several months, by the following method:—Put a quantity of it into a close canvas bag, and gently squeeze out the moisture in a screw press, till the remaining matter be as firm and stiff as clay. In this state, it may be closely packed up in a tight cask, for securing it from the air, and will keep fresh, sound, and fit for use for a long time. Another method is to stir a quantity of yeast and work it well with a whisk till it seems liquid and thin. Then get a large wooden dish or tub, clean and dry, and with a soft brush lay on a thin layer of yeast, turning the mouth downwards, to prevent its getting dusty, but so that the air may come to dry it. When that coat of crust is sufficiently dried, lay on another, which serves in the same manner, and continue putting on others as they dry, till two or three inches thick, which will be useful on many occasions. But be sure the yeast in the vessel be dry before more be laid on. When wanted for use, cut a piece out, lay it in warm water, stir it together, and it will be fit for use. If for brewing, take a handful of birch tied together, dip it into the yeast, and hang it to dry, taking care to keep it free from dust. When the beer is fit to set to work, throw in one of these, and it will work as well as fresh yeast. Whip it about in the wort and then let it lie. When the beer works well take out the broom, dry it again, and it will do for the next brewing.

YELLOW DYE, FOR SILK, RIBBON, ETC.—Boil a large handful of horseradish leaves in two quarts of water for half an hour; then drain off the liquid from the leaves, and soak in it the articles which are to be dried; when the colour is deemed to be sufficiently deep, take out the articles, rinse them in cold water, and spread them out to dry. A very fine yellow colour will be thus produced.

YELLOW DYE, FOR SILK, STUFFS, AND PAPER.—Heat over a clear fire, in a clean copper pan, half a pound of acacia flowers, before they are full blown; continually stirring them briskly; when they assume a yellow hue, pour a little water over them; let it boil till it becomes of a considerable consistence, and has also acquired a deeper colour. Then strain the liquid through a piece of coarse silk, add to it half an ounce of finely pulverised alum, and an ounce of calcined and finely powdered oyster shells. Mix the whole well together, and bottle it for use.

YELLOW FEVER.—A disease almost peculiar to tropical climates, and countries exposed to dry sultry heats, and which has the peculiarity of more frequently attacking men than women. Yellow fever is indicated by all the primary symptoms of fever, by great pain in the head and eye-balls, great drowsiness, clammy mouth, furred tongue, skin hot, dry, and hard; bilious vomiting, jaundiced appearance of eyes and skin, frequent retching and vomiting of frothy bile; great determination of blood to the head, delirium; *petechiæ* or purple spots break out over the body; the colour of the vomit changes to *black*, and so black for the teeth, lips, and mouth, hæmorrhage takes place from the mouth, ears, nostrils, and bowels; the pulse sinks to an imperceptible thread; and if unrelieved, through the veins and terminates the case.

The treatment of this disease depends upon the type of the fever that is developed in its progress, which though inflamm-

and intermittent in its first stages, becomes intensely typhoid in its last. The three most important systems, and which with modifications, constitute the sole practice, in this disease, are cold affusions, bleeding and purgatives; but these must be vigorously prosecuted within the first twenty-four hours, to avert the coming-on of the second or typhoid stage if possible.

YEW TREE.—The yew is one of the slowest growing trees we have, and a very little attention, by taking the points of the principal shoots off, will keep it in the form of a shrub for an almost indefinite time; treated in this way, it is sometimes of value for filling between the boles of the trees in distant shrubberies, as it will bear the confinement of such a place, and is not affected by the drip. On the other hand, if it is desired to assume the tree form, the greatest care must be taken of the leading shoot, for, as in the fir tribe, its loss is not readily repaired. As a hedge-plant in situations where a perfect screen from sweeping winds is required, the yew would be unrivalled but for its slow growth; it, however, bears removing very well, even when of great age, and this admits of large plants being employed, and thus a good edge may be formed at once. It bears clipping so well that, with attention to its early training, every part may be kept verdant, and equally full from bottom to top; this docility under the shears used to make it a great favourite, when sculptured articles of the kind were fashionable. When once established, the yew hedge is more durable than any other, exceeding even masonry in the time it will last. It should be clipped twice a year, in the early part of summer and autumn, and will then remain perfect. Yew trees delight in moist, rich soils; they grow best in deep loams or clay, but will live where it is much drier; they are usually raised from seed, or at least the common kinds, which produce it freely. This is gathered in autumn and mixed with sand, to be thrown in a heap in a shed, and, after turning two or three times, the pulp rots, and in spring, the stones are sown in light, rich earth, being covered about an inch deep. Part of the plants come up in the same season, and the remainder in that following. The choicer sorts are propagated by cuttings, which may be formed of either one or two years' old wood; the terminal shoots of the branches form the best, and pieces of about six inches in length are to be preferred. These, taken off either in April or August, and bedded rather thickly into a shaded border, form rooted plants in a year. They are usually left undisturbed till two years old, and the removal of those pieces which do not strike, generally leaves them plenty of room. They are afterwards planted in nursery rows; but their subsequent progress is so slow, that few besides the commercial grower ever attempt to raise them. The seedlings receive similar treatment; and in each case, care must be taken not to damage the leading shoots till the plants have attained a couple of feet in height, when, if desired for hedges, they may be topped, and the lateral shoots cut in and trained. September is the best month for removing these trees, whether old or young.

YOKING CATTLE.—The amount of labour, and the ease with which it may be performed, in agricultural practice, are materially influenced by the manner in which cattle are yoked to the plough. There are two methods in general use: one, yoking in pairs; the other, yoking in a single line. There are advantages and disadvantages attending each way; and the only method of arriving at a just conclusion is to compare these, and apply the deduction to such special circumstances as may exist. A disadvantage of yoking in pairs is, that in ploughing the furrows betwixt the ridges the land-cattle go upon the ploughed land, and tread it down with their feet, which, especially if the land is wet, hurts it very much. Another disadvantage is, that when there is but as much of the ridge unploughed as to allow the land-cattle to go upon it with difficulty, they are frequently either going into the opposite furrow, and thereby giving the plough too much land; or, what is worse, they are jostling the furrow-cattle upon the ploughed land. When cattle are yoked in a line, they all go in a furrow. This necessitates the giving the plough more land than ordinarily. Another disadvantage is, that horses and oxen, under such conditions, are apt to throw the burden on their fellows. This they have a better opportunity of doing when yoked in a line, as each pulls by the traces of the one behind him; and, therefore, with the exception of the foremost horse, it is difficult to tell when they neglect their work. Another inconvenience attending yoking cattle in a line is, that when the fore-cattle are all yoked to the traces of the hindmost, it is obvious that, as the beam to which the draught is fixed is much lower than the shoulders of the first horse, by which the rest pull, such a weight must be laid upon his back or shoulders as must render him incapable of giving any assistance. When a body is to be moved forward, the nearer the direction of the force applied approaches to the direction of the body, the greater is the influence exercised; and, therefore, as the plough moves horizontally, and as the direction of the united draught of a plough with the cattle yoked two abreast is more horizontally inclined than the direction of the draught in a plough with the cattle yoked in a line, the same force applied will have greater influence. This fact is confirmed when the cattle are yoked in pairs; for each has then a separate draught. The goadsman knows by the position of the yokes, whenever one of the horses does not draw equally well with his fellow; and the ploughman perceives, by the going of the plough, whenever either of the two horses does not draw equally well with the other; for if the pair that go foremost neglect their work, the plough is pulled out of the ground; and if the pair that go hindmost neglect their work, the plough enters the soil too deeply. These different modes of yoking are, also, in a great measure dependent on

icular soil. When the land is stiff . ; labour severe, yoking the cattle in. seems preferable, as it affords the igest draught; and when the land is and in danger of being injured by the g of the cattle, the yoking them in a affines them to the bottom of the , and prevents a great amount of ..

ORKSHIRE BACON.—It is generally ted that the bacon which comes from ire is the best of this kind of food. peculiarity of flavour depends upon the t curing, which is conducted in the ng manner:—After killing, the meat ered to hang for twenty-four hours, e being cut up; saltpetre is then in, in the proportion of one pound to undred and eighty pounds of meat, om twenty-one to twenty-eight s of common salt; this being well d in, the meat is laid in a tub kept for purpose. Having lain for a fortnight, a, ed over, and about seven pounds of s applied, after which the meat is left ortnight longer; it is then taken out, hung up in the kitchen, the inside shed over with quicklime and water, to serve it from the bacon-fly and prevent turning rancid; it is then hung up in a spare room away from all heat, but where it is perfectly dry.

YORKSHIRE BISCUITS.—Mix a small teaspoonful of bi-carbonate of soda and a little salt with a pound of flour; rub quarter of a pound of butter, add one yell beaten, and as much butter-milk will render the mass of a stiff paste; knead till quite smooth; roll it, cut out the biscuits; prick them, and bake immediately a moderately hot oven.

Flour, 1lb.; bi-carbonate of soda, 1 teaspoonful; salt, sufficient; butter, egg, 1; butter-milk, sufficient.

ORKSHIRE CAKE.—To one quart of lukewarm milk add a quarter of a pint of od ale yeast, and mix them well together ough flour to make a thick batter; and in a warm place till it rises as it can: then rub half a pound of er into some flour, and mix with it four beat all well together, add sufficient o make it into dough, and let it stand half an hour; then work it lightly up make into buns, put them on tins in a m, cover them with a light cloth, them with butter.

Milk, 1 quart; yeast, ½ pint; flour, dient; butter, ½lb.; eggs, 4.

RKSHIRE CAUDLE.—Take a pint milk, turn it with sack; then strain, put it in a saucepan with two blades of three slices of white bread, and a little nutmeg. Boil over a slow fire, then the yolks of four eggs, and the of two; stir into the caudle to , taking care to stir one way for fear dling it; sweeten to taste, and serve m.

RKSHIRE MUFFINS.—Set a sponge portion of a pint of new milk, and half an ounce of German yeast, stirred into the midst of two pounds of flour; set it to a rather warm place, covered with a cloth, when well risen, melt two ounces of butter in the remainder of the pint of milk; mix it into the flour, adding a little salt and two eggs, well beaten; beat the dough for twenty minutes; then make it up into balls, on a board well dredged with flour; lay a cloth in a tray before the fire, but not too near; dredge it well with flour, and as the balls are made, place them at a certain distance from each other, in order that they may not run into each other in rising; cover them with a cloth, and in about twenty minutes lay them on hot tins; shape them with a knife, and bake them in a quick oven.

Flour, 2lbs.; milk, 1 pint; butter, 2ozs.; eggs, 2; German yeast, ½oz.

YORKSHIRE PUDDING.—This highly esteemed and excellent pudding may be made in a variety of ways, the following methods being the best:—1. Take two eggs, a pint of milk or of water, and half a teaspoonful of salt; beat these well together, put six large tablespoonfuls of flour into a basin, gradually incorporate with it the eggs, and the milk or water to a smooth batter, and beat these together for a quarter of an hour. Place over this the meat which is to be roasted or baked. Where it is wished to retain the gravy for other purposes, the pudding may be baked in the following manner:—Rub a tablespoonful of dripping over the bottom and the sides of the baking-pan, and into this, pour the batter through a strainer; bake the pudding for an hour and a half, frequently turning the pan, to allow of the pudding becoming uniformly brown. 2. Rub half a teaspoonful of baking-powder quite smooth, mix it well with six ounces of flour, and as much milk as will make it a stiff batter, and a teaspoonful of salt; beat the whole till perfectly smooth; add two eggs, well beaten, and as much milk as, with the quantity previously used, will make a pint in all. Melt some butter in a large flat dish or tin; pour in the batter; bake in a quick oven. 3. Make a stiff batter of the beaten whites and yolks of three eggs, half a pound of flour, a pint and a half of cold milk, a teaspoonful of salt, and two tablespoonfuls of ale. Pour the mixture into a shallow dish previously heated, by being placed under the joint which is being roasted. This pudding will take two hours to cook before a good fire. 4. Take six eggs, and an equal number of tablespoonfuls of flour, and a teaspoonful of salt. Whisk the eggs well, strain, and mix them gradually with the flour, then pour in by degrees as much new milk as will reduce the batter to the consistence of rather thin cream. Have a pan warmed in readiness; beat the batter briskly and lightly the instant before it is poured in, watch it carefully to prevent burning, and let the edges have an equal share of the fire. When the pudding is quite firm in every part, and well-coloured on the surface, turn the under side to brown. 5. Mix five tablespoonfuls of flour with a quart of milk, and four eggs well beaten;

butter a shallow pan, pour the mixture into it, and bake under the meat.

☞ 1. Eggs, 2; milk or water, 1 pint; salt, ½ teaspoonful; flour, 6 tablespoonfuls. 2. Baking-powder, ½ teaspoonful; flour, 8ozs.; milk, 1 pint; salt, 1 teaspoonful; eggs, 2. 3. Eggs, 3; flour, ½lb.; milk, 1½ pint; salt, 1 teaspoonful; ale, 2 tablespoonfuls. 4. Eggs, 6; flour, 6 tablespoonfuls; salt, 1 teaspoonful; milk, sufficient. 5. Flour, 5 tablespoonfuls; milk, 1 quart; eggs, 4.

YORKSHIRE SALAD.—Mix a tablespoonful of treacle with two tablespoonfuls of vinegar; add a little black pepper, and shred lettuces into the mixture, and young onions, if liked.

YUCCA.—A plant called, also, "Adam's needle." It constitutes one of the aloe-like genera with thick, sharp-pointed leaves, and many of the species appear very ornamental when planted out in borders or in lawns. The plant will grow in any common border where the situation is a dry one; and where nature has denied this, the best way is to plant the yucca on a hillock of suitable compost elevated above the level of the garden, covering the whole with turf.

YULE CAKE.—Take one pound of fresh butter, one pound of sugar, one pound and a half of flour, two pounds of currants, a glass of brandy, one pound of sweetmeats, two ounces of sweet almonds, ten eggs, a quarter of an ounce of cinnamon. Melt the butter to a cream, and put in the sugar. Stir it till quite light, adding the allspice and pounded cinnamon, in a quarter of an hour take the yolks of the eggs, and work them two or three at a time; and the whites of the same must by this time be beaten into a strong snow quite ready to work in. As the paste must not stand to chill the butter, or it will be heavy, work in the whites gradually, then add the orange-peel, lemon, and citron, cut in fine strips, and the currants, which must be mixed in well, with the almonds; then add the sifted flour and a glass of brandy. Bake this cake in a tin hoop, in a hot oven for three hours, and put two sheets of paper under it to keep it from burning.

☞ Fresh butter, 1lb.; sugar, 1lb.; flour, 1½lbs.; currants, 2lbs.; brandy, 1 glass; sweetmeats, 1lb.; sweet almonds, 2ozs.; eggs, 10; allspice, ½oz.; cinnamon, ½oz.

Z.

ZINC.—A metal which does not occur in the native state, but is obtained from its ores, which are chiefly the sulphuret and carbonate of zinc. It has a brilliant metallic lustre, and a bluish white colour. It is so hard as to be filed with some difficulty, and its toughness is such as to require a great amount of force to break it when the mass is considerable. It undergoes little alteration, even by the combined operation of air and moisture at common temperatures. When heated to between the temperature of boiling water and 300° Fahrenheit, it becomes both malleable and ductile, so that it may be rolled into sheets and drawn otherwise. Exposed to a white heat, out of the contact of air, it sublimes and is condensed unchanged.

ZINC LOTION.—Sulphate of zinc, one drachm; water, one pint. This is a drying wash used in cracking of the skin, and after burns and scalds, to heal them and arrest the discharge.

ZINC OINTMENT.—This is made by rubbing well together one ounce of oxide of zinc, and six ounces of hog's lard. This ointment is useful for children, it is also commonly used for dressing the sores remaining after scalds and burns, to absorb the great discharge which generally follows: and it is a very good application to cracked skin, from which a watery fluid oozes and irritates the neighbouring skin.

CHARLES JONES, PRINTER, WEST HARDING STREET.