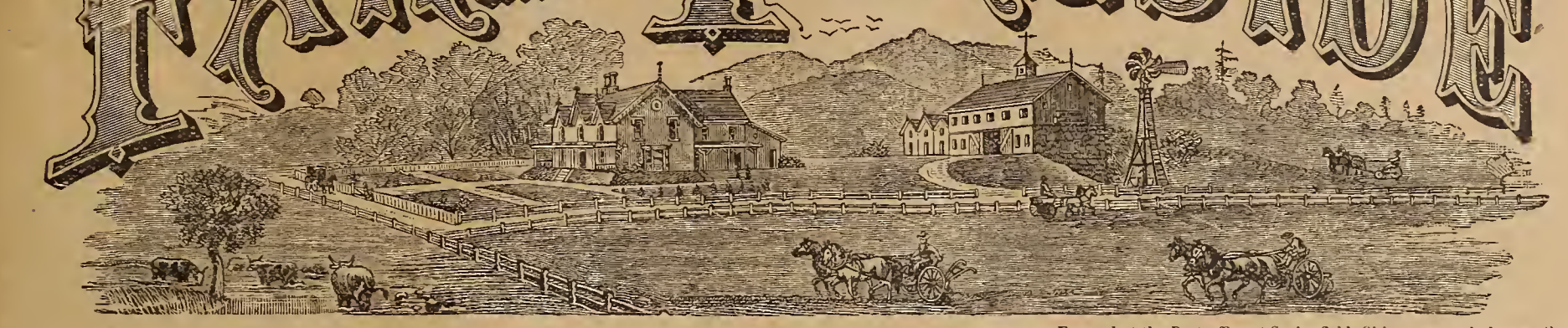
FARM AND FIRESIDE



Entered at the Post-office at Springfield, Ohio, as second-class mail matter.

VOL. XX. NO. 13. APRIL 1, 1897. TERMS { 50 CENTS A YEAR / 24 NUMBERS.

This is a fashionable berry-spoon, with an elegantly engraved silver-plated handle and gold-plated bowl. It is admirably adapted for serving berries, jelly, salad, ice-cream, canned fruit, etc. It makes a rich and exquisite present.

The silver and gold plating is excellent. We guarantee perfect satisfaction or money refunded.

SELL IN STORES FOR 75 CENTS EACH.

We will send this spoon, and Farm and Fireside one year, for 50 cents.

ENGRAVING NOT FULL SIZE.

Length of spoon, 8¾ inches.
Width of bowl, 2¼ inches.

Prem. No. 180.

We will send Farm and Fireside one year and this Berry-spoon for 50 cents.

If the following letter is marked with a blue pencil it means that we make a personal appeal to the person to whom this paper is addressed.

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Please examine the date on the yellow label of this paper. If you have not renewed, we will mark your subscription paid in full and send you Farm and Fireside for the remainder of this year--up to 1898--if you will accept any one of the special offers below.

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We are anxious to not only keep all of our old friends, but to get many new ones, hence we give the best bargains in premiums ever known. We guarantee each and every premium to give satisfaction or money refunded.

During the coming year Farm and Fireside will give to each subscriber, in addition to the regular paper, four or more elegant pictures in colors, size 11 by 16 inches. These beautiful Gems of Art ARE ALONE WORTH MORE THAN THE PRICE OF A YEAR'S SUBSCRIPTION. They are executed in the best style of art, on fine paper, in many pretty colors.

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If subscribers who have not yet renewed will accept any of the following offers, we will mark all their arrearages paid in full, and send Farm and Fireside for the REMAINDER of this year—up to 1898.

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Prem. No. 801. ROBINSON CRUSOE
Prem. No. 802. PILGRIM'S PROGRESS
Prem. No. 17. THE STANDARD COOK BOOK
"5 GOOD BOOKS" (offered as one premium on page 23)
Prem. No. 820. HORSE BOOK
Prem. No. 816. POULTRY BOOK
Prem. No. 27. HISTORY AND MAP OF CUBA
Prem. No. 591. SILVER-PLATED SUGAR-SHELL
Prem. No. 590. SILVER-PLATED BUTTER-KNIFE

For 40 CENTS we will send this paper one year and any ONE of the following eight premiums:

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Prem. No. 7. LIFE OF WASHINGTON
Prem. No. 11. THE PEOPLE'S ATLAS
Prem. No. 410. SIX TEA-ROSES
Prem. No. 100. CHRIST BEFORE PILATE
Prem. No. 15. LIFE OF LINCOLN
Prem. No. 26. GEMS FROM THE POETS
Prem. No. 30. BEAUTIES AND WONDERS

For 50 CENTS we will send this paper one year and any ONE of the following four premiums:

ANY SIX BROWNIE BOOKS (Count as one premium)
Prem. No. 155. WORLD ALMANAC
Prem. No. 180. BERRY-SPOON
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For 75 CENTS we will send this paper one year and the Set of Six Silver-plated Teaspoons. They sell in stores for $1.50 a set. For full description see advertisement in back numbers.

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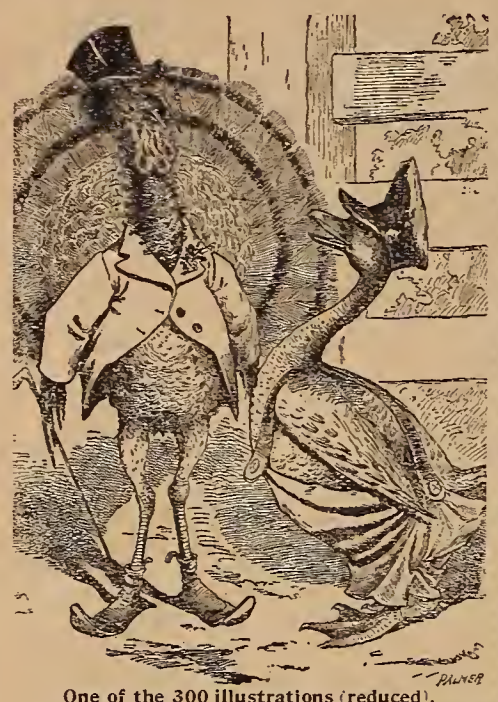
Send silver dimes or post-office money-orders. When postage-stamps are sent, add one 2-cent stamp extra, for we must sell postage-stamps at a loss. **We do not sell the premiums alone.**

Postage paid by us in each case.

For any article on this page order by the premium number and address FARM AND FIRESIDE, Springfield, Ohio.

BROWNIE BOOKS BY PALMER COX



One of the 300 illustrations (reduced).

Palmer Cox has enshrined himself in the hearts of millions of children. As a story-teller he created a new fairy-land, and as an artist he almost incarnated its denizens. His pictures enrapture the children, and they never grow weary of having the stories read and repeated to them over and over. No present will afford children more genuine and lasting pleasure or do their little minds and hearts more good than Palmer Cox's books. Now that a set of books can be had so very cheap, surely parents will not deny their little folks this wholesome treat.

Over 300 New Pictures

BY PALMER COX, IN THE

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A TREAT FOR THE CHILDREN

It is not often that we get such books. I have read them through, and laughed all the way along. It is the jolliest kind of fun from beginning to end. The youngest and the oldest can find in it A BIG LAUGH AND A GOOD SERMON.
ROBERT LOWRY, D.D.

One of the great men of the nation writes: "In our home are five grandchildren who remember Palmer Cox in all their prayers. His Brownie Books have set them wild with delight. They are a triumph, and ought to find a place in a million homes. LONG LIVE PALMER COX."

One of the 300 illustrations (reduced).

Bear in mind, these eight pictures are about FOUR TIMES LARGER in the Books than shown on this page. Size of books, 6 by 9 inches.

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HIS FUNNY PICTURES

Have never been equaled. All his Birds, Brownies and Beasts are arrayed in varied garments, much as ordinary human beings dress. Walk on two legs, think as men and women do, talk to each other, go to housekeeping, dance at weddings, etc.

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The numerous stories and fairy tales are delightful reading for children, and big people, too. Each story teaches a lesson and ends with a good moral. The print is large, the words easy and the covers bright and pretty. All of the illustrations are by Palmer Cox.

One of the 300 illustrations (reduced).

BUSY BROWNIES **Premium No. 899.** This book contains six stories, including "The Brownies at School," "The Brownies and the Farmer," "The Brownies' Plum Pudding," etc. Has 30 illustrations by Palmer Cox, the greatest juvenile artist of the age.

RIVAL BABIES **Premium No. 898.** Mother Bear and Mother Fox each had a son of whom they were very proud, and the fussy times they had with the rival babies is just too funny for anything. This book contains eight other stories and 40 illustrations.

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JOLLY CHINEE **Premium No. 894.** In this book Palmer Cox has pictured the Chinaman and other curious people in his inimitable and amusing way. 34 illustrations.

MERRY MICE **Premium No. 893.** This book contains seven stories and 25 illustrations by Palmer Cox. It tells of their strange adventures and conversations, their frolics, flirtations, courtships, etc., in the author's humorous and grotesque style.

JACK THE GIANT **Premium No. 892.** Never did a child fail to listen with intense interest to stories of the mythical "Jack the Giant," and where illustrated by 31 pictures by Palmer Cox, as this book is, they are of course doubly interesting.

FIRST TROUSERS **Premium No. 891.** Imagine Mother Bear making Chubby Bruin his first pair of trousers, and how comical he looked. There are seven other stories and 31 illustrations by Palmer Cox in this book.

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BONNY BIRDS **Premium No. 889.** Every story will delight and every picture will amuse both young and old. The farcial treatment of birds in this book delight as Palmer Cox alone can.

COCK ROBIN **Premium No. 888.** One of the mysteries of fairy-tale lore is "Who Killed Cock Robin?" This book tells the tale in rhyme and picture, there being 15 full-page illustrations by the world-famous Palmer Cox. This book, like all the rest, is brimful of fun.

Any TWO Books, and This Paper One Year, 30 cents.
Any FOUR Books, and This Paper One Year, 40 cents.
Any SIX Books, and This Paper One Year, 50 cents.

75-CENT BARGAIN OFFER

We will send the above-named TWELVE books, and both of our papers, Farm and Fireside and Woman's Home Companion, for the REMAINDER of this year, for 75 cents.

When the above offers are accepted, no commission will be allowed and the names cannot be counted in a club toward a premium.

Postage paid by us in each case. Order by the premium number and

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One of the 300 illustrations (reduced).

FARM AND FIRESIDE

EASTERN EDITION.

Entered at the post-office at Springfield, Ohio, as second-class mail matter.

VOL. XX. NO. 13. APRIL 1, 1897. TERMS { 50 CENTS A YEAR. 24 NUMBERS.

WITH THE VANGUARD

SECRETARY WILSON has taken hold of the work at the head of the Department of Agriculture like an experieuced hand in the business. One of the first things to receive his consideration is the sugar-beet industry, and it is evident already that under his administration all that can be done by the department for the encouragement and development of this promising industry will be done. Secretary Wilson has contracted for many tons of sugar-beet seed, and is arranging for experimental work iu fourteen states where the soil and climate are suitable. Five or more farmers in every county will be furnished seed for growing the trial crops under the direction of the experiment stations. At the end of the season samples of each crop will be forwarded to the experiment stations of the several states, or to the Agricultural Department, at Washington, for chemical analysis and determination of sugar content. Such preliminary work is in the right line. Before a large sum of money is invested in the erection of a sugar-factory, it should be determined as nearly as possible whether the natural conditions in the locality proposed are favorable to the profitable culture and manufacture of the sugar-beet.

PRESIDENT JAMES H. SMART, of the Purdue University, La Fayette, Indiana, was born at Center Harbor, New Hampshire, June 30, 1841. He received most of his early education in the Concord schools and from private tutors; he received the honorary degree of A.M. from Dartmouth in 1870, and the degree of LL.D. from Indiana University in 1883. He began his professional work at the early age of seventeen, when he was employed as teacher in one of the New Hampshire schools. For four years he was connected with various schools in his native state, and was also associate editor of the "Journal of Education."

He came west in 1863 to accept the principalship of an intermediate school in Toledo, Ohio; in 1865 he went from that city to Fort Wayne, Indiana, where he was for ten years superintendent of the public schools. He then became state superintendent of public instruction, which office he held for six years. In 1883 he was elected president of Purdue University, which position he still holds.

Under the administration of President Smart Purdue has obtained a high standing as a technological institution. The university has been wonderfully progressive, not only iu experimental work on the farm, but also in applied science; including civil, mechanical and electrical engineering. Its laboratories and workshops embrace all that is latest and best in practical equipment, and its courses of study have been arranged with a view to securing definite, practical results in harmony with the distinctive character and avowed purposes of the institution.

Dr. Smart has also served as trustee of Indiana University and of the state normal school, and for thirty years has been a member of the state board of education. In 1872 he was appointed as assistant commissioner for Indiana to the Vienna exposition; in 1878 he was one of the United States commissioners to the Paris exposition; in 1881 was president of the National Teachers' Association, and in 1890 of the American Association of Agricultural Colleges and Experiment Stations; and in 1891 he was appointed United States representative commissioner to the International Agricultural Congress at The Hague.

JAMES HENRY SMART, LL.D.

In addition to numerous pamphlets, etc., Dr. Smart has published the following volumes: "An Ideal School System for a State," "The Institute Systems of the United States," "Commentary on the School Laws of Indiana," and "The Schools of Indiana."

THE following from Mr. W. M. King gives some interesting notes on the old and the new in agricultural jonrnalism:

"It was a pleasant surprise to learn that the veteran agricultural journal, the 'American Farmer,' had been consolidated with the FARM AND FIRESIDE. I have before me volume one, number one, of the 'American Farmer.' bearing the date of April 2, 1819. The editor was John S. Skinner, of Baltimore, Maryland. The 'Farmer' was issued weekly, the price of subscription being four dollars per annum, payable two dollars half yearly in advance. In his announcement the editor said: 'The great aim will be to collect information from every source, on every brauch of husbandry, thus to enable the reader to study the various systems which experience has proved to be the best under given circumstances; and, in short, to put him in possession of that knowledge and skill in the exercise of his means, without which the best farm and the most ample materials will remain but as so much dead capital in the hands of their proprietor.'

"Among the contemporary publications of that period the 'Practical American Gardener' and the 'Plough Boy,' of Albany, New York, were frequently quoted. That the important branches of agriculture were not overlooked is evidenced by the fact that the subject of entomology received due and careful consideration. On page 179 of the volume we find that only six principal varieties of the strawberry were then cultivated in the garden. These were Fragaria Virginianna, common wood or scarlet strawberry; the Hautboy; the Chili; the Alpina, or monthly strawberry; the Ananas, or pineapple, and the White strawberry. These few varieties in comparison with the great number of those of surpassing excellence that we uow have indicates the great development of the fruit-growing industry at the present time.

"On page 265 we find the importance of agricultural chemistry fully recognized in these words: 'The greatest good rendered by Bonaparte to the French nation was derived from his patronage and sedulous exertions in disseminating chemical information throughout France; by which a new aspect and luster was imparted to the agricultural department.'

"The comparatively recent use of bones for fertiliziug is set forth in the following statement: 'It is a well-known fact that in England the means of accumulating manure are husbanded with so much economy that even bones are saved; nay, have been imported from some parts of the continent for that purpose, as we are told in their newspapers. In this country, especially in the neighborhood of towns and villages, immense numbers of bones are carefully thrown away.' "

PRESIDENT MCKINLEY'S message to Congress convened in special session is a very brief, lucid and business-like document on a single but most important subject—the condition of the public revenues. Month by month for three years the current receipts of the government have been less than its expenditures, and the public debt has been increased by borrowing money to meet its ordinary outlays. The message presents the records, showing, in the fiscal year ending June 30, 1894, a deficit, the first since the resumption of specie payments in 1879, of $70,000,000 nearly; in 1895 a deficit of $43,000,000 nearly; in 1896 a deficit of over $25,000,000; and in eight months of the fiscal year of 1897 a deficit of over $48,000,000; making in three years and eight months a total deficit of over $186,000,000. Within three years the public debt was increased over $262,000,000 by bond issues, and the annual interest charge was increased $11,500,000 nearly.

President McKinley urges that Congress should promptly correct the existing condition, and concludes the message as follows: "In raising revenue, duties should be so levied upon foreign products as to preserve the home market, so far as possible, to our own producers; to revive and increase manufactures; to relieve and encourage agriculture; to aid and develop mining and building, and to render to labor in every field of useful occupation the liberal wages and adequate rewards to which skill and industry are justly entitled. The necessity of the passage of a tariff law which shall provide ample revenue need not be further urged. The imperative demand of the hour is the prompt enactment of such a measure, and to this object I earnestly recommend that Congress shall make every endeavor. Before other business is transacted let us provide sufficient revenue to faithfully administer the government without the contracting of further debt or the continued disturbance of our finances."

FARM AND FIRESIDE

PUBLISHED BY

MAST, CROWELL & KIRKPATRICK.

OFFICES:

108 Times Building, New York City. Springfield, Ohio. 1643 Monadnock Block, Chicago, Illinois.

Subscriptions and all business letters may be addressed to "Farm and Fireside," at either one of the above-mentioned offices; letters for the Editor should be marked Editor.

TERMS OF SUBSCRIPTION:

One Year - (24 Numbers) - 50 Cents.
Six Months - (12 Numbers) - 30 Cents.

The above rates include the payment of postage by us. All subscriptions commence with the issue on press when order is received.

Subscribers receive this paper twice a month, which is twice as often as most other farm and family journals are issued.

Payment, when sent by mail, should be made in Express or Post-office Money-orders, Bank Checks or Drafts. When neither of these can be procured, send the money in a registered letter. All postmasters are required to register letters whenever requested to do so. Do not send checks on banks in small towns.

Silver, when sent through the mail, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelop and get lost.

Postage-stamps will be received in payment for subscriptions in sums less than one dollar, if for every 25 cents in stamps you add one-cent stamp extra, because we must sell postage-stamps at a loss.

The date on the "yellow label" shows the time to which each subscriber has paid. Thus: 1jan98, means that the subscription is paid up to January 1, 1898; 15feb98, to February 15, 1898, and so on.

When money is received, the date will be changed within four weeks, which will answer for a receipt.

When renewing your subscription, do not fail to say it is a renewal. If all our subscribers will do this, a great deal of trouble will be avoided. *Also give your name and initials just as now on the yellow address label; don't change it to some other member of the family; if the paper is now coming in your wife's name, sign her name, just as it is on label, to your letter of renewal. Always name your post-office.*

NOTES ON RURAL AFFAIRS.

Boys and the Agricultural College. The "California Fruit Grower" reports that Professor E. W. Hilgard is quoted as having said at a farmers' institute held in San Francisco, "Out of five hundred university students last year eighty-five or ninety were farmers' sons, yet not one of them took the agricultural course even as special student. Only five took the course at all, and they were city boys." To this the "Fruit Grower" comments as follows: "The said five city boys may felicitate themselves upon being given a very expensive education. . . . Is it not strange that in a state like California so few boys are found to take an agricultural course at the university? Only five last year, and those five drawn from an urban population!" But California does not stand alone in this experience. For instance, the same complaint is heard from Cornell University, at Ithaca, N. Y. The agricultural course is the only one in which tuition is free, and yet there are few boys willing to take it, and among those hardly any farmers' sons. Why is it? If there is any calling which for a successful outcome requires the use of brains and knowledge and training, it is that of the farmer and horticulturist. The farmer, gardener or fruit-grower who in our times will not use more discretion, better judgment and a heap more common sense than one half of our doctors, lawyers, politicians and even preachers, is doomed to certain failure.

* * *

The following is quoted from the "California Fruit Grower," speaking on the same subject:

"In a recent address before the Michigan Agricultural College Professor Taft said that there is no calling in which a liberal supply of brains can be used to better advantage than in that of the horticulturist. A practical education is essential in order to understand the nature of food required by different plants, the temperature at which they will develop to the best advantage, the character of the soil best suited to their growth and the amount of moisture needed. These and hundreds of other points of interest and knowledge are supplied through the study of botany, chemistry, physics, entomology and other natural sciences. This knowledge is to be obtained through the agricultural college course, which is to be strongly recommended to the young man who expects to follow the calling of a horticulturist."

* * *

Beet-sugar. I have not the least doubt that in the course of time, perhaps in a very few years, we shall produce all the sugar that the American people will need, on American soil. From questions received and discussed at farmers' institutes recently I notice that there is much interest manifest about the subject in rural circles. "Can we grow sugar-beets successfully?" was one of the queries which came out of the question-box at several meetings. The sugar-beet can be grown almost anywhere. It is only a question of soil, or perhaps of soil treatment and soil feeding, and of selection of variety of sugar-beet, whether the beet produced contains a large enough percentage of saccharine matter to make the profitable manufacture of sugar a possibility. It is claimed that on certain soils or in certain localities the sweetest varieties contain as much as twelve to thirteen per cent of sugar. The sugar-beet growers and sugar-makers of Germany know that the use of manures has much to do in deciding the percentage of sugar. Rank manures produce rank, watery growth. Soils excessively rich in nitrogen and humus are probably not those on which the sugar-beet for profitable sugar-making can be grown. But these are details of the business which have to be learned. The manufacturers likewise have to learn how to get this saccharine matter out of the beet and into the form of commercial sugar at the least possible cost. Sooner or later we will get the run of these things, and learn how to make beet-sugar with a fair amount of profit. There are even now a number of sugar manufactories in successful operation. One of these is at Chino, Cal. The company, according to a California paper, has contracted for 6,500 acres on the Chino ranch, 4,500 acres in Orange county and 2,000 acres in Ventura county, making a total of over 13,000 acres. A general average of ten tons to the acre is a very conservative estimate; and that estimate will give the factory 130,000 tons of beets to work next fall, or over twice as many as were sliced last summer. It seems high time, however, for experiment stations, and perhaps private individuals who are interested in the sugar industry, to make some careful tests about the effect of chemical and other fertilizers on percentage of sugar in the beet.

* * *

Sugar-beet for Stock. In years gone by I have often grown sugar-beets for cows in consideration of the fact that this variety of beet contains far more solid nutriment, pound for pound, than the ordinary stock or mangold beet. But it is not so much the real nourishing quality as succulence that I am after in roots for stock-feeding. In reality I care very little about the amount of starch or sugar, etc., in roots. It is the water I want, for I can supply carbohydrates and fatty matter most cheaply in corn fodder and meal, and protein most cheaply in bran and oil-meals. In addition to all this, cows, in order to do their best, need some sort of succulent food, and there can be nothing cheaper than corn silage; or for people having only from one to three or four cows, the large stock beet and perhaps flat turnips. Ten tons to the acre may be a fair estimate for an average crop of sugar-beets. I think I can raise twenty tons easily enough, at least with the free use of manure, and especially a light dressing of nitrate of soda. But under the same circumstances I can grow forty tons of mangolds to the acre without much effort. And a good supply for winter feeding comes very handy. These beets may be mostly water, but a good daily mess makes a big difference in the flow of milk. In short, I am going to stick to the watery mangold beets for awhile yet, at least so long as I do not keep stock enough to pay me for putting up a silo.

How to Grow Beets. The Ohio experiment station has also noticed this increased interest in the subject of sugar-beets and sugar-making. In a condensed bulletin this station gives some hints about growing it. I quote from it as follows:

"The sugar-beet may be successfully grown on any soil well adapted to potatoes or corn, the ideal soil being a rich loam, somewhat sandy and well drained. The two extremes of heavy clay and light muck lands should be avoided, and drainage, natural or artificial, is essential.

"The ideal site for a beet crop is a clean clover sod. It should be plowed not less than eight inches deep, as early in the spring as possible, and most thoroughly pulverized.

"If a garden seed-drill is at hand the seed may be sown with that, setting the drill so as to drop the seeds two or three inches apart. If no drill is to be had, mark out the ground with a sled marker, making the furrows one inch to one and one half inches deep and two feet to thirty inches apart, and drop the seeds by hand, covering about one inch, and packing the earth over the seeds.

"The planting may be done at any time from the middle of April to the first of June, preferably not later than the middle of May.

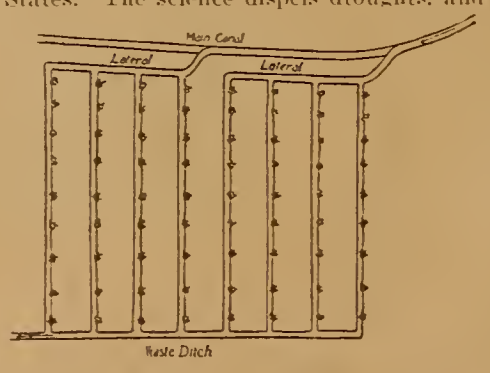
"When the plants reach a height of about four inches they should be thinned so as to stand about six inches apart. Large beets are not desirable for sugar-making, as they contain a smaller percentage of sugar than the medium-sized ones, and for the same reason medium beets are more valuable for stock food.

"After thinning the weeds must be kept down and the surface kept loose. To accomplish this at least cost, some such implement as the Thomas harrow or Breed weeder should be used at least once a week from the date of planting until the tops shade the ground, going over the crop at least once before the plants appear above the surface. If this is neglected, the hoeing required may easily double the cost of the crop."

All that I would have to add is that I like quantity at any cost, and therefore never neglect the application of nitrate of soda, if only at the rate of 100 to 150 pounds to the acre, except on the very richest land. T. Greiner.

IRRIGATING THE GARDEN.

Irrigation is being adopted by the successful gardeners and small-fruit growers throughout the world. The fact that water can be applied to fruits and vegetables at any time required is enough argument to convince any one of the value of irrigation. Thorough tests in the rain-belt regions have demonstrated that irrigation makes better-flavored products and more than doubles the yield. In this sense the application of moisture by the hand of man has become a science. Although practised for the past six thousand years, and a necessity in the production of crops in two thirds of the world, irrigation is but little understood by many of the best farmers and gardeners in the United States. The science dispels droughts, and



makes crops annual successes. At best, the rain dependence is only an uncertain substitute for independent soil moisture by irrigation.

The sources of artificial water supply are so numerous that there is no necessity for any section of the country suffering from a lack of rainfall. Running streams can be tapped by constructing gravity canals; springs may be easily developed, and their waters utilized; wells and cisterns can be pumped of their supply by windmills and other lifting devices. When once acquired, a water-right is worth more than the land it irrigates, even in the sections where rainfall moisture is depended upon for soil food. Gardens and small-fruit orchards and vineyards are especially benefited by irrigation, even though there is an abundance of rain for general field crops. The scientific application of water at the exact time needed solves the long-mooted problem of whether or not the garden pays for any except the professional market feeder. Many abandoned farms in the East could be reclaimed and made to pay as well as desert lands are redeemed in the West and converted into earthly homes of paradise.

Several systems of irrigation are practised, but probably the most general method is the furrow plan. This consists in a main canal, which carries the water to the head, or highest point, of the land, where it is divided into smaller laterals, and conveyed by them into the furrows. These small furrows lead the water along near the roots of the trees or plants, and after passing through the entire lot, empties into a waste ditch, which carries it into a creek or other stream, to be used again by the farmers below. The time occupied in irrigating a given area depends upon the kind of crop and the nature of the soil. In ordinary garden soil containing much manure and little clay a small stream may run from one hour to three times that long on a row eight to twelve rods in length. In most sections it is advisable to make irrigating furrows not more than twenty rods in length, as the ends next the ditch, or main canal, get too much water from soaking while the stream is finding its way to the lower end of the furrows.

Joel. Shomaker.

SEEDS.

The seedsmen have been busy all winter preparing for their harvest that comes in the spring, and they are sure of it. The complications of weather, politics or business do not interfere; the farmer must have seed, and he buys.

While visiting a market gardeu I saw that the young plants in the row stood thickly together, showing too free seeding, while in other rows there were not plants enough. The gardener explained that in order to get plants enough it was necessary to plant a double amount of seed, for it was cheaper and surer to plant double than to run the risk of planting again. As the result of this heavy seeding some parts of the field must be seeded again or plants transplanted to fill the rows. The question of pure or germinable seeds becomes more important every year, for if all reports be true, the quality of seed, for some reason, is generally growing less reliable.

In a test of seeds some remarkable facts came to light. In 233 samples of seed 20 contained three or more poor seeds for every good one, and 34 other samples contained fifty per cent or more poor seeds. In 12 other samples the highest per cent of germinable seeds was forty, as shown by the following: Lettuce, 1 per cent; pepper, 9 per cent; pepper, 6 per cent; onion, 12 per cent; spinach, 15 per cent; spinach 25 per cent; celery, 20 per cent; parsnip, 26 per cent, radish, 16 per cent; squash, 36 per cent; tomato, 21 per cent; melon, 40 per cent.

This may show what risk the farmer runs in planting seed. He is advised to test a sample of every package he buys in a cold-frame, or in the living-room in the window, in March or April. This is a good plan, but if he does this, he will only know then positively that the seeds he has planted will or will not germinate, while as to those not planted he is no wiser than he was before. But this appears to be the farmer's only protection; poor as it is, at least many farmers now practise it. If a sample from a package produces thrifty plants, they take it for granted (and are often in error) that the rest of the package is good.

But the farmer ought not to be put to this trouble to test seeds for his own benefit. When he buys seed he ought to have some guaranty that the seeds are germinable. Laws to regulate the selling of seed are needed, and will come. If the dealer cannot guarantee his seed as germinable, he ought to be compelled to guarantee that the seeds are at least fresh. Such a law will help if it does not provide a complete remedy, for fresh seed has more power of germination, usually, than old seed.

The purity of seed is another thing that needs the attention of the law. I know of cases where farms have been greatly injured by the seed—where the daisy and the wild turnip have been seeded, and seeded to stay, for where either take root they stay. To sell impure seed ought to be considered an offense punishable by fine or imprisonment, or both.

George Appleton.

Our Farm.

FARM THEORY AND PRACTICE.

Permanent Pasture.—When practicable, a permanent pasture is desirable. Fields that are adapted to the production of tilled crops and that are under a close rotation cannot be pastured with profit. If a crop of clover or timothy is removed in the rotation, there is nothing gained by grazing the young grass nor the growth after the crop is removed. The soil needs more of this organic matter than it gets at the best, and this aftermath is worth more as food to the soil than to stock. The skinning of tilled fields by stock, and the tramping when the land is wet, are responsible for many failures to get profitable crops. If less desirable land can be laid down to permanent grasses, and stock be confined to this land, the plow-land of the farm has a better chance.

* * *

Less Fencing.—A permanent pasture makes it possible to reduce the amount of fencing upon the farm. This is an important item. Many are slow to abandon the small fields surrounded by high fences, although they have nothing to commend themselves to the man who figures closely. We cannot control prices of what we raise, but we can control cost of production to a certain extent. The taxes on the field, the cost of the fence surrounding it and the waste of area occupied by the fence go to reduce the income. The taxes must be paid, but the heavier expense due to the fence may be eliminated from the cost of production of the crops. Useless fences cost the farmers tens of millions of dollars a year. The little square field is not in line with progress and cheap production.

* * *

Long Rows.—The possible gain in time of cultivation dne te the lengthening of rows is greater than any suppose who have not tested the matter. By the watch I find that when rows are eighty rods long an acre is cultivated in three fourths of the time required for cultivating in rows thirty rods long. Long rows make work easier for man and team. If we would compete with the West, we must plan for long, narrow fields instead of the little square ones usually seen. The tiling of open ditches and abandoument of useless fences make this possible on a majority of farms. Experience has taught me that the saving of money due to removal of fences where truly not needed, the gain from cultivation of fence-rows, and the gain in rapidity of cultivation where rows are long, amount in the aggregate to a nice sum of money—a sum that would materially increase incomes for thousands if the plan suggested were adopted.

* * *

The Best Fence.—There are many "best" fences. Much depends upon circumstances. A style that grows rapidly in favor is the smooth wire with nine strands. If the gronnd is level, posts may be set twenty feet apart, and stays put in each six or seven feet. These supports should be two inches wide and one and one fourth inches thick. The lower end shonld be set upon a flat stone, if convenient, and each wire should be secnrely stapled in place. Such a fence, made of No. 9 wire, excepting the top strand, which may be larger, is as inexpensive as any of which I have knowledge. It will turn all stoek except pigs, and lasts well. There is little weight upon the posts, and heavy winds or snows do no harm. It is also neat and easily constructed.

* * *

Other Fences.—The hedge has been a disappointment to nine out of ten who have tried it. In a good soil it grows too rank, sapping the soil with its roots for a long distance. It requires close attention, and in careless hands gets away from the owner. Several years are required for getting a substantial fence of hedge, and usually there are gaps or breaks in it. The board fence costs too much, and is hard on posts. The barbed wire is dangerous and grows in disfavor. The rail fenee will soon be seen no more, exeept in our wooded sections, and these are growing smaller. Some form of wire is the fenee of the future.

About the Home.—We are learning that the highway is no place for the pasturage of stock at large, and similarly are we learning that stock needs housing in the winter. The abandonment of old practices makes the numerons inclosures about house and harn unnecessary. One or two lots is all-sufficient on most farms. There is no reason why a house should not stand clear of all snch encumbrance. The fence about the lawn, the back yard, the kitchen-garden and orchard and the roadside should go wherever practicable. The chickens should have their inclosure, and may be given freedom late in afternoons. All these may be small things, but they enter into the cost of maintaining a farm—the cost of producing that which we must put upon the market at a low price. An inch of lead-pencil is worth dollars to a farmer when used in figuring npon actual, necessary cost of production.

David.

GETTING RID OF SURPLUS WATER.

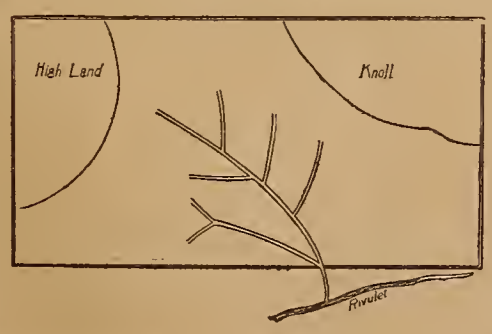
A necessity exists on many farms of providing means to get rid of surplus water on retentive soils, as well as on those places where springs abound, and their overflow renders tracts of more or less extent useless for purposes of eultivation simply by their water-logged condition.

These water-soaked soils, while they continue such, are of very little value as tillable land, the lesser wet soils more so, according to the degree of wetness occasioned by rainfall. Of the former elass of soils removal of snrplus water by snbsoil drainage makes them available for tillage and often the most productive tracts on the farm, while the condition ef the latter is always greatly ameliorated.

While surface drainage by plowing to form sloping-sided beds of more or less width is better than no drainage at all, the removal of the water down through the soil by means of tiles laid two and one half to three and one half feet below the surface at proper distances apart, according to the condition of the soil and the amount of water to be got rid of, gives far greater satisfaction. The advantage is twofold: Removing the water down through the soil leaves it in condition to receive the benefits of acration. Surface drainage merely removes the surplus water from the top of the soil, leaving the soil impervious to air, hence is sodden, cold and inert, and unfit for the growth ef plants. In the second place, if the land is tiled, the rain filters down through the soil and adds fertility to it; the earth arrests the fertilizing matter and holds it for the nse of the crop grown upon the land.

Laying stone drains in small areas will do very well. I have had such do service for many years, bnt with slight fall the drains are liable to become clogged and prove nnsatisfactory when the drains are of considerable length.

I know of stone drains that have been down twenty years that are still doing good service, but the incline is about one foot in eight, and the main drains but twelve to fifteen rods long. Frequently,



as in this case, a good thing can be done, for lots of stone that are an encumbrance can be got rid of; and as the drains are on an ample incline and short, in such cases it is better to use the stone than to be to the expense of tile.

This distinction may be made in choosing between stone and tile: For draining swaley places, the result of springs of comparatively small extent, and having ample incline, I do not hesitate to say that stone, if properly laid, in some respects is preferable to tile. Laid on hardpan, or bottom of marl, which usually underlies the accumulation of muck and soil, and properly covered—the lower layer with the larger stones and topped with small ones and coarse gravel, the whole eight to ten inches below the snrface, so as to clear the plow—the drainage is rapid and effective. The foundation being solid, the stones retain their position indefinitely, and such drains will do good service for a lifetime. The accompanying diagram shows a plan of a half-acre swale in a ten-acre lot, with a gentle slope, drained with stone drains.

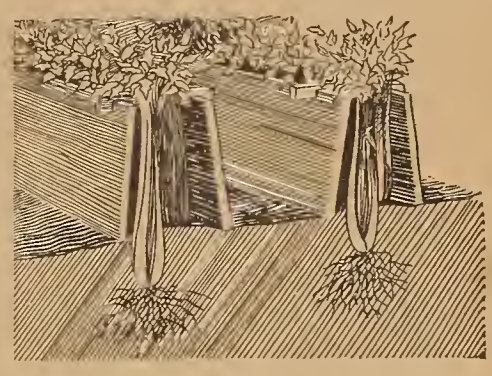
For thirty years the lot had been cultivated, running the plow to the edges of the swale, which was annually mown over with the hand-scythe, yielding a crop of coarse grasses on the wetter portion, with some timothy and redtop on the spaces represented between the drains. A few years ago this swale was taken in hand and ditched something as shown in the rough diagram, with a handy outlet to a "dug brook" by the border. The work was all done at one job, with the exception of the lower drain on the left of the main drain. The ground continued wet for a few rods at that point after the rest of the plot became settled and firm enough to drive a team upon it. After this lower drain was opened in the form shown, which was evidently the outlet of a spring, there has been a constant discharge of water from the outlet of the main.

L. F. Abbott.

NEW CELERY CULTURE—IMPROVED.

Those who have tried to grow celery for market by the method known as the "new celery culture" have probably found it difficult to blanch it perfectly. Boards cannot be easily nsed for blanching it when the rows are so close together. They have also found that unless large qnantities of fertilizers and water are supplied, the bunches are too small to be marketable, and that freqnent irrigation is required because of the rapid escape of moisture dnring the long, hot days in summer. I think I have developed some methods by which these difficulties have been largely overcome. My experiments were not very satisfactory with the "new celery culture" until last year, when I grew very fine celery in rows at an average distance of one foot apart. Some of this celery, marketed at a fancy price to some of the summer resorts near my village, paid me at the rate of five thousand dollars an acre; and from one large plot of early celery I realized at the rate of between two thousand and three thousand dollars an acre. I am so well satisfied with the results of my plan that I shall nse it in my large celery-field this year. The plot on which the celery was grown had received a heavy dressing of stable manure for several snccessive years, and was very rich. Another dressing was applied last spring and plowed in, then the ground was finely harrowed and smoothed with a light plank drag, and White Plume celery-plants set in May. Instead of setting the plants in rows one foot apart, as had been my custom, I set two rows six or seven inches apart, leaving an eighteen-inch space between the double rows. My plan was to board two rows together in blanching the celery, and to leave a space wide enough to walk in when placing the beards. The most of the cultivating was done with a wheel-hoe until the plants were eight or ten inches high, when the blanching-boards were set np and held in place by crosspieces notched and set over the top of the boards. It is very important that the boards be kept well apart until the celery has nearly reached its growth, for the leaves must be kept exposed to the air and sunlight. Near the celery-field is a large brook. Water from this was elevated into a large tank, and used for irrigating purposes. Iron pipes were laid from this tank over the celery-field, with hose attachments every few rods. In this tank I placed some loosely made bags filled with poultry manure. After the water had been allowed to stand a day or two it was distributed along between the celery rows with the hose. To retain the moisture and keep the ground from baking, the eighteen-inch space between the boards was mulched with manure and other material. One could almost see the celery grow. In a short time it grew above the top of the eighteen-inch boards, and in the dark space between them soon commeneed to blanch. It grew over two feet high, and when the boards were then crowded close together, the blanching was completed in a very few days. Every one who saw it said it was the finest field of celery they ever saw. I began to ship it to the dealers in near-by villages and to summer resorts along our railroad. After they had learned about the quality of the celery the demand was so great that I was unable to supply it, and the field of celery was marketed in a very short time. The celery grew so rapidly that it was very tender, and there were no hollow stalks. I have often been troubled with celery going to seed when planted so early, but on this plot of celery, which was nearly all marketed in August, hardly a single stalk went to seed. Celery grown in this way is very easily prepared for market. I take down the boards, and with a sharp knife cut the plants off a little below the surface of the ground, leaving the roots in the ground, which, with the celery trimmings, add something to its fertility. As fast as the plants were trimmed they were tied in dozen bunches and packed in six-dozen baskets.

There is a large saving in labor with this method as compared with the old one of wide rows and banking with earth. Three or four times as much can be grown on the same land, and there is no banking, no digging up the plants with a spade,



and no washing, for there is no soil put around the celery. The plan is an improvement over the one of setting the celery so close together that it will blanch by its own shade, for it blanches the celery perfectly. It is also an improvement over the plan of blanching it with boards in single wide rows, for in boarding double rows one half of the boards are saved. The mulch between the rows retains the moisture, and less water is required in irrigating the celery. No one can be successful in growing celery by this method without making the soil very rich, and there must be water available for irrigation. With the conditions all right there is money in it.

M. Jenkins.

Our Farm.

FACTS ABOUT COW-PEAS.

THE varieties, or so-called varieties, of cow-peas grown in the South are very numerous, and vary greatly in earliness, in habit of growth and in the amount of forage produced.

Professor W. R. Dodson, of Louisiana, experimented last year with sixty-three varieties, and it is believed that there are more than one hundred distinct variations of the cow-pea grown in various sections of the southern states.

The cow-pea has been called "the clover of the South," and in many sections its great value to agriculture has long been recognized. I believe, however, that the cow-pea is destined to occupy a very prominent place in northern agriculture, also, as soon as its merits become better known. There is at least one variety, and doubtless more, that will succeed anywhere that garden or field beans can be successfully grown.

The greatest value of the cow-pea lies in the property which it has of restoring worn soils. This property it shares with all leguminous plants, but it surpasses them all in producing the maximum results in a minimum of time. Clovers, trefoil, lupines and alfalfa are used in different countries as soil-renovators. They are planted in fall or spring, and occupy the ground the entire season or longer for best results. In the South the cow-pea is planted in the late spring or summer, and the crop of vines or peas is harvested or buried for fertilizing purposes in early fall.

The growth and development of this plant is both rapid and enormous, particularly when planted on good land. It probably assimilates more plant-food in a short time than any other leguminous plant. This property renders it of the highest value in a crop rotation, both as a collector of nitrogen and as a preparatory crop. It is not only the nitrogen which is added to the soil, but the great mass of humus or decaying vegetable matter obtained by plowing in a heavy crop of pea-vines, and is rendered available for succeeding crops.

In the North I would not advise the planting of cow-peas on cold or springy soils; but on sandy, gravelly or loamy ground they will succeed anywhere there is reasonable certainty of sixty or seventy-five days without frost after planting. They may be planted any time after late spring frosts are past and the soil has become warm. When designed for plowing under or for hay, I have found it best to sow them with a common grain-drill, using all the tubes, and sowing one to one and one half bushels of peas to the acre. Of course, where sown thus there is no after-cultivation, but the ground should be well prepared before sowing.

I have grown many of the leading varieties, but prefer the Large Early Black variety, for several reasons. It will give the heaviest crop of mature vines in the shortest time. It grows erect, of bush habit, and does not become tangled like many other sorts. This renders it much easier to plow down or cut for hay than the trailing sorts. It will produce a greater amount of valuable fertilizing elements to the acre than any other sort. This has been abundantly proven by careful experiments at the leading state stations. At the Rhode Island experiment station the Black variety yielded 35,003 pounds of green vines to the acre, containing 157 pounds of nitrogen, 32.2 pounds of phosphoric acid and 109½ pounds of potash.

At the North Louisiana experiment station twelve varieties of peas have been grown for three years on the same land, and the entire amount of vines, peas and roots harvested, weighed and analyzed. The average analysis of the six best varieties for three years was as follows:

Variety.	lbs Nitrogen.	lbs Phosphoric Acid.	lbs Potash.
Black	96	19½	81½
Unknown	88	17	78
Indian	79	18	63½
Red	70½	17	65
Clay	64	14½	53
Whippoorwill	55½	10½	40½

The great superiority of the Large Early Black is here most strikingly shown. South Carolina reports a yield of nearly four tons of dry matter to the acre when cured for hay, containing 205 pounds of nitrogen, 33 pounds of phosphoric acid and 155 pounds of potash.

Every system of profitable farming must sooner or later consist of a rotation of crops, with at least one renovating crop in the cycle. The enlightened agriculturist of every country is on the lookout for a valuable leguminous crop which will be an addition to his fields and his system. I feel quite positive that great possibilities lie in the cow-pea for the farmers of this country.

The Arkansas station gives results showing that a rotation of crops including the cow-pea will maintain and restore the fertility of worn soils without manure, and at the same time with profit. Occasionally it may be found that the soil is too poor to grow even cow-peas without assistance, and therefore it will be necessary to add mineral manures—phosphates and potash—at time of planting. In fact, it may be wise to apply phosphates, and perhaps potash, to nearly all soils in conjunction with planting cow-peas.

I have reports from farmers who succeeded well with Black peas last season in Illinois, Ohio, New York, Pennsylvania, New Jersey and Connecticut. I think that no farmer who gives them a thorough trial under proper conditions will ever regret it. E. G. Packard.

A WORD TO DIRECTORS OF AGRICULTURAL FAIRS.

As this is the season for consultation and arranging the premium lists for coming exhibitions later in the season, I suggest that some desirable changes be made in the premium lists. Wherein lies the benefit of awarding a premium for a bushel of selected potatoes, or of large ears of corn, or grains selected from an average crop? Why offer a premium for a bushel of potatoes selected from a ten-acre crop? Is it not the province of the local or state fairs to encourage and promote skill? To produce large yields on lands of fair quality skill and good judgment are required. For this reason the premium should be given to the person whose skill and industry enabled him to produce the largest yield on the least number of acres of an average quality of soil. An award given on such a basis would obviate ill-feeling such as often springs up when premiums are awarded. It is better to let the scales decide the matter whenever it is possible.

Fairs, when first instituted, were designed to promote the agricultural interests by infusing a desire on the part of the husbandman to excel in the production of some one of the many things for which prizes were awarded. Too many fairs are now run in the direct interest of showmen, peddlers, gamblers and humbug catchpennies of all sorts, creating a sort of pandemonium where vulgarity and vice are at a premium, and to the moral injury of the young and inexperienced, who for the sake of having a grand holiday are induced to attend them. Fortunately, some communities are now awakening to the importance of inaugurating a speedy reform, so that farmers and respectable people can attend a purely agricultural fair without finding themselves elbowed aside by "horse-jockeys" and disreputable people of all sorts.

In Montgomery county, Maryland, the members of the Woman's Christian Temperance Union and a large proportion of the solid citizens of the county have petitioned the agricultural society, which holds its annual fair at Rockville, to exclude all questionable side-shows and gambling devices, and to insist on the rigid enforcement of the local-option law.

This is a move in the right direction, and it is to be hoped will become so general that the board of directors of our fairs will reorganize them for the promotion of agriculture, instead of immorality and rascality. W. M. K.

A FEW NOTES ON SEEDS.

But very few persons aside from those engaged in growing seeds extensively are aware of the magnitude of the industry. It is estimated that not less than twenty millions of dollars are invested in land, seed-houses and propagating-grounds needed in the business, to say nothing of the amount paid for the skilled labor required to carry it on properly.

Fortunately for the purchasers of seeds, a good name is the seedsman's surest and quickest passport to success. In scarcely any other business need the buyer take so much on trust. Seedsmen are aware that it is only by the logic of good results, made apparent when the plants prove true to name, that they can hope for an increased demand for seeds. The leading seedsmen have earned a deserved reputation by years of patient labor in this direction.

Old methods of distributing seeds from country stores, and permitting the return of the unused seeds, which have been subjected to damaging exposure, have been to a considerable degree discontinued. It is a matter to be regretted that too many of our agricultural papers have given the importance of seed-testing so little attention. Letters and editorial advice about soils, tillage, fertilization, etc., have been made a prominent feature, while the importance of testing the vitality and purity of seeds, and their freedom from adulterations, has been too much overlooked.

Farmers can well afford to pay more attention to this subject than they have hitherto manifested. As the standard of general intelligence among farmers and truckers increases, they now demand for planting purer seeds and those of a higher degree of vitality. The field test need no longer be exclusively relied on. Since the introduction of modern testing appliances it is possible for the farmer to satisfy himself as to the vitality of the seeds he intends to plant.

In very many of the experiment stations seeds are now tested by competent botanical specialists and by improved sprouting apparatus, by means of which any desired temperature and humidity can be maintained. There seems to be no good reason why the quality of merchantable seeds should not be made to approximate to some recognized standard, as is the case with most other articles of merchandise.

J. W., Jr.

Our Farm.

NOTES FROM GARDEN AND FIELD.

The Japanese Husk Tomato.—Recently one of our readers asked about the Japanese Husk tomato. The majority of old gardeners will remember the ordinary husk tomato of our old-fashioned gardens known as Alkekengi, Cherry tomato, Winter Cherry, etc. This always was, and is still, an interesting plant, and of the very easiest culture. Indeed, it usually comes year after year, from self-sown seed, almost like a weed, where it has once been introduced. The yellow fruit, which is of cherry size, grows inside of a husk, and this, with the fruit inside, drops off at maturity. The plant grows upright, but spreading somewhat like its relative, the egg-plant. The fruit has a sweetish flavor, and pleases some palates even in its raw state; but most people would like it when made into sweet preserves. From the description given a year or more ago of the Japanese Bladder tomato, I expected this to be a similar plant, with larger fruit of red instead of yellow color, and altogether a very interesting novelty. Last spring it was introduced by the well-known importers of oriental plants and fruits, H. H. Berger & Co., of California, and by some of our leading seedsmen under its botanical name, Physalis Franchetti, and, of course, I got a package of seed at once. The plants started and grew exceedingly slow, and in all positions (whether planted out in the open or under glass) failed to bloom and set fruit. In short, under my treatment they were a complete failure both as a vegetable and as an ornamental plant. The catalogues, however, speak of its adaptability to any common soil. Color

of the fruit said to be of the most intense and brilliant scarlet. Perhaps I will have to try it once more, but I have my doubts about the "perfect hardiness" of the plant claimed for it by our seed-sellers, and that "if left in the ground it will sprout up again in spring." An enterprising (?) seedsman of New York advertises this novelty in certain household periodicals under the name of "Chinese Lantern-plant," and tempts customers with an illustration that does great credit to his imagination. According to his description the plant is the greatest thing both as a vegetable and a house plant ever found.

* * *

Fresh Grass for City Horses.—The official organ of the Society for the Prevention of Cruelty to Animals says, "We are pleased to learn from a Paris correspondent that men go about the streets of Paris in summer with carts filled with fresh grass, which they sell to horse-owners for the benefit of horses," and asks, "Why may not the same plan be adopted by farmers or others in the vicinity of our large cities?" I have seen this very same thing in some of our southern cities, and indeed it is there where I first saw crimson clover (then not yet heard of at the North). The great heads of crimson flowers at once attracted my attention when I saw farmers of the vicinity bring their carts loaded with the fragrant green stuff to the city, and evidently finding ready sale for it at five cents a heaping bushel-basketful. At this rate it must have been a very profitable crop, and a great benefit for the growers, as well as for the city horses. T. Greiner.

ORCHARD AND SMALL FRUITS.

CONDUCTED BY SAMUEL B. GREEN.

CLEFT-GRAFTING.

Cleft-grafting is probably more generally in use than any other kind. It is commonly performed to change the bearing of apple, plum and various other trees and plants. It may be used on very small branches or stocks, but is the form that is best adapted to large branches. The tools used on stocks of larger size are a sharp, fine saw for cutting off the stems or branches and a grafting-chisel for splitting the stock and holding open the cleft. On small stocks a sharp knife is used for all the purposes of of saw and grafting-chisel.

Fig. 3.

The work is done as follows: The place selected for the insertion of the scions should be where the grain is straight. The stock is then cut "square" off, and is split through its center to a sufficient depth to allow the scion to be put in place. The cleft should be held open by the wedge-shaped part of the chisel (a large nail will answer the purpose in a small way) until the scions are inserted, when the wedge is withdrawn, allowing the stock to spring back and hold the scions in place. If the stock does not spring back into place, it should be drawn tight against the scions by a piece of string. The number of scions put into each stock will depend on its size, but generally only two are inserted, and on small stocks only one. The inner bark of both scion and stock should come together, as shown in Fig. 1. When inserted the scions should appear as in Fig. 2. The scions should be made wedge-shaped for about one and one half inches where they go into the cleft, and also be wedge-shaped crossways, as shown in Fig. 1, so as to bind the inner bark of scion and stock securely together. They should each have two or three buds above the cleft. The scions must be wood of the preceding year's growth and no older. It is important to use a sharp knife for making the cuts. When the scions are in, all the cut surface should be covered with grafting-wax, as in Fig. 3, or with a ball of stiff clay and cow dung

Fig. 2.

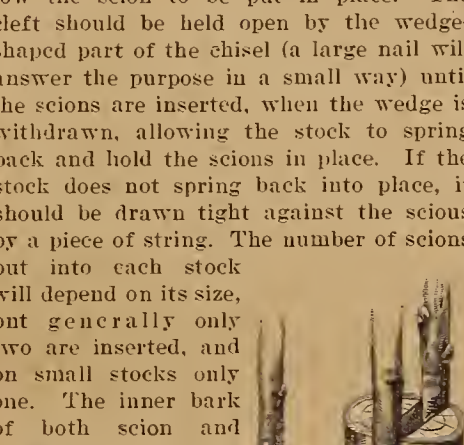


Fig. 1.

mixed; but grafting-wax is most convenient. A recipe for this was recently given in Farm and Fireside.

INQUIRIES ANSWERED.

Evaporated Berries.—M. J. B., Ohio. 1. Early Ohio for early and Gregg for late. In many of the best berry sections the Gregg alone is raised, as it is larger and looks better when dried. 2. The average acre yield of blackcap raspberries in Ohio cannot be far from 2,000 quarts, or about 500 pounds dried fruit, to the acre; but the yield is often more and not infrequently less. 3. The price varies from 10 cents to 16 cents a pound for well-dried fruit. 4. I do not know anything about the figures on dried currants, and think they are not dried much.

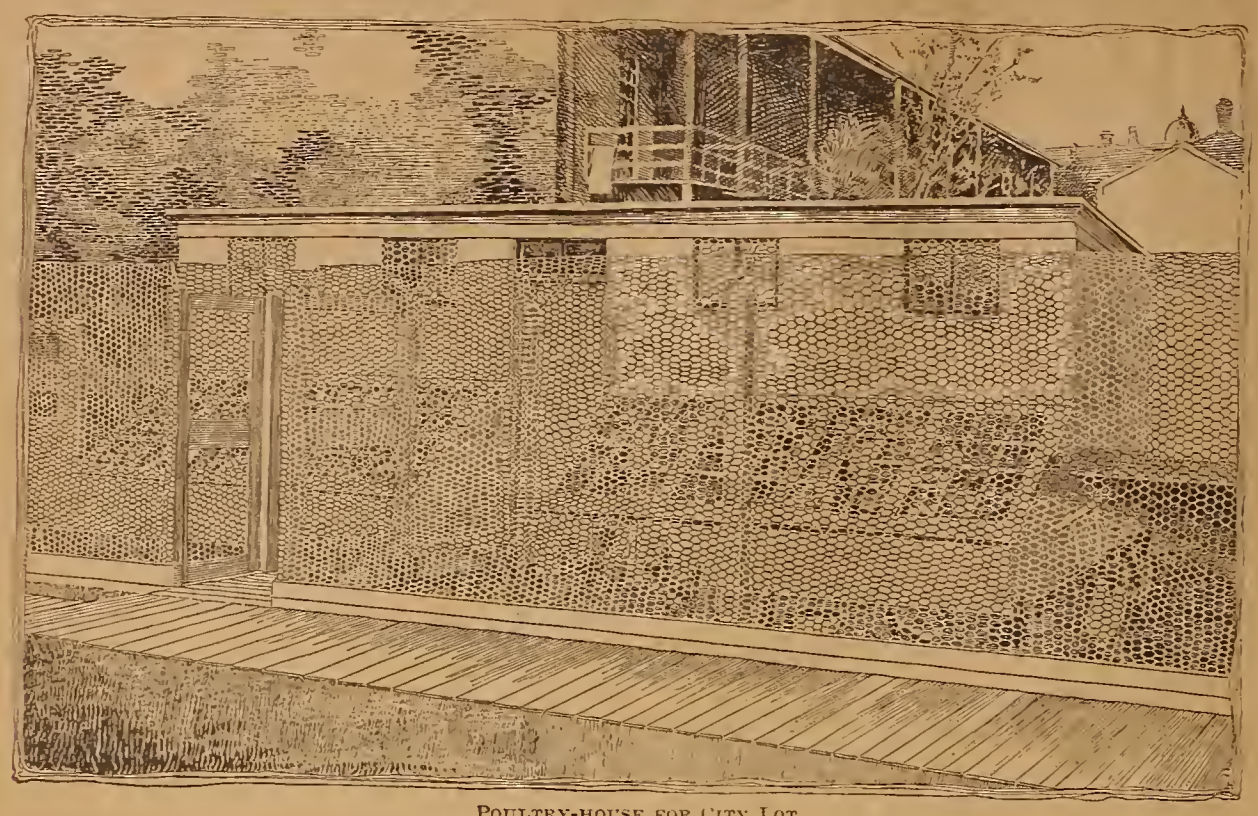
Fruit List—J. S. B., Snow Hill, Md. The following list of fruits is very good for your section, but for marketing purposes you should study what kinds are bringing the best prices in the markets: Early strawberries, Warfield and Haveland, pollenized with Beder Wood; late strawberries, Parker Earle and Buhach; early red raspberry, Hanson; late raspberry, Cuthbert; best early grape, Green Mountain; late, Worden and Concord; best blackberry, the Snyder; best early peach, Early Crawford; best late, Late Crawford; best red currant, the Cherry; best gooseberry, the Downing.

Trees from Near-by Nursery—Quince Sprouts.—J. W. B., Washington, Pa. The trees from your neighbor's nursery are probably as well adapted to planting in your section as any to be found; providing, of course, that they are true to name and well grown. My advice to planters always is to buy from near-by nurseries, providing the stock is good. It would be of no advantage for you to get trees that are grown further north.—The quince sprouts should be taken up with a short piece of the roots from which they have started. If this is done early in the spring, before growth starts, such sprouts will often do well, while if simply removed without a piece of the root from which they have sprung, they are much more liable to fail.

Algae on Fruit-trees.—A. D., Ozone Park, N. Y., writes: "The bark of my fruit-trees—apple, peach and cherry—is turning green. It commences near the ground, and gradually spreads over the trunk for six feet or more. What is the cause of it, and what is the remedy?"

Reply:—The bark of your trees is affected with what is known as Algae, which is a low plant analogous to the mosses and lichens. It seldom forms except in damp places, as on the outside of flower-pots in greenhouses, on damp walls and floors, etc., and I take it your trees are considerably shut in or growing in very moist land. You can easily get rid of it by washing the tree-trunk with very strong salt-water, say about one half the strength of strong brine. Do not get too much on the ground.

Monila.—J. D. K., Grove City, Pa. Your plums were probably destroyed by the disease known as "monila," which attacks peaches, plums, cherries and other stone fruit. The disease winters over in the dry fruit which hangs on the trees all winter, or perhaps remains on the ground. In the first warm days of spring it starts into growth, and forms a white mold that throws off a large number of spores, and which may cause all the growing fruit to rot. It may be largely prevented by spraying the fruit as soon as it sets, and at frequent intervals for several weeks thereafter, with Bordeaux mixture. The aim in applying this fungicide should be to keep the fruit covered with it until within a few weeks of its ripening. Picking and burning the mummified fruits in the autumn and winter is also a help in keeping this pest in check.



Poultry-house for City Lot.

Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

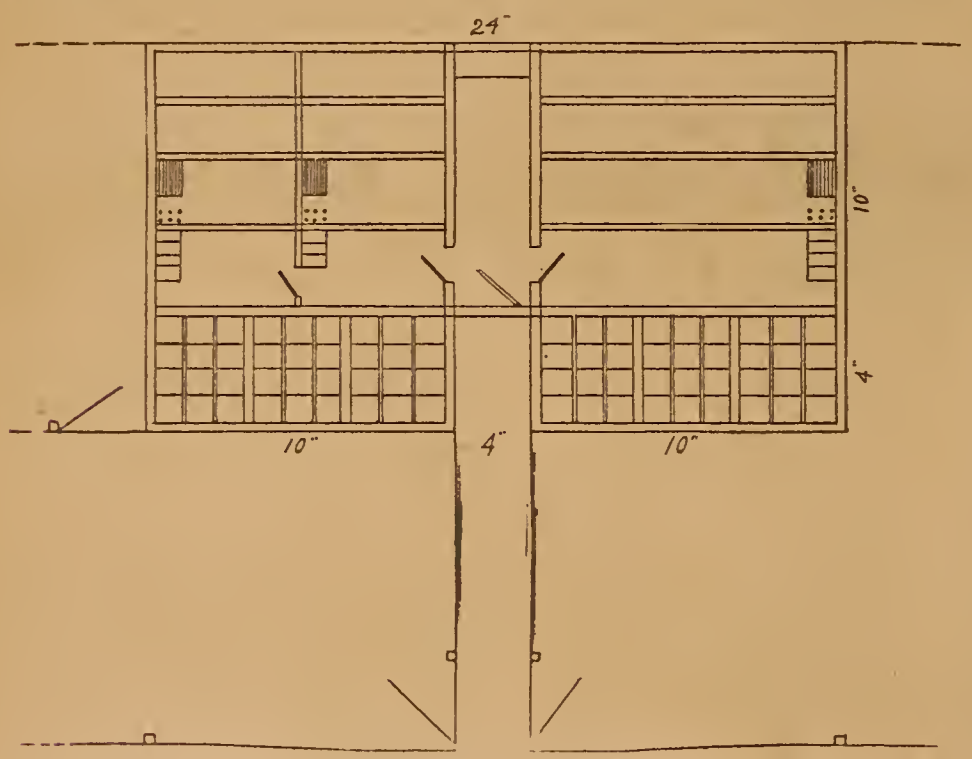
THE EARLY CHICKS.

THE cost of the chicks raised is increased by the number of eggs used in order to secure them; hence, every chick that dies increases the expense of all that remain. As young chicks are naked until well feathered, the down being no protection, the least dampness is fatal unless the weather is very warm. It is when the chicks run in damp grass that they become saturated and chilled. If one strong and active chick keeps the hen continually moving, the weaker ones follow her, and the brood is exhausted, because the hen does not nestle them. Every hen should be confined until the chicks are at least a month old. The brood should be in a convenient location where hawks, cats or dogs can be seen should they attempt to seize any of the chicks, and at night they should be securely fastened against danger. By saving all of the chicks a profit can be made; but where there is a large number destroyed by enemies the result is a loss of time and money.

POULTRY-HOUSE FOR A CITY LOT.

As there are a great many who keep a few fowls for pleasure as well as for profit on city lots, the illustration is presented as a design of one which has given excellent satisfaction. It was built by Mr. John Ramcke, Chicago, who describes it as follows: "The house is in the northeast corner of a lot 68x125 feet. I find that this does not take up very much room, being arranged so as to utilize the space under the roosting-place for a scratching-room. In the large apartment I keep my laying stock, and in the two small apartments the breeding stock. The windows in front of the roosting-place are arranged so that they can be hung to the ceiling in summer or in warm days. The outside walls are all double, with paper between, and also the roof. There is no floor in the lower part, but dry sand and about six inches of oak-leaves. At present I have no ventilator on the house, but as the house is damp in the roosting-place, I am going to put some openings into the hall, and by keeping the transom over the outside door open a little I think I will have ventilation enough.

"In the large apartment I keep thirty-six Brown Leghorns, and in the small ones, twelve Leghorns in one and twelve Plymouth Rocks in the other. At present the east part with the thirty-six Leghorns is a little crowded, but after I have removed the last year's hens it will be better. My pullets are laying, and all my stock is in excellent condition."



Ground Plan and Yards.

BROILERS AND CAPONS.

Broilers are not yet coming into the market except in special lots to those who supply certain customers, yet there is sale for them at good prices. Prices in New York and Boston have increased since Christmas. Old hens sell at twelve cents a pound and large chicks (over two pounds each) bring fifteen cents a pound. The demand for capons has set in, and they are quoted at twenty cents a pound, dressed. Capons are preferred of large size, and if produced from breeds that will give large birds, such as a cross between the Dorking and Cochin or Dorking and Brahma, they will easily be made to weigh ten pounds when fat. This is over two dollars for one bird, and it is no simple statement, as the quotations and sales are now being made at twenty cents a pound for "choice." It should pay to engage in the raising of capons. Even if only one half of the cockerels are caponized and reach the market the capons will pay, especially as the cockerels, if matured, will bring only five or six cents a pound. It would also be profitable to take lessons from experienced persons in caponizing, even if the cost was considerable, as it will be money well invested.

THE YARDS.

Just as soon as the frost is out of the ground, and as early in the season as possible, scatter air-slaked lime over the yards and spade or plow them, and then scatter more lime over the surface. In this manner not only will the yard be clean, but the next frost (if any) and the lime will aid in the destroying of the germs of disease, while the yard will be made clean by turning under the droppings. Do not harrow or rake the yards, but let the hens go to work and scratch in the rough ground. It will be good for them.

INQUIRIES ANSWERED.

Spurs on Laying Hens.—R. A. G., Keokuk, Iowa, writes: "I have three hens; there is but one laying, the others have spurs. Does this make any difference in the laying?"

Reply:—It will not affect them as layers.

Crossing Breeds.—E. W. W., Manito, Ill., writes: "What do you think of introducing two Light Brahma males into a flock of Plymouth Rock hens? What kind of a cross would they produce?"

Reply:—You don't state number of hens. No advantage will be secured by the cross. It is better to use Plymouth Rock males.

Amount of Space.—N. J., Westfield, Mass., writes: "1. How many square feet of space does each hen need in a building? 2. How long must a coop be that is 10 feet wide, 7 feet in front, 5 feet in the rear; that is, in two pens that will hold fifty hens each so that they may be kept in good health?"

Reply:—1. About 10 square feet. 2. Each apartment should be 50 feet long to give plenty of room for scratching.

Overfeeding.—H. E. B., Troy, Pa., writes: "I have a sick Hamburg pullet which has been ailing for about three weeks. At first her comb turned very dark, next her legs failed her, she could scarcely walk, reeling from one side to the other, then her wings drooped. She eats well all the time, but can scarcely get about."

Reply:—You omitted detail of management. The symptoms indicate overfeeding.

Head Turning Green.—H. B. L., Ravenna, Ohio, writes: "I have a Buff Leghorn hen, and I noticed about a week ago that her head was turning green; then the swelling increased so that her eyes were sunk far back in her head; the comb was very pale and cold, and the eyes watered a great deal, but she eats well."

Reply:—You should have given mode of management. Probably due to exposure. Anoint head with linseed-oil, and keep the bird warm, feeding on lean meat or nourishing food.

A Number of Questions.—J. A. M., Mercer, Mo., writes: "1. What is the best variety of geese? 2. What is the best variety of ducks? 3. How many eggs do each lay a year? 4. Should they have access to a pond to be raised successfully? 5. In what months do they begin to lay? 6. What is the best variety of turkeys? 7. How should they be mated? 8. Can they be raised if they are confined? 9. How many eggs do they lay a year?"

Reply:—1. Probably the Embden. 2. Pekins. 3. Geese from 20 to 40; ducks from 80 to 150. 4. Not necessary, but an advantage. 5. Ducks in February, and geese in March or April. 6. Probably the Bronze. 7. One gander to five or six hens. 8. Not without difficulty and labor. 9. From 30 to 60, individuals differing.

Our Fireside.

OVER THE HILLS.

Over the hills and far away,
A boy steals from his morning play,
And under the blossoming apple-tree
He lies and dreams of the things to be;
Of battles fought and of victories won,
Of wrongs o'erthrown and of great deeds done,
Of the valor that he shall prove some day,
Over the hills and far away—
Over the hills and far away!

Over the hills and far away,
It's oh for the toil the livelong day!
But it mattered not to the soul aflame
With a love for riches and power and fame!
On, O man! while the sun is high—
On to the certain joys that lie
Yonder where blazeth the noon of day,
Over the hills and far away—
Over the hills and far away!

Over the hills and far away,
An old man lingers at close of day;
Now that his journey is almost done,
His battles fought and his victories won—
The old-time honesty and truth,
The trustfulness and the friends of youth,
Home and mother—where are they?
Over the hills and far away—
Over the hills and far away!

—Eugene Field.

PHIL KENT'S EXPERIENCE.

BY MILLER PURVIS.

Chapter IX.

While Phil Kent was working out the problem he had set himself to solve, Frank Meade was enjoying himself to the top of his bent. He found storekeeping a pleasant business as long as the work could be done by proxy. To be sure, some of the older customers of the store dropped off after awhile, but Frank did not miss them, as he left details to his clerk as much as possible. Those who left were among the older people, and when the clerk called Frank's attention to their defection he explained that some of them had said that there was too much noise about the store and too many loafers sitting around to suit them. He said Snapp had never allowed young men and boys to gather at the store and gossip, but had discouraged anything of the kind, and had prided himself on the quiet and good order that he preserved.

"That's just an excuse," said Frank; "why, over at Farmdale Jake Long's store is always full of idlers, and he has grown rich in business there. You must be friendly with people and treat them decently or you can't do business with them. For every one of the old fogies who leaves us we get three younger fellows whose trade is worth more, and we're not losing anything. We have more people coming in and out than any other store in town, any day in the week."

"I know that," replied the clerk, "but some of the people who are leaving us are our best cash customers, and I don't know but Snapp was right, though I sometimes thought he was a little too strict."

The clerk had been in the employ of Snapp on busy days and at such times as he needed help for a day or two, and had picked up a good knowledge of the business, and when Frank got the store Snapp had recommended the young man to Frank, who had hired him temporarily at first, and then permanently, and finding him an adept at the business, it was not long before the store was left very much of the time in his charge.

Money came in very rapidly, it seemed to Frank, who had never had an opportunity to handle much of it in his father's time, and he congratulated himself that he was growing rich. His wife established herself as the leader of a set of young people, and began to take advantage of social opportunities opened to her.

Once or twice when bills fell due, and Frank had not the money to meet them promptly, his city creditors had told him not to mind it, as they were in no hurry. They had examined into his circumstances, and knew that he had a farm that was only mortgaged to one fourth its value, and his credit was rated good accordingly.

The temptation to idleness and pleasure was greater than Frank could withstand, and in the end he was rarely to be found at his place of business. There was no outing that he and his wife did not attend, and on every occasion they were the leaders in display and extravagance.

The other business men of the town were not ignorant of his actions, but it was not to their interest to warn him of the end he was approaching. Instead of doing this they quietly repeated to their friends and customers what he was doing, and these in turn talked about it to others, until it soon became well known that Frank Meade and his wife were going at a pace that could not last.

As the summer advanced Frank felt less and less the obligations of business, not because of any recklessness as to consequences, but because he had never had a business training. His father had not thought it worth while to induct him into any of the secrets the knowledge of which might have arrested his downward career before the final disaster overtook him.

Without giving the matter serious attention, he had vaguely thought that the man who sells goods must make his money very easily and rapidly. To him the selling of fifty dollars' worth of goods a day seemed like a large business, and he rarely stopped to think that if he spent more than his percentage of profit he must fall behind at the end of the year.

His clerk was a conscientious young fellow, or the end might have been hastened. This young man tried earnestly to keep the patronage up to the highest point, but found it impossible to do so, and more than once tried to debate the matter with his employer.

Frank would listen to him without remark, and then put off the consideration of the question by saying, "You are all right, Charlie, and mean well, but you need not worry over these things. I furnish the money and you get your pay regularly. I never had much of a good time in my life, and I am going to take a vacation for the first year, and then settle down."

So things went on through the spring, summer and into the autumn. Frank's credit

Presently she emerged, holding a package in her hand.

was good up to a certain point, and the wholesale men knew that they were not imperiling their interests in any way by giving him credit up to the limit.

That limit they had fixed far enough within Frank's resources to make themselves perfectly secure, and one day in October he got a letter from a firm with which he had been doing business that was very much different in tone from anything that he had ever received from them.

This letter was couched in the most courteous language, but it made plain the fact that the amount he owed the firm was needed very badly, and they hoped he would find it perfectly convenient to give it his immediate attention.

The letter nettled Frank not a little, and as he had not the money to meet the account, be applied to the local bank for the amount.

"I presume you want to give personal security," said the banker, suavely, when Frank stated his wishes.

"I suppose my name is good enough for a few hundred dollars," said Frank.

"Certainly it is," assented the banker; "but you know life is very uncertain, and we must protect our depositors in the event anything happened to you."

"Would not my estate be able to pay the amount?" asked Frank.

"Without doubt," was the smooth reply; "but such things must go through the processes of law, and the law's delays are frequently very long drawn out."

The truth was that the banker was in the habit of charging large interest on short loans, and he knew that any complication with the courts would shut him off with the legal rate.

"Very well," said Frank, preparing to go. "I will bring in a friend with me to sign the note."

That was the beginning of real trouble for Frank. As long as he had plenty of money he had plenty of friends, but now that he needed money he found that it was hard to get one to go his security for a few hundred dollars.

He tried one and another, and finally went to Mr. Snapp, of whom he had bought the store.

"I don't think I can go on your note, Meade," the old man said, kindly.

"Why not? Are you afraid you will have it to pay?" asked Frank, hotly.

"That is not the question with me," replied Snapp. "I might have it to pay and I might not. The fact of the matter is, Meade, that you have not attended to business in a business way, or you would have no need to borrow money. I sold you the store with a good trade, and while it may have fallen off some, as often happens when one man who has done business for a good many years sells to another, you ought to have picked up enough more trade to have made it even. I increased my trade from the time I began until I sold to you, but I attended to business instead of leaving it to a clerk. Your clerk is all right, but no man can be successful in any business if he does not attend to it himself. It is the same in every business. The merchant who leaves his business to his clerks while he spends his time in pleasure, or the farmer who leaves the hired man to plow while he idles in town day after day, will both fail in the end. I hope you will tide over this little difficulty, but I cannot help you, as I made it a rule of my life never to go security for any man, and never to ask a similar favor."

"It's a mere matter of form," said Frank, uneasily, "and I thought you would not object."

"Many a man has been ruined by signing a note for a friend as a mere matter of form," replied Mr. Snapp, "and the man who begins doing this does not know where he will find himself in the end."

Keeping store did not appear in the same bright light to Frank that evening as he went back to his store that it had before he began it. He began to see that he had made a mistake, and like most men who make this discovery he was inclined to blame his wife.

"Write a letter to those fellows, and tell them we'll attend to their matter in a day or two," he said to his clerk. "I'll look around and get the money for them."

As he went home he cast about in his mind for means to raise the desired amount, but could not think of a place where he could get it.

The next morning the matter did not seem of such great importance, and he went on a nutting excursion with a lot of young folks, and by the next day he had ceased to think of it, except for an uneasy feeling when for a moment it came to his mind.

A week passed, and he received a letter from his creditors saying that they had drawn on him through the local bank for the amount, and expressing a hope that he would protect the draft.

Frank made another effort to secure the money to meet the draft, but failed. He had not the business training to understand what a serious matter it was to let a draft go to protest, and when a bank clerk came in with it the next day he told him to let it go back.

"They failed to pin a 'no protest' on the draft," explained the clerk, and I'm afraid we shall be compelled to let it go to protest."

"Well, let it go," exclaimed Frank, angrily. "I guess I can stand it. If they hadn't been in such a hurry for their money they wouldn't have needed to draw on me."

As this was a matter that did not interest the embryo banker he departed, and the draft went to protest. With this protest Frank's credit rating with the commercial agencies went to pieces, and it was not long before his creditors were all after him.

"I don't see how it happens that I am so short of money just now," he said to his clerk one morning, after the clamor for payment from his creditors had become so insistent that it interfered with his sleep at night and his peace of mind during the day.

"You have spent more than your profits during the year," said the clerk.

"How do you know?"

"From my books," replied the clerk.

"Let me see them."

Frank had never paid much attention to the books kept by the clerk, and had only a misty idea of bookkeeping, for his father had thought this one of the things not necessary on the farm, and when the clerk showed him that he had spent far and away more than he had earned during the year he was astonished.

"Money always seemed plenty," he said; "how did it happen?"

Then the clerk showed him some of the mysteries of bookkeeping, and he began to see that the storekeeper, as well as the farmer, must look to his expenses if he would succeed.

For a week or two Frank felt that his time of trouble had come, and that ruin was staring him in the face. Then Snapp came to him with a proposition. He would take back the store, with the building, and advance Frank money enough to pay his debts if they exceeded the store at a fair valuation, and add the amount to the mortgage he already held on his farm.

Frank was in a state of mind to accept anything at this time, and in the end found that he would have something left after he had discharged his debts, and that instead of adding to the mortgage on the farm it might be reduced to $2,000.

As the result of a year's business he found himself with a mortgage on his farm and back at the place where he began. It was a bitter lesson to him, and the pride of him and his wife received a terrible shock; but it was the best they could do, and both of them submitted with the best grace possible, and went back to the farm to begin life over again, carrying the additional weight of debt that they had accumulated.

Their year of pleasure had been a costly one, and it left them nothing but vain regrets, which spoiled the memory of the pleasures they had enjoyed.

Chapter X.

As Phil Kent entered the house after hearing from Sim Hall that Squire Dumas had made an assignment he could not conceal from his sister the trouble that was weighing him down. He was as ready to give up the fight as he had ever been in his life, and he could not think of a place where he would be able to borrow the amount he needed.

Besides this, his pride was dreadfully hurt to think that he had failed so soon. He lingered at the door to take a look at the brilliant beauty of the asters, chrysanthemums and zinnias in the yard. The red glow of the sinking sun shone on the crimson cheeks of the apples that weighted down a tree in the orchard, and the three cows watched him lazily as they chewed their cuds at the gate of the pasture.

He must lose all these things, he thought, for just at that moment it seemed to him that ruin was staring him in the face, and threatening him with instant financial destruction. Finally he entered the house, and in an instant Kate had detected in his looks symptoms of trouble of some kind.

"What is it, dear?" she said, coming up to him.

"What is what?"

"The trouble you are in?"

"It is nothing alarming," he said, with an attempt at cheerfulness. "We'll come out all right in the end."

"Now, Phil, don't try to fool me," said Kate, slipping a hand under his arm. "I know that you are in trouble, and you must tell me just what it is."

"It's about the payment," said Phil, desperately. "It's due to-morrow, and I haven't money enough to meet it. I wanted to surprise you by giving you the canceled note, and when I found I hadn't enough to make

the payment I concluded to borrow the remainder from Squire Dumas, who, you know, promised to lend me money if I needed it; but when I started to see him Sim Hall came along and told me the squire had just made an assignment."

As Phil proceeded, talking hurriedly, as if he wanted to get through with the worst of it, a slow smile dimpled Kate's face. Then a sorrowful look came to it, and she said:

"Poor old Squire Dumas! It will be hard on him, won't it."

"I presume it will, but it seems to me it is pretty hard on us, too. I know I am taking a selfish view of it, and, of course, I am sorry for the squire, and all that, but you don't seem to understand that we are in a serious situation ourselves."

"Wait a minute," was Kate's reply, as she disappeared in the direction of her bedroom, much to Phil's astonishment. Presently she emerged, holding a package in her hand.

"How much do you lack to make your payment?" she asked.

"To be exact, I lack just ninety-eight dollars and twenty-three cents," answered Phil, with a desperate sense of humor.

"I think," said Kate, deliberately unrolling the package, "that you should have told me about this a long time ago. It isn't fair to me, as a half owner of this farm, to keep me in ignorance of the real state of our finances."

"I know it isn't," Phil said, peuitently, "but I wanted to surprise you."

"I must say you succeeded," said Kate.

"It saved you from worrying over it, at least," was Phil's defense, "and that was so much gained."

"You want to worry for the whole family, do you?" asked Kate, finally taking the paper from the package in her hands, and calmly smoothing out a roll of bank-notes.

Phil watched the bank-notes in dumb amazement for a moment.

"In the name of all wonderful things, where did you get that roll of money?" he asked.

"It is a little that I have saved from my butter-and-egg money, and what I sold the chickens and garden-truck for," said Kate. "You see, I was thinking about the payment, and wanted to surprise you."

"You could not have succeeded better," said Phil, with some show of emotion, going over to his sister and patting her brown hair much as he had done when she was a little girl.

Phil walked around the room for a minute or two just to work off the exuberance of feeling that made it impossible to sit still.

"It seems to me that more cows and more chickens would be a pretty good investment," he said, turning aside to Kate. "It looks to me as if I made a mistake in my estimate when I said they would serve to buy—flummery, wasn't it?—one time when we were talking the matter over."

"Flummery was the word you used," said Kate, "and I resolved then to teach you a lesson. You are like a great many other men who know a vast deal more than any woman could possibly accumulate in the way of information. You think cows and chickens are all right to furnish pin-money with, and furnish the women with 'flummery,' as you call it, but that they cost about as much as they come to."

"Don't say another word," cried Phil, in mock humility. "I surrender without conditions. You may have a dozen cows and five hundred chickens, all of highest lineage and purest blood, if you want them, and I shall willingly toil early and late to furnish them with proper food, if you will only manage them as well as you have the stock now on hand. I shall constitute you general manager and master of the exchequer from this date."

"Not quite that, Phil," said Kate, "but I do think that we shall get along much easier if we will only pay more attention to the things for which there is a good market, such as butter and eggs, and less to the big crops, for which there is a slow demand."

"Spoken like a true student of the situation," said Phil. "From this day we are going to begin diversified farming, which includes cows and chickens, and everything else that other people neglect."

That night Phil slept sweetly, for his first difficulty had been overcome, and the way opened for a solution of the whole problem of successful farming.

The next morning Phil and Kate drove over to Riverside to pay the note, and at the court-house they met Squire Dumas, with the wrinkles on his forehead seeming deeper than ever.

"I am very sorry for your trouble, squire," said Phil, shaking hands with him, "and am only sorry that I am not in a position to help you."

"Thank you," answered the squire. "I may have to call on you to go over the books with me, as I am not very good at bookkeeping myself, and would be glad of help."

"How much are you involved?" asked Phil.

"Not a cent," answered the squire, much to Phil's surprise. "I lent him a little money not long ago, but I got a hint where it was going to, and got out of it safe and sound, and didn't lose a dollar."

"I fail to understand you," said Phil, with a perplexed look. "Sim Hall told me last night that you had made an assignment, and now you tell me that you haven't lost a dollar. I am a little lost, I think."

"That Sim Hall is a regular old gossip," exclaimed the squire, in disgust. "Come to think it over, he was in the store last night when I was talking with Jake Long. It's Jake who has made the assignment, and I am the assignee, and have just come over to get the matter in shape."

"Jake Long is the last man whom I would have guessed as being in financial straits," said Phil. "How did it happen?"

"Oh, it's the same old story," answered the squire. "He wanted to make haste to get rich, and invested in some wild-cat mines, and began speculating in wheat through a broker on the Chicago board of trade, and finally got desperate over some losses, and like every one else who tries to get something for nothing, he lost what he had."

"I'm sorry for Jake," said Phil, "though I never thought very much of his way of doing business."

"He will be a good example for us older chaps, as Frank Meade has been for young men. Frank's moving back to his farm today two thousand dollars poorer than he was when he left it. How are you getting along?"

"I'm feeling encouraged," answered Phil. "I'm over here to-day to pay off the first note on my farm, and I think Kate and I will get through all right now, though I felt rather blue last night when I heard you were broke up." And he proceeded to relate the story of his discouragement, and how Kate came to his help.

"You are on the right road, my boy," exclaimed the squire, heartily, "and if you keep on you'll succeed. You've made a thousand dollars' improvement in the looks of the Pearson place already, and it would sell for much more to-day than it would when you bought it. I predict that you'll die rich—if you live long enough."

My story is ended. I might tell you of Phil's struggles, and some of the lessons he learned before he had the farm paid for, but it is needless to do so. It is sufficient to say that he paid for it without further help than Kate's cows and chickens, and after this was done continued to improve the farm until now it is one of the show-places of the country. Most of the people who read the farm papers have heard of Phil Kent, though not by the name I have given him.

Frank Meade struggled along with his burden of debt for three or four years, and at last, through Phil's advice, he sold half his farm to the railway conductor, Mr. Little, and that gentleman and his wife are now successful farmers, happy and contented.

Jake Long saved enough from the wreck to begin life again in a small way, but his old business tact has deserted him to some extent, and he will never reach the place he once occupied.

Dan Collins is growing old cheerfully, and is now Phil's right-hand man, and imagines that he is of great help about the farm, where he works industriously among the strawberry-beds or in the berry-patches and orchard, or helps Kate with the chickens.

The good effect of Phil's modern methods have not been lost on the neighborhood. First his nearest neighbors began to improve in their way of managing their farms, and from them the good work spread until in every direction the farms were made more tidy and orderly, and more attention was given to planting and cultivating the crops, until now there is not a prettier farming neighborhood in all the land than that which lies about the village of Farndale.

Phil Kent's experiment was a great success, for he not only made a home for himself under adverse circumstances, but he taught his neighbors that farming can be made to pay, and in the end they came to believe the truth of George Washington's saying, "Farming is the noblest industry in which man can engage."

THE END.

BERRIE'S IMPROMPTU DINNER.

BY LIZZIE CLARK HARDY.

"The very good Lord! Joel Simpkins, I want to know if you can tell me what won't happen next time? Berrie! Berrie! come down here this minnit!"

The small boy who had brought the mail from the little town six miles away on the Kansas prairie had gone whistling down the road, and Mrs. Simpkins held the open letter in her hand, with a look of consternation on her motherly face.

"What is it, Prudence? What has happened now? Though nothin' couldn't happen to make things any worse than they are jest at present."

The sound of a light footfall on the stair, and a slender, flower-faced girl with long-lashed brown eyes, and a crop of dark, wavy hair gathered in a knot at the back of her shapely head, stepped into the room.

"What is it, auntie?" she questioned, glancing from the open letter to her aunt's troubled face.

Aunt Prue adjusted her glasses.

"I want you to hear this, Berrice Blaine, and then tell me, if you can, what be we goin' to do?" Then she read, slowly:

MY DEAR AUNT PRUE:—I shall be passing through Logan on the eighteenth, and I mean to stop over and take dinner with you and Uncle Joel. My appetite is something wonderful, but if your pumpkin pie and plum pudding are what they were in days lang syne, you will need to have a good supply on hand. Can only stop over one train. Business trip to Denver.

Yours lovingly,
HUGH COURTNEY.

"Hugh! Hugh Courtney comin' to see us! The land sake, Prudence! won't you be glad to see a face from old York state once more?" And Uncle Joel carefully moved his rheumatic limb to an easier position, and settled back in his comfortable easy-chair.

"Now, Berrie, I want to ask you if that ain't jest for all the world like a man. He'll be glad to see Hugh, and so shall I, bless his dear heart! And that's all he thinks or cares, and here we be taken by surprise, and for the first time in our mortal lives, Berrie, without a single, solitary thing in the house to eat but pork, potatoes and flour. What shall we do, Berrie? I shall be mortified to death, I know I shall."

Berrie smiled reassuringly over at Uncle Joel, and then asked:

"And who is this wonderful Hugh Courtney that his coming should upset you so much, auntie?"

"He's your Uncle Joel's sister's son. She married one of them rich Courtneys, and lives in New York City. They're awfully high-toned. When Hugh was a little fellow he used to come out and stay for weeks on the farm. He was a fine little chap, and I set great store by him then; but he's a grown man now—must be about twenty-five, and most likely jest as stuck up as the rest of them Courtneys."

"I'll bet you don't find Hugh Courtney stuck up, not a little bit. He wa'n't built that way," said Uncle Joel, easily.

"Well, stuck up or not, he'll expect somethin' to eat. He don't know that you're laid up with rheumatiz and not able to do a hand's turn, nor I'm jest about good for nothin' with this pesky sprained wrist, and t'ain't no ways likely he knows we've had a drought, and didn't raise a livin' thing to eat. Pumpkin pie, indeed! I'd admire to know where the pumpkin was to come from."

"And plum pudding, too, auntie. That's on the bill of fare, and we are six miles from a raisin."

"And not even a chicken, Berrie. I sold the last one yesterday, because we had nothin' to feed them."

"Well, well, Prudence, I wouldn't make sich a fuss; jest give Hugh the best we have, an' I guess it will be all right."

Aunt Prue fairly groaned.

"And have your sister's folks think we're poorer'n Job's turkey? That's all the pride you've got, Joel Simpkins."

Berrie had been looking out of the window, with a little pucker between the straight black brows.

"Now, auntie," she said, brightly, "just leave it all to me, and I promise that your worthy nephew shall have a dinner fit for a king or a congressman, with never an inkling of the depressed state of our larder just at the present time; only let me have a little time to meditate," and she whisked out of the door, with a laugh.

The Simpkins were really well-to-do people, but a season of unusual disaster had reduced them to what seemed to them the direst poverty. They were childless, and when Mrs. Simpkins' brother, a minister, had died, leaving his motherless daughter alone in the world, they had gladly welcomed her to their home and hearts. Berrie was a graduate, a thorough musician, and had been her father's housekeeper since her mother's death, two years previous.

The change had been a strange one to her—from an eastern city with its social privileges, where she had been a favorite in society, to the lonely Kansas farm—but she had bravely taken up life's burden, and for the past year she had taught the school in the Simpkins district.

"Behold the pumpkin pie, auntie?" said Berrie a few minutes later, holding out a pumpkin about as large as a billiard-ball. "It's the sole and only one on the farm, and I've had it hidden away in the empty corn-crib for a month, and here, Uncle Joel," showing a little paper sack, "is the seed-beans; they, too, shall be sacrificed on the altar of hospitality. Now, auntie, let's take an inventory. Here is molasses, dried apples and half a dozen crackers, a handful of currants, and—yes, really, a quart of cranberries. We are rich indeed. The mince pie and plum pudding are an established fact, auntie mine."

Aunt Prue looked incredulous as Berrie darted to the door and called, "Johnnie, Johnnie Brown!" to a small boy going by with a gun on his shoulder, "are you going duck-hunting, Johnnie?"

"Yes, Miss Berrie; they're thicker'n hair over on Turtle lake now."

"Well, Johnnie, if you will bring me a pair of ducks this evening I'll give you that copy of "Robinson Crusoe" you were looking at the other day."

"All right, Miss Berrie; it's a bargain," said the delighted Johnnie.

Berrie beamed triumphantly on her relatives.

"Fate favors the valiant," she said, laughing. "Now listen to your prophetic niece. To-morrow at ten o'clock the train bearing the great eastern potentate will arrive at Logan. He will hire a conveyance, and at eleven o'clock he will arrive at the Simpkins residence, to be received by his respected aunt and uncle in the purple and fine linen of former days, while your handmaiden prepares the feast of fat things in the kitchen. There will be roast duck with dressing—oh,

my, auntie!—roast pork and cranberry sauce, creamed potatoes, pumpkin pie, mock mince pie that will pass for the real article, and plum pudding compounded of molasses, dried apples and currants, Parker house rolls, and coffee fit for the gods. Now, as the edibles are still in their natural state, you will permit me to at once assume the role of chef."

Then began the elaborate preparations. Berrie's previous experience as her father's housekeeper stood her in hand in the present emergency. Uncle Joel and Aunt Prue looked on in doubtful amazement, and assisted as much as their maimed condition would permit. In good time Johnnie presented himself with the ducks, and became the proud possessor of "Robinson Crusoe."

Aunt Prue's finest table-linen was brought forth, and Berrie added a few pieces of china that had been her mother's, and cut her choicest flowers to grace the occasion, and at eleven o'clock, as Berrie had predicted, a stalwart, broad-shouldered young man sprang from a light wagon at the door, kissed Aunt Prue on both cheeks, and shook Uncle Joel until his rheumatic limbs creaked in agony.

When he was seated in the front room, answering a perfect fusilade of questions from his delighted uncle, Aunt Prue slipped out to the kitchen.

"Oh, Berrie," she whispered, "he's just as nice as he can be! Has a sort of grand way about him, but not stuck-uppish one bit. Now skip and put on your very prettiest dress. I'll 'tend to the dinner."

In due time dinner was announced, and in the dining-room Hugh was introduced to Berrie, who stood by the table in a pretty cream gown, a bunch of scarlet geraniums in her bodice, and a little flush on her smooth, rounded cheek, looking as fresh and dainty as though a blazing cook-stove and an improvised dinner were things to her unknown. Hugh Courtney could not conceal the admiration in his keen blue eyes. He had not thought to find so sweet and gracious a presence in the home of good, prosaic Uncle Joel and Aunt Prue.

He found as the dinner progressed that Berrie, aside from her bright and intelligent personality, was not lacking in social graces; and as Berrie decided that the eastern potentate, as she had laughingly styled him, was a very agreeable young man, their acquaintance progressed rapidly.

The dinner was pronounced a success. The ducks were done to a turn, the pumpkin pie was delicious, the mock mince rivaled the real article.

"Aunt Prue," said her nephew, "I used to think your plum puddings beat the world, but you have outdone yourself this time."

Aunt Prue answered graciously, and the dimples came and went in Berrie's rounded cheeks as Uncle Joel actually had the temerity to wink at her across the table.

After dinner Berrie played for Hugh on her piano—the one thing she had clung to when she migrated West—and then they sang some duets together, while the elderly people beamed on them through their glasses. Then, leaning on Hugh's strong arm, Uncle Joel hobbled out to take a look at the sunburnt fields, and under the spice of his nephew's genial companionship told him all about the late drought, poor crops, and hard times in general, and even so far forgot Aunt Prue's injunctions as to reveal the secrets of Berrie's impromptu dinner, disclosing the true inwardness of the mince pie and plum pudding, and even how the ducks were obtained by the sacrifice of "Robinson Crusoe."

"What a good time they are havin'!" said unsuspicious Aunt Prue, as she heard the two men laughing together; "and Hugh has grown to be a fine man. Don't you think he is nice, Berrie?" and Berrie assented.

All too soon came the time of departure.

"I shall write when I get to Denver," said Hugh, "and on my way home I mean to stop over, and stay longer. That dinner, auntie, has only whetted my appetite for more."

"You can give Berrie credit for the dinner. I couldn't do much with my lame wrist," answered Aunt Prue, discreetly.

"Oh, there's not much credit in getting a dinner when one has an abundance to do with," retorted Berrie, carelessly.

Uncle Joel looked anxiously at Hugh, but that young man's look of bland innocence disarmed his fears, and after a lingering good-by the visitor departed.

A letter came from Denver, but, strange to say, it was addressed to Berrie. Many others followed in its wake, and two months later when Hugh came on, and stayed two weeks at the Simpkins ranch, he seemed to require so much of Berrie's time and attention that the heft of the cooking fell upon Aunt Prue, who enjoyed it immensely. Now that Uncle Joel had sold a lot of stock to good advantage the larder was overflowing with good things, and she felt that Hugh could take a fairly good report of their condition to the folks back East.

But Aunt Prue and Uncle Joel were not blind to what was going on before their very eyes, and neither of them was in the least surprised when, six months later, a wedding dinner was prepared in the Simpkins homestead at which everything, the mince pie and plum pudding included, was the genuine article.

THE INTRODUCTION OF IRON.

The Bible speaks of Tubal Cain as the discoverer of iron and the father of smiths; the Egyptians imputed to Hephaestus the same honor, while Pliny mentions it having been discovered by the Dactyles on Mount Ida after the forests on the mountain-side had been destroyed by lightning, this about 1431 years B. C. Jeremiah and Ezekiel both mention iron in their scriptural writings, the latter especially mentioning two qualities of the metal, calling one "bright iron," which was probably steel. Moses mentions an iron furnace, and Job speaks of it as being taken out of the earth.

Thousands of years before the opening of the Christian era the Egyptians used iron in making sickles, knives, etc. Sparta first used iron for money; Britain also used it as a medium of barter and exchange prior to the conquest by the Romans. The use of steel is known to be quite ancient, its invention being ascribed to the Chalybes, who in ancient times lived in the present Batoom. The Britains, before the time of Christ, used to export iron to Gaul, and after the Roman conquest the conquerers established extensive smelting-works which existed at least as late as the Saxon conquest.

Iron bars were demanded by William the Conquerer as tribute from the city of Gloucester. In 1355 James III. forbade the export of iron from England, and in 1483 the importation of iron articles that could be made at home was forbidden. Bar-iron was made in the American colonies as early as 1622. The tinning of iron was introduced from Bohemia in 1681. The first experiments in smelting iron with antbracite coal were tried at Mauch Chunk, Pa., in 1829, in France two years earlier, and successfully in Wales in 1837.

The first iron-works in America were established near Jamestown, Va., in 1619; in 1622 the works were destroyed and the workmen and their families killed by the Indians. The next attempt was at Lynn, Mass., on the banks of the Saugus, in 1648. The ore used was the "bog" variety, still found in abundance. At these famous iron-works Joseph Jenks, a native of Hammersmith, England, in 1652, by order of the province of Massachusetts Bay, coined the first historical old "pine-tree shillings."—Chicago News.

THE SILK INDUSTRY IN PENNSYLVANIA.

Captain Clark, chief of the Bureau of Industrial Statistics, has issued the first thorough report ever made of the silk industry of Pennsylvania. The state had a total number of spindles, all kinds, in 1895, 557,412, as against 348,432 in 1890, an increase of 208,980 spindles, or 59 per cent. The total number of employees, skilled and unskilled, in 1895 was 13,815, as against 9,330 in 1890, an increase of 4,485. The aggregate amount of wages paid out in the manufacture of silk in 1895 was $4,082,292.08, as against $2,725,285 paid out for the same class of labor in 1890, a per capita in 1895 of $295.50, as against $292.10 in 1890. This is exclusive of salary of clerks, salesmen or officers or members of the firm. The gross value of the product for 1895 was $24,184,583.84, as against $19,357,546 in 1890, an increase of $4,827,037.84, or 24.9 per cent. The value of ribbons and laces manufactured in 1895 was in round numbers $2,500,000, as against a value in 1890 of $1,195,231, or indicating an increase of over 100 per cent. The production in yards of ribbon alone was about 35,000,000. The separation of dress silks and other broad goods was not clearly defined, but their combined value for 1895 was $7,147,103, as against a combined value in 1890 of $4,575,217.

WEALTH.

Wealth is a blessing when properly used, and the mere fact of any man possessing it can by no possibility be held against him unless he came by it through dishonest or fraudulent means. One might ask with some show of reason, where would the hospitals, the infirmaries, the charitable institutions, the halls of learning and the thousand and one great interests of this country be had they not been endowed and assisted by people of means? There are many people in this country to-day who owe their education and training largely to the benevolence of those who gave of their substance to keep up the schools and colleges.

The American people are gifted with a fair average of good sense, and while they may for a time join in the outcry against the capitalist, as such, they can scarcely fail to come back to their normal, rational level and look upon these outbreaks as sensational, injurious, unjust and wholly uncalled for.

"The nine subscriptions inclosed are only part of those I took in two hours to-day," writes Rev. [illegible] W. Fitch, of Alameda county, Calif., referring to his agency for Farm and Fireside and Woman's Home Companion. "Every family I visited gave me an order. The introduction of your high-class literature in the homes of the people I feel to be a praiseworthy enterprise, in whose success, self-interest aside, I greatly rejoice."

Our Household.

MIDDLE AGE.

I stood on the level hilltop.
In the glowing hour of noon:
I knew my faithful shadow
Must fall behind me soon.

I sighed, as, looking backward,
I saw in the light of Truth
So little but vain endeavor,
And the barren dreams of youth.

There were broken cups of promise,
There was many a wasted day;
There were shrines my hands had builded
To gods with feet of clay.

Then I wept to know the morning,
With all its blossoms fair,
Had left but withered thistles
To fill the noontide air.

—Margaret Holmes Bates.

HOME TOPICS.

Nuts.—Nuts are considered by many an excellent substitute for meat. Almonds, hazelnuts, etc., should be blanched by pouring boiling water over them. Let them stand five minutes, and the tough brown skin can be very easily rubbed off. Almost any one can eat nuts if they take a little salt with them. A friend of mine says a few English walnuts will relieve her of an attack of indigestion. A very pretty dessert is made as follows:. Grate a cocoanut, being careful to leave the brown rind. Heap it in a glass dish, which is pretty garnished with green leaves; beat the whites of five eggs to a stiff froth, add two large spoonfuls of fine white sugar and one of extract of pineapple or orange, then beat the whole into a pint of cream. Serve as a sauce with the cocoanut.

Scalloped Potatoes.—Cut into little cubes cold boiled potatoes until you have about a quart. Put nearly a pint of milk into a saucepan, with a tablespoonful of butter, and when it boils, thicken with a teaspoonful of flour wet with a little cold milk. Put a layer of the potatoes into a buttered pudding-dish, season with a little salt and pepper, then dip over them a few spoonfuls of the gravy; continue in this way until all is used. Cover the top with rolled bread or cracker crumbs and bits of butter. Bake it twenty minutes.

Marriage.—If mothers would teach their children from early childhood to look upon marriage as a sacred obligation, and one which should not be lightly assumed, there would be fewer unhappy homes and fewer divorces.

The home life should be such as to teach the truth, that only mutual affection can be the basis of a true and happy married life. Wealth and social position may be good things. Some one has said in giving advice to girls, "If you can love a million dollars, all right; but be sure the love is there whether the million dollars are or not." Wealth alone cannot bring happiness, and a marriage where love is not is sure to be filled with heart-hunger and regret.

Watch carefully the associates of your children as they are growing up. Do not let them play at love-making, as too many very young people do. It is dangerous. Young boys and girls may be friends, comrades, and it is usually some older person who puts the idea of "beaux" into their minds. Not long ago I heard a wise mother say, "I never permit my daughter to associate or receive attentions from any young man I would not be willing she should marry if she loved him." Girls often do not know their own hearts. They are flattered by attentions, and imagine they have given their love. A wise mother who is her daughter's most intimate friend and confidante can often help her. If she believes the one in question is the only man in the world for her, and she would be willing to give up all other friends to go with him, then it is pretty certain she loves him. Mothers, let your own experience aid your daughters. Be wise for them, and teach both sons and daughters to be true and earnest in all life's relations, and when they come to take the important step of their lives they will not do it lightly or thoughtlessly.

Maida McL.

CHILDREN'S DRESSES.

As mothers are always interested in pretty dresses for children, we give an illustration as a suggestion. Both dresses are of wool. The skirt of the elder child is plain and full, as is always best for small children, and is gathered down three times before sewing upon the waist. This is done in a seam, and afterward bound inside with thin silk. The waist is full. The plaited collar is separate and made like a yoke, only buttoned up in the back. The trimmings are black velvet and rhinestone buckles.

The dress for a small child is a one-piece dress with blouse front, opened in the front, tight coat back. This would answer for a street dress to wear without a wrap. The collar is trimmed with a ruffle of silk or ribbon edged with lace.

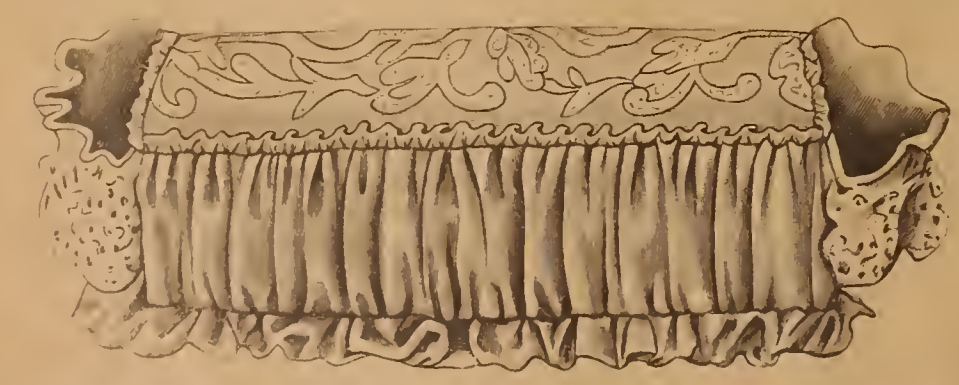
and brier-stitched with heavy floss. A belt from the sides crosses in front and brings the back in to the form.

We cannot furnish patterns for these.

TOILET-CUSHION.

This new-style cushion is very convenient. I think many have gotten tired of the pin-trays—they collect dust, and one can never get a pin from the right end—so cushions are once more in favor. A long, narrow cushion can be bought at the fancy-store or made at home. The top is three inches wide; the sides are two and one half inches deep and eight inches long. It is called the mattress cushion. First cover the top with the silk, then draw over it a piece of openwork material, lace, or hemstitching and drawn-work; then cover all the sides with a puff of the silk, allowing a ruffle to stand up around the edge. The bottom ruffle is put on separately; also the pockets on the ends, which serve to catch collar-buttons, rings, etc. The sides are used for hat and stick pins. Its thorough convenience recommends it.

Christie Irving.



KNITTING-BAG.

This is made of a square of pale blue leather, using your knitting-needle as a measure. It is lined and bound with pale pink. Upon two opposite corners a triangular pocket of flowered ribbon is placed, and the other two corners are brought up and fastened with a handle and bow of ribbon. The little pockets are made for the ends of the needles to slip under and hold one's knitting work, to keep it from becoming disarranged.

Christie Irving.

A WAVERING IMAGE.

Familiar expressions grow in meaning as they receive the test light of experience. That poem called "The Bridge," which Mr. Longfellow wrote more than fifty years ago, and which has been read, sung and recited ever since, contains an expression fraught with deep significance. The entire poem is strikingly beautiful when read after a season of forgetfulness, so that the thoughts have their intrinsic force unimpaired by the familiarity which breeds indifference, or the tediousness of repetition which degrades the noblest composition. Mr. Ruskin said it is not good for man to live too intimately with what is unusually beautiful. He questions whether persons living within sound of Niagara can ever feel the full impressiveness of so stupendous a phenomenon. If this is true concerning [illegible] orders of nature, may it not be likewise in regard to the most excellent productions if literature? It is certainly desirable that youthful minds be nourished with the best food, but there is such a thing as forcing upon the attention something which cannot be appreciated. In such a case the result is prejudicial. Have you not often read a poem which you vaguely remembered was in your "school reader," and found it of exquisite beauty? Have you not wondered that you did not enjoy it long ago? Have you not reproached your teacher that she did not explain and illuminate it to your childish perception? Ah! there is a season for everything. If you have not read "The Bridge" for ten years, take it, stanza by stanza, and discover its delicate charm. To me it was a revelation. The conclusion left me with a sad thought. The poet, you remember, is communing with himself at night as he stands on the bridge, and he sees the sky overhead and its reflection in the waves below:

The moon and its broken reflection,
And its shadows shall appear,
As the symbol of love in heaven
And its wavering image here.

A very young reader cannot feel the full meaning of that thought, because when one is young one expects to find constant friends, unchanging lovers. No one will take the poet's statement that all this world contains is a "wavering image" of love. The novelists are improving in their art, and the best of our time tell their love-stories with relentless truth, showing fickleness in men and women. Some critics find fault, and complain that these writers have no ideality. It is true. Ideality has its purpose. The ideal is an aim toward which to strive. The sad thought of the wavering image holds this lesson. Complain not that others do not love you with constancy, but scrutinize yourself and see if you are free from blame as a friend and lover. Young man, if your sweetheart seems fickle, do not find fault with her until you see if you have not set her an example of fickleness. Young woman, do not throw over your lover merely because he varies in his moods. When he is your husband he will not always be the same. There is no domestic or social relation where the incompleteness of love will not be apparent. The "wavering image" is all that we can have, and even this is very precious, and worth all it costs in patience and forgiveness.

K. K.

THE INDISCRIMINATE KISSING OF CHILDREN.

What right has "just anybody" to kiss my sweet, precious and sweet-looking baby just because lying there in her carriage she is a tempting vision of physical beauty and loveliness? None whatever; and besides, by this act my child's life and health may be endangered, if not destroyed.

It is now well established by bacteriological examination that adult persons may be bearing about in their mouths the germs of diphtheria while apparently well, and very possibly their own physical vigor is such that they will throw off the germs, or rather the germs will die, and feel no ill effect, because in a body where the blood is perfectly healthy there is a power of resistance to disease; but in the infant, whose tissues, blood included, are still in an undeveloped state, this power is often wanting, and of all methods of directly communicating the germs nothing can surpass that of kissing. When one carefully analyzes the act it would seem that often it is an act of great presumption on the part of the aggressor, who very likely would not presume to kiss the parent of the child. Much affection can be felt and shown without kissing, and so many of the diseases of the respiratory passages are found to be communicable—even pneumonia is suspected—that it is time mothers should wake up to the hidden dangers of kissing infants just because they are infants.

Mrs. H. M. Plunkett.

NOTES OF THE HOUSEHOLD.

"House-cleaning is a perfectly insane mania with women in general." So says Sir Neighbor across the way, and so echoes the usual "head of the household." As the time for a thorough renovating of rooms draws near, and plans are discussed relative to improvements, repairs, new carpets and curtains, women who love home and the work of the home grow enthusiastic, while husbands sigh over the soon coming few days of disorder and upheaval. And then it is they declare the process of house-cleaning "an insane mania," and contend that the house "is all right just as it is, and clean enough for any one."

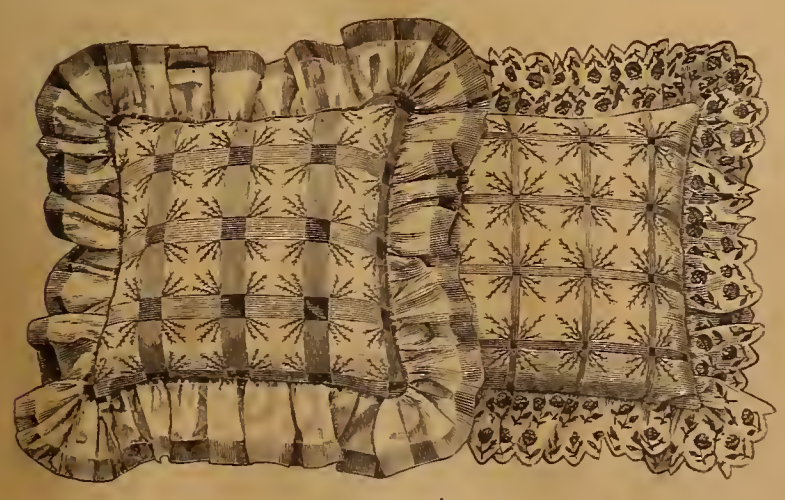
But to the end of time women will clean house, and laborious as is the work attending it, will enter heart and soul into the undertaking, and enjoy it all with a zest born of feminine nature. Talk as women may of house-cleaning in so methodical and careful a manner that the family will not realize that the work is under way, it yet remains a fact that theory and practical demonstration are greatly at variance. For that matter, why should a housewife bear the burden of this extra labor alone? It is work that must be done. It is done for the comfort and health of not only herself, but the entire household of individuals. Why, then, should she not be given the timely aid and a part of the surplus strength of the masculine portion of the family?

In many farm-houses, and especially in homes where the housewife keeps no help, the papering, cleaning and the taking up and putting down of carpets is all done before work in the field begins. This for the purpose, of course, of securing the help needed from husbands or sons. A very wise policy this, and a saving of dollars in many instances.

A carpet-stretcher should be numbered among the necessities in every house. The stretching of carpets by sheer strength is strength wasted, and leaves the work at best but unsatisfactorily done. In a few days of time the carpet has swept into wrinkles, and makes a bad appearance, and it is difficult to sweep it at all. With a good carpet-stretcher all this is avoided, and the ease and dexterity of putting down the carpet something wonderful to one who has never owned and operated one of them. The carpet-stretcher that a few years ago was sold at two dollars or more may be bought at present for from fifty to seventy-five cents.

When the carpets are all down, a carpet-sweeper becomes another of the luxury-necessities, though it should be looked upon as an economy pure and simple. It is in reality an economy of woman's strength and time. Moreover, an economy in saving of carpets. Daily hard sweeping of the carpets with a broom wears them fast, while with a sweeper the thorough sweeping by broom-power seldom need be done oftener than once a week. Two dollars and fifty cents buys an excellent sweeper at present. The price of it may be saved in a few months' time.

In putting down the carpet let the seams run in the opposite direction from that in which the broom-sweeping is usually done. Sweeping a carpet with the weave of the carpet lessens the wear very materially.



Sweeping in the direction of the seam cuts the carpet, and leaves it not so thoroughly swept as when swept across the widths. A carpet thus swept will wear more than a year longer than the one in which this simple precaution has not been taken.

Carpets occasionally swept with a broom dampened in water in which a tablespoonful of turpentine has been placed will not be troubled with moths. The broom should be shaken as dry as possible before applied to its work, and the water frequently changed. If the carpet be frequently wiped over, also, with a cloth wrung from warm, light suds, the colors will be brightened, and the general appearance of it much freshened.

The wall-paper will be dusty and soiled, though perhaps not to the extent of its being absolutely necessary that it be replaced with new this one season more. To freshen it, pin upon the brush part of the broom a large cloth, and brush over every particle of sides and ceiling with it. The cloth will need to be changed often. After removing all the soil that can be in this way, place upon the broom, wrong side out, flour-sacks that are floured, just as emptied of their contents. By brushing the walls very hard with these sacks the paper will be found very presentable, though not quite as the new.

After the home is again all in presentable order, sweet-smelling and clean, bright, pretty and homelike, husband will have forgotten the temporary trifling discomforts of the hour or the very few days, and will reconsider his "insane mania" theory, and he will enjoy the changes here and there, and the look of

intense satisfaction that beams from the face of his wife as she tells him how much she enjoys the riddance of dust and soil, and of how nice he is looking himself in his accustomed place at the head of the family and table. And he will rise up and call her a blessed, neat little housewife and homekeeper. Then she is amply repaid, and assures him that in time again she will once more betake her to house-cleaning.

ELLA HOUGHTON.

CRASH AND CROSS-STITCH.

Having persuaded the family that feather-beds are less healthy than mattresses, I had many pounds of feathers to make cushions and sofa-pillows. These objects are generally ornamental, but whether they are useful depends on the material which covers them. If of silk or valuable embroidery, they are so choice that the owner often feels annoyed at the rough usage they receive. Something pretty and not expensive, remaining fresh quite a long time, and easily washed when soiled, are covers made of common crash. This is sold at ten cents a yard, two and one half yards being required for a pillow eighteen inches square. This allows for a very full ruffle. Select crash with bars of red, blue or yellow. Get three skeins of linen floss No. 10 of same color, and embellish the crash with cross-stitching as shown you in the accompanying illustration. I have a pillow in red and one in blue. The latter is particularly pretty, as I happened to have a piece of white and blue embroidery which once trimmed a gingham dress, and which afterward had been kept the traditional seven years. Perhaps you have something that will be appropriate. If not, the crash ruffle will do very well, especially if you have the time and patience to cross-stitch the hem.

K. K.

CONGRESS OF MOTHERS.

It was a universal wonder among all people as to what this congress of mothers, which was held at Washington, D. C., February 17th, 18th and 19th, could mean. Consequently, thousands went to see. The idea, which originated with Mrs. L. W. Birney, was made possible by the noble generosity of Mrs. Phebe Hearst, and proved to be one of the most remarkable concourses of women that Washington has ever seen. It was thought the large banquet-room of the Arlington hotel would accommodate all who cared to come, but the first morning found that inadequate, so the First Baptist church was secured, and then the overflow was taken down-stairs, many of the speakers going down there as soon as through with their papers upstairs.

Mrs. Birney, in her opening address, said: "The higher branches of book-learning are well enough for the girl, but they should be made secondary in her education to the knowledge that shall fit her for motherhood. She may never marry, but as one of the sex on which the care and education of childhood must so largely rest she should know its needs, and be ready with head and heart and hand to serve the cause of helpless infancy in any emergency."

Miss Amelie Hofer read a paper on "What the Kindergarten Means to Mothers." Her talk was helpful in many ways, and showed her in perfect touch with child nature.

Mrs. Wilbur Crafts spoke upon "Mothers and Schools." She thought each mother should consider obligatory frequent visits to schools; an acquaintance with the teacher; co-operation with school plans. Also emphasizing the fact that mothers should serve on school-boards.

Owing to illness of some of the speakers others than those named on the program were heard from.

The first speaker Thursday morning was Mrs. Maud Ballington Booth, of the Salvation Army, who held her audience spellbound until she was through. The tenderness of her entire talk reached the heart of every mother present, and the stories she related of her work among the outcasts of the world brought tears to every eye. It seemed as if a holy calm settled upon the entire audience as she spoke. One could readily see she has given up herself, heart, soul and time, to the great work she has undertaken.

The talk of Mrs. Helen Gardner, who is editor on the "Arena" with John Ridpath, on the subject of heredity, was intensely interesting, and really, considered from all views, a very appalling subject. She spoke of life-giving in contrast with life-taking. In one case as murder, considered a crime; in the other as birth, and perhaps a long life, as a gift. But is it? You entail this upon a soul who must battle with environments, disappointments, poverty, perhaps. Is it, after all, a gift to be desired? Does it pay to be called into life? Her talk certainly set people to thinking deeply.

Mrs. Rebekah Kohut, of New York, spoke of the "Parental Reverence as Taught in Hebrew Homes."

Mrs. Sallie Cotton's paper upon "National Training-schools for Mothers" was very fine, impressing the fact that our government would do well to establish such schools in various parts of the country to prepare our women for scientific motherhood.

Miss Julia King's paper upon "Physical Culture" was well received, and the idea impressed upon all that health was the key-note of all happiness.

The breathless attention given each speaker showed the intense interest of the entire audience, and all who came away felt it was good to have been there, and were willing to carry the good work further, and establish other councils about their homes, where the purity of home and the sanctity of motherhood should be thoroughly guarded.

Novel as the movement was, the first meeting was indicative of the interest in it and the assurance that it will only go on to grow to larger proportions.

LOUISE LONG CHRISTIE.

CAP FOR LITTLE GIRL.

This is much more convenient for riding, and is made of black or navy-blue velvet lined with silk, and finished about the face with knife-plaitings of white swiss or lace.

Our Household.

PERCHANCE!

Ah, yes! I know, I know too well
That life hath not yet passed midday,
But ah, alas! I know as well
Its sun has set, for me, for aye.

Perchance, the moon may rise at eve
Above yon drifting clouds of gray,
But it will be the night hath come,
The long, long night, and not the day.

Still, faith doth whisper to my soul,
However dark may be the way,
God's radiant smile shall break the dawn
Of life's last but eternal day.

—E. L. C.

BREAD-MAKING.

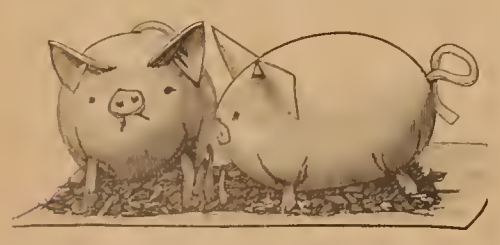
One of the causes of poor bread is the lack of knowing whether the flour used in its composition is made from spring or winter wheat, or the two mixed. Winter-wheat flour contains more starch, and the bread dries up quicker than if made of spring-wheat flour; this contains more gluten

than the other flour, and is therefore more nutritious, and as a consequence is more economical. Winter-wheat flour makes whiter bread than that made from spring wheat, the former flour being easily packed in the hand, as it is fine and smooth. The latter is coarse, has a yellower tint, and is not easily packed in the hand. The former is best for bread, the latter for pastry. A mixed flour makes very good bread, and winter-wheat flour will do very well if you work it right.

Care and attention must be taken with bread from the beginning to the end of the process until it is safely out of the oven and wrapped in a clean old tablecloth to steam and cool off. It must not be allowed to rise too long, especially the last time, when the loaves are ready for the oven. Have the oven hot enough. If you keep your hand in it until you count twenty it will do. Keep the fire steady for about half an hour, then let it cool down; it will take about an hour to bake a common-sized loaf. I divide the loaf into two parts when I mold it to put into the baking-tins. The loaf rises more evenly than when in one piece.

Flour should be kept in a dry, cool place, and always sift it before using. When you buy flour always ask if it is made from spring, winter or mixed wheat; if from the former, knead as little as possible, and keep the dough smooth. Mixed-flour bread is kneaded a little longer and a little firmer; winter-wheat flour is kneaded until it is smooth and light.

When you make bread do not use too much yeast; if you do, your bread will be coarse-grained, and is apt to sour in warm weather. Bread is best made by the slow process; that is, sponging at night, cutting down in the morning and molding when light again, and putting into the baking-tins and letting rise again. Bread should rise the last time until it is nearly twice the bulk it was when placed



in the tins. Bread made with milk dries up quicker than if mixed with water.

Raised Bread.—Put three quarts of sifted flour into a large earthen cooking-bowl, add one teaspoonful of salt, rub into the flour one half cupful of nice sweet lard or butter; dissolve one half cake of compressed yeast in one half cupful of warm water; have ready about a pint of warm milk or water, with a knife stir sufficient of this into the flour to make a thin batter in the center of it, then add the yeast and two teaspoonfuls of sugar; then add enough more milk or water to make it of the right consistency. That depends on the kind of flour you use, as I have already explained to you. If you do hard a struggle, and they might better give it up.

Like many other professed Christians neither had learned to make their religions not know the kind of flour you have, work it stiff enough to form a smooth ball in the center of the bowl; that is, about the same firmness you would work a mixed flour. The sponge should be worked with the knife for about twenty minutes, then covered up with a cloth and left to rise where it will keep warm and at an even temperature. If it turns sour, add a pinch of soda dissolved in hot water, and turned over the sponge before it is cut down in the morning. This cutting is done with a knife as soon as you rise in the morning. When it is light again, form into loaves with as little handling as possible, and make the loaves into good shape. Butter rubbed over the top of the bread makes a more tender crust. The recipe I have given makes three medium-sized loaves.

August Flower.

A COMFORTING THOUGHT.

Life indeed seemed hard to Mrs. Allen. Crops had failed; their best cow had died, and her beautiful heifer calf had to be killed because they could not spare milk for it; cholera had depleted her flock of hens, and now when eggs were high she had but few to sell; and many of her turkeys had been stolen. Not a dollar could they pay on the mortgage. The interest even could not be met. By exercising the utmost economy it would be impossible to make the grain and provisions last until spring. She had patched and darned, cut down and made over until they would be comfortable as to clothing; but where was the money to come from to furnish food for the family, and keep the stock from suffering by and by? This question hung like a dark pall over the household, and was discussed almost daily, for they had not yet learned to live one day at a time or practise the adage, "Never trouble trouble until trouble troubles you." And now Mr. Allen was sick, and it seemed to Mrs. Allen this gloomy day, when even

the sun refused to shine, that life was too practical; to trust the Lord for daily needs, and know the joy that comes from leaning on his promises.

Only that morning Mrs. Allen had picked up a Sunday-school card bearing a quotation from the thirty-seventh Psalm, "Trust in the Lord, and do good; so shalt thou dwell in the land, and verily thou shalt be fed." Yet so absorbed was she in trouble that she failed utterly to hear the Father's voice in it, or see the comfort it contained.

Presently a neighbor came in, bringing a few flowers and a bowl of broth for Mr. Allen. Her quick intuition saw the gloom. Divining the cause, as they chatted she tactfully told the story of the oriental king who desired of his wise men a saying that would prove true under any and all circumstances; one to fit all cases and never fail. After much thought this answer was given him:

"And this, too, shall pass away."

Adding, as she arose to depart, "I know it is true. No trouble can be so great or long-lived but it must 'pass away,' and if we trust the Lord for help, it is easy to bear, and we can rejoice that it will pass away and all come right in the end."

"And this, too, shall pass away," repeated Mrs. Allen to herself. Could it be possible? Slowly her reason grasped it. Yes, it must be; it was true. Glancing up she beheld the sunlight. Already the gloom had passed, and so must trouble. Like a flash came a remembrance of the promise, "Trust in the Lord . . . and verily thou shalt be fed." Yes, she would do that. Had not the neighbor said trusting the Lord made trouble easy to bear? And surely she had had much experience. Yes, as she thought about it her own troubles were but small compared with those this neighbor had borne; yet she said trusting the Lord made them easy.

From that day on, when tempted to worry, Mrs. Allen called to mind, "And this, too, shall pass away," and the promise, "Trust in the Lord, and do good; so shalt thou dwell in the land, and verily thou shalt be fed," and life was full of promise.

When spring came she found that although the winter had been hard, they had gotten through it, and never again did she allow herself to give way to discouragement, but instead she repeated the faithful saying, and trusted the Lord.

Clara Sensibaugh Everts.

ECONOMY IN THE SEWING-ROOM.

In the home where every little counts, and there are many such homes even in this prosperous land, a little economy exercised in the sewing-room will go quite a way toward making both ends meet.

By careful cutting of both materials and linings, by preservation of "scraps" for mending and turning, by neatly folding and saving patterns intact for future use, much can be saved.

Basting-thread, costing only two or three cents a spool, will do its work even better than the sewing-silk, so handy, to be sure, but costing ten cents a spool.

Buttons cut from old gowns and garments of every sort, and put into the button-bag for future use, will not come amiss when fashion swivels herself around, or when other garments are buttonless. There is an old saying that if you keep a thing seven years you will find a use for it, but verily one need not keep buttons that length of time.

Dress-shields for the ordinary individual will outwear at least two gowns, and books and eyes an indefinite number.

These seem but small things, yet the linings, etc., of a dress sometimes cost nearly as much as the dress-goods.

When perchance a waist-lining cut from some pattern has been basted and tried on, and turns out to be a perfect fit, it is economy to spare the time to reopen the seams after trimming the edges, and to cut a pattern by same, thus enabling you to always have a perfect lining or foundation pattern for any waist, fancy or plain, which you may desire to make.

All these are but little things, yet a penny saved is a penny earned, and pennies make the dollars.

Emma Louise Hauck.

WINTER VEGETABLES.

Boiled Parsnips.—Scrape well, and boil in slightly salted water; add a little butter, and let the water boil nearly away. Serve plain.

Remnants of same—Cut cold parsnips into cubes, warm them in the oven; pour over them a white sauce—one half pint of sauce for a medium-sized dish.

Another—Cut cold boiled parsnips into lengthwise pieces, dip into beaten egg or dredge with flour, and brown on a lightly buttered griddle.

Carrots.—Scrape, and slice thin; boil, and when tender, take a knife and chop the carrots fine; season well with pepper and salt, add two or three spoonfuls of milk or cream and a small piece of butter. Do not have them too wet with milk.

EASTER EGGS.

For the children who like to get up some funny Easter eggs we submit the illustrations of a few new ones. The Brownie has a few shot put into the shell to balance it. The pigs-in-clover are very funny, and the little chicken from yellow cotton can be made to look very natural.

Our Sunday Afternoon.

PRAYER.

More things are wrought by prayer
Than this world dreams of. Wherefore, let thy voice
Rise like a fountain for me night and day.
For what are men better than sheep and goats,
That nourish a blind life within the brain,
If knowing God, they lift not hands of prayer,
Both for themselves and those who call them friend?
For so, the whole round earth is every way
Bound by gold chains about the feet of God.

—Tennyson.

A REMINDER.

This is a busy world, and we meet people each day that we shall probably never see again this side of eternity. It seems many times as if, without doubt, we shall meet this business acquaintance or that friend again, and perhaps many times we do, but very many times we do not see their faces or talk with them again, as we are separated by circumstances, or plans make our paths diverge, or one is called into eternity suddenly. For that reason we, as Christians and children of God who want to make the most of life, and do the most good to the most people, ought to be sure that our influence is given for Christ and his kingdom.

We ought to learn to improve these meetings with our friends, or even with a stranger with whom we have the opportunity to talk a little. Sometimes the time, place and opportunity seem to entirely exclude having a personal word about the salvation of this person's soul.

That being the case so many times, how easy it would be to hand envelops or little tracts in an envelop to this one or that one, with the plan of salvation plainly stated therein. Only eternity can tell the value of such messengers, and no one can tell the blessing that is likely to come from such quiet work.

If you are not already carrying out some such plan as this, will you not try, and see what blessing comes to you, and also to the people with whom you leave these silent little reminders?—Union Gospel News.

TREASURES OF THE BIBLE.

The philosophy of the Bible stands immeasurably above all that the mind of man has been able to conceive. We admire the wealth of thought and the keen sagacity of Aristotle, Plato, Socrates, Newton, Locke, Hegel, Bacon and others, but their creations pale before the splendor of biblical wisdom. Sir Isaac Newton said, "I consider the Word of God the most exalted philosophy," and Coleridge, "The Bible conducts me to a much greater depth of my ego than any other book;" that is, that the Bible explained most clearly to him his own existence. Rousseau, who was certainly no hero of belief, once wrote, "When we read the works of our philosophers, in spite of their pomp of style, how poor, how despicable they are in comparison with Holy Writ!"

Another defender of biblical philosophy is Carlyle. He treasured the Bible as the most valuable book, and often exclaimed, "Oh, noble book! Oh, book for all mankind!" He particularly preferred the book of Job on account of its wonderful philosophy. If the great thinkers know the worth of the Bible so well, what an example of spiritual poverty is he who is ashamed to read this Book of books or to allow himself to be supposed capable of enjoying it!—Public Opinion.

PROSPERITY AND CHARACTER.

It is not a morbid fancy, but a simple fact, that prosperity cannot ripen character. In that sphere it cannot be made evident to others or to ourselves that we are not serving God for a reward. Hence, the trier of life—the messenger of God—goes walking up and down the earth, jostling men out of their prosperity, and driving them into worlds of poverty and loss and sorrow and disease and loneliness where they can test their principles and find out what they believe, what they stand on and what they are living for. This is not Job's history alone; it is yours and mine and every man's.—Theodore T. Munger, D.D.

FAULT-FINDING.

It is very easy to find fault. We as a class are very sharp-sighted. The faculties of observation appear to be strained almost in their exercise, and we have only to stand off and look at our friends and neighbors to find a good many things that are awry in their make-up and expression. Even children seem to become adepts early in their criticism of others. Their ideas are chiefly borrowed, but nevertheless they are often disagreeably pronounced in their criticism.

It would be far better to develop our minds in the line of saying and appreciating those qualities in our friends and neighbors that are good. This means cultivation of that insight and discernment which employ the sympathies. Thus, people we love best are they who see the good in others rather than the imperfect, and speak of it frequently. They are the genial, kindly, sunny ones that make life charming; while your carping, querulous, fault-finding persons who do not draw attention to excellencies are no encouragement and stimulus to helpful effort. Most people of intelligence are aware of their defects, and to be told of their good qualities strengthens effort to overcome their weakness and vices of disposition.

The disposition to see the good in others is worth more than money or beauty, and, as one has said, "It is a perpetual joy to the possessor, while it brightens the soul of every one that may come within the circle of its influence."—Phrenological Journal.

TELL THE TRUTH.

What is there on earth that is meaner than a lie, and who is there that is meaner than a liar? If you cannot depend on what a man says, what is he good for, and of what use is he in the world? A man who misleads, who deceives, who lies, cannot have the approval of good men in this world nor of the Lord in the world to come.

So long as a person will tell the truth, whatever his faults may be, there is some hope of making something of him, but when he will lie it is hard to do anything with him. There seems to be no bottom or foundation to a liar, and when men lie we never know where to build or what to depend upon. This is one of the worst things about drinking men. They will lie. Whoever saw a drunkard whose word could be depended on?

Let us learn to hate falsehood, and say with the psalmist, "I hate and abhor lying, but thy law do I love." (Ps. cxix. 163.) "These six things doth the Lord hate, yea, seven are an abomination unto him: a proud look, a lying tongue, and hands that shed innocent blood; an heart that deviseth wicked imaginations, feet that be swift in running to mischief, a false witness that speaketh lies, and he that soweth discord among brethren." (Prov. vi. 16-19.)—The Christian.

WEALTH DOES NOT GIVE HAPPINESS.

Two things ought to be strongly impressed upon the young people of our country. The insecurity of riches even when acquired, and their unsatisfying character. There is no fallacy so universally cherished as the notion that wealth is surely a means of happiness. The care of a large property is one of the most burdensome of earth's trusts. The only material good which comes from any estate is to be made out of a moderate income far more easily than a large one, and with fewer attendant disadvantages. Few thoughtful men would undergo the entire stewardship of a large estate on a positive bargain that they should receive no more for taking care of it than ordinarily falls into the lap of the owner. The scramble after wealth is due to a wrong estimate of it when it is gained.

THE LITTLE MATTER OF JUSTICE.

One thing was forgotten by Mr. Cleveland, Congress and Mr. Olney with regard to the fighting Cubans. They are absolutely right, and they have suffered enough to be entitled to everything they fight for. Points are stretched in behalf of this diplomacy and that, but the matter of justice is not brought up for discussion. France was generous to us a hundred years ago, and it is beastly ingratitude for us to ignore the rights of our near neighbors who are situated now precisely as we were situated then.—Judge.

Our Farm.

THE PEAR.

Propagation.—Standard pears are made by budding pears that do best as standards on pear seedlings. Pears are dwarfed by budding the pear on the quince. The Duchesse d'Angouleme is the famous pear as a dwarf.

Cultivation.—Pears delight in a rather rich clayey loam, and yet a rich sandy soil will produce fine pears. The land should be well drained and kept cultivated, turning the soil early in the season, continuing the cultivation up to the first of August. Deep cultivation should be avoided.

Enemy.—Blight is the greatest enemy to pear culture. It first appears in the spring on the blossoms, and may be noticed about the time the tree is going out of blossom, when certain flower-clusters turn black and dry up as if killed by frost. This disease spreads through an orchard with great rapidity at blooming-time. This is due to the fact that the microbes are able to live and multiply in the nectar of the blossom, from whence they are carried away by the bees and other insects which visit the blossoms for the honey and pollen. This is called blossom-blight, and from the blossom the disease may extend downward into the branches. Another way in which blight comes is through the tips of growing shoots, as is the case in young trees, and is called twig-blight. It will be observed that blight moves downward, and sometimes very rapidly. There has been no reliable cure for this dreaded disease other than to cut off the affected parts and burn them.

S. C. Vaughn.

TREE-TOMATOES.

From the advertisements and cuts found now and then in papers and catalogues many people are led to believe that there are certain varieties of tomatoes that grow in tree form, or that climb poles like beans. It seems strange that any seedsman will try to mislead people in this way. There is no such a thing as a tree-tomato or one that will climb a pole. Any vigorous-growing variety, if properly trimmed and all laterals are pinched off, if tied to a pole, will readily grow from seven to ten feet high and produce fruit the whole length of the vine. The writer has grown large quantities of them in this way, and when properly done, it is the best way to grow them. The past season he had a large number of the New Imperials growing on poles, and they averaged at least ten feet in height. H.

EXTRACTS FROM CORRESPONDENCE.

From Ohio.—Paulding county has the name of Black Swamp, and no doubt was at one time a lake. Only twenty-five years ago it was covered with water nearly all the year round. The numerous small creeks were blocked with driftwood and willows, making it almost impossible for the water to flow away. These streams were well stocked with fish and the forests were full of game, attracting the home-seeker. Soon the creek-banks were dotted with log cabins. Then the creeks were cleared of driftwood, and large ditches were dug in the low ravines, with great cost to the county, but giving excellent outlets for drainage; and to-day we have one of the best counties in the state. Our soil is a black, loose loam of great fertility, well adapted to corn, wheat, rye, oats, buckwheat, potatoes, vegetables, small fruits and grasses. Tomatoes bring large crops with but little cultivation; thousands of bushels rotted in the truck-patches last season. Cucumbers, green beans, sweet corn and peas go to waste in large quantities, all for the want of a sufficient market. A canning-factory would do well here. Grover Hill is a thriving little town of about one thousand souls. Good schools and churches, good farm lands and a generous people invite the home-seeker.

Grover Hill, Ohio. G. A. M.

From Arkansas.—That old song, "The Arkansas Traveler," with the picture that often goes with it, has no doubt turned thousands of immigrants and millions of wealth away from our state. The bear, the panther and the wolf, with the mythical Arkansas Traveler, have long since passed into history. Yet it is true that up to this very day we of the modern Arkansas are sometimes spoken of with derision. Here in Searcy county, among these southern hills and mountains, is a safe retreat alike from icy blizzards and from scorching sunshine. Here the ground seldom freezes more than an inch or two deep, and perhaps not more than one day in a thousand that the mercury remains below thirty-two degrees for twenty-four hours at a time. Here a little snow falls every winter, but is soon gone. Here are valleys and coves of the richest of land, and even the hillsides in many places are as rich as the richest river-bottom land. Here and there on the hillsides and mountain-sides are natural terraces. These so-called benches are narrow strips of nearly level land, extending along the side of the mountain, one above another. The top bench is as rich as any. I have stood on the top bench, a thousand feet above the gardens and fields and orchards and meadows and houses and barns below me, beyond which rose in the distance hills and mountains and trees, all comprising a landscape of twenty miles or more in extent. I have stood there in a grove of papaws forty or fifty feet in height, with here and there a walnut-tree two, three and some of them five feet in diameter. Water is good; health is good; game is scarce; roads are bad. All the common fruits, grains, grasses and vegetables flourish. There is rich zinc ore in inexhaustible quantities here; copper has been mined and smelted, and there is an abundance of marble, limestone and sandstone. When the soil, climate, timber and minerals, with the beauty and grandeur of the scenery, are all made known the world will be surprised that such wonderful opportunities really do exist. We have plenty of churches and schools. There is not a saloon in Searcy county. W. H. S.

Marsball, Ark.

Recent Publications.

CATALOGUES RECEIVED.

W. Atlee Burpee & Co., Philadelphia, Pa. Manual of thoroughbred live stock and fancy poultry.

Frederick W. Kelsey, 145 Broadway, New York. Handsome descriptive catalogue of select deciduous and evergreen trees, shrubs, vines, roses and hardy plants.

George S. Josselyn, Fredonia, N. Y. Descriptive catalogue of grape-vines and small fruits, with photographic reproductions from nature, and beautiful colored plate of Campbell's Early Grape. This grand grape, originated by Mr. George W. Campbell over a dozen years ago, and thoroughly tested, is now offered to the public as a grape in all respects better adapted to general use than any other known.

Red Jacket Manufacturing Company, Davenport, Iowa. "Squirts by a Red Pump"—booklet describing an iron pump that is "so easy to fix."

Woodcleft Poultry Yards, Freeport, N. Y. Illustrated pamphlet describing high-class thoroughbred poultry.

C. N. Bowers, Dakota, Ill. Illustrated poultry annual and book of valuable recipes. Mr. Bowers catalogues many varieties of fowls bred from grand prize-winners; also, Duroc-Jersey swine and Belgian hares. Price 10 cents.

Lewis Roesch, Fredonia, N. Y. Illustrated nursery catalogue. Specialties—Fine grapes, Crandall currant and Chautauqua gooseberry.

J. M. Phillips' Sons, Mercersburg, Pa. Buyers' guide for 1897, listing pure, reliable garden, farm and flower seeds.

"Everybody thinks Peerless Atlas well worth the dollar asked for it," writes Mrs. Ida Williams, of Daviess county, Indiana. "It is a great help to any agent for Farm and Fireside or Woman's Home Companion to have such a popular premium to offer the public at a merely nominal price."

Queries.

READ THIS NOTICE.

Questions from regular subscribers of Farm and Fireside, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Milking-machines.—M. C. S., Cave Springs, Ga. For descriptive circular of a new milking-machine write to De Laval Separator Company, 74 Cortlandt street, New York.

Ginseng Culture.—F. R., Easley, S. C. Send five cents to Superintendent of Documents, Washington, D. C., for Bulletin No. 16—"American Ginseng: Its Commercial History, Protection and Cultivation."

Alfalfa Culture.—R. E. M., Mercer, Mo., and others. Send five cents to Superintendent of Documents, Department of Agriculture, Washington, D. C., for Farmers' Bulletin No. 31—"Alfalfa." For alfalfa-seed write to the seedsmen advertising in our columns.

Leached Ashes.—J. H. P., Huffman, Ark., asks if leached ashes broadcasted in a young orchard will be of much benefit. The potash has been removed, but the ashes usually contain enough phosphoric acid to pay for applying them liberally to the orchard or garden.

Seed-corn.—B. F., Seguin, Texas, writes: "Will corn which was raised near and partly turned into pop-corn do to plant this season? Will it produce a good grade of corn and a good crop?"

Reply:—Do not plant this mixed corn. If you want to raise a good crop of good field-corn, carefully select pure seed of a good variety; if you want to raise pop-corn, plant pure pop-corn seed.

Preserving Shingle Roofs.—Referring to a query on this subject in a recent number, T. H. Y., Orient, L. I., writes: "As soon as spring weather advances, I shall reshingle a roof that has been on about fifty-four years. The shingles were of North Carolina cypress-wood, and limed. Of course, the cypress-wood was an advantage, but the lime-water was the finishing stroke to fifty years of age and better. I applied the lime simply by mounting the ridge of the roof, taking air-slaked lime and sowing it upon the roof its entire length. The secret is that lime is death to all moss growth, and moss allowed to form upon any wood roof, side covering or picket fence gathers moisture by rain, and retains it, and where wood cannot very soon dry out after a rain, it will soon decay, especially so where there is but little sun."

Crimson Clover.—C. M. S., Henleyville, Cal., writes: "Kindly answer the following: Will crimson clover yield more than one crop of hay if sown in October? When should it be cut? If seed is desired, is it necessary to use a clover-huller, or will an ordinary thresher clean it? Will it, if sown in March or April, yield a crop of hay or seed the same year?"

Reply by T. Greiner:—I have experimented with crimson clover for some years without being able to make a marked success of it. Our climate is too severe, so that the plants usually winter-kill. And yet other growers in the state think highly of it as a cover crop for orchard. Even if the plants die during winter, they have helped to make the soil better and to prevent the loss of nitrogen from the soil. In your climate you can sow late in the fall, and have a fine crop of green stuff early next spring. After that the plants die. Cut the crop when in full bloom. I do not know much about making it into hay. It is a valuable crop, and well worth your efforts in cultivating it. Here we cannot make a crop the same season that seed is sown. Some among our readers may give more information about the crop as grown in California, as also about threshing, etc.

VETERINARY.

Conducted by Dr. H. J. Detmers.

To regular subscribers of Farm and Fireside, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. Detmers, 1315 Neil Avenue, Columbus, Ohio.

Note.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

Milk-leg?—E. J. B., La Grange, Ohio. I do not know what you mean by "milk-leg," consequently cannot comply with your request.

A Barren Cow.—M. G. W., Amethyst, Col. A cow that has ceased to breed, Jersey or no Jersey, and is dry, should be fattened and be converted into beef.

A Seriously Damaged Mare.—S. T. L., Mesa Grande, Cal. Unless the injury is very superficial, in which case the same may be repaired by a surgical operation, your mare is incurable, and unfit for breeding.

Black Mange?—T. L. W., Ellisville, Va. What do you mean by "black mange?" I am not familiar with all the local terms. Give a description of the disease of your hog, and I may be able to give you the asked-for advice.

Probably Indigestion.—J. A. S., Portersville, Pa. If your cow does not present any other symptoms of disease than those mentioned in your inquiry, the ailment may be nothing but indigestion, which will yield to a good dose of sulphate of soda combined with a little ginger or mustard, and a suitable diet, and then the milk will be all right as soon as the cow has recovered. It is entirely different if you have overlooked important symptoms indicating the presence of a more serious morbid process.

Horse-training.—E. S. B., Max, Neb. Your question is rather foreign to my department. Consult a horse-trainer.

Periodical Ophthalmia.—T. S., College Springs, Iowa. Your four-year-old colt, according to your description, suffers from periodical ophthalmia (so-called moon-blindness, although the moon has nothing to do with it), and must be considered incurable.

Worms in Horses.—F. W. H., North Branch, N. Y. I may be able to comply with your request if you will give particulars, and make at least an attempt to give a description of the worms. As it is, I have to refer you to the numerous answers recently given in these columns to questions about worms.

Weakness in the Hind Quarters.—W. R., Terre Haute, Ohio. All that can be made out from your description is that your mare is weak in the hind quarters, an ailment which, as a rule, is incurable, especially if it is of long standing. Ascertain the history of the animal, and probably more light will be thrown upon the case.

Young Pigs Died.—S. P., Kossuth, Ind. It is possible that your pigs consumed something that did not agree with them, but it is impossible to derive a definite diagnosis as to the cause of death from your meager description. If you had made a more careful post-mortem examination, you might have found the cause of death. Coagulated milk in the stomach is nothing abnormal. Milk always coagulates in the stomach. You ought to have examined all the interior organs.

A Lame Pig and a Paralytic Sow.—G. W. B., Hume, N. Y. As to your pig, you only say that the same first became lame in one hind leg, and a day or two later also in the other. It is utterly impossible to base any opinion in regard to the cause and nature of the lameness upon such meager statement. There are too many possibilities. You ought to have examined the lame legs.——Concerning the paralysis of your cow, which is probably entirely different from the lameness of the pig, I have to refer you to the numerous answers recently given to similar questions in these columns.

Indigestion.—J. H. R., Woodcock, Pa. Your cows have suffered from indigestion. Your treatment, a physic, is rational, but the dose of salts (sulphate of soda) which you have been giving is hardly large enough unless the cow is rather small. Sixteen ounces is not too much for a full-grown cow of good size. The treatment bestowed upon his cows by your neighbor is, to say the least, worse than useless. It is not only useless, but a torture to the animal, and even dangerous. The best thing is to prevent indigestion in cows by keeping them on a proper diet of good and wholesome food.

Probably Lung-worms.—B. D. H., Centerville, Pa. Your yearling heifer probably suffers from the presence of a large number of lung-worms (Strongylus micrurus) in the bronchi. There is no remedy. If the number of worms is not too great, and the animal not too poor, the latter may pull through. The prevention consists in keeping such young animals, during spring and summer, away from ditches and pools of stagnant water containing the worm-brood. Still, the few symptoms you give, namely, a rasping cough since last summer, loss of appetite and poverty, are hardly sufficient for a diagnosis.

Two Dry Teats—Indigestion.—L. D. B., Girard, Ill. That the two front teats of your heifer are dry and yield no milk is due to a defective development of the mammary glands, consequently you will never succeed in making them yield any milk, because you cannot produce any glandular tissue that is wanting.——Your other cow suffered from indigestion caused probably by unsuitable food. To split the tail of the poor animal, to put black pepper and turpentine into the wound, and to apply turpentine to her head, was cruel and foolish. A cow's tail may be injured, and may become inflamed, but a disease in which the tail becomes hollow does not exist. And as to "hollow horn," all cows which have horns at all have hollow horns.

Probably Garget—Seedy Warts.—J. W. J., Cluster, W. Va. What you describe appears to be nothing more nor less than repeated attacks of garget, which require no other treatment than that applied before; namely, frequent and thorough milking. The shortness of breath sometimes shown by your cow when in the pasture may have its cause simply in too full a stomach. If your cow is a great milk producer, as she seems to be, it is advisable to make it a rule to milk her three times a day instead of twice. By doing this you will get still more milk, and the attacks of garget, very likely, will not reoccur.——As to the warts of your calf, they will disappear without any treatment; but if you have not the patience to wait, you may remove them, according to circumstances, by means of ligatures, corrosive sublimate or nitric acid, as has been so often described in these columns.

An Abscess.—W. M., Tomales, Cal. If you found at the post-mortem examination of your bull no other morbid changes whatever besides the abscess, or, as you call it, "bag of matter," close to the windpipe, it must be concluded that the abscess, as is very well possible, constituted the cause of death. Of course, the simple statement that such an abscess was found does not throw any light upon its origin, and does not show whether it was caused by the presence of any sharp foreign body that had been swallowed with the food and got stuck, or whether it was due to other causes. In the former case you ought to have found the foreign body, and in the latter, but especially if the abscess was of a tuberculous nature, you ought to have found also other morbid changes in other parts of the body, particularly in the lungs. Perhaps your examination was only a very superficial one. There is no cure for tuberculosis, and abscesses pure and simple, if accessible, must be lanced before they endanger life.——As to abortion of cows, there is nothing that can prevent it after the causes, which are very numerous, have been acting. In so-called epizootic abortion the prevention consists in warding off and destroying the causes before they have been acting. If it has made its appearance in a herd of cattle, the best that can be done is to remove, temporarily at least, every cow that is with calf to another non-infected place until the old premises have been thoroughly cleaned and reliably disinfected. Besides that, the aborted calves and afterbirths must be disposed of in such a way as will make an infection through that source an impossibility, and the genitals and tails of the cows that have aborted must be disinfected by washing them twice a day with a good disinfectant, say a creolin solution or a one-per-mille solution of corrosive sublimate in rain-water, until all discharges have ceased.

A very intelligent lady in Perry county, Ohio, writes: "I have dropped the other papers I was working for, as every one likes Woman's Home Companion the best. Being just what the people want, and your commissions being extra liberal, it pays me better. I consider it the best woman's journal published, just as Farm and Fireside is the best farm paper."

Our Miscellany.

A woman hates to have a tooth filled most as much as she hates to cut a piece of lace.

As soon as a bachelor begins to reflect out loud, all the married people he knows get down on him.

The average woman would wear a dress made of orange-peel if the dressmaker said it was the fashion.

When a man is away on a trip and does something he ought not to, he sits down and writes a nice letter to his wife.

A book, handsomely illustrated, descriptive of Georgia and Alabama, will be sent free to any address upon application to J. C. Haile, General Passenger Agent Central of Georgia R'y Co., Savannah, Ga.

A paper out in Bedford, Iowa, said that a man's wife had eloped, and the man sued the editor for $10,000 because the statement wasn't true. It's rather hard to make out from this item whether the husband was glad or sorry.—Cincinnati Commercial Gazette.

The town of Enfield, Maine, has probably the largest manufacturing plant in the world for the production of hard-wood novelties, in almost endless variety and size. The concern takes the trees at the very stumps in the forest, setting them in motion, and never ceasing to push them forward by all the arts of ingenious manipulation until they are distributed in innumerable shapes and sizes to purchasers far and near. Some idea of the productions here included may be obtained from the three months' record of 300,000 currycomb-handles, and the six months' turnout of more than 3,000,000 of handles for hair-curling tongs, besides numberless rubber-stamp handles, pail-handles, tub-handles, handles for shoemaking tools, drug-boxes, pill and salve boxes of all sizes and shapes and colors, water-proof and air-tight mailing-boxes, 300,000 wooden whip-sockets, and more than 4,000,000 different sized and shaped lather and paint brush handles.—New York Sun.

PROGRESS IN GEORGIA.

Is there a village in Georgia that is not more than holding its own?

And how about the farmers, are they impoverished? Is the sheriff selling them out? Are they moving to Texas?

If you think so you are mistaken. Small farms are in demand, and the small towns are prospering, and some of them are putting on frills.

We are coming out of the valley of hard times and climbing upward.—Atlanta Evening Constitution.

A JEWEL.

Mistress—"I told you half an hour ago to turn on the gas in the parlor, Bridget."

Bridget—"Sure, an' I did, mum. Don't yez shmell it?"—New York World.

SCHEMING FOR WIVES.

"There are plenty of women in Oregon now," observed a prominent Oregon politician who is here to see that that state is not forgotten in the matter of patronage, "but it is within the memory of many of us when women were very scarce there. We gave it out that we wanted them for school-teachers and the like, and encouraged them to come out there, but the truth was the men wanted them for wives. I remember once we sent a young man to Massachusetts, where he was well acquainted, with orders to collect one hundred young women and to escort them back to Oregon. We guaranteed every one of them one year's employment. The active man in the matter was a fine-looking young man, who afterward served two terms in Congress from our state. He spent two months in selecting the party, and started West with them. On the trip out he courted one of the school-teachers on his own hook, and actually got her consent to a marriage on the arrival of the train at Portland. The boys howled considerably about it, claiming that he had treated them unfairly, in having first choice; but there was a lot of fine marriageable material left. Some of those women are to-day the leading ladies of the society of the state. More than three fourths of the hundred were married inside of three years, and many in less than one year. A few of the lot, however, are teaching school there to-day: not that they did not have any offers, but because they would not accept any of the fellows who offered themselves. Now that Senator Mitchell has about given up his contest to return as senator, he will likely be succeeded by a gentleman who married one of the party of school-teachers to which I refer. He will bring his wife here with him, and your Washington folks can see for themselves the kind of ladies we had out there for school-teachers. They can't be surpassed, even if equaled, anywhere. I may be an interested person, though, for it happens that my wife was one of the party."—Washington Evening Star.

WHY IOWA FARMERS PROSPER.

"If the farmers of Iowa are paying off their mortgages and putting money in bank, it is not because of the profits made in growing corn and wheat and oats," said Mr. J. B. Newton, of the Hawkeye state, at the Ebbitt. "Their improved lot within the last decade is due to the fact that they have been subordinating the production of cereals to the dairy. The Iowa cow has proved of far more benefit as a revenue-raiser than ten-cent corn, and the creamery has become firmly established as one of the institutions of the land.

"In the county of Jones the farmers have in bank deposits over three million dollars, according to the latest report of our state dairy commissioner. Here is an object-lesson to the agriculturists all over the Union, for it goes to show that by proper management and attention to the right things farmers can become lenders of money instead of borrowers."—Washington Post.

TO BE HEALTHY.

Professor Shuetuck says: "Eat fruit for breakfast. Eat fruit for luncheon. Avoid pastry. Shun muffins and crumpets and buttered toast. Eat whole-meal bread. Decline potatoes if they are served more than once a day. Do not drink tea or coffee. Walk four miles every day. Take a bath every day. Wash the face every night in warm water and sleep eight hours. You will never need nerve medicine."

IMPROVE YOUR HOME.

The good or bad appearance of the home place is largely a matter of paint—good paint. It is the best of preservatives. Buildings and implements last twice as long, look 100 per cent better, and will sell at a much higher price if kept well painted.

A pot of paint and a brush are indispensable in the house. Sinks, tables, floors, etc., need it, and anybody can put it on. It is real economy to buy good paint, for it will not crack, flake or chalk off. The Sherwin-Williams Co., of Cleveland, Ohio, sell prepared paints all ready for use. They furnish paints especially adapted to the work, house paint, buggy paint, implement paint, also a special kind for floors, bathtubs, cupboards, etc. They publish a little booklet giving much useful information about paints for different purposes, also color-cards for those who wish them, and will send all free to readers of the Farm and Fireside who ask for them. Look around your home, and see if there are not many things which would be improved by a coat of good paint, and then send for this booklet. It will teach you much, and cost you nothing.

"Though times are hard and money scarce out this way," writes Mr. F. I. Stevens, agent for Farm and Fireside and Woman's Home Companion, in Potter county, South Dakota, "I have succeeded in getting another list of subscribers for you, as the papers and premiums are wonderfully good for so low a price, and please the people very much. Will have more names for you soon."

A SUPERFINE DISTINCTION.

The hypercritical man flung down his paper in disgust.

"There it is again," he exclaimed. "Somebody has once more made use of that inexcusable phrase 'luscious bivalve.'"

"It is rather odd," replied his wife in a sympathetic tone.

"I don't object to the age of it," was the petulant answer; "what makes me indignant is its inaccuracy. The oyster in its native state is a bivalve. But before it is fit for consumption somebody has to go at it with a knife and a hammer and pry at least one of its shells off. Then it may be accepted as a luscious viand. But it's a univalve then. And so long as it remains a bivalve I defy anybody to digest it unless he has a gizzard like an ostrich."—Washington Star.

ARE YOU GOING TO TRAVEL THIS SUMMER?

If you have decided in the affirmative, and wish to gather a comprehensive idea of the very best Summer resorts in the northern United States, the Great Lakes region and Canada, you can obtain satisfactory information by sending 4 cents in postage stamps to Mr. D. G. Edwards, Passenger Traffic Manager C., H. & D. R'y, Cincinnati, Ohio, who will in return send you a copy of "A Michigan Romance," an attractive story by Stanley Waterloo, containing also full information about the Summer resorts of the Great North. The intelligent traveler will appreciate this work. The C., H. & D. R'y have also under preparation another series of books, for the coming Summer.

Smiles.

STRONG AND WEAK POINTS.

Now rangeth the orator over the land
And he talks many words to the minute;
Oh would that his reasons were strong as his lungs!—
The other side wouldn't be in it.

HAD TO MOVE.

She was weeping when he entered, and they had not been married so long that he felt it unnecessary to try to comfort her.

"Why, my dear," he said, sitting down beside her and putting his arm around her, "what has happened?"

"Oh, I shall never get over it—never!" she cried, unheeding his query.

"Never get over what?" he asked. "Has any one dared to insult you or say anything unkind to you?"

"No-o," she returned, through her tears; "it isn't that. I did it myself, but—but—"

"Oh, never mind," he said, soothingly. "There isn't a piece of bric-a-brac in the whole house that can't be replaced."

"It isn't that, either," she sobbed. "If it was just a money loss I wouldn't care. But it is a mistake—a fearful mistake—that I made, and when I think what people will say when they hear about it, I just want to go away and die. It's simply awful to contemplate, Harry, and I don't see how I can live in this neighborhood and hold my head up after it."

"Well, we'll move if it's necessary," he answered; "but tell me what it is."

She brightened up instantly at the suggestion that they might move.

"I never thought of that," she said. "That will fix it all right. You see, the trouble is all about that Mrs. Brown who lives in the next block. If we can get away from her and the people who know her I suppose I can live it down."

"You haven't had any serious trouble with her, have you?" he inquired, anxiously.

"Oh, dear, no!" she answered. "But, you see, I called on her to-day."

"Well? What happened then?"

"Nothing. She was punctiliously polite, but I could easily see she was inclined to look down upon me as a woman who did not understand social customs, but nevertheless was well-meaning, and was to be treated with dignified courtesy. I couldn't understand it at first, but later—"

"Well?"

"Why, later I learned that she moved into the neighborhood two hours before we did, and I should have waited for her to call on me first. Yes, I'm afraid we'll have to move, Harry. I can never be anything here after that."—Chicago Post.

A CARD FROM A GEORGIA WIDOW.

Mr. Editor, I desire to thank the friends and neighbors most heartily in this manner for their co-operation during the illness and death of my late husband, who escaped from me by the hand of death on last Friday while eating breakfast. To my friends and all who contributed so willingly toward making the last moments and the funeral of my husband a success, I desire to remember most kindly, hoping these lines will find them enjoying the same blessings. I have also a good milk-cow and roan gelding horse, eight years old, which I will sell cheap.

"God moves in a mysterious way, his wonders to perform. He plants his footsteps on the sea and rides upon the storm."

Also a black and white shoat very low.—Griffin Call.

AMEN!

"What the Senate committee on foreign relations has practically said to Mr. Cleveland in regard to the Cuban situation," said a prominent western senator lately, "reminds me of what President Lincoln wrote to General McClellan, when the latter was in command of the army. General McClellan, as is well known, conducted a waiting campaign, being so careful not to make any mistakes that he made very little headway. President Lincoln sent this brief but exceedingly pertinent letter:

"My Dear McClellan:—If you don't want to use the army, I should like to borrow it for awhile. Yours respectfully,

"A. Lincoln."

—Washington Post.

GOOD JUDGES OF CHARACTER.

Passenger (alighting from cab)—"What's the charge?"

Cabman—"One dollar."

Passenger—"That's quite reasonable. I knew by your face that you wouldn't try to be extortionate."

Cabman—"Thankee! I knew by your face that you'd be too mean to pay more than the legal fare without a lawsuit."—New York Weekly.

AS IT SEEMED TO HIM.

The lesson was David's lamentation over Saul and Jonathan.

"You read the next verse, Freddy," said the Sunday-school teacher to the physician's little son, and Freddy read:

"Saul and Jonathan were lovely and pleasant in their lives, and in their death they were not divided. They were swifter than eagles, they were stronger than lions."

"Freddy, what does it mean where it says that in their death they were not divided?" asked the teacher.

"That means there wasn't any post-mortem examination made," replied Freddy.—Puck.

HIGHLY SYMPATHETIC.

"The meanest man" is a person who seems so frequently encountered that it is a pleasure to run across the most tender-hearted man. He was standing just outside his office, when a friend stopped to inquire:

"How is Diggles getting along? I haven't seen him for a long time."

"Worse than usual," was the reply, in tones of the deepest sympathy. "Very much worse than usual, poor fellow!"

"Are you sure of that?"

"Certain. I recently had my salary reduced, and I can't lend him nearly as much as I used to."—Washington Star.

ANATOMICAL.

Mrs. Levi—"Bud afder our Repecca marries young Cohn, do you subbose she vill own his heardt?"

Levi—"I toudt gare a gontinental vedder he has a heardt or not. He has a life insurance bolicy for feefty thousand dollars, und only vou lung."—Truth.

AN EFFECTIVE WAY.

Gilboy—"I undersand that Judge Marrymore is breaking up housekeeping."

Gadman—"That can't be; he's very busy these days deciding divorce cases."

Gilboy—"Well, isn't that what I said?"—Roxbury Gazette.

A MORNING CALL.

Mrs. Gadd—"I'm nearly tired to death; was at Mrs. Nabb's party last night."

Mrs. Gabb—"I didn't go; in fact, did not get an invitation. Were there many there?"

Mrs. Gadd—"Oh, no! It was very select."—New York Weekly.

RESERVED.

Lawyer—"I must know the whole truth before I can successfully defend you. Have you told me everything?"

Prisoner—"Except where I hid the money. I want that for myself."—Detroit Free Press.

BIRTH.

"She taunts me," he hissed, "with not being as well born as she. 'Tis true, methinks, her father set up Havana three-for's, and mine only Pittsburg stogies; but a man's a man for a' that."

GOOD GROUNDS, TOO.

Duzbey—"I understand that Mrs. Buzbuz has begun divorce proceedings."

Doobey—"On what grounds?"

Duzbey—"South Dakota."—Roxbury Gazette.

HE COMPLAINED.

"Hang this fog!"

"What's the matter?"

"Why, it's so thick I just walked into one of my creditors."—Cleveland Plain Dealer.

WHAT'S THE GOOD OF ANYTHING.

"I found a lead-pencil this morning."

"That isn't very remarkable."

"Well, but it had one of those safety pocket-holders on it."—Yale Record.

AN IMPORTANT NOTICE.

Readers of Farm and Fireside who have not yet seen "Our Heaven-Born Banner," the most beautiful patriotic picture ever issued in this country, would do well to secure a copy at once. This wonderful picture, illustrating the patriotic sentiment of Drake's Ode to the American Flag, shows every color and tint of the rainbow, and was issued by the C., C., C. & St. L. R'y in special recognition of the Grand Army of the Republic. It has now reached its seventh edition and adorns the walls of many of the finest homes in this country. In anticipation of the coming G. A. R. Convention in Buffalo, N. Y., next July, the "Big Four Route" is desirous that every reader of Farm and Fireside should possess a copy to adorn their homes. Send 10 cents (to cover the bare cost of postage and packing) to Mr. E. O. McCormick, Gen. Pass. Traffic Manager "Big Four Route," Cincinnati, Ohio, and receive a copy by return mail. If the edition is exhausted when your letter is received, your money will be returned to you by first mail.

40 Cent Patterns for 10 Cents

Any TWO patterns, and this paper the remainder of this year, 35 cents.

Full descriptions and directions—as the number of yards of material required, the number and names of the different pieces in the pattern, how to cut and fit and put the garment together—are sent with each pattern, *with a picture of the garment to go by.* These patterns are complete in every particular, there being a *separate* pattern for *every single piece* of the dress. Your order will be filled the same day it is received.

For ladies, give BUST measure in inches. For SKIRT pattern, give WAIST measure in inches. For misses, boys, girls or children, give both BREAST measure in inches and age in years. Order patterns by their numbers.

Satisfaction guaranteed or money refunded.

To get BUST and BREAST measure, put the tape measure ALL of the way around the body, over the dress close under the arms.

Special price of each pattern, 10 cents.

Postage one cent EXTRA on skirt, tea-gown and other heavy patterns.

No. 7005.—Ladies' Tucked Shirt-waist. 10 cents.
Sizes, 32, 34, 36, 38 and 40 inches bust.
No. 7006.—Same Pattern in Misses' Size. 10 cents.
Sizes, 10, 12, 14 and 16 years.

No. 7012.—Misses' Jacket. 10 cents.
Sizes, 12, 14 and 16 years.
No. 6989.—Misses' Four-gored Skirt. 11 cents.
Sizes, 12, 14 and 16 years.

No. 7020.—Misses' Sleeves. 10 cents.
Sizes, 12, 14 and 16 years.

No. 7019.—Ladies' Waist. 10 cents.
Sizes, 32, 34, 36, 38 and 40 inches bust.
No. 7003.—Ladies' Skirt. 11 cents.
Sizes, 22, 24, 26, 28 and 30 inches waist.

No. 1002.—Ladies' Basque. 10 cents.
Sizes, 32, 34, 36, 38 and 40 inches bust.

No. 6549.—Ladies' Tea-gown. 11c.
Sizes, 32, 34, 36, 38 and 40 inches bust.

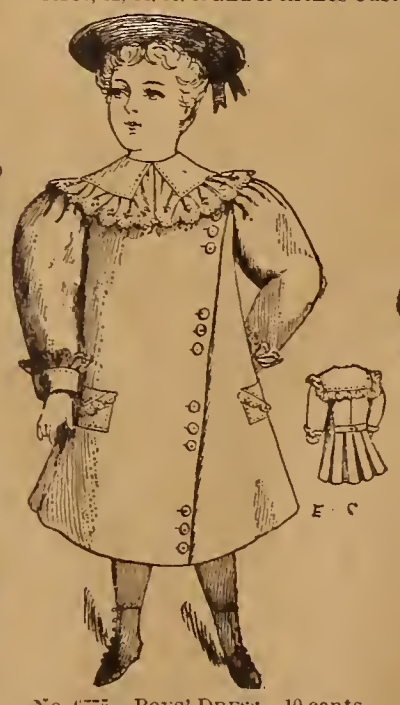
No. 7002.—Ladies' Eton Jacket. 10c.
Sizes, 32, 34, 36, 38 and 40 inches bust.
No. 6996.—Same Pattern in Misses' Size. 10 cents.
Sizes, 12, 14 and 16 years.

No. 7023.—Ladies' Double-breasted Eton Jacket. 10 cents.
Sizes, 32, 34, 36, 38 and 40 inches bust.
No. 7018.—Ladies' Bicycle Skirt. 11c.
Sizes, 22, 24, 26, 28 and 30 inches waist.

No. 6616.—Ladies', Misses' and Children's Cycling-caps. 10c.
Sizes, 18½, 20¾, 22¼ inches head measure.

No. 1018. 10c.
Sizes, 32, 36, 40 in. bust.

No. 1013. 10c.
Sizes, 32, 36, 40 in. bust.



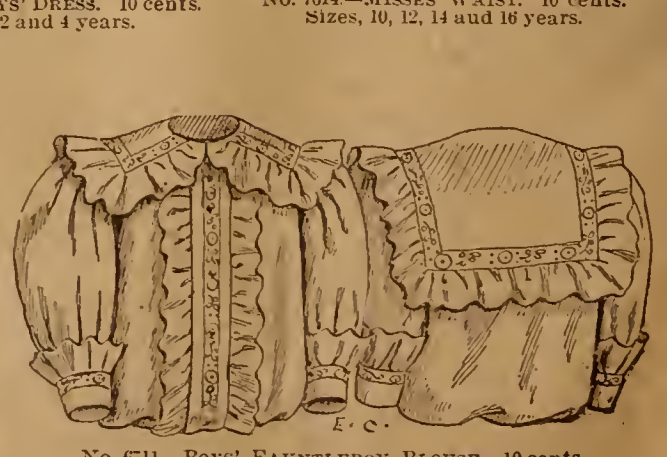
No. 6775.—Boys' Dress. 10 cents.
Sizes, 2 and 4 years.

No. 7014.—Misses' Waist. 10 cents.
Sizes, 10, 12, 14 and 16 years.

No. 7004.—Misses' Skirt. 11 cents.
Sizes, 12, 14 and 16 years.

No. 6779.—Boys' Suit. 10 cents.
Sizes, 2, 4 and 6 years.

No. 6741.—Ladies' Night-gown. 10c.
Sizes, 32, 34, 36, 38, 40 and 42 inches bust.



No. 6711.—Boys' Fauntleroy Blouse. 10 cents.
Sizes, 2, 4, 6 and 8 years.

WE HAVE OFFICES IN NEW YORK CITY, SPRINGFIELD, OHIO, AND CHICAGO, ILLINOIS.

NOTICE.—Send all orders for patterns direct to our central office, to FARM AND FIRESIDE, SPRINGFIELD, OHIO, where our stock of patterns is kept.

PATTERN CATALOGUE

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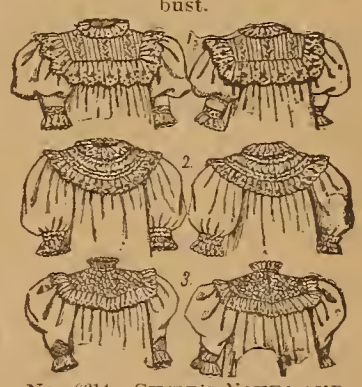

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The picture is 21 inches wide and 28 inches long.

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The scene chosen for the painting is the "Judgment Hall" in the palace of Pilate, and the hour "early in the morning." Around the Governor the priests are gathered, and the high-priest, Caiaphas, is accusing Christ and demanding his death. The proud and furious bigot is all alive with excitement. There is a majesty about his pose, the consciousness of power in his look and gesture, and something of dignity in the superb audacity with which he draws Pilate's attention to the execrations of the mob (who are crying out, "Crucify him!") as expressive of the national will which the Governor is bound to respect, at the same time insinuating that to let this man go will be treason to Cæsar, as well as a violation of the Jewish law which demands the prisoner's death for "making himself the Son of God." Pilate is yielding to the clamor, while his conscience, aided by his wife's message warning him not to condemn that righteous man, is protesting in tones which make him tremble.

THE CENTRAL FIGURE,

And the most impressive of all, is Christ himself, clad in white, with flowing hair and bound wrists. He stands alone in the simple majesty of his own personality, without sign or symbol save his individual greatness. A heavenly submission is on his face. Never before in any painting of the Messiah has anything of his personality in pose and figure been seen. The face has been that of Jesus, the form that of other men; but here the figure is of Christ himself.

OTHER LEADING FIGURES

Are represented by the proud and confident Pharisee, the haughty and contemptuous Scribe, the Roman soldier, and the ruffian leaders of the mob. At one side a mother holds up her child to see the Savior. In the outer court the multitude is awaiting Pilate's decision.

WHAT OTHERS SAY.

Washington, D. C.
I saw the painting "Christ Before Pilate" in St. Paul, and can testify that the picture sent me is a perfect facsimile in every particular, especially in the coloring. I consider it an art treasure, and in view of the great value of the original, it certainly is.
Mary A. Denison.

Muskegon, Mich.
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Chas. A. Lindstrem.

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St. Catharine's Academy, Racine, Wis.
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Mother M. Hyacintha.

Artondale, Washington.
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For only 40 cents we will send Farm and Fireside one year and the picture "Christ Before Pilate."

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Premium No. 17.

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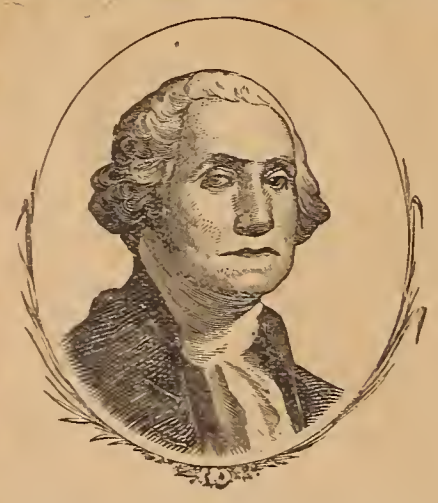

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OVER 200 SPLENDID ILLUSTRATIONS were especially made for these works. As the size of the pages is double that of ordinary book pages, these two books contain enough to make OVER 1,300 PAGES of the ordinary book. There are over 650 large pages.

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Our biography of the great general was written by Washington Irving, prince of American authors. It tells the true story of Washington as a boy in his Virginia home, as a pupil and student, as a surveyor and mathematician, as a brave, fearless man, as an Indian fighter, as a Virginia planter and gentleman, as a British soldier, as a patriot and commander of the Revolutionary army. It also pictures Washington's home life as lover, husband, friend, neighbor, citizen, and as the first president of the United States.

LINCOLN, the Great Emancipator.

Our biography of Abraham Lincoln gives the complete story of his life. It tells what is known of his ancestors, of his humble birth in a log cabin, of his life as a farmer's boy, a frontiersman, a wood-chopper, carpenter, flatboatman, student, surveyor, clerk, athlete, storekeeper, postmaster, story-teller, captain Black Hawk war, lawyer, politician, member of the legislature, congressman, orator, statesman, friend, lover, husband, father, president of our country, commander-in-chief of our armies, our martyred hero.

Every patriotic home should own these two peerless books, the lives of the nation's two greatest statesmen and presidents.

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These books are unsurpassed for inspiring the youth of our land with high ideals and lofty ambitions, and parents who induce their sons and daughters to read them will be sowing good seed in fertile places.

We will send Farm and Fireside one year and either "Life of Washington" or "Life of Lincoln" for 40 cents.

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EASTERN EDITION.

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VOL. XX. NO. 14. APRIL 15, 1897. TERMS { 50 CENTS A YEAR. 24 NUMBERS.

WITH THE VANGUARD

All readers interested in the extension of a profitable agricultural industry in this country should apply to the Secretary of Agriculture, Washington, D. C., for a copy of Farmers' Bulletin No. 52—"The Sugar-beet: Culture, Seed Development, Manufacture and Statistics." This pamphlet has been prepared recently by the Department of Agriculture to meet the demand for information as to the adaptability of the soil and climate of the United States to the production of sugar-beets. It is illustrated by twenty-four cuts showing typical specimens of varieties of beets, implements of cultivation and machinery for extracting and refining the juice of the beets.

Richard Henry Jesse, seventh president of the University of the State of Missouri, was born in Lancaster county, Virginia, March 1, 1853. His birthplace was the old Ball farm, the birthplace and early home of Mary Ball, Washington's mother. President Jesse received his preparatory education at an academy founded by his father. Later young Jesse was sent to the Hanover Academy, at that time the oldest and best fitting school in the state. Thence he went to the University of Virginia, graduating with distiuction in 1875.

Richard H. Jesse, LL.D.

The next year he returned to Hanover Academy as instructor. For the next two years he was principal of a high school in Princess Anne, Maryland.

In the summer of 1878 the trustees of the University of Louisiana wrote to the University of Virginia asking that a dean be recommended for the academic department. The University of Louisiana had been founded at New Orleans in 1840. The academic department, or college proper, had been established in 1856 under Dr. Francis Liston Hawks. At the outbreak of the civil war the University of Louisiana was closed, and in the troubles of the reconstruction period the academic department was not opened again until 1878. In answer to the request to name a dean, the professors of the University of Virginia united in recommending Mr. Jesse. Unanimously elected, he determined to give his entire time and energy to the upbuilding of his department in the University of Louisiana, which he successfully accomplished in the face of the greatest difficulties.

Paul Tulane, of New Jersey, gave a large sum for the endowment of a university in New Orleans. Dean Jesse strove with great energy to effect a consolidation between the Tulane University and that of the state. He soon won to his ideas Judge E. D. White, now justice of the United States Supreme Court, Judge Charles E. Fenner, of the Louisiana Supreme Court, both Tulane trustees, and the newly appointed president, William Preston Johnston. These men took the lead in the movement, and the consolidation was effected in June, 1884. In the consolidated university Mr. Jesse chose the chair of Latin, and was made senior professor in the fall of 1884.

Without his knowledge or consent a distinguished professor of the University of Virgina recommended Professor Jesse as president of the University of Missouri. Many friends joined in urging his name, and in December, 1890, he was offered the position by the unanimous vote of the trustees, and accepted it the following month. In June, 1891, he was duly inaugurated. In the same month Tulane University conferred on President Jesse the degree of LL.D. During his administration the University of Missouri has made great progress. In January, 1892, its buildings were destroyed by fire. The people responded generously, and about $600,000 have been expended in the work of reconstruction. During the first four years of his administration the legislature gave to the university more money than was ever given by any other state to any educational institution within an equal space of time. The university has now the following departments: Academic (college proper), law, medical, engineering (civil, electrical, mechanical, mining), and the college of agriculture and mechanic arts, to which the agricultural experiment station is attached. President Jesse has been especially successful in fostering secondary education in Missouri, and the university has now a thorough system of affiliated schools.

On July 2, 1890, an act was passed by Congress entitled "An act to protect trade and commerce against unlawful restraints and monopolies." This act, popularly known as the Sherman anti-trust law, reads in part as follows:

"Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several states, or with foreign nations, is hereby declared to be illegal. Every person who shall make any such contract or engage in any such combination or conspiracy shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine not exceeding $5,000, or by imprisonment not exceeding one year, or by both said punishments, in the discretion of the court.

"Every person who shall monopolize, or attempt to monopolize, or combine, or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several states or with foreign nations, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by fine not exceeding $5,000, or by imprisonment not exceeding one year, or by both said punishments, in the discretion of the court.

The United States Supreme Court recently rendered a judgment against the Trans-Missouri Freight Association, declaring that this act applies to railway "pools," or combinations, to determine and maintain rates, and the combination of railways in the association named has collapsed. This decision has been called the most far-reaching judicial decision of modern times; and it is claimed that the principle of this law must apply equally to all trusts, trade combinations and labor organizations which attempt to regulate prices and wages, as well as to railway pools.

FARM AND FIRESIDE

PUBLISHED BY

MAST, CROWELL & KIRKPATRICK.

OFFICES:

108 Times Building, New York City. Springfield, Ohio. 1643 Monadnock Block, Chicago, Illinois.

Subscriptions and all business letters may be addressed to "Farm and Fireside," at either one of the above-mentioned offices; letters for the Editor should be marked Editor.

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Postage-stamps will be received in payment for subscriptions in sums less than one dollar, if for every 25 cents in stamps you add one-cent stamp extra, because we must sell postage-stamps at a loss.

The date on the "yellow label" shows the time to which each subscriber has paid. Thus: 1jan98, means that the subscription is paid up to January 1, 1898; 15feb98, to February 15, 1898, and so on.

When money is received, the date will be changed within **four weeks,** which will answer for a receipt.

When renewing your subscription, do not fail to **say it is a renewal.** If all our subscribers will do this, a great deal of trouble will be avoided. *Also give your name and initials just as now on the yellow address label; don't change it to some other member of the family; if the paper is now coming in your wife's name, sign her name, just as it is on label, to your letter of renewal. Always name your post-office.*

NOTES ON RURAL AFFAIRS.

Beet-growing Once More. The Ohio station in its bulletin No. 75 gives a reprint of an earlier bulletin issued by the Wisconsin experiment station on "Beet-sugar Production." There are several things in it that seem to me very suggestive and pregnant with important information. The bulletin tells us, for instance, that beet culture is not exhaustive to the soil. Chemically considered, sugar is a compound of carbonic acid and water, substances which nature furnishes to us free in unlimited quantities. "Of course, there is nitrogenous and mineral matter in the plant substance also; but we should not forget that all the beet-leaves remain upon the farm, and the pulp can be returned to it from the factory for feeding stock. By feeding leaves and pulp to cattle the farmer is able to return to his field in barn-yard manure all of the valuable elements taken from it in the crop."

* * *

Cost and Yield. The cost of growing an acre of beets is estimated at from twenty-five dollars to thirty dollars, and the yield of sugar-beets at from twelve to twenty tons an acre. This would put the cost of raising a ton of beets at about two dollars or less. Cattle-beets, of course, could be made to yield double this quantity. This shows once more how cheaply we can produce roots for cattle-feeding. It also shows that sugar-beets can be produced cheaply enough in this country to make the commercial production of beet-sugar a financial success. It can be only a question of time when American growers and manufacturers will learn how to overcome the same difficulties and discouragements which the people of Europe during the first half of the present century met, and found means to overcome. The problem is simply that of using the greatest possible economy in every detail of work. A fraction of one per cent of sugar more or less in the beet, or obtained from it through perfected methods, may make the difference between profit and loss in the final outcome. It was thus years ago in Europe. It will be thus here.

How to Improve Varieties. Highly instructive is the account of the development of the sugar-beet, from the root containing six per cent of sugar to that of the present day, analyzing from fourteen to twenty-five per cent of sugar. Whole fields are now grown which carry fourteen per cent of sugar in the juice, while single specimens have exceeded twenty-five per cent. This high sugar yield is the result of the most careful selection of the roots. "To be satisfactory, the beet must be smooth on its surface and without prongs and branches, so as to have no places where dirt may be concealed at the time of washing the roots. Large beet roots carry little sugar, the ideal root weighing from one to three pounds. Those of the most desirable form are smooth and spindle-shaped, and such are selected for growing seed. Plugs are taken from roots having the desired form and size in such a way as not to seriously injure them, and the juice of these plugs is analyzed to determine the sugar. Those which are satisfactory are planted the following spring to produce seed. The seed thus secured is planted, and the beets resulting are again analyzed as before, and only the best are chosen. This process is repeated for several years, when finally all of the seed grown is turned over to the farmers for producing beets to be consumed by the factory. The beet roots so carefully selected for seed are called 'mother beets.' Millions of dollars, literally, have been expended in scientific studies of the beet root, with the wonderful results above noted. All of this care and selection results in making the beet root one of the most artificial of plants, and it responds immediately to abuse by yielding less sugar, or, under good culture, by holding its sugar content up to the high standard set for it."

(The illustration shows the Vilmorin, a model root of the variety having largest percentage of sugar—sixteen per cent and upward.)

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Poultry Parasites. The North Carolina station sends out a bulletin (No. 131) on "Parasites of Poultry." It treats on tapeworms, trematode worms, nematode worms, gape-worms, spiny-headed worms, nest-bugs, bird-fleas, mites and lice. I find that with the free use of pure kerosene-oil in the interior of the poultry-houses, the roosts and nests, I have very little trouble from the ordinary kinds of external poultry parasites, and with clean, well-balanced food and cleanliness none from interior parasites. The following—a part of the treatment recommended for the tapeworm—is good advice as a preventive of all parasites and diseases. "Keep the roosting-house clean. Use kainite and air-slaked lime freely as a disinfectant in house and yards. Dilute sulphuric acid—four fluid ounces to the gallon of water is a very efficient disinfectant." I keep mostly Black Langshans and some others of the large Asiatic breeds, which have more or less feathers on their legs. These breeds are especially subject to leg-mange, a disease caused by the scab-mite, a very small insect (about 1-50 inch long). Lack of exercise and uncleanliness favor the spread of the disease, which is highly contagious. A cure is easily effected, and yet I, like many other people, often allow the disease to exist in my flocks from year to year through sheer shiftlessness. The bulletin gives the following treatment: "Absolute cleanness of cages, coops and houses. All diseased birds should be isolated, and those badly diseased killed. Fowls should be removed to clean runs, and given as much room as possible. Compel them to scratch for their food. Scabby legs should be soaked in warm water for five minutes, and then rubbed with a stiff brush to break the scabs. Then rub on an arsenical wash, or apply an ointment made of lard ten parts, sulphur three parts, and crystallized carbolic acid one part. An application of pure kerosene-oil twice a week, after a careful washing with warm water and soap, is very good, and is used perhaps more extensively than any other remedy. If the legs bleed, wrap them up with cloths after applying the remedy. Usually one application will suffice, and a cure will be had in three or four days. Repeat application after three days if necessary." I have never failed to cure the diseased fowls by immersing the legs as far as affected into pure kerosene-oil, repeating in a few days if required. The work should be done at night after the fowls have gone to roost. Most of the breeds much subject to scaly-leg are tame, so that one bird after another may be picked up and treated. Even if a fowl is not affected, or only slightly so, the treatment should be thorough just the same. Lately I have hit upon the plan of blowing a kerosene spray over the legs of the roosting fowls once or twice a week. This should be done early in the evening, when the birds are still standing up on the perches, so that the spray can be directed straight across, just above the roosts and below the breasts of the roosting fowls.

SALIENT FARM NOTES.

Hoeing a garden is not very hard or unpleasant work if one has only a small area to go over and the weather is comfortably cool and pleasant. But when one is in a great hurry and there is a large patch to go over, then the work is both hard and irksome. When a farmer goes into a garden to "clean 'er up," he has only a limited amount of time to do it, and he makes the soil fly right and left until he is wet with sweat and aching in every joint; then he declares emphatically that gardening is the hardest work on the farm, and from that hour the garden begins to go to ruin and becomes a wilderness of weeds.

* * *

The right time to hoe a garden is as soon after every shower as the soil will work nicely. After a shower the weeds—purslane, smartweed and all the other well-known garden pests—spring up by the thousands, and if the surface of the soil is stirred while they are in the seed-leaf, every one of them is destroyed; while if they are permitted to get an inch or two high many of them, especially purslane, are very difficult to destroy. A few years ago I moved my garden to a new piece of ground, and during the first two seasons the surface would be fairly red with young purslane after every shower. As soon as the soil could be worked I would go over the patch with a wide garden-rake, and in two seasons cleared the ground of the pest.

* * *

For several years I have been trying various garden-cultivators to see if I could find one that would work as well as a good sharp-toothed rake, be easier on my arms and back and enable me to get over the ground faster. I found that most of these so-called garden-cultivators, or hoes, or plows, whichever they were called, were made to sell rather than to do good work. The attachments were clumsy, rough cast-steel or iron affairs that could not be polished or made bright and smooth or kept sharp. The wheels were too small, and this made them hard to push along; in fact, most of them were simply made to enrich the manufacturer rather than to make gardening easier.

* * *

In buying a garden-cultivator it would be far better to pay a fair price and get a good one than to accept one of the made-to-sell sort as a gift. In making a selection choose one with a large wheel, for this will make it run easier; and see that this wheel is set so that it will run steadily and not wobble. See that the hoes, or weed-cutters, are made of good steel, thin like a hoe, and can be polished smooth and bright with sandpaper, and can easily be kept sharp. Then see that the teeth of the rake, or rakes, are not less than three inches long, and are polished smooth like the tines of a manure-fork. Rough teeth gather trash and clog so as to be almost useless before they are run ten feet. See that the pitch of the handles can easily be adjusted, and that they are stiff and firm, but light. See, also, that the frame is light, open and strong, and that all adjustments can be made easily and quickly. When you find a garden-cultivator like this, buy it on the spot; and if it does not lighten the labor of cultivating the garden more than half, send the bill to me.

* * *

With such a cultivator as I have described one can skim the soil of a large garden easily, and in a very short time. If it has two wheels, one can straddle the rows of young vegetables and loosen the soil and destroy weeds faster than four or five men can do it with hoes, do a better job, and do it very much easier. On most farms the women of the household will gladly do the hand-weeding—picking the weeds out of the rows—if some one will do the hoeing. With a good, made-for-business hand-cultivator a man can hoe a large garden in an hour right after breakfast, and that is the time to do effective work, and the ladies can pick the weeds out of the rows whenever they can get to them. The attachments needed for a garden-cultivator are: A rake—two are better than one, if they can be set at an angle to run between narrow rows; they should sweep not less than sixteen inches wide, and if the teeth are round, smooth and fine like the tines of a manure-fork, they may just as well sweep twenty inches. A pair of hoes that can be set at an angle to cut a narrow strip, or one sixteen inches wide. A pointed shovel-plow, about three inches wide, that can be set to gouge deeply if necessary. Sometimes a turning-plow can be used to open a row, but unless the soil is very mellow it will prove useless, because of the difficulty of preventing it from running to one side. A row-opener with a mold-board or wing on each side is preferable in every way. For covering seed in the rows I prefer a hand rake or a hoe, as much better work can be done with them.

* * *

There is quite a knack in working a garden-cultivator. When one "catches on" he can do good and rapid work, but the greenhorn will blister his hands and get into a white heat several times before he learns the trick. I have found it best to wear gloves. Don't gouge deeply; merely skim the surface one half to one inch in depth. Push the machine forward ten to fifteen inches, draw it back six or eight, and as you step forward with one foot—only a short step—push it forward again. Draw it back as before, then step forward with the other foot, and push the machine another ten to fifteen inches. Proceed in this way, slowly at first, watching the wheels and hoes or rakes closely, and being careful to not go deeply, and you will soon learn the caper; and having once learned it you can do much better work than with a hoe or rake, and without cracking your back.

* * *

Most of the winter wheat in this central part of the state is dead. Here and there a field that was thoroughly well prepared and seeded at just the right time, or is protected from the northwest wind by woods, is alive and looking fairly well; but such fields are few and far between. The majority of our farmers have to face the hard fact that most of the wheat they sowed in a half-careless, half-hearted manner last fall is gone, and the land is on their hands. What will they do with it? Grow more fifteen-cent corn?

* * *

At this writing (March 27th) the soil is water-logged, and oat-sowing is out of the question. If the weather should clear up for a couple of weeks right now much of the wheat ground will be seeded to oats. And it is just possible that the oats crop will be a good one. Such is usually the case when winter wheat is killed. All farmers are hoping that the opportunity to sow oats will come, because it will greatly lessen the area to be planted to corn.

Fred Grundy.

Our Farm.

FARM THEORY AND PRACTICE.

Clover Failures.—Red clover has become one of the foundation-stones of good farming. With good growths of clover as a basis we can arrange crop rotations satisfactorily. It is a fact not fully recognized, however, that in most sections of this country there is no assurance that a seeding to clover will secure the desired growth. In a few fertile valleys clover rarely fails, but elsewhere farmers are disheartened by not infrequent failures. I do not mean that all this land will no longer grow clover, but that failures are sufficiently frequent to derange rotations badly and to bring discouragement to those who would plow less and build up the soil more rapidly during this era of low prices. During the winter I have met hundreds of such men, and have heard them discuss the ways and means of increasing the chances for a good stand and rank growth of clover. Dependence upon this manurial plant grows greater, its value being more fully appreciated, and it is most unfortunate that there should be so much difficulty in securing it.

* * *

What Is the Matter?—Some farmers have jumped to the conclusion that the seed often lacks vitality. I hardly think that this is correct. An easy test can be made by placing one hundred seeds in a pan of moist soil, kept in a warm place, or in a wet cloth, and noting in a few days the number of seeds that have germinated. Most clover-seed upon the market has vitality, I think, and the difficulty is elsewhere. Usually the fault is with the soil. When the mechanical condition of the land is at fault, heavy seeding is desirable. It is true that there is enough seed in a bushel of clover to furnish all the plants needed on twelve or fifteen acres of land, but with a poor mechanical condition of the soil half of the seed furnishes no plants. Many farmers use only one bushel of seed to eight or ten acres, and some failures are attributable to this light seeding. Unless the soil is loamy in texture, it is safer to double the amount of seed used. I have watched the seeds germinate, and those young plants dwindle that had a poor location, and a fair stand of plants in the end is often due to such an abundance of seed that every favorable spot, however tiny, received a seed.

* * *

Seeding with Spring Crop.—A friend writes that he desires to seed twenty acres to clover, and wants some forage from the field this year while the clover is starting. If a crop for hay or grain is desired, probably the best plan is to seed the land lightly to oats, sowing clover at the same time. It is not best to risk the usual amount of oats for seed when a catch of clover is the first consideration. The oats rob the clover-plants of moisture, soluble plant-food and sunlight. Thin oats serve as a cover crop, checking the weeds. They may be cut for hay—the best plan for the clover—but are hard to cure, or they may be harvested for the grain. The objection to this method of seeding down is that the grain crop hardly pays expenses. On land that is deficient in vegetable matter, and that is inclined to bake, I prefer the chance of getting clover with thin oats to that furnished by a wheat-field, the surface of which is often hard-baked in spring. In the latter case, even when the seed falls into checks made by frosts, the plants become stunted by the first drought, and this condition of the land is a fruitful cause of clover failures.

* * *

Unprofitable Land.—In so many sections I have seen thin land that would be cropped this season simply because no catch of grass has been obtained upon it in the past. Where pasturage is wanted it is not necessary to seed to wheat and take the chances of a stand of grass. Such land should have been seeded to rye and timothy last fall and to clover this spring, all to be moderately grazed this summer. As the rye was not sown last fall, such land should be well plowed and fined at once, and seeded to rye, oats, Canada field-peas, timothy and clover. Early in the summer stock should be allowed to keep the growth grazed fairly close. About the first of July the stock should be removed, and all the long stuff clipped with a mower and left as a mulch during the usual midsummer drought. Early in September more rye and timothy should be drilled in wherever the grass has failed to catch well. For this purpose use a sharp-hoed drill without any preparation of the ground. If the stand of grass is not thick the following spring, a sprinkle of clover-seed will do good. In this way considerable feed may be grown while a stand of grass is being obtained, especially if a light top-dressing of manure can be given the land. David.

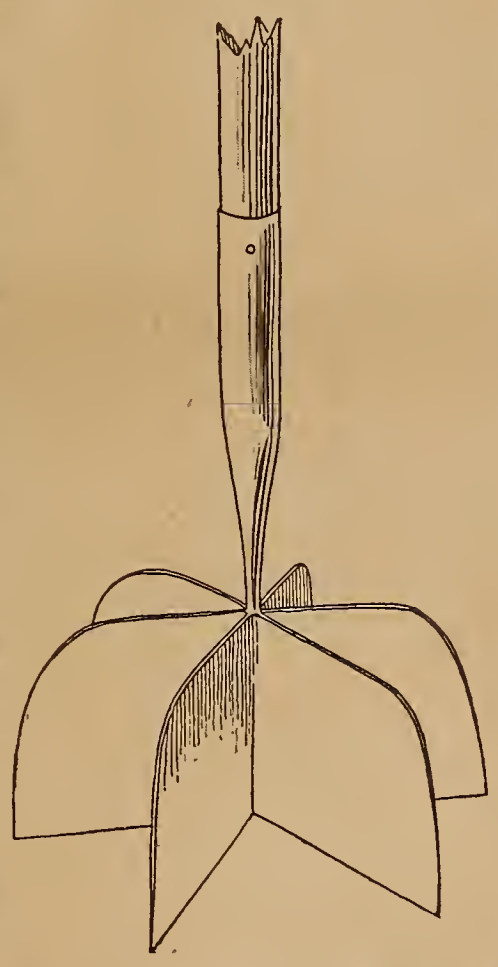
A LONG-FELT WANT, ETC.

Ever since I have kept poultry it has been my aim to cheapen the bill of fare of my fowls; and especially since embarking in the capon business have I tried to economize more and more, for it is not a small matter to provide for a large flock of these eight and ten pounders all winter, and it will tax the wit of the careful feeder to make savings as much as possible and is consistent with the well-being of his flock.

It is only too true that many farmers even now feed their poultry exclusively on a grain diet; but this is neither economical nor do I think the best results can thus be attained.

When the cold season begins insects disappear, and the fowls need a substitute. Milk goes a long way to supply this want, then meat-scraps, ground green bone and animal meal are most excellent substitutes, and some of them should be given at least in small quantities.

When hard-freezing weather sets in and snow covers the ground, then our fowls miss another element, so very conducive to their general welfare; that is, green stuff. Now, it is comparatively easy to furnish a substitute; we have a multitude of vegetables which may be had and kept on hand all winter. I will name cabbage, beets, apples, potatoes, carrots, etc.; but a great many poultry-keepers, especially the farmers, are too easy about it. It seems to be too much trouble for them.



Now, it does not seem to me of too much trouble to chop up a quantity of any of the above-named vegetables each day, mix same with bran and middlings and place into the feeding-troughs at noon, thus saving a great deal of the more valuable grain.

A few apples scattered about on the henhouse floor will soon be devoured; also a head of cabbage: but beets and carrots fowls do not take to so kindly, and such have to be fitted by chopping finely. In cold weather even apples and cabbage soon freeze in the ordinary poultry-house before the fowls have time to eat them up, especially when feeding capons, which are not as active as hens. Chopped vegetables, on the other hand, would soon be cleaned up, and would not have time to freeze.

I have for a long time felt the need of a tool that would do the work of chopping vegetables quickly and finely enough, and I have been asked many times by others to contrive a practical method to accomplish the desired end. I have hit on a tool like the accompanying drawing. Will not some manufacturer of hoes or similar tools take this hint and provide us with such a tool? The cutting-blades should be the size of a large garden-hoe, or perhaps seven or eight inches across. I believe the tool would meet with a ready sale if not too expensive. Costly machinery the small poultry-keeper is loath to buy. He cannot afford to purchase all these modern adjuncts like bone-cutters, clover-cutters, etc., but an inexpensive vegetable-chopper I think he would buy readily.

Allow me to make another suggestion in regard to green bone. The majority of poultry-keepers are aware of the great advantages of the cut bone, but few have the machine to cut them. Let the bones be boiled instead until all the adhering meat and gristly substance becomes soft and comes off from them. Remove the bones, boil down the liquid, then thicken with bran or meal. It makes a most splendid morning feed in cold weather. The bones may be charred, broken up finely and placed in a box in the henhouse. I consider this the best way to make use of green bones and other offal from the butcher-shop when a bone-cutter cannot be had. F. Greiner.

CORN AND WHEAT GROWING.

In all the grain-growing sections of the middle states along the Atlantic seaboard there was, years ago, no system of farming so popular as the old three-field system, in which the wheat followed a fallow from the old corn-stalks during the summer following the growing of corn on the field. But it was found, as farmers began to think more about the improvement of the land, that the old three-field system was a poor one for the land. Then, with the discovery of the Peruvian guano deposits, it was found that remarkable crops of wheat could be grown on the corn land by giving the soil a dressing of the guano, and at once there was a change in the plan, and the wheat was put after corn, and for the next year the wheat-stubble was pastured, and put in corn the following year.

It was considered necessary to "rest" the land one year in three, and yet the wheat was poor when all the growth that came naturally on the stubble was eaten close by cattle and sheep. The result was that in the best wheat-growing sections of eastern Maryland the soil got more and more compact from lack of vegetable matter and poor drainage, and as the mineral matters in the soil became deficient under the influence of the drain set up by the highly nitrogenous Peruvian guano, it was found that the guano no longer gave the big crops of wheat that it did at first; and then the cry went abroad that these artificial fertilizers were only stimulants, and that the soil from overstimulation had become exhausted, while the fact was that it was underfed and starved.

Then it became fashionable to have state chemists, and the state of Maryland got one. His duties seemed to be mainly to make for the farmers analyses of their soils, and tell them what they lacked. This was followed by the making of what was called manipulated guano, in which a larger percentage of mineral matters was added to the Peruvian as a nitrogen-furnishing medium, and the farmers thought that now they had the matter in a slug, and that all they had to do was to have their soil analyzed and tell what it needed, and then buy the guano that was said to come the nearest to what the soil demanded. Years before this the wheat-farmers had found that the resting of the land in clover not only gave them a better pasture, but also that in some way it benefited the land, and the practice became general to run the land in clover two years, making a four-year rotation instead of a three-year one; and some made it even longer, and had two fields of wheat, one after corn and one on a clover sod, and it was found that the clover sod gave the best wheat crop.

Some, as in eastern Pennsylvania, where the feeding of dairy-cattle was important, made the rotation still longer, and grew oats after the corn and wheat after the oats, seeding down to grass to run in mowing and pasture for years until it ran out and was again broken for corn. Gradually it became apparent that the analysis of the soil was an unsatisfactory mode of determining the needs of the crop, and the practice came into vogue that is still followed, of determining the needs of each particular crop, and varying the fertilizer according to the crop rather than the soil analysis, as the latter might show matters present, but in such an unavailable form that they were useless to the crops. Thoughtful men, too, found that it was an error to let the land lie in grass until exhausted by pasturage, and the modern plan of a short rotation of crops and no pasturing of the cultivated fields, but only the retention of a part of the land to be kept as a permanent pasture, top-dressed, to keep up its productiveness, was adopted. The result has been a general return to the old three-field rotation among the most progressive and observant farmers. The needs of the soil and the crop are both studied, and it was soon found that for the wheat-farmer the purchase of nitrogenous fertilizers in any form was a mere waste of money, since in a brief rotation in which clover came on the land once in three years the supply of nitrogen was sufficient for all the needs of the grain crops.

As by this mode of farming the vegetable matter increased in the soil, it was found that the use of lime was a great help in the promotion of the nitrifying process, and some made the mistake of supposing that lime was a manure that could be used to make the soil fertile, while in fact it was a real stimulant to enable the farmer to get at matters already in his soil.

But out of all the various experiments that farmers had been carrying on before the organization of the state experiment stations, there was gradually evolved a system, not yet in general use, but which promises to do more for our agriculture in the wheat-growing sections of the Atlantic coast than any that have preceded it. This is the three-year system in which all the manure made on the farm is spread during the winter on a clover sod that is to be planted in corn in the spring. The corn crop can use this coarse matter with its slowly nitrifying organic matter during the long summer better than any other crop.

The cultivation of the corn crop on a deeply plowed soil makes the best possible fallow for the wheat, and the manure applied to the corn gets into the best condition to promote the growth of the wheat. No grass is sown with the wheat, but clover is sown on it in the spring. And right here comes in the greatest improvement of all. It has been long known that the soils of the eastern coast plain are deficient in potash, and that clover needs large supplies of phospheric acid and potash in order that it might do its best for the farm and the farmer. Instead, then, of using the fertilizers of an artificial nature on the wheat crop they are applied to the clover, to promote the luxuriance of the one crop in the rotation that is for the benefit of the land.

This method of using the mineral forms of fertilizers has a twofold value. The increased growth of the clover enables it to do more of the nitrogen-gathering from the air, while at the same time it furnishes the farmer with an increased amount of forage to feed to stock and make more manure for the corn.

This three-field system, in connection with a standing pasture, so that there is never any need for the eating down of the clover, is the last great improvement in grain-farming in the middle states. It enables the farmer by an outlay of half what he would years ago have spent for a complete fertilizer for the grain crop to rapidly build up the productiveness of his land, and the thoughtful farmer who spends the same amount he formerly spent for a complete fertilizer can use double the amount on his land with profit.

This is the judicious use of commercial fertilizers, as compared with the old gambling on the chances with a high-priced fertilizer for the sale crops direct. For all the purposes of the grain-farmer the only fertilizer needed in connection with clover can be made by mixing 1,600 pounds of acid phosphate with 400 pounds of muriate of potash, and use it at the rate of not less than 400 pounds an acre on his young clover. In all the coast section this need not cost more than $18 a ton at present rates by the car-load. Used in this way, fertilizers are no longer to be dreaded as stimulants, but recognized as rapid improvers of the soil. Lime on the corn crop once in six years will be found a great help. W. F. Massey,

North Carolina Experiment Station.

Our Farm.

NOTES FROM GARDEN AND FIELD.

Seed-testing.—As usual, I have a lot of seeds left over from last year, and perhaps even from years before that. So long as these seeds will germinate promptly they are good to use, and I do not throw them away until well satisfied that they are past their usefulness. Among garden seeds that retain their germinating power the longest I have pumpkin, cucumber, squash, melon, egg-plant, endive, lettuce, radish, spinach, beet, cabbage, cauliflower, celery and others. These, when well stored, are good for at least five years, and up to ten years. Beans and peas are good for about three years, corn for at least two years, and carrots for four or five years. It is well established, however, that those seeds which germinate most promptly also give the strongest plants. We do not want seeds that have just enough vitality left to come up weakly and make a slow, sickly growth. Even if seeds to be used are old, we want them to be yet of strong vital power—and we should know what we are doing. It will not do to leave anything to chance. So if we have old seeds (and often having tested them before we know more about their purity and the general characteristics of the particular strain than about a newly purchased lot), we must give them some sort of test before we risk planting them. This is especially necessary with seeds like onion, salsify, etc., which lose their vitality very quickly, and while often doing all right the second year, do so only when the conditions under which they were kept over were favorable. Parsnip-seeds seldom grow when more than one year old, and I never plant old seed of this.

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Simple Seed-testing Devices.—My way of testing old seeds usually has been to plant a few dozen of each kind in a flower-pot in the greenhouse or in some corner of the bench. In a new book by Professor E. S. Goff, of the Wisconsin experiment station ("Principles of Plant Culture," 275 pages, richly illustrated, just published by the author, Madison, Wis., an excellent work), I find a plan of testing seeds which is extremely simple, needing no special paraphernalia, and yet safe and sure, and no doubt more satisfactory generally than my greenhouse method. Take two pieces of moderately thick cloth, a table-plate that is not warped and a pane of glass large enough to cover the plate. The cloths are dipped into water, wrung out a little until moderately wet, spread over the bottom of the plate, and the seeds to be tested are placed between them. "It is well to use a hundred or more seeds of each sample, as a larger number will show the per cent of vitality more accurately than a smaller one, and the lot should always be well mixed before taking the sample. The plate should be covered with the glass to prevent evaporation from the cloth, and it may be placed in any room of comfortable living temperature. The seeds should be frequently examined, and may be removed as they sprout, when by subtracting the number put in the per cent of vitality may be readily computed. The cloths should be placed in boiling water a few minutes before using them for a second test, to destroy any spores or mycelia of mold with which they may have become infested." Under ordinary circumstances, if a large percentage of the seeds put in sprout promptly, we may safely use such seed for planting.

Plan Modified.—The same plan, slightly modified, I find in another book just from the press ("Vegetable Gardening: A Manual on the Growing of Vegetables for Home Use and Marketing." Prepared especially for the classes of the School of Agriculture of the University of Minnesota. By Professor Samuel B. Green. 115 illustrations. Webb Publishing Company, St. Paul, Minn. Another excellent work.) Professor Green's directions are as follows: "Take two plates, and in one of them place a folded cloth; woolen flannel is preferable, since it must remain moist for a long time; but any cloth will do. The cloth should be free from dye stuffs, since they may contain injurious chemicals. Wet the cloth, pressing out the surface water, leaving it very damp, but not soaked. Place the counted seeds between the folds, and mark plainly with a pencil on a piece of paper the number of seeds put in and the date. Then cover with a second plate. Plenty of air will get in between the plates, and the upper one will prevent evaporation. Common newspaper or wrapping-paper may take the place of the cloth, but requires much more attention."

* * *

Crops for Profit.—What to raise this year to bring a little ready cash above cost of production is the great question with us just now. Cabbages have been extremely cheap for a year or two, and yet I am planting heavier than ever of the early sorts, in hopes that possibly I may be able to sell the crop at some profit. I am also trying the plan of growing a crop of horse-radish by planting sets between the rows of early cabbages. By heavy manuring and good culture I hope to make the combination profitable. Horse-radish sells in the commission-stores in Buffalo at

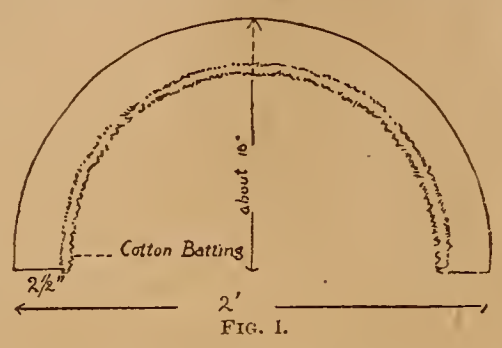


Fig. 1.

from five dollars to six dollars a barrel. This is a paying price, but I do not know how much demand there is for this vegetable. Perhaps it would not be difficult to overstock the market. All I can do is to try a fraction of an acre and abide by the results. Early peas are yet a staple crop. My aim is to get them into market as early as possible, and I can succeed fairly well by planting on warm soil as early as the weather will permit, and using one of the first early sorts like Alaska. For this purpose the soil will not need to be as dry as for most other crops. What we want is to get the seed into the ground as speedily as may be. I shall also plant more largely of celery, and surely of Hubbard squashes. Barletta pickling onion still remains one of my chief crops for money. Fortunately, seed can now be bought at a reasonable price.

* * *

Tree-protectors.—For a year or two our apple orchards have greatly suffered from the attacks of the canker-worm. In some cases whole orchards have been defoliated and the crop ruined. The mature female cannot fly, and has to crawl up the body of the tree in order to deposit her eggs on the branches, usually in the top of the tree. Sometimes this is done as early as in the fall, or in warm days in winter; more usually in early spring. Protecting bands of cotton, wool, paper or of some sticky substance like that on fly-paper have been recommended. If they are put on early enough and in a proper manner, they surely will do all that is claimed for them. At a farmers' institute held in this vicinity a week ago one of the residents of this county showed samples of the bands used by him with success. These bands (Fig. 1) are cut out of stiff glazed paper, in the shape of the segment of a ring about two and one half inches wide, and long enough to reach around the body of the tree. A little strip of cotton batting is glued along the upper edge, inside, so as to make the band fit the tree closely, leaving no openings between the band and rough bark through which the canker-moth might crawl. The band is bent around the tree (Fig. 2), a foot or two from the ground, and fastened by wiring or stitching the lapping ends together. Very few of the moths will try to crawl around the outer edge of the band, but those that do are caught by means of a ring of sticky substance smeared on the band. The following mixture melted together has been found to be the best for the purpose: One pound of resin, one pound of castor-oil, one pound of Venetian turpentine. This is the sticky substance found on our fly-papers. A small quantity painted on the band will do the business. It remains soft and sticky a long time, but may be renewed as the case seems to require.

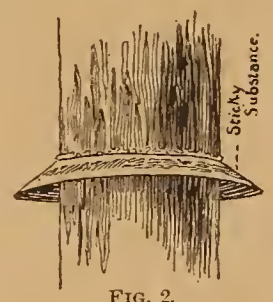


Fig. 2.

T. Greiner.

Orchard and Small Fruits.

Conducted by Samuel B. Green.

INQUIRIES ANSWERED.

Pruning Apple-trees—Winter Apples.—E. C. W. Apple-trees should have any heavy pruning they may need done during mild days in winter or early spring, and the wounds then protected by paint or wax. If light pruning only is needed, which would always be the case if pruning was attended to in time, the best time to do it is early in June.——Ben Davis, Willow Twig, Winesap, Grimes' Golden.

Peach-yellows—Black-rot.—J. L. H., Cedarville, Ohio. The cause or cure of peach-yellows is not known. When affected, the trees ripen their fruit prematurely, the peaches having distinct red streaks extending from the surface toward the pit. The following year the growth is generally tufted and branched, shoots appearing on wood that is more than two years old. Such growths have narrow horizontal leaves having a yellowish color. The disease is contagious, and the diseased trees should be burned as soon as the disease is discovered. ——The black-rot affects the plum and cherry, but not the peach.

Mulch for Strawberries.—J. T. R., Alma, Ark. The best mulch for strawberries is such stuff as swale-hay straw, cut cornstalks, bagasse, etc. It should be put on as soon as the plants begin to start, so that they may push their fruit-stems above the mulch. It is also desirable to get it on early, so that the rains will pack it down. Work the mulch in among the plants as much as possible, and fill the space between the rows so as to nicely cover the ground about three inches deep. A good mulch not only protects the plants from getting dirty, but also helps to prevent drying out.

Cranberry Culture.—G. H., Cleveland, Ohio. There has been some little advance in cranberry-growing of late years, but not in the direction you speak of. I am very sure that nothing has been done in the cultivation of cranberries in the irrigated sections of Arizona and New Mexico, and I think they would not grow there, except possibly in the mountains. Cranberries have never been a success out of the northern states nor off the granitic formation. They cannot be successfully grown on the alluvial soils of our western states, and consequently are a failure in Illinois, Iowa, Kansas, western Minnesota, the Dakotas, etc.

The Bark-louse.—L. H. F., Morristown, Tenn. The term bark-louse is applied to several scale insects. They are carried from one place to another in various ways; some kinds have wings, others can only spread by trees coming from infested nurseries or on the feet of birds. One of the worst insects that threatens our fruit interests is a scale known as the San Jose scale. If you have small trees that are badly infested with any kind of scale, I would recommend digging and burning them. If the trees are of good size and you do not want to do this, you can spray with whale-oil soap, which is the best remedy. If you will send a new sample, I will try to tell you whether the scale you have is seriously injurious. The sample to note as having been sent has not arrived.

Grafts and Cuttings.—M. S., Barton, Mo. 1. The pear makes a poor union on the apple, and the plum a poor union on the apricot. The latter will often grow very well for a year or two, but does not make a satisfactory union. 2. The quince and a few of the Japan pears, such as Kieffer and Le Conte; but they do not often do well in the northern states. In the Gulf states the peach even will often grow from cuttings. 3. The quince is most certain if cuttings of the old wood are used and made up in the fall. If young wood is to be used, it is a good plan to graft an inch or so of apple root on each quince cutting, which will support it until it gets roots of its own. The apple root may be broken off the second year. For directions as to best treatment of such cuttings see also the reply to J. Q. B. in this issue of Farm and Fireside.

Growing Fruit-trees from Cuttings.—J. Q. B., Bethany, Mo., writes: "I have five thousand cuttings of European and Japanese plums, pears, peaches and Morello cherries that I want to grow. They are now buried outdoors, tied in bundles of one hundred, with butts up and covered with four inches of soil, which has been protected from freezing. The intention is to hold them in this way, watering and raking the soil when necessary, until they are thoroughly calloused and the weather will permit of their being planted out. I am in doubt whether to plant on a hillside or in a bit of rich bottom land that has been used for a garden for several years. Also, should I manure the land? I have a nice lot of decomposed stable manure."

Reply:—It seems to me, judging from your letter, that the land at the foot of the slope would be best for your purpose. In preparing the land I should plow it deep at least a half dozen times before planting out the cuttings, and work in a good dressing of decayed manure. This would be for the purpose of getting the soil warm before planting in it. Now, in your section the growing of fruit-trees from cuttings is an experiment, and in addition to trying them on the land referred to I would recommend that you make up a hotbed in the field, without sash, with one foot of good hotbed manure in it and covered with one foot of mellow, rich soil in which to plant some of your cuttings. Do not plant in it until the heat has subsided, nor until the cuttings are well calloused. I think this latter method would be much more certain than planting in the open ground. By using it I have successfully rooted hybrid perpetual roses that are considered difficult to root under ordinary circumstances. Your success will largely depend on thorough callousing the cuttings and getting the soil warm before planting.

Evergreens.—J. L. L., Buffalo, N. Y. I always prefer to set evergreens about the time that they show a very little start from the new growth; they may also be safely set out very early in the spring, and even when they have made a new growth of two or three inches they can be moved successfully if very carefully handled. If I was sending away for evergreens, I should want them early, as I think they will stand the most rough usage before they start at all. If left to themselves in good land, Norway spruce will easily grow forty feet high and spread twenty feet, but if set three feet apart, they may be kept in the form of a hedge not over eight feet high for many years. They make an excellent wind-break, but are not desirable for a small hedge. Siberian arbor-vitae is a much better tree for a low hedge than the Norway spruce; in fact, it takes on a hedge form much more easily. Tom Thumb arbor-vitae grows too slow to use for a hedge four or five feet high. Siberian arbor-vitae is far better for this purpose.

Budding Peaches—Grafting Plums.—P. K., Cauyou City, Oreg., writes: "What can I best do with peach-trees that are a year old this spring, in which the buds did not take last fall? Can the same be budded this spring, and how is spring budding performed? The trees are very large.——Can plums and prunes be successfully grafted on peaches?"

Reply:—Such stocks may be cut back to the ground any time early in the spring, and you can then bud in August on the suckers, but I should prefer good seedlings from pits planted this spring for this purpose. Spring budding of peaches is practically the same as grafting, and is not often successful in the northern states. If you want to try it, you should cut your scions before they start, and keep them dormant by storing in an ice-house, or otherwise, until the bark on the stocks will "slip," when they may be budded the same as young seedlings. The stocks should be cut off as soon as the buds have taken well.——Plums and prunes will do very well on the peach when grown in good peach land, but in heavy land they fail. The peach does not often graft well in the northern states, and you would probably find it surer to bud them in summer.

Our Farm.

PICKED POINTS.

Ten years ago a farmer friend concluded he had been working upon the wrong motive all his life. He had labored to produce to sell to the general public, which always pays the lowest prices. He then changed his motive, and produced for the rich, arguing that as they had the most money they were able to pay the most. But here he was confronted with the fact that if he was to get higher prices he must have better products. This necessitated greater attention and better farming. Gradually he learned just what the rich wanted, and then set about producing it. One result was he found there was ready demand for better butter than the market was supplied with. After a few had tested his best butter there was no difficulty in making contracts to supply families the year round at forty cents a pound. This necessitated a summer and winter dairy, and this in turn called for a silo and for green crops to tide over droughty spells; then a knowledge of how to compound balanced rations became a necessity, and he had to acquire the information. Better qualities of vegetables, fruits, poultry and other things were required. In ten years' time his farm was one of the best conducted ones in the country. His change of motive resulted in all these betterments of farm and financial condition, and paid for them as he progressed.

* * *

As a rule, farm wages have been reduced about ten per cent. Those men working by the year have suffered a lump reduction of $15 to $25, and good monthhands whose wages were $20 for eight months are cut to $18. It seems somewhat anomalous that in any general depression farm wages are the last thing about a farm to go down, and the last to come up when depression gives way to general prosperity. But there is a way by which a farm-hand never need fear a cut in wages, but may rather expect an increase from year to year, and have no apprehension of ever being out of a situation, nor under the necessity of looking for one. The places that pay the best are always looking for the right ones to fill them, and the supply for such is far short of the demand. Recently an extensive farmer in the West desired the services of "a capable, industrious, steady, moral young farmer." None such was to be found in his own vicinity, so he commissioned a well-known agriculturist in the East to find one for him. To the latter's surprise among all of his acquaintances he could find only one that could meet the requirements. He entered into negotiations with this one, who accepted the situation at $250 a year and board; and this for only ordinary farm-work. The understanding is that if in three months the employer and employee are mutually suited the wages are to be increased; and at the beginning of the second year there will be another increase. When farm laborers cannot command the wages they think they ought to have, it is generally their own fault, because they have not qualified themselves to be worth more.

Dr. Galen Wilson.

BEES.

The chief drawback to bee culture is a scarcity of forage that yields toothsome honey.

Until last season the exceptionally dry summers for several years had killed nearly all the white clover, the chief source for our best honey. On account of the frequent and abundant rains last year the lookout for honey the coming season from that source is very promising. There are many reasons why every farmer should possess one or more colonies of bees. Practically, all children crave sweet things, and within certain limits this longing should be satisfied. A little judicious study of the diet of children will save many a doctor bill, saying nothing of the children's constitutions. My mother always kept a cupful of honey and salt as a remedy for colds. I am never troubled with constipation in a season when the bees have stored a surplus.

Aside from their contribution to our bill of fare, bees have an economic value on the farm that but few seem to appreciate. As in many other problems when the conditions are beyond control, or at least very difficult to regulate, the value of bees as an agent in the fertilization of flowers is hard to determine with any considerable degree of accuracy. That they are of much value in this regard is not to be questioned. Tests such as excluding insects from flowering trees by network have been made, showing that many varieties of fruits and vegetables would produce nothing but for the assistance they receive from bees and other honey and pollen gathering insects. I am confident that my bees add many dollars to my annual income in the increased production of small fruit resulting from their labors. Aside from the fact that the pistil—or pistils—of a flower is frequently not in condition to receive the pollen from its own stamens when it is being distributed, so that if they are fertilized at all the pollen must come from some other flower, scientists pretty generally agree that cross-fertilization in plant as in animal life produces the best results.

Those who would keep bees will sometimes find it necessary to feed them or grow a special honey-producing crop, such as buckwheat. A very few pounds of honey will usually winter a strong colony; this is especially true when the temperature is uniformly cool.

J. L. Hartwell.

EXTRACTS FROM CORRESPONDENCE.

From Kansas.—Crops here were good last year, excepting oats, which were damaged by rust. Corn is selling to cattle-feeders for from 16 cents to 17 cents a bushel. The wheat crop was better than usual. About the same acreage of wheat was sown last fall, but it is not looking very well at present. The hay crop was unusually heavy. Considerable clover-seed was hulled, and it is selling for about $3.75 a bushel. At sales hogs and cattle sell well; horses rather low. Stockers and feeders are in good demand. Several farms are changing hands at from $15 to $45 an acre. Land rents at from $2.50 to $3 an acre, or one third to one half of the crop. Several young apple orchards have been set out here in the last few years, ranging from 5 to 160 acres each. B. C. M.

Basehor, Kan.

From Alabama.—The climate here is all that could be desired. The land is rich and very productive, requiring no fertilizer for ordinary crops. It is extremely cheap, quality considered, ranging from two dollars and fifty cents to ten dollars an acre, according to improvements. Large bodies of it are heavily timbered with two or three kinds of pines, half a dozen species of oaks, with elms, gums and hickories thickly interspersed. These furnish first-rate winter ranges for hogs. Other large tracts are open and covered with fine grasses and clovers for eight or nine months in the year, furnishing the best of grazing for all kinds of farm animals. Negro labor is plentiful and comparatively cheap. Land rents for from one dollar to three dollars an acre for the actual acres cultivated. Industrious parties can get good land rent free for a term of years for opening it up. Last, but not least, I really believe it is the most healthful section in the United States. R. P. S.

Kamp, Marengo county, Ala.

From Virginia.—Warren county is in the northern part of the Old Dominion. It has a population of about ten thousand. It is about twenty miles long and about ten wide, lies in the heart and center of the beautiful Shenandoah valley, with great water-power and beautiful mountain scenery. Warren county has both slate and limestone lands, with hundreds of acres of river-bottom land which will produce one hundred bushels of corn to the acre, of wheat from thirty to forty bushels, and the other grains in proportion. Some of the limestone land will produce as well as the bottom land. The slate land is not quite as fertile as the limestone and bottom land unless it has been improved, but is much easier cultivated. We have good churches, and of all denominations; very good public school-buildings and good roads. The county contains several high schools, one seminary and the S. N. College. There is some land for sale around Reliance for from fifteen dollars to fifty dollars an acre, according to location. We do not have very hard winters. Last winter we had but very little snow or cold weather.

Reliance, Va. J. D. H.

From Oklahoma.—Custer county is located in the Cheyenne and Arapahoe country. It is twenty-four miles wide north and south by forty-two long. It has a population of 5,296, including 520 Cheyenne Indians, who are peaceable and keep to themselves. The country here is rolling, intersected by canons, most of them having cedar and cottonwood trees in them; the larger ones have oak and walnut. The soil is sandy loam two and one half or three feet deep. It is red and black. The red, which has most sand in it, seems to stand drought better than the black. The last two summers have been very dry. With plenty of rain this country would raise enormous crops. The wheat in 1896 was very poor, owing to an extremely dry spring; but a large amount was sown last fall, which looks well, except the late-sown. The extreme wet weather last fall, followed by hard freezing, killed out some of the late wheat. Kafir-corn does well, and all stock thrives on it. There is no better food for chickens, and palatable and nourishing bread is made of it. All kinds of melons and sweet potatoes grow luxuriantly; Irish potatoes not so well. Many planted small patches of cotton last year as an experiment, and it did so well in spite of the dry weather, there will be a large acreage planted this year. There is a cotton-gin at Independence, which ginned 500 bales of cotton last year. Independence and Arapahoe are the only towns in the county, but there are seventeen post-offices, most of them having stores and blacksmith-shops. Arapahoe is sixty-two miles due west from El Reno. It is a long way to market, and there is the treacherous South Canadian river to cross. Its bed is quicksand, and if a team stops they settle down and can't start again; if they keep moving, they go all right. The people here are industrious, brave and hopeful. They have many hardships to endure, but are cheerful through all. Most of them live in dugouts made by digging down two or three feet into the ground, laying up three or four logs above the ground, with a board roof covered with dirt. Whole families live in one room. They are all anxiously waiting for the decision of Congress about giving them their homes free. If they have to pay $240 for their quarter-section, many will have to give up all, for they cannot do it. Most of them came here poor, and have managed to only live so far. There are sixty-six school districts organized in the county. We have school from three to six months during the year. Many school-houses are mere dugouts, with slab seats, and not even a blackboard. We have organized a farmers' club that meets every Saturday evening at our dugout school-house. There are twenty-six members, men and women. They exchange ideas and experience about farming, and the club promises to be useful and instructive, besides promoting sociability. S. J. M.

Thomas, Oklahoma.

Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

FORAGING AND OVERFEEDING.

It is not unusual for the careless farmer to get more eggs during winter, and from scrub hens, than the breeder who should know all about the poultry business, and this fact has been held up by the farmer as a cause of his lack of faith in the merits of the pure breeds. The difficulty in both cases is want of knowledge of the proper mode of management, for frequently the supposed experienced breeder is more ignorant of poultry management than the careless farmer. Perhaps one half of those who endeavor to give the best of care make a practice of feeding their fowls at noon. Nothing is so injurious or does more harm to prevent laying than the giving of three meals a day. It is simply a force-fattening process that sooner or later brings in its train every ill that can befall the flock. For awhile the hens will lay a great many eggs, their combs will be bright and they will enjoy excellent health; but the forced feeding causes the hens to store up fat on the bodies faster than the production of eggs can take the supply, resulting not only in the hens ceasing to lay, but in disease which comes from such a condition. Because three meals a day gives good results at first (which always happens), it will be adhered to as a practice, and when disease appears, or the hens cease to lay, the cause becomes a mystery, the three meals never being suspected. If it is considered that the natural condition of fowls is one of activity, and that they prefer to seek or scratch for their food, seldom eating a full supply of food at once, but gradually consuming what they can find, there will be more judgment used in feeding. Exercise is the egg-producing stimulant, and if the hens are given a light meal in the morning, with inducements to scratch during the day, receiving a full meal at night and nothing at noon, they will remain in better condition than with three meals daily, and be more profitable.

THE RENEWAL OF THE FLOCK.

The first portion of the year is when the largest number of chicks are hatched, especially to renew the flock for next year. As this is simply getting ready twelve months ahead, the results of the future depend upon the success of this year. The hatching of the new stock is the foundation of the work, and if a good beginning is made there will be a great saving of time later on. The most important matter is to secure healthy stock—so as to avoid roup and disease—and you can never buy such fowls as you can hatch for yourself. If the hens are to be turned out with four or five males, and the eggs used indiscriminately for hatching, the result will be what are styled "haphazard" chicks; that is, chicks of which the farmer knows nothing, or males or females that were sires and dams. Only a few good hens are required in order to secure a large number of chicks, and they should be selected from the general flock, put into a yard away from the others and mated with a strong and healthy pure-bred male, which will not only secure uniformity, but enable the farmer to know what kind of fowls he will have next year.

USING SULPHUR FOR LICE.

Early in the spring is the time to destroy lice, any work done being better than later on, as the pests are sluggish and not so active. The best method is to drive the hens out and burn five pounds of sulphur in a house 10x10 feet. That is a large amount of sulphur, but it is necessary if the work is to be well done. Those who use sulphur for the purpose do not burn enough of it, and as it is cheap it is safer to use too much than too little. It is also important that every crack be closed and the house made tight. Have an old pot or piece of sheet-iron made red hot, and place it on a brick, to avoid setting fire to the house; put the sulphur on and close the door, leaving the house closed for two hours. A mixture of kerosene and sulphur will also burn well, but use plenty of it or the work will be useless.

MANAGEMENT OF DUCKS.

Ducks lay their eggs early in the morning, and sometimes not until the sun is up. They do not lay at night, as is supposed by some. They should not be turned out too early, as one or two of them that are disposed to be late in laying may make nests outside. They lay very regularly at their best, often an egg for every duck being procured for several days in succession, and they will lay as many eggs as the hens during the year, but in much shorter time, after which they will take a long resting-spell. Ducks should be laying eggs in abundance at this season of the year, and if properly managed, they will lay until summer is well advanced. Give them animal food, such as ground meat, at least once a day, and also a mess of cut clover, scalded. They prefer soft food, cooked turnips, thickened with equal parts of bran and corn-meal, providing an excellent mess for them. If laying regularly, give them three meals a day. Keep the floor of their quarters covered two inches deep with straw, and also keep the quarters clean, as ducks will not thrive in damp apartments.

LICE ON YOUNG TURKEYS.

As soon as the young turkeys are hatched the large gray lice leave the mother and go to the little ones, confining their operations to the heads and necks; hence the heads of the turkey hens, before the eggs are hatched, should be lightly anointed with a few drops of a mixture of one part kerosene and ten parts lard, and one drop (no more) should also be rubbed on the heads of the little ones the first day after they are hatched. The hens are great ramblers, but must not be allowed to wear the chicks out in that manner. They must be kept out of the wet grass, as dampness is fatal to the chicks; and always keep a sharp lookout for lice, as one half the young turkeys are destroyed by vermin. Feed hard-boiled eggs, bread dipped into fresh milk, chopped onion-tops, milk-curds, chopped lettuce, and as they grow larger give wheat, cracked corn, chopped lean meat, or anything they will eat. The two main causes of loss, however, are lice and dampness.

GEESE ON THE FARM.

Geese in the market will sell for from fifty to sixty cents, but the kind of geese sold are really worth no more. There has been but little improvement of geese on farms, and it is seldom that they exceed eight or ten pounds in weight. The Toulouse and Embden geese are fully twice as large as the common geese (one being once exhibited weighing fifty-two pounds alive), and a pair would lay the foundation of a paying flock in a few years. The fat goose is a luxury enjoyed only by those who know something of them, and it brings a good price. Turkeys sell higher, but the profits are no larger than from geese. There is a great loss of young turkeys each year, while geese seem to thrive on a grass-plot or a pond that cannot be used for any other purpose. As geese will breed until over twenty years old, a flock of the large varieties once obtained will return an income every year, which would be satisfactory compared with the capital invested.

EARLY RYE.

Poultrymen who turn their hens on early rye are astonished to find that the fowls lose flesh and become thin, although they may seem to appreciate the young rye. The reason is that when the rye first appears it is mostly water, containing very little nutrition, and is also then laxative, causing diarrhea. The proper plan is to turn the hens on the rye about an hour each day, and if they appear to be affected by it they should be kept away from the rye for a few days. Salt should be given in a mess of scalded corn-meal when the hens use the rye, a level teaspoonful of salt being sufficient for one quart of meal, which may be fed to fifteen hens.

GREEN FOOD.

With the appearance of green food come insects, and the fowls secure a large amount and a variety of food, which is more valuable to them than grain. To provide eggs at the cheapest cost, the farmer should take advantage of his opportunities. If green food is plentiful, he need not give the hens any assistance. It is also due more to the seeking of the food—the exercise—that the hens are more prolific in spring than in winter. More warmth, more exercise, contentment, greater variety of food and less grain are the causes of the increased supply of eggs, which may not bring as high a price as in winter, but upon which the profit is fully as large, because the cost is much less.

PLYMOUTH ROCKS AND WYANDOTTES.

These breeds cannot be well compared, as they are different in characteristics, and yet approach one another closely in several respects. They are classed as medium in size, filling a place intermediate between the large Asiatics and the Leghorns, Hamburgs, etc. Both breeds have yellow skin and legs, and both are hardy and capable of enduring any climate. The Wyandotte is not very uniform in color compared with the Plymouth Rock, and as chicks they seem to vary very much, but as they approach maturity they become more uniform. The Plymouth Rocks do not have legs that are of a clear yellow color when young, and the pullets may have a very dark stripe on the front of the shank, but this passes away as growth is made. The Plymouth Rock has a single comb, somewhat medium in size, but the Wyandotte has a rose-comb, which is considered as less liable to freezing in winter. The Wyandotte is a little smaller in size than the Plymouth Rock, which accounts for the pullets of the Wyandotte breed beginning to lay about a month earlier than Plymouth Rock pullets, and they are also more compactly built. Both breeds are favorites, the hens being good layers and mothers, the chicks making choice broilers, and the fowls are excellent market birds.

CORRESPONDENCE.

Remedy for Gapes.—Put copperas and assafetida into a bottle, add water to it, drain off into the drinking-water in dry weather. During rainy periods mix the solution in dough at night, and feed.

M. A. P.

Remedy for Roup and Cholera.—Let me, through the columns of your paper, give the readers a positive remedy for roup, or colds in the heads, of poultry. Simply one half teaspoontul of kerosene poured into the chickens' mouths, and let them swallow it. I have used it for thirteen years, and have never had one to die of roup yet. For chicken-cholera use poke-root tea. If they are too sick to eat, soak bread in the tea and feed them for about two days. I never have any dread of the disease now, but lost whole flocks before I used it.

S. A. B.

Aurora, Mo.

Smoking Out Lice.—Please say to "L. G." (in inquiries) that if he will get some stems of tobacco-leaves (the refuse from cigar-factories) and green cedar-twigs, and give the coop a good smoking, keeping a heavy smoke for about three hours, once a week, he will get rid of the mites. Then keep watch, and if any is found later on, repeat. I left the chickens in while smoking. I have not seen a louse or mite since, but before I fought them for three summers with coal-oil emulsion and whitewash, only to find a new crop if I missed a week or two.

H. L. A.

Chapman, Neb.

INQUIRIES ANSWERED.

Compelling Hens to Sit.—Mrs. L. P., Amboy, Ohio, writes: "How can I compel hens to sit?"

Reply:—It cannot be done, but they will be more inclined to sit if they become very fat.

Which Breed?—C. B., Redwood City, Cal., writes: "We have chickens of a dove color. What are they?"

Reply:—Your description is rather meager; they do not correspond with the color of any recognized breed.

Males with Frozen Combs.—J. E. McD., Grinnell, Kan., writes: "Some of my roosters have frozen combs and wattles. Will such injure them for breeding purposes?"

Reply:—If they recover, they will not be impaired for breeding purposes.

Scaly-leg.—H. N. M., Hunnewell, Kan., writes: "What is the cause of scaly-leg? Does it prevent laying?"

Reply:—It is due to a minute parasite, which is easily destroyed by applying melted lard once a week. It does not prevent laying, but is unsightly.

Canary.—S. B., Victoria, B. C., writes: "What can I do for a canary that has lost its feathers?"

Reply:—The cause may be lice. Dust two or three times a week with insect-powder, vary the food, and give a grain of sulphur once a week. Oily food frequently causes the difficulty.

Poultry at Last Census.—F. H. C., Mt. Salmon, Mich., writes: "Give the amount of poultry and eggs according to the last census."

Reply:—The last census was in 1890, and is not strictly reliable. The value of poultry and eggs is about $200,000,000 a year, being nearly divided between "poultry" and "eggs."

Plymouth Rocks Not Laying.—H. F. B., Batavia, Mich., writes: "My Plymouth Rocks do not lay. They are fed on grain, vegetables, apples and sugar-beets, the feed being varied and given three times a day."

Reply:—The feeding of poultry three times a day will cause the hens to become excessively fat, in which condition they lay but few eggs.

Swollen Heads.—O. E. K., Escanaba, Mich., writes: "Some of our fowls have swollen heads with sore throats."

Reply:—You give no details of management. Probably due to drafts of air on them at night from some source. Anoint heads with vaseline once a day, and add a teaspoonful of chlorate of potash to every quart of drinking-water.

Pip and Frozen Combs.—R. B., Raymond, Wis., writes: "Give me a cure for 'pip,' and also a remedy for frozen combs and feet."

Reply:—"Pip" is simply a cough, or sound, indicating obstruction of the nostrils. A drop of kerosene injected into each nostril is a remedy. Frozen combs and feet should be anointed with crude petroleum, but the injury cannot be repaired.

Our Fireside.

THE LOVE THAT FORGIVES.

A beautiful love is the love that adores;
It changes life's rocks into smooth sloping shores;
But better 'mid breakers for each one who lives
To cling to the beautiful love that forgives.

The love that adores is a holiday love;
It fails when by trial its weakness we prove;
Then for life's every day thank the Lord when he gives
That crown of his blessings—the love that forgives.

—L. A. Coonley.

TEDDY'S TELEGRAPH.

It wanted just ten minutes of train-time when Teddy and his father drove up to the little station of Weeping Water, on the Northwestern railroad. Teddy had been hoping all the way that they would be in time to see the panting engine and long train of cars, filled with tired, smoke-begrimed people, slow up at the station, and Mr. Redmond had kept Dan and Jerry at a brisk trot over the last two miles of the way.

This drive to the station was a great event to Teddy. You might not have thought much of it—just a two-seat spring-wagon and a big, willing team of farm-horses. But how they did go! The seven-mile trot over the level Dakota prairie was nothing to them. But the best part of the ride was that they were to bring home Mrs. Redmond's sister and her husband, with their son, a year younger than thirteen-year-old Teddy.

He had thought of little else for a month but this visit of his cousin from Ohio—somebody to play marbles with, to ride with him after the cows; better than all, to receive messages at one end of the line of the North Dakota and South Eighty Telegraph Company.

This was the telegraph line which Teddy had stretched from the kitchen door across the yard to the cow-barn, which stood on the corner of the "south eighty."

Western boys and girls well know what an "eighty" is. In the West land is divided into sections, half-sections and quarter-sections. A section is six hundred and forty acres, which is sometimes divided into halves and quarters. A quarter-section, or one hundred and sixty acres, makes too large a field to farm conveniently, very often, and is divided into two fields of eighty acres each. So the "south eighty" was the eighty-acre field of Mr. Redmond's half-section which lay south of the house.

The end of the line by the kitchen door was fastened to an old cow-bell, with a similar arrangement at the other end in the cow-barn.

The line itself was made of various pieces of string and rope; the part near the house was the clothes-line, which Mrs. Redmond contributed to the use of the telegraph company every day but wash-day.

It was supported from the door to the fence on the tops of the clothes-line posts, thence run along the wire fence on top of the posts to the barn. Altogether it was quite an ingenious contrivance.

Teddy had arranged a code of signals by which you could hold quite a conversation over the line by ringing the cow-bell a certain number of times, but, to his great regret, Mrs. Redmond, who was operator at the kitchen end, never could remember them.

Mr. Redmond and Teddy reached the station before train-time, but it brought no passengers for them.

"Think they must have calculated to come next week," Mr. Redmond conjectured, though with no particular reason for thinking so. "Mother will be disappointed, for a fact."

They were just starting for home when the station agent hurried out, with a yellow paper in his hand.

"Lucky you hadn't got off," he said, somewhat out of breath from his haste. "Telegram for you, Sam."

Mr. Redmond read it aloud:

Meet us at Broken Bow to-morrow. J. Wilson.

"Well, I have to go to town in the morning," he remarked. "They must have come the other way."

"Folks coming over the Central Dakota, hey?" the agent queried. "That train is due at three seventeen. Couldn't you stop at Martin's and bring me out my felt boots that he's been mending?"

"Certainly," the farmer answered. "But it looks as if you wasn't going to need them much longer."

"I'm not so sure of that," the agent said, taking a survey of the sky. It was a lovely blue except near the sun, where whitish rays shot downward toward the southern horizon. "The sun's been drawing water all day, and I'm afraid it's a weather breeder."

"I hope not. March is an uncertain month, anyway. Well, get up, Dan. Come, Jerry."

What a lovely day it was! As far as the eye could see the prairie stretched like a floor, broken only by a few distant groves of cottonwoods and poplars. The grass was short and brown, fading into a misty violet haze in the distance. Great tumbling weeds rolled lazily over the ground in the softly stirring air, and the Broken Bow trail stretched off to the west like a streak of warm sunshine.

"I wish I was going with you to-morrow, father," Teddy said, as they drew up before the barn.

"I don't like leaving mother alone so long," Mr. Redmond answered. "I've got to start early and won't be home till night, and it's pretty lonesome for her. It ain't as if there were neighbors handy."

"I wouldn't leave her, either," the boy declared, eagerly.

Teddy was very fond of his mother. She helped him in all his plans, played marbles with him, and taught him evenings the only schooling he got, for the nearest school-house was five miles away. In return Teddy loved her with all his boyish heart, and waited on her like a willing little slave.

Mr. Redmond got off early the next morning. Teddy watched Dan and Jerry trot down the trail and across the prairie until they were out of sight. Just a little disappointment sobered his round face, but he would not let his mother see it.

The station agent had given him a ball of strong twine with which to replace the clothes-line and other fragments of rope and string that formed the "wire" of the North Dakota and South Eighty Telegraph Line. This he promised himself to do in the afternoon.

Mrs. Redmond was deep in preparations for the expected visitors, and Teddy worked faithfully, carrying wood and water, scouring tins and the old-fashioned copper candlesticks, and polishing the few silver spoons which Mrs. Redmond brought from their place of safekeeping in an old trunk, until they shone like new.

He quite forgot about his telegraph, and it was not until a sudden blast of wind swept around the house, rattling the windows, that he went to the door and looked out.

The warm, springlike air had grown icy cold, and over in the northwest a strange-looking bank of gray clouds was coming nearer and nearer. He could see the tops of the distant cottonwoods bending and shivering in the wind that was hurrying along in furious gusts before the cloud.

"It's a blizzard, Teddy," his mother said. She shut the kitchen door, and holding her apron tightly over her head, looked anxiously along the trail. "I do hope your father hasn't started yet."

"I'd better get the cows in, I guess," Teddy said. "You come help me, mother."

The cows had been turned out in the little yard adjoining the barn. They seemed to know that something unusual was happening. Huddled together in the most sheltered corner, they shivered before the cold wind, and lowed mournfully.

It took him but a few minutes to drive them into the warm barn, then fastening the door securely, Teddy and his mother ran back, hand in hand, to the house.

They had no time to lose. The cottonwoods along the fences were bending and cracking, and the gray cloud was close on them, a driving mass of sharp, icy particles of snow that cut their faces like sand. Snap, Teddy's dog, slipped in after them, and crouched, whining and shivering, by the stove.

Mrs. Redmond looked at the clock with dismay. It was nearly five o'clock, and already so dark that she could hardly see the figures.

From the windows they saw the tumbling weeds now madly racing across the fields, but the driving snow soon shut out everything like a white wall, and the wind shook the little house until the very floor trembled.

To fully realize what a blizzard is one must live in the West, and see the bare, level prairies with hardly a tree for miles, not a hill to check the wind except the low sand-bluffs along the rivers.

Many of the settlers plant what are called "wind-breaks;" that is, large groves of cottonwoods, poplars or willows. These are generally planted on the north side of houses and barns, and are of considerable use in breaking the violence of a moderate gale.

But a blizzard! Nothing can stand up against it. Cattle huddle together with their heads from the blinding snow, and often die from exposure if the storm continues long.

People caught out in a blizzard make for the nearest shelter. Often it is only a hay or straw stack, from which they pull enough to make a hole, into which they creep and lie, warm and sheltered, until the danger is over. Many people are lost in going very short distances, sometimes from their houses to the barn or well.

Once outside, nothing farther away than a few feet can be distinguished. People thus lost wander away on the prairie, and traveling always in a circle, often return and perish within sight of the house they cannot see.

No wonder, then, that Teddy and his mother watched the storm with increasing anxiety. By six o'clock it was dark, and Mrs. Redmond set a light in the window that looked out toward Broken Bow. But she might as well have set it in the cellar, as far as seeing any light from outside went.

"I can't believe father would have started with a storm coming up," she said, trying to reassure herself and Teddy, knowing all the time that blizzards invariably burst from a clear sky and on the most springlike days.

"Mr. Benson said yesterday was a weather-breeder," Teddy answered, trying to push a refractory stick into the stove.

"What's that?"

He dropped the stove-lid, and stood listening. In a minute the sound came again, a faint note like a bell pulled unevenly.

"It's the telegraph!" Teddy exclaimed.

And sure enough it was!

Standing close to the kitchen door, they heard it plainly—one, two, three—one, two, three.

"Oh, it's father!" Teddy shouted. "He must have got lost, and is trying to let us know."

He threw open the door, and would have run out into the storm had not his mother held him back.

"You'll get lost, too, Teddy," she exclaimed in alarm. "You can't see where to go."

"If I only had something to hold fast to. Oh, I know!"

He ran back, and had on coat, cap and mittens before Mrs. Redmond had managed to shut the door, which the wind held open like a strong hand.

Something hard in the pocket of his coat struck his arm. It was the ball of twine the agent had given him.

He tied one end of it around his waist, and gave his mother the ball, while he explained the solution of the "telegraph" which had flashed through his active little brain.

"Don't you see, mother? Father's got lost down by the barn-yard fence, and can't see which way to go. It's the only place he could get hold of the wire. I'll follow it down, and I will be sure to find him. You hold the ball and keep letting it out real slow. Then when we come back, we've only got to follow the string home."

In spite of her fear that something would happen to Teddy, Mrs. Redmond saw that it was the only way to guide the lost party to shelter.

Taking a lighted lantern, Teddy set out, feeling his way along the fence, every now and then giving little reassuring jerks to the string which his mother held through the crack of the door.

He could not see beyond his outstretched hand; if he had been able to, he would have seen the objects of his search only a short distance away, close to the very fence he was guiding himself by.

Mr. Redmond, with Teddy's uncle and aunt and Fred, had started from Broken Bow immediately after the arrival of the train, which was an hour late. They were within two miles of home when the storm struck them, and in a few minutes nothing could be seen of the familiar trail.

After driving blindly for awhile, Mr. Redmond slowed his horses down to a walk and let the reins loose, hoping that they would find their way home alone. This they did, until blinded and confused by the storm, they stopped and refused to go any farther.

"Guess I'll try leading them," Mr. Redmond said, with the vaguest idea as to where he was going to lead them.

He climbed out of the wagon and reached the horses' heads. A step forward and he came up suddenly against a wire fence.

"Cheer up, folks!" he called out. "Here's a fence, so we must be near some place."

A string, tied apparently from one post to the next, touched his hand.

"Why, we're right close home, and this is Teddy's telegraph. Wonder if I could make him hear?"

He pulled it vigorously several times.

"I'd follow it to the house if I only knew which way the house was," he meditated; "but just as like as not I'll fetch up over in the south eighty. Well, I'll have to risk it; we can't stand this much longer."

Feeling his way back to the wagon, he explained matters to the half-frozen occupants and returned to the fence. Deciding to follow it to the right, he had hardly taken a step in that direction when a faint light pierced through the blinding snow from the left, and a bundled-up, snowy little figure caught hold of him.

"Oh, father! where are the folks? How did I get here? Oh, I'm tied to a string!" Teddy burst out, incoherently, while his father, between surprise and the cold which was fast overcoming him, could scarcely speak.

Discovering that the horses stood within ten feet of the barn-yard gate, they hastily unharnessed them and turned them into the yard, where they could find shelter under the wagon-shed. Then Teddy—who was still tied to his faithful guide—taking the lead, they started for the house, Indian file, holding fast to each other's clothes.

It was a slow march, for they were stiff and numb with cold, and Teddy was obliged to roll up his string guide into a ball as he went.

"I declare to goodness, Miranda!" was all Mrs. Redmond could say, as she drew the half-frozen party, like a string of fish, into the warm, bright kitchen.

And well she might say so; for Mrs. Wilson, clad in the station agent's felt boots and Mr. Redmond's fur overcoat, was a sight to see; while Fred, wrapped in a striped horse-blanket, with the stripes running up and down, looked like nothing so much as a roll of bright-colored rag carpet.

"I think we all feel like giving thanks," Mr. Redmond said after supper, as he reached the old worn Bible down from the clock-shelf.

"Seems almost like it was a miracle," Mrs. Wilson, who was of an imaginative turn of mind, remarked, meditatively.

"I don't know about miracles," practical Mrs. Redmond said, "but I'm wonderful glad I put off the washing and let Teddy have the clothes-line for his telegraph to-day."—Waverley.

THE ELEVENTH AND NINETEENTH CENTURIES.

These two centuries are both remarkable for Mohammedan atrocities, massacres and diabolism. During the eleventh century the Turk was the dread, not only of all Europe, but of the civilized world. Then it was that he commenced to tantalize, torture and murder religious pilgrims journeying to the sacred shrines at Palestine. This so incensed Peter the Hermit that he aroused Europe to a crusade against the Turk for the liberation of the holy sepulcher. The eleventh may not have been so practical as the nineteenth, but it was a century of chivalry. Although the Turk was then the terror of the civilized world, even the children of Europe were not afraid to fight them. During the crusades there were 700,000 chivalrous, heroic spirits marshalled beyond the Bosphorus, not one in twenty of whom ever reached Jerusalem alive.

The chivalric daring of the eleventh century stands out in glaring contrast to the jealousy, envy, cupidity and cowardice of the nineteenth. Instead of being the dread, the Turk is now the scorn of all nations. Since the eleventh century Don John, of Austria, in the famous battle of Lepanto, sunk two hundred of his battleships in four hours, and swept the proud pre-eminence of the Turk from the Mediterranean for all time. John Sobieski, before the walls of Vienna, scattered his land forces like autumn leaves before the wind. Ferdinand and Isabella have long since driven the Mohammedan Moors from the Iberian peninsula. France has conquered in Algeria, England has subdued and subsidized the Mogul dynasties of India, and is rapidly subordinating the valley of the Nile. Bulgaria and Greece have been lost, while Crete is prosecuting a propitious and promising revolution.

Notwithstanding the wounded, lacerated condition of the Turk he still has the satanic strategy to play upon the pusillanimous prejudices and predilections of Europe that for two years he has held armed millions at bay. In the afternoon of this century, England with her European allies engaged in a war which sacrificed a thousand million of dollars and a half million of the finest soldiers that the Old World ever marched to battle. And all this cruel Crimean war was fought over the front-door key of the church of the nativity of Bethlehem.

Only four years later we see all christendom armed to the teeth, standing still for two years, gazing upon the unparalleled atrocities of a Saracenic assassin, mutilating and debauching a race of Christian women and foully murdering a hundred thousand fellow-Christians, and not a single gun fired in all the two years. More than a year ago fifteen American citizens at Harpoot were insulted and their homes were bombarded and destroyed. More than a hundred thousand dollars' worth of American property has been destroyed, and more than twelve months have passed with no sign or even promise of indemnity.

American Christians have expended nine millions of dollars in the Turkish empire. There is now two and one half million dollars' worth of property there exposed to destruction. The time has passed for still-horn demands for indemnity. We must knock with the iron hand of a man-of-war.—St. Louis Christian Advocate.

USELESS ARGUMENT.

Lowell gave utterance to a great number of epigrammatic phrases. Possibly no one of them contains more real philosophy than this: "There is no good in arguing with the inevitable. The only argument available with an east wind is to put on your overcoat." What an amount of useless expenditure of breath and words and worry might be saved to the majority of us if we who so heartily accept Lowell's theory would only keep it in mind, and reduce it to daily practice.

In the great trials and sorrows of life, which sooner or later come to all of us, there is a real wisdom in avoiding the argument which we naturally begin with the inevitable. We need not and should not submit to our sorrows, our trials, our disappointments in a desperate, fatalistic, morbid way, but in a submissive, if not a cheerful, spirit accept the inevitable as best we may. If the east wind blows, "put on your overcoat" and face it.

Many in these days and years find their incomes much reduced, their salaries decreased, their plans frustrated. They spend much time and strength, and bad temper perhaps, discussing over and over again the unfavorable situation, when, since it is inevitable, and cannot be changed, it would surely be wiser to cease arguing and expend the time in devising plans to overcome, if possible, these untoward circumstances.

Many young people in our families do not appreciate the intense work necessary on the part of their fathers to earn a generous living, nor on the part of their mothers to manage the households and make the best of everything. Nor do they realize the part of both parents in striving to give to sons and daughters not only the advantages of education, but also many of the luxuries and pleasures of life. They frequently grumble and scold because they cannot have what they desire, and what those richer than themselves enjoy. These all should take this good doctrine of Lowell to heart and cease to battle with the inevitable, and meet their circumstances bravely and cheerfully. We cannot change the east wind, so instead of growling about it, let us put on our overcoats and meet it as comfortably as possible.

HOW MUCH WATER SHOULD WE DRINK?

According to Professor Allen, says "The Medical Times," we should drink from one third to two fifths as many ounces as we weigh in pounds. Therefore, for a man weighing 168 pounds there would be required fifty-six to sixty-four ounces daily, or from one and one half to four pints. This "The Journal of Hygiene" regards as a very indefinite answer. The amount of water required depends on the season of the year, the amount of work done and the kind of food eaten. In hot weather we require more than in cold, because of the greater loss through the skin, though this is in part made up by the lesser amount passed away through the kidneys. If a man labors very hard, he requires more than if his labor is light. A man working in a foundry, where the temperature is high and the perspiration profuse, not infrequently drinks three or four gallons daily. If the food is stimulating and salty, more water is required than if it is bland. Vegetarians and those who use much fruit require less water than those who eat salt fish and pork, and often get along on none except what is in their food. In most cases our instincts tell us how much water to drink far better than any hard or fixed rule. For ages they have been acquiring a knowledge of how much to drink, and transmitting that knowledge to descendants, and if we follow them we shall not go far out of the way. It is of more use to us to know that pure water is essential, and that impure water is one of the most dangerous of drinks, than to know how much of it is required daily. If one lives in a region where the water is bad, it should be boiled and put away in bottles, well corked, in an ice-chest, and in addition one should eat all the fruit one can, if fruit agrees. Fruits contain not only pure water, but salts which are needed to carry on healthfully the functions of life.

GOLD AND ITS USES.

If the average reader or thinker will devote a few minutes to the subject of gold and its uses, and how much of it annually disappears by wear, leaving no possible trace, he will find himself involved in some extremely interesting calculations. If some genius would only invent a power strong enough to attract to it the millions of invisible particles that have been and are constantly being worn off the various articles composed of that metal, what an immense amount would be recovered!

Where do these particles go? Here, there, everywhere; in your house, on the streets, in the banks, business houses, stores and wherever man goes. As an instance of this the following is cited: There is at present a veritable gold-mine being worked in an old watch-case factory in Brooklyn. It occurred to the new purchasers of this property that during the long years of manufacturing of gold watch-cases that took place there a large quantity of gold particles must have been absorbed by the flooring, walls, furnace chimney, etc. So they went carefully to work and tore the old building down, bit by bit, and burnt and crushed the material, afterward assaying the ashes. So far something like $50,000 has been recovered. Say an ounce of this lost gold were recovered. If we melted it down and gilded a fine silver wire, it would extend more than thirteen hundred miles; or if nineteen ounces were recovered (which in the form of a cube would be about one and one quarter inches square), it would gild a wire long enough to compass the whole earth like a hoop.

If you pick up a gold-leaf, such as is used for gilding purposes, it becomes a curiosity in your eyes when you realize that seventy-five square inches of it weigh only one grain. Now, the thousandth part of a line, or inch, is easily visible through a common pocket-glass. Hence, it follows that when gold is reduced to the thinness of gold-leaf 1-50,700,000 of a grain of gold may be distinguished by the eye. But it is claimed that 1-1,400,000,000 of a grain of gold may be rendered visible.

Large quantities of gold are used in gilding portions of exteriors of public and private buildings. For instance, if we take the church of St. Isaac at St. Petersburg, we find that it required the use of two hundred and forty-seven pounds of gold to gild its five crosses. They can be seen glittering at a distance of twenty-seven miles.

BE TRUE.

Character is always known. Thefts never enrich; alms never impoverish; murder will speak out of stone walls. The least admixture of a lie, for example, the smallest mixture of vanity, the least attempt to make a good impression, a favorable appearance, will instantly vitiate the effect; but speak the truth, and all nature and all spirits help you with unexpected furtherance. Speak the truth, and all things are vouchers, and the very roots of the grass underground there do seem to stir and move to bear you witness. See again the perfection of the law as it applies itself to the affections and becomes the law of society. As we are, so do we associate. The good, by affinity, seek the good; the vile, by affinity, the vile. Thus, of their volition, souls proceed into heaven—into hell. These facts have always suggested to man the sublime creed that the world is not the product of manifold power, but of one will, of one mind; and that one mind is everywhere, in each ray of the star, in each wavelet of the pool, active; and whatever opposes that will is everywhere balked and baffled, because things are made so and not otherwise.—Emerson.

INDIAN TAN.

Much has been said about the fine quality of some of the leather prepared by the Indians. The following directions from a reliable source will be useful to people who have the skin of a small animal that they wish to prepare without the trouble or expense of sending it away: "Take a skin, either green or well soaked, and flesh it with a dull knife; spread the skin on a smooth log and grain it by scraping with a sharp instrument; rub nearly dry over the oval end of a board held upright. Take the brains of a deer or a calf, dry by the fire gently, put them into a cloth and boil until soft, cool off the liquid until blood-warm, with water sufficient to soak the skin in, and soak until quite soft and pliable, and then wring out as dry as possible; wash in strong soap-suds, and rub dry, and smoke well with wood smoke. Instead of brains, oil or lard may be used, and the skin soaked therein six hours."

SPEEDING A LOCOMOTIVE.

At sixty miles an hour the resistance of a train is four times as great as it is at thirty miles; that is, the fuel must be four times as great in the one case as it is in the other. But at sixty miles an hour this fuel must be exerted for a given distance in half the time that it is at thirty miles, so that the amount of power exerted and steam generated in a given period of time must be eight times as great at the faster speed. This means, says a contemporary, that the capacity of the boiler, cylinders and the other parts must be greater with a corresponding addition to the weight of the machine. Obviously, therefore, if the weight of a wheel, on account of the limit of weight that the rails will carry, is limited, we soon reach a point when the driving-wheels and other parts cannot be further enlarged, and then we reach the maximum of speed. The nice adjustment necessary of the various parts of these immense engines may be indicated by some figures as to the work performed by these parts when the locomotive is working at high speed. Take a passenger-engine on any of the big railroads. At sixty miles an hour a driving-wheel five and one half feet in diameter revolves five times every second; now, the reciprocating parts of each cylinder, including one piston-rod, crosshead and connecting-rod, weighing about six hundred and fifty pounds, must move back and forth a distance equal to the stroke, usually two feet, every time the wheel revolves, or in a fifth of a second. It starts from a state of rest at the end of each stroke of the piston, and must acquire a velocity of thirty-two feet a second in one twentieth of a second, and must be brought to a state of rest in the same period of time. A piston eighteen inches in diameter has an area of 254½ square inches. Steam of 150 pounds pressure a square inch would, therefore, exert a force on the piston equal to 38,175 pounds. This force is applied alternately on each side of the piston ten times in a second.—Boston Journal of Commerce.

CURRENT TOPICS.

A certain physician of this city, who never neglects an opportunity to study the traits of the people among whom his business takes him, has been making some observations recently that may serve as a basis for estimating the character of the average modern American.

"I have to travel on street-cars a good deal," the physician said in explaining his course of procedure, "and I hear all kinds of people talk. A short time ago I thought I would keep a record of the words most frequently used within my hearing by people of all classes.

"I omit names, profanity and vulgarity, but otherwise this list, which represents one week of street-car conversation, is absolutely correct. Here, then, is a summary of what married men talk about:

"Dollars mentioned within my hearing, 407 times; business, 295; money, 206; dollar, 194; stocks, 163; bonds, 152; job, 81; son, 63; daughter, 11; wife, 4; literature, 0; music, 0; art, 0.

"Married women: She, 409; party, 326; dress, 324; splendid, 316; dollars, 201; trimming, 187; cards, 151; prize, 151; society, 130; baby, 129; clothes, 84; weather, 62; rich, 60; lovely, 59; perfectly awful, 46; doctor, 43; medicine, 34; music, 6; literature, 0; art, 0.

"Young men, unmarried: Corker, 502; daisy, 467; girl, 416; beaut, 391; fairy, 306; winner, 302; stunner, 284; hummer, 251; dance, 104; party, 87; old man, 83; fight, 79; money, 72; dollars, 50; no good, 42; cigarette, 31; college, 1; literature, 0; music, 0; art, 0.

"Young women, unmarried: Lovely, 509; just perfectly lovely, 491; horrid, 476; gorgeous, 463; fellow, 409; engaged, 387; dress, 371; stunning, 352; love, 295; party, 291; wear, 284; she, 206; opera, 108; ring, 31; mama, 28; papa, 16; music, 9; mother, 1; picture, 1; poem, 1; art, 1.

"I intend," concluded the doctor, "to pursue this subject further, and may be able to give additional figures that will be interesting."—Cleveland Leader.

THE UNIMPROVABLE FIDDLE.

When you come to think of it, says a writer in "Chamber's Journal," it is a curious and bewildering circumstance that, in a world and in an age where progress is one of the laws of existence, the violin should be to-day, not only as to form and all essential details, exactly what it was three hundred years ago, but that it is even now a less perfect instrument than it was when the old masters were warming their glue-pots and mixing their vaunted varnish and chipping out their blocks of wood in the little Italian town of Cremona, now two centuries back.

Mr. Gladstone has said somewhere that to perfect that wonder of travel, the locomotive, has not required the expenditure of more mental strength and application than to perfect a violin. But then you can put the locomotive into the march of progress; the violin you can't. In this respect it stands alone among musical instruments.

Flutes have been improved, new types of clarinet have been evolved, the harpsichord and the spinet have given place to the pianoforte, organs have come to be controlled by electricity—everything, in short, in the way of musical instruments has tended toward advance and improvement, while the construction of the violin is numbered—at any rate by the enthusiasts who run the fiddle prices into four figures—among the arts which have been and are not.

The experience of centuries and the ingenuity of many generations of skilled mechanics have been altogether unavailing, and violinists to-day are content to starve themselves that they may give hundreds, nay, even thousands, for instruments which did not produce tens when they first left the workshops at Cremona.

ATTRACTIVE GIRLS.

The girls who attract the best men are almost always a source of surprise to their feminine friends, who are often lost in wonder as to why so many more patent charms should have been passed over in such selections. It is the little mouse of a woman, the shrinking, shy creature left in the background by her bolder sisters, we constantly see brought to the front by the man who has won her love. Every man's ideal of a wife is a girl who may be pretty, who might be brilliant, but who must be good. He also recognizes instinctively that her grace should not be too costly to wear every day. That she shall be cheerful of temper, inclined to take short views of human infirmity, and sound of health, he is apt gravely to consider within himself an essential. If all those who before marrying omitted to think about these things had done so, it is possible we should hear less to-day of the incompatibility of man and woman; and the woman's question would be the man's question more universally.

CHERRIES FOR MARKET.

Cherries are generally divided into three classes—the Heart cherries, which have rather a hard, firm flesh; and the Duke cherries, which are quite as fine in size, but softer, and, to many tastes, much more delicate; while the Morellos, or pie-cherries, have always a more or less acid flavor, rendering them more valuable for canning purposes than for dessert. Whenever cherries are to be sent long distances, the Heart cherries, or, as they are called in the catalogues, Bigarreans, are the best on account of their firmness. They are also much more highly esteemed than the others for canning purposes. The Napoleon and Black Tartarian, two very old kinds, are still classed among the best. The Yellow Spanish is also popular, being appreciated for jelly as well as for other useful purposes.—Meehan's Monthly.

HOW TO REST.

To understand how to rest is of more importance than to know how to work. The latter can be learned easily; the former it takes years to learn, and some people never learn the art of resting. It is simply a change of scenes and activities. Loafing may not be resting. Sleeping is not always resting. Sitting down for days with nothing to do is not restful. A change is needed to bring into play a different set of faculties, and to turn the life into a new channel. The man who works hard finds his best rest in playing hard. The man who is burdened with care finds relief in something that is active, yet free from responsibility. Above all, keep good-natured, and don't abuse your best friend—the stomach.

SOMETHING FOR CRITICS.

Isaiah says there are certain people "that make a man an offender for a word." We have sometimes almost been inclined to think the prophet had in mind people who criticize an editor. If some error slips by, or the editor in his absence engages some one to make up the paper, and some mistake creeps in, lo! a deluge of complaint, and the paper is sometimes stopped for a word. We have known people to take a paper for years, until on some unlucky day they read something not just to their liking, and then they write, "Stop my paper; I saw something there that I do not just agree with."—Christian Witness.

PROFITABLE APPLES.

American apples have a prominent place in British markets. The King of Tompkins County is the greatest favorite in England, bringing a higher price than any American apple in the British market. The dealers do not push them into popularity, for the reason, it is said, that they are more liable to rot on their hands than the Baldwin. The Baldwin is a great favorite with them for selling, as it will keep longer in good condition than any other American apple that reaches them.—Meehan's Monthly.

THE GOLDEN RULE THE ONLY SOLUTION.

What plan is to settle these (industrial) difficulties? The only correct and practical theory is the theory which is contained in the gospel of Christ. Each class and each individual to consider not only selfish desires, hut hroaden out to reach the rights and needs of all they come in contact with in any way. "Do to others as ye would that they should do to you." "Bear one another's burdens and so fulfill the law of Christ." The capitalist says, not how little can I pay and how much service can I get, hut how much can I afford to pay. The laborer not to say how little can I do and how much can I get for it, hut how much can I render to my employer.

Questions of difference will often arise hetween employers and employees. When these arise, let every effort he made on the part of each to come to a mutual understanding. The employer does not condescend a hair's hreadth when he meets an employee on a common level to consider together matters of mutual interest. He is buying lahor, aud he should meet the lahorer on the same bnsiness basis he would meet a man of whom he is going to buy a mill or a railroad. If this was done, if each party would seek to come to a mutual uuderstanding as to their mutual interests, most of the misunderstandings could be adjusted.

When a mutual agreement cannot be reached after patient and careful efforts, then let differences be submitted to arbitration. Of course, I would not submit to arbitration any matter of moral principle, nor any matter relating to my privileges as a eitizen. I should consider if I were a lahorer that I had a right to belong to any society, church or other organization I chose. If a capitalist I would consider that I had a right to employ whom I pleased when it did not interfere with anyhody else's rights. But matters of difference which could not be adjusted hetween us, and which did not involve moral principles or personal rights of either, should he submitted to arbitration. This principle is the gospel principle in all differences from two individuals to two nations. Then, when arbitration cannot be agreed to and either thinks that there are matters that cannot be settled thus, then let there be laws to protect the rights of the laborer, the capitalist and the general public, and let the courts be the final arbiter. When peaceful agreement eannot be reached by these steps carefully taken, it is time to separate. If it is the laborers who feel agrieved, they should stop work in any nnmber that they chose, provided they were not under contract to work longer. But they would have no right to say that the employer should not employ whoever he pleased, and they would have uo right to interfere in any way with others who desired to work. Let all organizations of both capital and labor bend their great powers, not to destruction, but to adjustment. Organization is necessary to carry out the ends herein indicated over gospel lines of adjustment.—Pulpit Herald and Altruistic Review.

AN ANCIENT EGYPTIAN LOCK.

Among recent discoveries in Egypt was that of a lock supposed to have been in use more than four thousand years ago, by which reckoning it would considerably antedate the Pharaohs of the Exodus, of the days of Moses, aud even of Joseph, and would reach back well toward the reign of Cheops aud the building of the Great Pyramid. Relative to its eonstruction, the "Enropean Trade Mail" says that the old Egyptian lock was not made of metal, like those we use nowadays, but of wood, and the key that opened it was wooden, too. On one side of tue door, to which it was fastened, there was a staple, and into this staple fitted a wooden bolt that was fixed to the door itself. When this bolt was pushed into the staple as far as it would go, three pins in the upper part of the staple dropped into holes in the bolt and held it in its place, so that it could not he moved back again until the pins were lifted. The key was a straight piece of wood, at the end of which were three pegs the same distance apart as the pins which held the holt firm. When the key was pushed into the bolt through a hoie made to receive it, the pegs came into such a position that they were able to lift the pins that fixed the bolt, and when these were lifted the bolt could be lifted out of the staple.

The through-car line of the C., H. & D. Ry. from Cincinnati to Hannibal is beginniug to attract a great deal of patronage. This line opens up an easy and comfortable way of reaching the very valuable portion of the West that has heretofore been difficult to reach without the annoyance of change of cars. The Pullman and Wagner sleeping cars and parlor cars alternate in the run, leaving Cincinnari every night, going through Hannibal and the Mississippi River without change of cars. At Hannibal direct connection is made with the M., K. & T. trains for the Indian Territory: also with Wabash and C., B. & Q. trains for Kansas City and the West.

THE SERVANT QUESTION.

If in the elaborate scheme of a daughter's education a little time were given to a practical knowledge of household affairs, it would he found of inestimable service all through her life. Possibly the fault of which we complain does not lie so much with the servant as it does with the mistress. How ean we expect our maids to know more than we know ourselves? They are very much like children, and they soon discover our ignorance, and impose upon us. Try to teach a child anything and see how utterly impossible it is unless you yourself know thoroughly the suhject you are trying to impart.

Another great trouble with the average young housekeeper is lack of system. Her education is doubtless at fault in this, and she has never learned business principles. But one's house must be run with method if one wishes to run it satisfactorily. Inexperienced women make demands which are often quite impossible to be eomplied with, not realizing what work their domestics are doing at the moment, which must he neglected if their request is regarded. Given a home, and a husband who provides the wherewithal to keep the home, it ohviously becomes the wife's just thought to see that she does not neglect this duty, and that the work is carefully and properly done. This, of course, involves many petty worries and vexations and countless irritations and annoyances, but undoubtedly the hushand has quite as many cares in his every-day business. A servant's duties should be carefully explained to her, and each hour should find its appointed task. If this is neglected the mistress should not overlook the fault. A business man tells his clerk what he expects him to do, and if the clerk does not ohey orders he is promptly discharged, unless some excellent and sufficient excuse is given. We women are much too apt to overlook little faults in our servants rather than scold them. We do the neglected work ourselves, which teaches no lesson, and is an exceedingly bad method. Obedience should be exacted, and respect follows closely after.—Harper's Bazar.

DANGER FROM STEEL BUILDINGS.

The true danger to be apprehended in regard to the modern office buildings of mixed steel and masonry construction is from rust. No one knows exactly how the metal in such structures is going to behave, for the reason that such combinations have never before been exposed in the same manner to the action of the elements. We know that iron buried in the heart of thick stone walls, laid in lime mortar, has remained unchanged for seven or eight centuries, presumahly through the alkalinity of the lime, which has been known for ages as a powerful preventive of rust. Our high buildings are, however, built with cement instead of lime, and not much is known in regard to the action of cement on iron. Chemically, cement is much less alkaline than lime, and as it is insoluble in water, what alkalinity it possessess can hardly have much chemical effect on the metal. Its insolubility, however, makes walls built with it more impervious to water than those built with lime, and if the steel structure is well grouted with cement, as is customary, there is reason to suppose that the metal, guarded from moisture by its impervious sheath, which, if it does not contribute alkali, at least contains no acid, may last uninjured for a very long period. Such experience as is available confirms this view, and although architects will watch with great anxiety for any signs of deterioration of metallic structures used in the new manner, as an indication which may assist in devising precautions against such action in future, they have certainly neither forgotten nor neglected anything that the present condition of knowledge affords in the way of information on the subject.—American Architect.

THE PASSING OF THE STREET-CAR HORSE.

It has been estimated that electric railways have displaced in the United States no less than 275,000 horses, and the movement has not yet stopped. It is estimated by a Topeka paper that that many horses would require about 125,000 bushels of corn or oats a day. A decrease of 125,000 bushels a day in corn and oats consumption is enough to appreciably affect prices of those grains. It amounts to 45,000,000 bushels a year. Furthermore, the loss of this commercial demand for these coarse grains in the cities means an enormous loss of tonnage for the railroads—about 62,500 car-loads.

CRIPPLE CREEK INVESTMENTS.

Big fortunes have been made by a small investment in Cripple Creek stocks, and the way many have suddenly acquired wealth would make interesting reading. We can not here go into details, but if you will write us we will suggest a plan that will materially improve your pecuniary condition. We have something special to offer, and it will cost you nothing to send us your name and get on our list for Cripple Creek literature. Our facilities in the stock business are unexcelled. Address The Mechem Investment Company, Colorado Springs, Colorado.

Our Household.

CONSOLATION.

O heart of mine, we shouldn't
Worry so!
What we've missed of calm we couldn't have,
You know!
What we've met of stormy pain,
And of sorrow's driving rain,
We can better meet again,
If it blow.

We have erred in that dark hour
We have known,
When our tears fell with the shower,
All alone.
Were not shrine and shadow blent
As the gracious Master meant?
Let us temper our content
With his own.

For, we know, not every morrow
Can be said:
So, forgetting all the sorrow
We have had,
Let us fold away our fears,
And put by our foolish tears,
And thro' all the coming years
Just be glad.

—James Whitcomb Riley.

HOME TOPICS.

The Garden.—No other part of a farm is so important to the health and comfort of the family as the garden. You can hardly have too large a garden. Fence in at least two acres, and have it oblong in shape instead of square, then plant everything nearly in long rows, so it can be cultivated with a horse. If you have not already done so,

plant at once a generous supply of currant, raspberry and blackberry bushes; also a strawberry and an asparagus bed, planting all in long rows. Set grape-vines around next the fence, but do not plant fruit-trees in the garden. Early peas should have been planted some weeks ago, but plant again now, and be sure and plant enough at a time. Some one says, "Plant twice as many peas as you think are enough, and you will have a fair supply." Twelve or fifteen hills of string-beans are enough to plant at a time, but keep planting them every two weeks all summer. Of course, you will raise a good supply of tomatoes, squashes, cucumber cabbage, onions and Lima beans. Of the latter plant all you can supply with poles. They are excellent in the winter if picked when large enough for use, shelled, and dried in the shade. If soaked over night before they are cooked, they taste like fresh green beans. If you have never tried egg-plant and okra, try some this year. Plant the okra where it is to grow. A dozen hills are enough, and set out the egg-plants when you do tomato-plants.

Guarding Against Bad Habits.—To bring up children properly, so that they will be high-minded Christian men and women, is no light task. It requires much sacrifice of ease and so-called pleasure. While life on the farm is in many respects the very best for the children, yet here a danger often menaces them from the associations of hired help, both in door and out. Farmers often hire for the season a young man who is almost an entire stranger to them, and of whose moral character they know nothing. He becomes a member of the family, too often sharing a room with the boys of the family. If he happens to be a young man of good morals no harm is done; but if otherwise, who can estimate the injury?

Mothers, fathers, watch this matter carefully, and unless you are absolutely certain of the purity of their moral character, never let your children be alone with hired help. Many young boys owe their ruin to their association with immoral hired men. Too late many parents have found that their children were being blackened with a stain upon their souls no fuller's earth can whiten; that they are hearing language and learning things which tend to ruin both body and soul. Mothers, to you belongs, for the most part, the duty of teaching the little ones that their bodies are the temples of God, and must be kept "beautiful, entire and clean." It is criminal carelessness to let the little child grow up ignorant of the laws which govern life, laws holy because God's laws. Ignorance does not mean purity. Right knowledge, coming from the lips of mother, purifies and sets up a defense against possible evil influences. Keep the little ones so near your heart that they will be as an open page to you, then you will detect the first approach of evil, and can thwart its influence.

Maida McL.

A FELON.

A felon may be arrested in its incipient stage, but it seldom is. Symptoms are not generally understood, and remedies likewise unknown, and the unfortunate sufferer must usually suffer to the bitter end of its slow, torturous course. Once encountered, all after-thoughts of a felon are entertained with dread and fear, and the approach of a second visitation sharpens every wit to a seeking out of remedies of extermination for application at the outset.

"If you think you have a felon, wait not a moment before going to a doctor," we read. But I would warn you in just the opposite direction. Home remedies that are simple are also effective if promptly applied. A doctor bill may be saved, and you may also escape the thrust of the surgeon's lance. But prompt measures only will avail. If the felon has become far advanced before it becomes a certainty that it is a felon, there is then no other alternative than to submit to having it lanced, and possibly several times.

Symptoms.—From a noted physician I gathered the information I pass on, and from bitter experience I have proven that the symptoms given are a sure harbinger of what is coming. They may be relied upon. First, an unaccountable and sudden soreness at end of finger, or near some joint of the finger. The soreness seems deep, and the finger begins soon to feel hard and hot, and to look glassy and inflamed. It begins to swell, growing hourly hotter, harder, more inflamed and painful. It begins early to throb, and is soon throbbing violently. Taking the affected finger in the palm of the other hand you will feel the regular, heavy pulsations that tell always of what is to come, unless the embryo felon can be arrested by prompt application of strong measures.

So situated that uninterrupted attention can be given to it, twenty-four hours should be usually sufficient to kill the life of the felon, though one must be prepared to endure much pain during the interval.

Yet, as compared with all that will be borne for days and weeks, should the felon run its natural course, the pain of the twenty-four, or at farthest thirty-six, hours will not be felt as worth the while to dwell upon. For amputations have frequently been resorted to, and if not amputations, loss of parts of the finger affected have been of not unusual occurrence.

To Destroy.—Bind the finger loosely in a quantity of salt (rock-salt is said to be best, though common barrel-salt answers the purpose well) well saturated with turpentine. Keep constantly wet with the turpentine, and persistently apply the remedy. Relief must not be looked for at once, nor in a few hours. Much pain will attend the hours of waiting for the felon to be brought to a head or destroyed, and there is no other way than to bear it. The trouble is developed beneath the skin that surrounds the bone very tightly, and that to physicians is known as the "periosteum," and bone injury has been the cause of the trouble. Time it must take to reach the seat of so deep-laid a disease. But the remedy is a sure one if persisted in, and will save many days, and possibly weeks, of excruciating pain. Only one who has thus suffered can know the full meaning of the word felon, and one who has thus suffered will be upon the alert to battle its work upon the very first symptoms of a second visitation.

Ella Houghton.

A FEW DAINTIES.

Table-cover.—Have you a piece of linen the desired size for your table? Hemstitch or scallop and buttonhole-stitch the edge. Use any broad pattern as a design. Outline it first in coronation braid, and then with two threads of filo in your needle put a herring-bone stitch through the middle of each flower and on either side of the stems. The braid is procurable in three colors—old blue, red and white—and is twelve cents a bunch. It takes three bunches for the pattern we illustrate.

Work-bag Apron.—Material: One yard of homespun linen and three yards of ribbon. Embroider the linen in violets or forget-me-nots, and have the ribbon match

your design. Measure into three parts; sew the bottom third up at the sides with the next one, put a tuck all around this to run in the ribbon to draw it up in a bag, when the next third is tucked in. At the top put a hem and a ribbon to draw it up into an apron when in use.

Rolling-pin Bag.—This is made of heavy linen the size of the pin, a ribbon to draw it up, and on the sides work in outline "Keep Me Clean." Once used, you would not give it up.

Magazine-cover.—This is very useful to keep one's books nice, especially if intended to save for binding. Any kind of heavy cream drilling or linen can be used, and the design worked in silks.

Bags for Collar and Cuff Buttons.—These three little bags are intended to hang upon one's dresser to contain the necessary buttons one must use. The tops are of linen cambric hemstitched and trimmed with lace and finished with silk to match the rest of the toilet things.

Crocheted Tidy.—Materials for this are a ball of shaded green cotton and one yard of dark green satin ribbon. For the wheels make a chain of ten, and fasten into a ring; crochet into each stitch around this a short crochet-stitch; make two rows this way. Then make a chain of twenty-two stitches, crochet in short crochet, back

and forth upon this chain, two rows of single crochet; in the third row make four stitches, then chain four along the edge to make the picot. After the first one join the end of each part into the third picot of the one before; join the first one to the last one to complete the wheel. Four are used in each corner.

Belle King.

Oh Rose-leaf! flushing when the South
Doth woo thee with a warm caress,
Thy dainty hues enchant me less
Than Hebe's rosebud cheek and mouth;
For nothing ever can repair
Thy tender blushes when they fade;
But Hebe, happy little maid!
Hath **Ivory Soap** to keep her fair.

WHY IS IT?

Oh, can you answer, stranger,
  And tell the reason why
The worthless pass through danger
  When the useful often die?
Why yonder drunkard reeling
  Along the crowded street,
Devoid of hope or feeling,
  Death's reaper cannot meet?

Why is it, stranger, tell me,
  Death loves a shining mark,
When he could just as well be
  Extinguishing the spark
That burns within some creatures
  Whose lives with evils teem,
Engraved upon whose features
  The brand of Cain is seen?

Why does death seek the bowers
  Where choicest blossoms grow,
And pluck from thence the flowers
  That do most beauty show?
Is it that his dread portals
  More cheerful may appear?
That we poor, trembling mortals
  In passing may not fear?

Why are young men taken,
  The aged left behind?
Some weary and forsaken,
  Some wretched, halt and blind!
Why should our young men perish
  Ere they have reached their prime?
Why those whom most we cherish,
  To whom we most incline?

Our hearts are filled with sorrow,
  Our eyes o'erflow with tears,
As we think that each to-morrow
  Will bleud into the years.
And yet the well-loved faces
  That did our presence cheer,
Within their wonted places
  Will never reappear!

Ah! often have I pondered,
  And asked the questions o'er,
Until in thought I've wandered
  To the Galilean shore.
And then the lesson taught us,
  "Submission to God's will,"
Comes wafted o'er the waters,
  And I listen, and am still.

—W. W. McWhan.

WHAT HAPPENED NEXT.

THE Rose had provided herself with gowns for the coming season, and how pretty these gowns were, of the finest fabrics in green and pink and crimson, all delicately perfumed! Wrapped in with these fabrics were also the fine gold ornaments this Rose was to wear another summer—when she came out.

Her finery was wrapped in dainty tissues and packed away in cunning little buds just as a lady would pack away her clothes in her trunks; and these buds were locked and sealed and set about with thorns for safekeeping until another year. When this work was all done, the Rose fell fast asleep, and so sound was her slumber that through the wildest winter's storms she never once awakened.

But one morning the south wind came bending over her, and shook her ever so gently, saying:

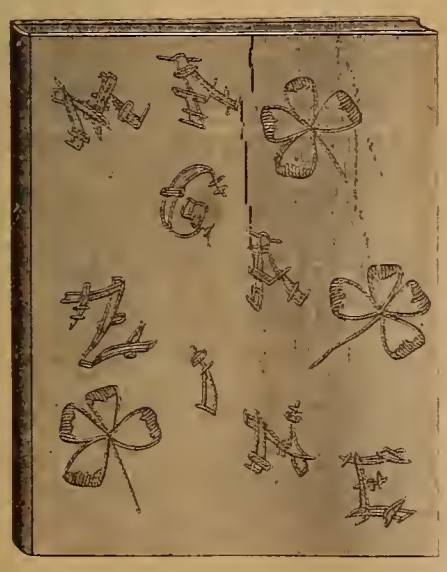
"Wake up! Wake up, you sleepy little Rose! April is here!"

The Rose sighed, but would not be wakened so early.

Then a troubadour robin called out so loud and clear:

"Wake up! Wake up, sleepy Rose! Sweet April is here!"

But the Rose would not listen.



Then Mistress Honey Bee hurried scolding by:

"What is to become of my pot of honey," shrilled the bee, "if you sleep so late as this, you lazy Rose?"

But the Rose only dreamed a laughing little dream, and never answered a word.

Now came a company of brothers, the Raindrops, whose business it is to knock up sleepy-headed people, and they knocked and knocked and knocked, calling out, loudly:

"Wake! Wake up, sleepy Rose! The wild flowers are all a-dancing in the meadow, and the violet has her bonnet on. April is here!"

Now, each brother carried in his hand a crystal cup of warm, sweet nectar, and with the words "April is here!" they dashed these cups of nectar full upon the Rose, and then ran away.

"Oh, dear!" murmured the Rose, "must I wake up?" and she stirred and stretched her limbs, lazily; but would have fallen to sleep again directly if at that moment a bevy of sunbeams had not seized hold of her, crying:

"Rose! Dear little Rose! Wake up! To-day is April, and to-morrow is May, and the next day is June, and we have come to help you to dress!"

With this the sunbeams began drying the Raindrops from her face, and pulling open her buds, and drawing out some of the Rose's pretty silken gowns, and shaking the folds out of them, for you may be sure they were wrinkled enough after being packed away all this time.

And what happened next? Why, you must go into the garden and see for yourself; or if you can catch May or June when they are at their work, question them. FRANCES BENNETT CALLAWAY.

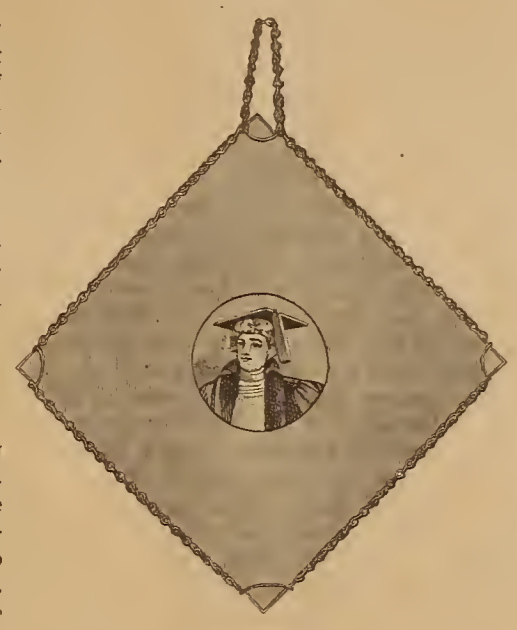
SMALL PICTURES.

The dictates of fashion will not allow apathy concerning any of our belongings. I am not one to find fault with this state of affairs. To settle one's self in any condition of dress or furniture is to go to sleep on the lazy road of old-fogeyism. We sometimes think it absurd to have "new styles" in certain standard articles which might aim only at intrinsic worth and good taste; but, on second thought, we decide that fashion's changes lead to that freshness in furnishing and toilet which is always interesting and generally agreeable. To keep up, in a respectable

degree, with these new ideas keeps us in a lively state of mind, and makes it necessary for our fingers to be nimble. For instance, but a few years ago artistic ladies labored to possess large paintings framed in heavy gilt moldings. It is true that a really valuable painting cannot be affected by so fickle a thing as fashion, but the general expression of a room is decidedly influenced by changing styles, and, we think, rightfully. Gloomy, old-fashioned rooms may be allowed in some parts of a house, but the apartments mostly occupied are more apt to cheer the spirits if they bear evidence of recent arrangement. Bright, cheerful wall-paper is decidedly the fashion now, and the pictures to embellish it are small, brilliant water-color paintings. Small pictures look best grouped with some regard to the relationship of their subjects or the harmony of their tints. If a lady has skill in drawing, a little practice in coloring will enable her to produce pleasing effects. It is surprising what a beautiful object may be composed of a dash of pale blue sky, a few green waves, a gray boat; this framed in a wide white matt and narrow gilt frame charms all beholders.

Very pretty sketches of flowers or still life can be quickly and delicately worked up; and if the little picture is entirely original, even if somewhat defective, it has a peculiar value. You know how it is with your friends; you do not like a person who is precisely like other persons, but some one who has individuality, although those peculiar traits may be faults.

Perhaps the most fashionable little water-colors are miniatures; faces of coquettish girls or pretty children. Some of my



artistic friends have an unusually tasteful way of framing these pictures, and it is so inexpensive as to make that fact a merit. The frame consists of a brass chain, which can be bought at any hardware-store for five cents a yard. Brass rings about an inch in diameter are put at intervals in the chain, and these rings, by being bent over the edge of the glass, keep the matt, glass and backing neatly together. I have seen pictures of considerable size framed in this simple way. We give you two illustrations—the university girl with her cap and gown, and the other in circular frame. K. K.

SHOWERS.

One of the new and pretty entertainments for a betrothed pair is a "Linen Shower."

In the corner of the invitation-card (given out by some friend of the engaged couple) are written the words, "Linen Shower," and all the congratulation gifts are in linen.

Pretty hand-wrought doilies, centerpieces, towels, table-cloths, napkins, sofa-pillow covers in grass-cloth or white linen; in fact, a shower of linen comes into the possession of the honor guests.

A benevolent society in connection with a city church, in imitation of that idea, sent out cards recently far and wide in aid of their work. In the corner of the card was written "Silver Shower." An "at home" at the residence of one of the church members was announced, and a simple cup of tea and wafers were the refreshments offered, while every one was expected to bring a silver piece, either large or small.

New things are almost always a success, and this entertainment was no exception. MARY JOSSLYN SMITH.

PIE RECIPE.

I have taken your paper for several years, but I have never happened to see my pie recipe in it, so I will write it off, and you can publish it if you see fit.

1 cupful of seedless raisins,
1 cupful of sour cream,
1 cupful of sugar,
1 egg.

All kinds of spice as for mock mince pie. Flour raisins, and bake well done between two crusts. Equal to mince pie.

LOUISE S.

BRONCHITIS. Sudden changes of the weather cause Bronchial Troubles. "*Brown's Bronchial Troches*" will give effective relief.

NUT SANDWICHES.

Three kinds of nuts are to be used in the regular recipe, although these may be varied—hickory-nuts, walnuts and pecan-nuts. Chop fine one cupful of each, and mix same with one and one half cupfuls of mashed hard-boiled eggs. (The eggs must be well mashed to form a paste.) To the above add mayonnaise dressing. Cut your bread into thin slices, butter same, and mate them, so that they will fit together nicely; then trim off most of the crust. Open your mated slices, place a crisp lettuce-leaf on each, and on one only spread some nut paste, and cover with the remaining slice. These are very nice in appearance as well as very palatable, and will be new in many communities. EMMA L. HAUCK.

NEW PLANT THAT CURES ASTHMA.—FREE.

The New African Kola plant is Nature's botanic cure for Asthma in every form. Mr. A. C. Lewis, editor of the *Farmer's Magazine*, writes that it cured him when he could not lie down at night for fear of choking. Rev. J. L. Coombs, of Martinsburg, West Va., testifies to his entire cure after thirty years' suffering, and many others give similar testimony. Its cures are really wonderful. If you are a sufferer, send to the Kola Importing Co., 1164 Broadway, New York, who will send you a large case by mail free, to prove its power. It costs you nothing, and you should surely try it.

Our Household.

THOUGHTS OF LIFE'S AFTERNOON.

To feel that we are "growing old,"
To know the hours gone by
That brought the heart so little pain,
So very much of joy;
To see the shadows changing place,
And lengthening evermore;
The suulight falling backward now,
The shadows on before,
And darling hopes unrealized
Pass silently away:
To look within the soul and see
Its early faith not there,
To know the tale of others' woes
Less quickly starts a tear;
To find that fancy is no more
The gay, wild, wayward thing
It was of yore—that thought floats out
On smoother, steadier wings.

To see the eye uot quite so bright,
The brow not quite so smooth,
The cheek's hue uot so fresh as in
The days of early youth;
To feel 'tis easier to check
The heart's impulsive beat,
To stay the step when it would bound
Auother's step to meet;
To find the eye scarce moistens now
At things which ouce did please,
The spirit leaps uot forth at onee
With every passing breeze,
With every dashing, bounding wave,
And everything that is free;
Aud sings not with each bird,
And loves with less intensity.

To know the faces we have loved—
How many are they uow!—
As only pictures hung
In Memory's gallery;
To find life now a little spare,
With not so much to come;
A world of bygones there is now,
Where still tho'ts have their homes;
To know, oh! shrinkiugly to know,
The longing is in vain,
To turn life's sullied pages back,
And have them white again;
To know they come but onee, the days
Of bloom and buoyancy,
And life thereafter has few dreams
Aud more reality.
It may be better thus, but there's
A sadness can't be told,
Iu finding life changed thus to us—
And we, each, "growing old!"

THE QUILTING.

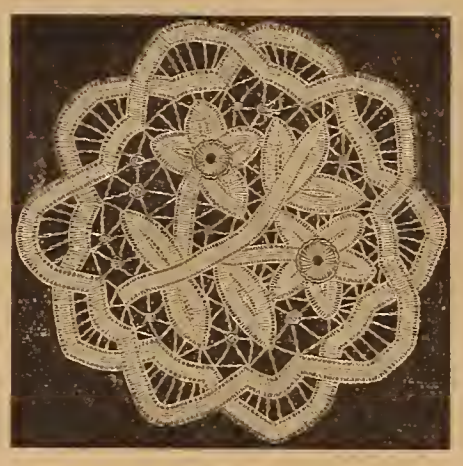
Yes, they were women, Margaret, and had good hearts; good heads, too. Modern women all over, these, and a quilting was almost as great a novelty as a falcon-hnut, for with clubs and teas the love of sewing in company was at ebb-tide.

"Some elderly sister suggested, and a good old-fashioned quilting was the result. Fun they thought it, and came to the work for charity in quaint caps and gowns, such as our great-grandmothers wore. How they laughed! This was indeed a departure from the formal tea-drinking. It was difficult iu that chattering crowd to

bring order out of the prevailing chaos, but at length when the stitches, fitful and crooked, were being plied conversation became general, as in the used-to-be. While the glittering needles stabbed the muslin, Margie, neither education nor culture kept softer material from being pierced by eye-shafts or barbed tongue-arrows. After all, child, we talk about our grandmothers' gossip, and soft tones and polish only drive it deeper to the heart! Only the spirit of the Lord Jesus can take away the sting, even as in the olden time.

"Finally they touched upon Richard Elkton's case. He was an invalid, and Elsie, his sister, taught a little private school, and cared for him. Orphans, these two, and so loyal to each other. Now, Ann Winchester was quilting down near one corner of the frames; firm, positive Ann, to whom the Elktons were nothing in the world, except by that arrangement which makes us all brothers and sisters. But Aun always did love fair play, and somehow she was nearer the Master than she had ever been. It jarred even on me to hear all Richard's little peculiarities dissected, but I didn't say anything, because I felt that it was none of my business. The needles and tongues pricked ou, while Ann had her eves on the quilt and a crimson spot on one cheek. At last Mrs. Perkins said, 'If I were Dick Elkton, seems to me I'd stir around some, and not impose on my sister continually.' Then Ann looked up. There was a quiet dignity in her eyes that awed us all, as she said, 'Let us pray.' Now, Ann Winchester prayed down by her lonely white bed every night—we felt sure of that—but in a solemn conclave of women we had never heard her voice. The consternation that reigned on those faces arouud that quilt, and the oppression of that pause! But as her words began to come we realized what a wealth of soul she had. Oh, that prayer, Margie! It seemed to bring that brother and sister and every one of us before our Heavenly Father, right into his courts. I never longed for deeper consecration than at that moment. When she finished it was rather awkward until one dear woman went and kissed her, saying, with wet eyes, 'Thank you, Aun.'

"The rest of the quilting is almost a



blank to me. We talked about helpful things in sheer desperatiou.

"Mrs. Perkins never forgave Ann until she read about the 'Hush Your Mouth' society. Then she organized onc, and made Ann a uember. Her reformation was complete, and we were all made to 'set a watch before the door of our mouths.'" Mrs. Geo. W. Shelton.

A FEW CHOICE RECIPES.

Veal Pie.—Use a twenty-cent knuckle of veal in two quarts of hot water; boil three hours, keepiug the broth up with hot water; pick the meat from the bone, chop fine, adding a teacupful of finely chopped cold boiled ham; season with salt and a dash of cayenne pepper, celery-salt and the juice of one lemon. Wet a mold, and line it with sliced cold hard-boiled eggs; press the meat into the mold, pour over the broth, which must have been boiled down to one quart. Set upon ice to harden. Turn out of the mold, and garnish with parsley. Prepared the day before, this is nice for tea or luncheon.

Veal Loaf.—
2 ponnds of veal,
1 pound of pork,
2 eggs,
2 slices of bread, crumbed.

Have the butcher chop the meat; use butter the size of an egg, pepper, salt to taste, one half cupful of milk. Mix all, put into a long pan, and bake for one hour. Serve hot or cold.

Creamed Sweetbreads.—First soak them in cold salted water for one hour, then plunge them into hot water, and boil for twenty minutes, then again into cold water; remove all skin and fine membranes, cut up with scissors; heat again, and season with salt and cayenne pepper, and pour over them a sauce made of cream thickened a little; then put them into shells, cover the top with rolled cracker and bits of butter, and return to the oveu. When browned, serve at once.

Chicken Croquettes.—Take the best of the meat from a cold boiled chicken, chop fine, add one half cupful of butter, two tablespoonfuls of flour, rub smooth in a saucepan, cook together, stirring constantly until like cream; then add one pint

of broth, the juice of one lemon, a little minced parsley, celery-salt, and cook a short time; when cool, make them into rolls or pyramids, roll in beaten egg and cracker-crumbs, let them staud awhile, theu fry in deep hot lard.

A Luncheon Dish.—Separate all the fat from cold meat, chop fine; fill a baking-dish full of boiled macaroni, in the center place meat seasoned to taste with salt, pepper, onion or tomato, pour stock, gravy or milk over all, cover with bread-crumbs, bits of butter and grated cheese. Bake one half hour. Belle King.

BATTENBERG LACE MAT.

There are so many pretty things one can make out of this braid. It comes at six and twelve cents a yard; the wheels ready made at six, eight and ten cents a dozen. Spool-linen thread is used, at twenty-five cents a spool.

The patterns come on pink muslin. The braid is basted on first, and then joined by various stitches. It is used for doilies, table-covers and all sorts of dress ornamentations. It is very speedy work, but requires a great deal of neatuess, and the pattern must be kept very true.

Belle King.

FASHIONABLE SLEEVES.

These sleeves are very dressy, and can be made in any of the new materials. Trimmed with galloon, gimp or ruffles of narrow lace, they can be very effective.

GOOD-NIGHT.

When I shall bid a last good-night
To all I hold most dear,
Wheu I shall rest beyond the light,
Let not your burning tear
Touch but the flowers above my heart;
Nay, love, you should not weep,
When I have played on earth my part
And rest at last asleep.

But yet recall our twilight walks
Beside the forest dim,
When evening, with her shadow, folds
Her mantle over sin,
And all the forest's whispering trees
Were breathing love's old song,
And echoes of some distant breeze
Went quietly along.

And call your mem'ry next to bear
Upon a dreamy wood;
Wild roses perfumed all the air,
And where a cottage stood,
And every twilight shadow grew
So dear within each heart,
When neither you nor I could feel
That we must ever part.

Ah, Love! Breathe not one whispered prayer,
Or touch your hnnd to mine,
For could I feel you kneeling there
I would fore'er resign
All hopes of heaven's remembered bliss,
And all its sweetest psalms,
Could I but feel once more your kiss
Aud rest within your arms.

—Valeutine Hubert.

40 Cent Patterns for 10 Cents

Any TWO patterns, and this paper the remainder of this year, 35 cents.

These patterns retail in fashion bazaars and stores for twenty-five to forty cents each, but in order to increase the demand for our paper among strangers, and to make it more valuable than ever to our old friends, we offer them to the lady readers of our paper for the remarkably low price of only **10 Cents Each.**

Full descriptions and directions—as the number of yards of material required, the number and names of the different pieces in the pattern, how to cut and fit and put the garment together—are sent with each pattern, *with a picture of the garment to go by.* These patterns are complete in every particular, there being a *separate* pattern for *every single piece* of the dress. Your order will be filled the same day it is received.

For ladies, give BUST measure in inches. For SKIRT pattern, give WAIST measure in inches. For misses, boys, girls or children, give both BREAST measure in inches and age in years. Order patterns by their numbers.

Satisfaction guaranteed or money refunded.

To get BUST and BREAST measure, put the tape measure ALL of the way around the body, over the dress close under the arms.

Special price of each pattern, 10 cents.

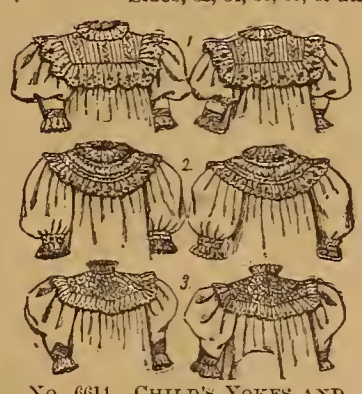
Postage one cent EXTRA on skirt, tea-gown and other heavy patterns.

No. 7030.—MISSES' NORFOLK WAIST, WITH APPLIED PLAITS. 10 cents.
Sizes, 12, 14 and 16 years.

No. 7028.—CHILD'S DRESS. 10 cents.
Sizes, 2, 4, 6, 8 and 10 years.

No. 7026.—LADIES' SHIRT-WAIST SLEEVES, STOCK, COLLAR AND CUFFS. 10 cents.
Sizes, large, medium and small.

No. 6890.—LADIES' WRAPPER. 11 cents.
Sizes, 32, 34, 36, 38, 40 and 42 inches bust.

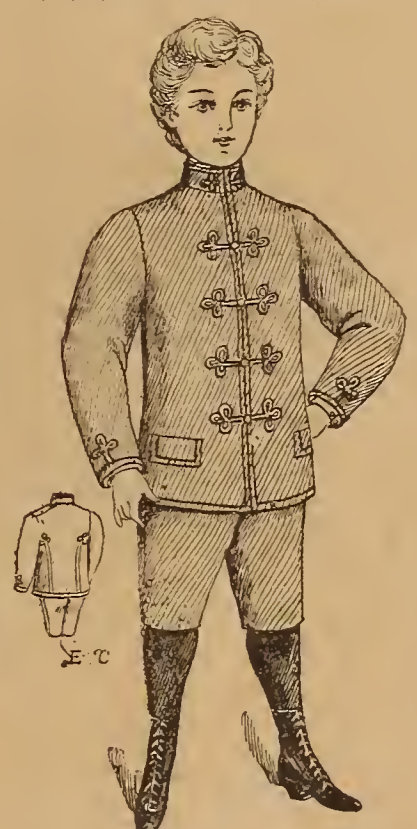


No. 6614.—CHILD'S YOKES AND SLEEVES. All three for 10 cents.
Sizes, 1 and 2 years.

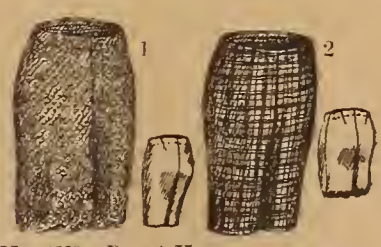
No. 6459.—LADIES' AND MISSES' SUNBONNETS. The two patterns for 10 cents.
Cut in two sizes—Misses' and Ladies'.

No. 1021.—CAPE. 10 cents.
Sizes, small, medium and large.

No. 7006.—MISSES' TUCKED SHIRT-WAIST. 10c.
Sizes, 10, 12, 14 and 16 years.
No. 7005.—Same Pattern—Ladies' Size. 10c.
Sizes, 32, 34, 36, 38, 40 and 42 inches bust.



No. 7021.—BOYS' MILITARY SUIT. 10c.
Sizes, 4, 6, 8, 10 and 12 years.



No. 6558.—BOYS' KNICKERBOCKER AND KNEE-TROUSERS. 10 cts.
Sizes, 6, 8, 10 and 12 years.

No. 7011.—MISSES' SHIRT-WAIST. 10c.
Sizes, 10, 12, 14 and 16 years.

No. 7015.—MISSES' WAIST. 10 cents.
Sizes, 12, 14 and 16 years.
No. 7004.—MISSES' SKIRT. 11 cents.
Sizes 12, 14 and 16 years.

No. 7031.—LADIES' SLEEVES. 10 cents.
Sizes, large, medium and small.

No. 7010.—MISSES SHIRT-WAIST. 10c.
Sizes, 10, 12, 14 and 16 years.
No. 6998.—Same Pattern—Ladies' Size. 10c.
Sizes, 32, 34, 36, 38, 40, 42 and 44 inches bust.

No. 7017.—LADIES' SHIRT-WAIST, WITH STOCK COLLAR. 10 cents.
Sizes, 32, 34, 36, 38 and 40 inches bust.

WE HAVE OFFICES IN NEW YORK CITY, SPRINGFIELD, OHIO, AND CHICAGO, ILLINOIS.

NOTICE.—Send all orders for patterns direct to our central office, to FARM AND FIRESIDE, SPRINGFIELD, OHIO, where our stock of patterns is kept.

Our Sunday Afternoon.

THE CHRIST OF CALVARY.

Theology is but a scheme
  Of logic wrought in air,
And history a troubled dream,
  If Christ be wanting there.

The grave conceals a mystery
  To which God holds the key;
I need the Christ of Calvary
  To open it for me.

For life and hope and destiny
  Are shrouded in its gloom;
My proof of immortality
  Lies in his empty tomb.

I know not how the Lord arose
  And passed out into day.
Enough for me the linen clothes
  In the tomb there folded lay.

A glorious fact, not theory,
  Supports my simple creed:
I build my whole theology
  On "Christ is risen indeed."

—Selected by N. R. Smith.

UNDER THE CLOUD.

THE question is often asked, "Why are God's people so afflicted, and why do they have to endure such tribulations, and why are there so many clouds to pass through, such heavy seas to cross?"

Past history shows that every man or woman who has been interested in some aggressive part of God's work, any one who has been a leader or a champion of some reform, has been ridiculed and persecuted right and left, and has literally passed under the cloud and through the sea.

How many are there to-day who will say that if such a person was all right he would not have so many trials and tribulations? But little they know of what they are talking; God's work is exactly the opposite of that. "Yea, and all that will live godly in Christ Jesus shall suffer persecution."

A great deal of the persecution, a great many of the hardships that are to be gone through by those who are earnestly engaged in aggressive Christian work are due to the lack of sympathy and to the ridicule of professing Christians. How hard it is that such should be the case! No wonder that the world will criticize and ridicule at everything that is being done for the uplifting of mankind, because it conflicts with the sin and the wickedness of the world: but for children of God to do these things—how unfortunate, how wrong!

Instead of ridiculing or finding fault or criticizing, how much encouragement and sympathy ought to be given to any one who is doing anything whatever to uplift humanity.—Union Gospel News.

THINK BEFORE YOU STRIKE.

I remember reading in my boyhood days about a merchant traveling on horseback, accompanied by his dog. He dismounted for some purpose, and accidentally dropped his package of money. The dog saw it, the merchant did not. The dog barked to stop him, and, as he rode further, bounded in front of the horse and barked louder and louder. The merchant thought he had gone mad, drew a pistol from his holster and shot him. The wounded dog crawled back to the package, and when the merchant discovered his loss and rode back, he found his dog dying there, guarding the treasure.

The following little story told by a friend of mine is not so painful, but adds force to the thought, "Think before you strike any creature that cannot speak."

"When I was a boy and lived up in the mountains of New Hampshire, I worked for a farmer, and was given a span of horses with which to plow, one being a four-year-old colt. The colt, after walking a few steps, would lie down in the furrow. The farmer was provoked, and told me to sit on the colt's head, to keep him from rising, while he whipped him 'to break him of that notion.'

"But just then a neighbor came by. He said: 'There's something wrong here; let him get up and let us examine.' He patted the colt, looked at his harness, and then said: 'Look at this collar; it is so long and narrow, and carries the harness so high that when he begins to pull it slips back and chokes him so he can't breathe.' And so it was, and but for that neighbor we should have whipped as kind a creature as we had on the farm, because he laid down when he could not breathe."

It was only the other day I heard of a valuable St. Bernard dog being shot because, having a wound on his head concealed by the hair, he bit a person who handled him roughly. Boys, young and old, please remember that these creatures are dumb. They may be hungry or thirsty or cold or faint or sick or bruised or wounded, and cannot tell you.—Geo. T. Angell.

BURIED SOULS.

There is a story of an Italian nobleman who took his terrible revenge on one whom he hated. He set him alive in a niche in the palace that he was building, and piled rows of bricks and stones about him until the wall closed over his head, and shut him in his dark and awful living tomb.

Horrible as this story is, it is just what many men are doing with their souls. They are piling bricks and stones upon them, walling them in, and leaving them there to die. In the very core of many a great fortune which men have gathered: in the inner chamber of many a beautiful palace which men have built: in the deepest shrine of many a temple of honor which men have reared in their own praise—hidden away out of sight is a grave over which God's angels weep—the grave over a soul.

Many a man has buried his manhood in his business. Many a poor slave has dug a deep grave for his soul with the wine-cup for a spade. Fashion has woven the shroud and pall for many a poor girl's soul. In many a garden of beauty and pleasure, hidden among the flowers, is a grave where innocence, faith, virtue, honor and truth lie buried.

PURE SOPHISTRY.

Do not believe it, boys. It is pure sophistry. We mean all this nonsense about the "pleasures of sin." Sometimes very good people indulge in this silly talk. They advise young people to shun the pleasures of sin in such a doleful way, and with so much stress on the "pleasure" of the forbidden thing, that inquisitive young people imagine there is something really delightful in wickedness. Nothing could be further from the truth. There is no pleasure in sin. Nothing but sorrow and suffering and disappointment and loss of self-respect. Sin never was and never will be, even in its most attractive phases, anything but degradation to both soul and body. Sin is hideous. Only righteousness is beautiful. It alone is the giver of true pleasure. All else burns the soul with the brand of death. My young friends, when any one talks to you of the "pleasures of sin," smile at him and tell him that he is greatly mistaken. There is no pleasure so sweet and no joy so deep as that of having a pure heart in a clean body.—Epworth Herald.

MAJORITIES NO PROOF OF RIGHT.

Do not think you are more likely to be wrong because you are in a very small minority. Majorities have generally been wrong, especially in religion, from the fall of man until now. When the flood came, who knew it? Who were saved? Noah and his family—eight persons! Only these in all the world were right, not a single convert gained during this long preaching of righteousness outside of his own family, and perhaps not these! When the cities of Sodom were destroyed, who knew it beforehand besides Abraham? And who were saved besides Lot and his two daughters? When Nebuchadnezzar was a monarch of the world and made a ponderous image, and commanded all the world to worship it, who were right, save three that would not obey the sinful command?

FREE STOP-OVER AT WASHINGTON.

On all through tickets between the east, west, north and south, reading via Baltimore & Ohio Railroad, a stop-over at Washington can be secured, without extra charge for railroad fare, by depositing the ticket, upon arrival at Washington, with the B. & O. station ticket agent at that point. Washington is always attractive to visitors, and particularly so while Congress is in session. This arrangement for stop-over privilege will doubtless be appreciated by the public, and will bring to the National Capital many travelers to view its superb public buildings monuments, museums and thoroughfares.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of Farm and Fireside, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Book on Swine Wanted.—R. C. M., Mercer, Mo. Send $1.75 to this office for Coburn's "Swine Husbandry."

Horse-radish.—H. M. P., Gate City, Ala., writes: "How is horse-radish prepared for table use?"

Reply:—Fresh roots, after being trimmed and washed, are grated, put into a glass and covered with vinegar. Keep tightly covered, as it soon loses its strength.

Peanut Culture.—D. E. H., Parr, Ind., asks for full information about the culture of peanuts. It would require a small treatise to cover the ground, and such can be obtained by sending five cents to the Superintendent of Documents, United States Department of Agriculture, Washington, D. C. Ask for Farmers' Bulletin No. 25, "Peanuts: Culture and Uses."

Strychnine for Ground-squirrels.—A. W., Jenny Lind, Cal., writes: "Give me a recipe for mixing strychuine with wheat for poisoning squirrels."

Reply:—Soak the wheat for an hour or two in a strong solution of strychnine in sweetened water. With a spoon drop a few grains into every hole or squirrel runway you can find in the field. Place the poisoned grains far enough in to be out of the reach of birds.

Grass for Pine Grove.—L. A. W., Big Prairie, Mich., writes: "I wish to know the best kind of grass to sow in a pine grove. The soil is rather light."

Reply:—Carefully observe what grasses do best under similar conditions in your locality, and sow them. Orchard-grass does well in partial shade, but is not adapted to poor, light soil. You might experiment with it on a small plot in your grove. Sow at the rate of two bushels to the acre.

Cellar.—L. P., Fayetteville, Ark., writes: "Wishing to make a cellar to keep my milk and other stuff, and as the ground is very wet and seapy, I would like to know how to mix and apply cement to the sides and floor to keep out the water. I intend to dig into the ground about three feet and wall up with stone, and build three feet above ground with same material. Should the wall be laid with cement or lime and sand?"

Reply:—Unless you can put down a tile-drain with good outlet below the foundation of the wall your cellar will not be a success. Drainage is necessary for a dry, sweet cellar. Lay up the wall with cement mortar. Divide the cellar, and use one portion of it exclusively for milk, cream and butter.

Wireworms.—M. E. L., Kendallville, Ind., writes: "I have three acres of low land that I can irrigate. I can raise good crops of all kinds on it except corn. Wireworms destroy the corn and trouble my potatoes some. What will kill wireworms? Will salt do it?"

Reply:—For a few years continue to raise such crops as you have found not to be injured by the wireworms. Applications of salt will not do much good. About the only method of fighting wireworms is by baiting—a method practicable over a small area only. Bury pieces of potatoes here and there in the ground, and mark each place with a stick. Look over the baits each morning, and destroy the worms that have collected on them.

Brewery Hops and Tobacco-leaves.—T. C., Creedville, Ohio, writes: "Is a load of brewery hops equal to a load of barn-yard manure for fertilizing, both loads being of equal size?——Are tobacco-leaves good to use as a fertilizer?"

Reply by T. Greiner:—The spent hops fresh from the brewery contain nearly or fully twice as much plant-food as ordinary stable manure, but whether all this plant-food is as readily available is more than I can say. At any rate, spent hops are well worth hauling and composting with colder manures, and will readily bring them into hot fermentation. Spent hops are also an excellent thing to add to manure for hot-beds.——Tobacco-leaves are very rich in potash, and consequently excellent for manuring purposes.

Cow-pea Hay.—J. K. W., Sylvester, Ga. In answer to your query about making cow-pea hay we republish the following by a Mississippi contributor: "The main point in the curing is to preserve the leaf, which may be done by giving plenty of ventilation while curing. The vines should be removed from exposure to the sun as soon after mowing as possible, it being necessary to expose them only long enough to wilt the leaves. My usual way of curing them is in rail pens, floored, commencing with a layer of vines two feet deep, then a few rails laid across and another layer of vines, and so on until the pen is as high as wanted. A very good plan is to plant a 6x6-inch post with 3-inch auger-holes two feet apart, in alternate directions, for cross-poles. Stack the wilted vines around the post, over the poles; when complete, cap with hay."

Fall Seeding for Pasture.—E. M., Clarence, Iowa, writes: "One of my neighbors sowed a field of corn to grass last fall, and got a fine stand. I am thinking of trying the same thing next fall on ten acres for hog-pasture. What would you advise me to sow for such a pasture? I see alsike recommended. What is the plant like? It has never been introduced in this section. Is it a plant that will make good feed and will not prove a nuisance when I want to plow it up? I would like to sow red clover and timothy. The soil is rich and black. Please give amount of seed to be sown to the acre."

Reply:—Profit by your neighbor's experience. For such a pasture as you want you may sow, early in the fall, one bushel of blue-grass and four pounds of timothy-seed to the acre. The following spring sow four pounds each of red and alsike clover to the acre. This will give you choice mixed pasture. There is nothing objectionable about alsike clover. It is intermediate in growth and appearance between red and white clovers, and it is highly desirable in all permanent pastures.

VETERINARY.

Conducted by Dr. H. J. Detmers.

To regular subscribers of Farm and Fireside, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. Detmers, 1315 Neil Avenue, Columbus, Ohio.

Note.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

Actinomycosis.—H. J., Pierpont, Ohio. What you describe seems to be actinomycosis (so-called lump-jaw), which has its seat in the jaw-bone. You will find it incurable.

Ringbone.—S. L., New Texas, Pa. Please consult Farm and Fireside of December 1st. It is, at any rate, getting rather late in the season for the treatment of spavin and ringbone.

A Dry Teat.—F. J. H., Lacombe, Ala. The best you can do is to leave that dry teat, or rather quarter of the udder, of your cow alone. The latter will give nearly as much milk from three teats as from four.

So-called Scratches.—Q. N., Paloose, Wash. Make three times a day to all the sores and cracks a liberal application of a mixture composed of liquid subacetate of lead, one part, and olive-oil, three parts, and keep your horse out of mud, water and filth, if possible on a clean and dry floor in the stable.

Thorough-pin and Lameness.—H. K., Ceresco, Neb. A thorough-pin very seldom causes any lameness, unless it is complicated with an inflammation of the joint. Make a close examination of all the joints, hind knee included, report the result and give an accurate description of all the peculiarities of the lameness, and I may be able to give you a satisfactory answer.

A Lame Mare.—E. A. H., Sprague ville, N. Y. You give nothing whatever but negative symptoms, except where you say that the mare has been lame a year, and that her feet are tender. Even if the seat of the lameness is in the feet, there are too many possibilities; so, for instance, it may be navicular disease, chronic founder, or lamenitis, corns, contracted hoofs, ringbone, diseased tendons or ligaments, etc.

Strychnine Poisoning.—Subscriber, Wawkomis, Oklahoma. The symptoms you describe are those of strychnine poisoning. If cattle are poisoned outdoors, the poison, as a rule, has been administered by mixing it with salt. Your first cow, which died, got enough strychnine to kill her, while the second, which recovered, did not get quite enough of the poison, but too much salt, hence the (immaterial) difference in the symptoms. Your description of the symptoms is so graphic that a mistake in making the diagnosis is excluded, and if it would not take so much space I would reproduce it.

No Typographical Error.—M. D. M., Royalton, Vt. I have not been able to discover a typographical error in the article referred to. The dose is high, and intended to be high; but you cannot make a comparison between a man and a horse. One is omnivorous and the other herbivorous. There is a vast difference, also, between our domestic animals. So, for instance, it is next to impossible to poison a goat with narcotics; on the other hand, a dose of calomel, not injurious to a man, may become fatal to an old cow, and horses and sheep can stand large doses of tartar emetic, while human beings and dogs can stand very little.

Grease-heel.—E. A., Ayers, Ill. If yours is an inveterate case of so-called grease-heel, or, as you say, "one of the worst kind," the best you can do will be to intrust the treatment to a competent veteriuarian, because in such a case abnormal conditions and complications, about which your communication is silent, are existing, and require strict attention. Ordinary cases, not neglected and free from such complications, will be brought to healing by making twice or three times a day liberal applications of a mixture composed of liquid subacetate of lead, one part, and olive-oil, three parts, and by keeping at the same time the horse on a strictly clean and dry floor.

Wart on the Teat of a Cow.—E. S. P., Pacelot, S. C. If the wart has a neck, apply a ligature (a strong silk thread or a thin "waxed end" from a shoemaker) as tight as you can, and as close to the teat as possible, and the wart will soon drop off. Still, as the teat is dry it may not be very material whether the wart is there or not, because in time it will disappear without treatment. The presence of the wart is not directly responsible for the non-production of milk by the quarter to which the teat belongs, but it may be so in an indirect way, in so far as it may have prevented thorough milking. It will be of no use to make an attempt to get milk out of the dry quarter.

Badly Contracted Hoofs.—E. D., Michie, Mich. First have the shoes removed from your horse's feet, then have the long toes pared and shortened just as much as it can with safety be done. Keep the horse barefooted, and let him have all the voluntary exercise outdoors he is willing to take and you can possibly allow him. In about three or four months his feet will have very much improved, probably enough to make him able to work. Meanwhile a little judicious paring every three or four weeks will be very beneficial. When put to work and shod again, the shoes must be reset once every four weeks. If this is neglected, the hoofs will soon be again just as bad as they are now.

Indigestion.—L. N., Nebalem, Oreg. Your cow suffered from indigestion, and probably from impaction of food in the third stomach. She probably had overloaded herself with the good food offered her. Your treatment was all right in principle, and also effective, as the sequence has shown, but you could have obtained the same result much sooner if you had at once given her thirty drops of the best croton-oil mixed with about five ounces of some mild oil, linseed-oil, for instance, as this would have forced a passage in less than thirty hours. The Epsom salts and the irrigation with soap-suds undoubtedly saved your cow's life, but you, very likely, would have failed if you had given smaller doses.

Possibly Farcy.—F. F., Brainerd, Minn. The disease of your two-year-old colt described in your inquiry is either farcy (external glanders) or an uncommonly severe case of lymphangitis. If you have a state veterinarian in Minnesota it will be best to inform him and to let him decide, because in such a case absolute certainty is necessary. The latter can also be obtained if you can get a guinea-pig and have the same inoculated with the contents of the abscesses. If this is done, and the disease is farcy (external glanders), the inoculated animal will take the disease, and will soon die of either farcy or glanders. If it is only lymphangitis you may possibly effect a permanent healing by a thorough cauterization of every abscess with sulphate of copper or with lunar caustic.

Either Vertigo or Epileptic Fits.—J. N. K., High Point, N. S. Your horse is subject to attacks, or fits, of either vertigo or epilepsy. If it is the former, the attacks, as a rule, are less severe and come on only when the horse is working, especially in the bright sunlight, and soon after a heavy meal; but if the same are of an epileptic nature, they may come on at any time. If it is vertigo, you may prevent the falling down of the animal by covering its eyes as soon as the first indications of an approaching fit make their appearance; and many a fit may be prevented if the horse is given reasonable time for digestion before the same is hitched up after having eaten a heavy meal, and if the harness, but particularly the collar, is always well-fitting and if the check-reins are not too tight. Otherwise both diseases are not only incurable, but also make it dangerous to work a horse affected with either on the public highways. Epileptic fits are distinguished from attacks of vertigo by the attending clonic and tonic spasms.

Lameness of Young Lambs.—R. W., Belfort, N. Y. The lameness of young lambs which you describe is partially of a rachitic and partially of a rheumatic character. It occurs most frequently among lambs born in the latter part of winter and the fore part of spring or before the first part of April; and the changeable weather, the too close confinement in an often poorly ventilated stable and the frequently unsuitable food of the ewes seem to constitute the causes. If your aged ewe had received more food rich in lime and phosphates, and less potatoes and rutabagas, and had had more fresh air and exercise, the disease might not have made its appearance. The best preventive consists in changing the lambing season to April or May. As to the prognosis and treatment, lambs less than two weeks old, as a rule, will die, while those that are older when becoming affected may be saved by careful nursing and daily applications of a little tincture of iodine to the swollen joints. You say, "There don't appear much about sheep in the columns of Farm and Fireside." As far as the veterinary department is concerned, I think you are right, because during the last four years sheep-raising was not a paying business, and very few people cared to make any inquiries about sheep diseases. It will be different hereafter.

Heaves.—H. P., East Alton, Ill. Heaves is a term which cannot be applied to any specific disease, but which must be defined as signifying any chronic, feverless and incurable, consequently permanent, difficulty of breathing, no matter what the original cause may be. This definition, of course, would answer your question, and sufficiently indicates that not all cases of heaves are alike and have the same cause. In Illinois, and also in most, if not in all, other states of the Mississippi valley, a vast majority of all the cases of heaves, however, have the same source and origin; that is, are caused by eating musty and dusty hay, timothy and clover hay in particular, and these cases, although incurable, can be considerably improved if the following rules are observed: 1. The affected horse must receive only a minimum of rough food, and, if possible, no hay at all, unless wild hay is available; but instead of it some good and clean oat straw. The deficiency in nutrient food must be made up with grain. 2. To promptly relieve any costiveness, whenever it should happen to exist, by feeding a good bran mash. 3. To see to it that the stable is well ventilated, and that the affected horse has always pure air to breathe. If the ventilation is not what it ought to be, it may be advisable to give to a horse troubled with heaves the coldest stall, or one close to the door, because cold air contains more oxygen. If these rules are observed, a horse affected with heaves will be enabled to do a great deal of farm-work, unless the difficulty of breathing is excessive.

So-called Black-leg.—W. F. S., Timberlake, Oklahoma. What you describe are cases of so-called black-leg, black-quarter, or symptomatic anthrax, an infectious and very fatal disease, which is caused by a bacterium known as the bacillus of symptomatic anthrax, and which principally affects young cattle, especially such as are well kept and in good condition. There is no treatment known that can in any way be relied upon, and an animal once affected hardly ever pulls through. There are two ways of prevention: One is to keep young cattle away from all such places, fields and pastures in particular, in which young cattle have contracted the disease, and in which, consequently, the disease germs must be existing; and by seeing to it that young cattle, if they cannot be kept away from such places, are perfectly free from any sores and lesions, especially on their legs and feet, because it is through such sores or lesions that the bacteria find an entrance into the connective tissues of the animal. The other means of prevention consists in producing immunity from the disease by injecting a little of a fluid pure culture of the symptomatic anthrax bacilli directly into a vein; but in doing this great care must be exercised to get absolutely nothing of the culture into the connective tissues, because if this should happen, the disease will be produced instead of being prevented. In one respect your communication is of great interest. You state your calves were suckling calves, and your description is so plain and so lucid that there cannot be the least doubt in regard to the diagnosis. Your statements entirely agree with my own experience, but they contradict two renowned German authors, Professors Friedberger, in Munich, and Froehner, in Berlin, who say in their pathology, third edition, second volume, page 485, "Usually the disease attacks only young cattle from six months to four years old; calves less than six months, and native cattle over four years old, are not subject to the disease." In justice to the named professors, however, I must say that they cite as their authority a French author—Arloing. If you know the exact age of your calves, please let me know.

Our Miscellany.

It is likely that Russia will soon abolish the import duty on agricultural machinery.

Walnuts and butternuts are being successfully cultivated in Whatcom county, Washington. They are not native to the region.

Under direction of the state horticultural society the state of Arkansas is going to make an intelligent effort to raise sugar-beets.

Party at the door—"Is the lady of the house in?"

Cook—"I'm wan of thim, sor."—Boston Transcript.

An Ottumwa man agreed to pay a farmer twenty cents a bushel for his corn if McKinley was elected. Over two thousand bushels have been turned in.

In the West Indian islands and in South America grows a tree whose fruit makes an excellent lather, and is used to wash clothes. The bark of a tree which grows in Pern and of another which grows in the Malay islands yields a fine soap.

A Kansas preacher told his flock the other day that the great trouble with the Kansas farmer, as a general thing, is that he farms too much land too little. He assured them that a man could do better with eighty acres well tilled than with four hundred acres cultivated as most of the farms in the Sunflower state now are.

The young women of the different church societies of Lebanon, Ind., are preparing to farm on the Pingree plan the coming season for the benefit of the poor. One real-estate firm has come to their assistance by donating the use of fifty vacant lots. Some of the most prominent society girls in Lebanon will be found wielding the hoe as soon as the weather will permit.

Meissonier left a curious codicil in his will, the details of which, it is said, will be strictly carried out by the heirs. The codicil referred to bears the date of January 1, 1894, and reads: "In the secret cupboard in the wainscoting of the large studio there may be some money, which my children will necessarily take, but I conjure them, if they wish to avoid remorse for having failed to respect the wishes of their father, to place all the letters and all the papers which they may find shut up there, without reading them, in a box, which they will seal with a seal and which they will convey in my name to the library of the institute, only to be opened thirty years after my death."

A curious statement is made by United States Consul Morris, at Ghent, Belginm, to the State Department, at Washington. According to this communication the most expensive product of the world is charcoal thread, which is employed for incandescent lamps, the article for the most part being manufactured at Paris, and coming from the hands of an artisan who, for the present, remains unknown in order to better protect the secret of manufacture. It is by the gram—15½ grains—that this product is sold at wholesale, and in reducing its price to the basis of pounds, it is found that the filament for lamps of twenty candles is worth eight thousand dollars a pound, and that for lamps of thirty candles it is rated at twelve thousand dollars a pound; the former have a diameter of 0.020 of a millimeter—one millimeter equals 0.0394 inch—and the latter of 0.0045 of a millimeter.—New York Sun.

BEFORE BUYING A NEW HARNESS.

You can save money on harness by buying direct from the manufacturer at wholesale prices, and at the same time get a genuine good article. A two-cent stamp sent, with your address, to King Harness Co., 7 Church St., Owego, N. Y., will bring a full description of all kinds of first-class harness to all readers of the Farm and Fireside who mention this paper.

GLASS BRICKS IN USE.

Glass bricks are made extensively in Germany. They are blown with a hollow center, containing rarified air, and they are said to be as strong and durable as clay bricks. They freely admit light. So far the glass brick has only been used in the construction of conservatories, and has been voted a success.

A MONEY MAKER IN HARD TIMES.

I have for the past five years had a pretty hard struggle to make a living, but about three months ago I began selling Self-Heating Flatirons and have made from $4 to $5 every day, which I think is pretty good for an inexperienced woman. My brother is now selling irons and makes more money than I do, but he has sold other things and is more experienced. The iron is self-heating, so it is the proper heat all the time; and you can iron in half the time you commonly do and have the clothes much nicer. You can iron out under a tree or in any cool place, and one cent's worth of benzine will do an ordinary ironing, so you save the price of the iron in fuel in a few weeks. By addressing W. H. Baird & Co., Dept 11 6, Station A, Pittsburg, Pa., you can get full particulars, and I know any one can do splendidly anywhere. We sell at nearly every house, and every woman that irons once with a Self-Heating Iron will have one, as it saves so much labor and does so much better work.

Mrs. M. B.

HAD HIS REASONS.

"No, you don't!" said Uncle Allen Sparks, when a committee of citizens once asked him to allow himself to become a candidate for justice of the peace. "I have six good reasons for refusing."

"What are they?" asked the spokesman.

"The first one," replied Uncle Allen, "is that I don't want it, and the other five are that the ticket you want me to run on is going to be swamped by about 800 majority."

FULL ENOUGH THEN.

Millie—"Dickie Doolittle seems such an empty fellow!"

Willie—"You wouldn't have thought so if you had seen him last night."—Pick-Me-Up.

EARLY SLANG.

Sunday-school teacher—"What was it, children, that the rich man said when the guests bidden to his feast refused to come?"

Children (in unison)—"He said, 'There are others.'"

SOUTH DAKOTA IN SPRINGTIME

Is clothed with verdure green and spotted with the beautiful blue and white prairie flowers, tokens of luxuriant soil like that fair country to which Moses led the children of Israel in ancient times.

And like unto that land of plenty, South Dakota outrivals its sister states of the East in the products of its soil, sown, cultivated and harvested in less time and with greater ease than in any other portion of the United States.

And so we say unto you that now is the opportunity of a lifetime to "Go West and buy a farm." For descriptive lists and prices address H. F. Hunter, Immigration Agent for South Dakota, 295 Dearborn street, Chicago, Ill.

INFORMATION EXCHANGED.

Dr. Meredith, who has an office on Fourth avenue, on leaving his office yesterday morning to attend to a patient wrote on the slate on his desk, "Will be back at eleven o'clock."

When the doctor returned he found this written under his notice: "Will not be back at all." This was signed "Burglar."

The doctor found that a number of small articles had been taken from his office.—Pittsburg Dispatch.

END-OF-THE-CENTURY FARMING TOOLS.

The great progress made in the manufacture of tools and implements in the past half century is manifest in nothing to a greater degree than in the tools for farmers and gardeners made by the Withington and Cooley Mfg. Co., of Jackson, Mich. Their famous W. & C. line of tools embraces nearly a hundred kinds and styles. The most prominent are the "Ivan Hoe," V-shape shuffle hoe, Acme weeding hoe, solid steel bow rake and Acme hay and manure forks. Each of these is a vast improvement over old styles, in design and efficiency, and every one is thoroughly well and skillfully made, of finest steel and toughest woods. The firm also manufacture a line of splendid wheelbarrows. Their W. & C. Book will be mailed free to any one that writes for it.

Recent Publications.

CATALOGUES RECEIVED.

H. McK. Wilson & Co., No. 202 Market street, St. Louis, Mo. Illustrated catalogue of cheese-factory, creamery and dairy apparatus and supplies.

F. S. Burch & Co., 178 Michigan street, Chicago, Ill. "Enemies of the Shepherd," a handbook on the external and internal parasites of sheep, and remedies for the same. Price 4 cents, in stamps.

P. Emerson, Wyoming, Del. Catalogue of fruit, nut and shade trees, asparagus roots, small-fruit and vegetable plants.

The Cow on the Farm. A little book by a woman of practical experience, for the women on the farm who desire to perfect themselves in the art of making and preserving butter. Price 25 cents. Published by Robert Clarke Company, Cincinnati, Ohio.

LANDS FOR SALE.

AT LOW PRICES AND ON EASY TERMS.

The Illinois Central Railroad Company offers for sale on easy terms and at low prices, 150,000 acres of choice fruit, gardening, farm and grazing lands located in SOUTHERN ILLINOIS. They are also largely interested in, and call especial attention to the 600,000 acres of land in the famous YAZOO VALLEY of Mississippi, lying along and owned by the Yazoo & Mississippi Valley Railroad Company, and which that Company offers at low prices and on long terms. Special inducements and facilities offered to go and examine these lands both in Southern Illinois and in the "Yazoo Valley." Miss. For further description, map and any information, address or call upon E. P. SKENE, Land Commissioner, No. 1 Park Row, Chicago, Ill.

Smiles.

A LOVELY WEEK.

"SUCH a lovely week as I've had of it!" said the volatile Miss Giddygadd to Miss L. Marguerite Rosebudd, between the acts at the matinee. "Such a perfectly charming week!"

"Yes, dear? Well, I've had a lovely time, too. Saw you at the De Lange's Monday night."

"Oh, lovely affair, wasn't it?"

"Lovely!"

"Perfectly so. Were you at Miss De Gall's 'at home' Tuesday afternoon?"

"Yes, indeed; and it was a lovely affair. Didn't you go?"

"No; I had to pour for Helen Shoddy's tea that afternoon."

"Oh, of course. I saw you there. How stupid of me to forget. But I went to four teas that afternoon. Lovely affairs, all of them."

"I went to two Wednesday afternoon, and to Mrs. Upstart's musicale and dance in the evening. Had a lovely time at the Upstarts'."

"So did I. Lovely little dance, wasn't it?"

"Lovely!"

"Saw you at Birdie Gabbleton's luncheon Thursday afternoon. Lovely affair, wasn't it?"

"Perfectly elegant! Birdie does entertain so sweetly. She went with me to Mrs. Brainless' four-to-six after the luncheon."

"Have a good time?"

"Lovely! Perfect jam of people. Street packed with carriages. Dining-room all pink and green. Oh, lovely! Elegant refreshments. Orchestra behind palms in the hall—just lovely! And, oh, what an exquisite little german that was at Mrs. Clement-Jones' Thursday night!"

"Wasn't it, though! And such a ravishing lot of pretty dresses, and the supper served by De Cent!"

"Heavenly, wasn't it? Then I saw you at Maldie Frothingly's morning whist party on Friday, and at Mrs. Lollypad's great reception in the afternoon, and didn't I catch a glimpse of you at Mrs. Posingley's in the evening?"

"Yes. I looked in for a few minutes on my way to the De Huntley's great ball. That ball was just the loveliest of lovely balls."

"Really?"

"Oh, it was! Then I'd a lovely time at the readings by Professor De Cheekley at Mrs. Stone-Murray's this morning, and here's this lovely matinee this afternoon, and I've an elegant dinner on hand for this evening."

"Dear me, life is worth living; now, isn't it?"

"Indeed it is, when one can have such perfectly charming times as we've been having all winter. I have had such a lovely week, haven't you?"

"Oh, lovely!"

"Charming!"

"Perfectly so!"—New York Herald.

GOING TO RETIRE.

A business man accustomed to hard work for many years usually finds idleness irksome. Men who have been actively in the harness as a rule do not like to retire, although retirement in old age is the goal of the average worker. A successful Chicagoan, who has reached sixty years, said to me the other day: "I am going to quit. I have worked for thirty years without a week's vacation; now I am going to rest for thirty years. I have earned every dollar I possess; and I intend to spend money and stop worrying about accumulating it."

I applauded this determination and inquired how he intended to spend his leisure.

"I have bought a homestead in Blank," he said, naming a small town in Michigan, "and I shall remove there with my family, and simply wallow in idleness and contentment."

"But how will you pass your spare time?" I insisted.

"Well, I'll hunt and fish," he said.

"Good; but that will not keep you busy the year round," I ventured.

"No; but I shall read. I'll take all the papers. I will get together a little library, too."

"What will occupy all your extra time?"

"Oh, I shall walk about a good deal, I dare say. Exercise, you know—great thing for an old man."

"Is that your entire program?"

"N—no, not exactly," he said, hesitatingly. "I'm going to organize a private bank down there and manage it."—Chicago Times-Herald.

MAN'S INHUMANITY TO MAN.

"Excuse me, mister, but won't ye give me a dime or a nickel to git a place to sleep an' somet'in' t' eat? I ain't had nothin' in—"

Thus pleaded the beggar.

"If you're hungry, come along and I'll buy you a meal," replied the well-dressed man.

The beggar turned away, and an expression of bitterness came upon his features.

"They're all the same," he muttered. "I ask them for 'rocks'"—

He clenched his teeth and gnashed his fists.

"—And they offer me bread."

HOUSEHOLD WORDS.

A daily paper gives this list of household words. Have you ever heard them?

"Leaume be.

"Did anybody see my hat?

"Who carried off that paper?

"Now I lay me down to sleep.

"Say, John, ain't you boys up yet?

"No, you can't have any more cake.

"Oh, mamma, Willie's pinching me.

"Oh, papa, make Dick quit calling me names.

"Yes, dear, ten dollars will do, but fifteen dollars would be better.

"Where's that half-dollar I gave you last week?

"Come on to your dinner before everything gets cold.

"Come, now, it's time for you young uns to be in bed.

"Good gracious! how much money do you want, anyhow?"

CHANGE OF HEART.

Socialistic mob—"Bring him out! Hang him! Down mit monopoly!"

Inventor (putting his head out at the window)—"Goodness me! What does this mean?"

Mob spokesman—"You moost die! Ve hear you invent a machine vat do de vork off von hoondred men. You dake breat out off deir mouths; you—"

Inventor—"This machine of mine is an attachment for breweries, which will bring beer down to one cent a glass."

Mob (wildly)—"Hooray!"—New York Weekly.

THE BAD, BAD MAN.

The reformers are not of one mind. Colonel Ingersoll says a woman should have a divorce whenever she so desires, and that nobody but a brute will live with a woman who asks to be free from him. And a Missouri clergyman wants to tax bachelors very heavily, and send them to the penitentiary at the age of thirty; adding that after that age a bachelor is unfit to live with a pure woman. Between these reforming extremists the universal man had better split the difference and go out and get himself hanged.—Judge.

UP-TO-DATE.

"A capital invention, these horseless carriages!"

"Don't talk rubbish. We have had for a long time things quite as remarkable in their way as horseless carriages, and nobody takes the slightest notice of them."

"Indeed! What, for instance?"

"Cowless milk."

SAVING STEPS.

Ted—"Since Tom has been living in a flat, whenever he goes out with his wife in the evening he gives her time to get down to the street before he puts a foot out of the room."

Ned—"He does that so she can tell him through the speaking-tube about the things she has forgotten."—Truth.

IT COULDN'T HAVE BEEN.

Stapleton—"Where did you go last night?"

Caldecott—"Oh, I went to supper at the Van Razzlers."

Stapleton—"Was it a regular function?"

Caldecott—"I guess not! I had a regular square meal."—Puck.

AT THE DENTIST'S.

Rebecca—"I would like to have a nerve killed. How much will it cost?"

Dentist—"Seventy-five cents."

Rebecca—"Seventy-five cents? Can't you make it less to me? I have such weak nerves!"—German Exchange.

NOT GUILTY.

Proprietor—"Go tell that man who just came in to shut the door. I hate such carelessness!"

Clerk—"That wasn't carelessness on his part, sir; it was a precaution. He's a book agent."—Roxbury Gazette.

GET THEE!

Willy—"I met our new minister on my way to Sunday-school, mama, and he asked me if I ever played marbles on a Sunday."

Mother—"H'm—and what did you say to that?"

"I said, 'Get thee behind me.'"—Twinkles.

THE SAFEST TIME.

Counsel—"You are free."

Client (a burglar)—"And I am grateful to you, sir. When shall I call at your office?"

"I should prefer to have you call while I am there."—Life.

GOVERNMENTAL CONTROL.

Smith—"I think the public should control a great many of these private enterprises."

Robinson—"I think so, too. For instance, I'd like to see the public in control of the board of aldermen and the state legislature."

WOMAN'S POWER.

IT SHAPES THE DESTINIES OF MEN AND NATIONS.

Where Men Are at a Disadvantage, and "Only a Woman Can Understand a Woman's Ills."

Woman's beauty, love and devotion, rule the world. Grand women; strong mentally, morally and physically, whose ambition and magnetic influence urge men to deeds of grandeur and heroism. Such women are all-powerful. Weakly, sickly, ailing women have little ambition; their own troubles occupy their thoughts, and their one object is to get well.

They have no confidence in themselves, and only too often lose faith in their physicians.

All irregularities, whites, bearing-down pains, nervousness, headache, backache, "blues," distaste for society, sounds in ears, palpitation, emaciation, heavy eyes, "all gone" feeling, dread of impending evil, sleeplessness, etc., should at once be removed and vigorous health assured.

Lydia E. Pinkham's Vegetable Compound has for twenty years saved women from all this. Hear this woman speak:—

"I wish to publish what Lydia E. Pinkham's Vegetable Compound and Sanative Wash have done for me. I had falling of the womb and leucorrhœa, and they have cured me of both. I am a well woman. I suffered dreadfully with such dragging pains in the lower part of the back and extending around the body, irritation of the bladder, pain when walking and painful menstruation; I weakened terribly. I had been treated by three doctors without much help, and it only took five bottles of your Compound and three packages of Sanative Wash to cure me. I can recommend them to all women suffering with complaints like these."—MRS. VANNATTA, 3827 N. Broad St., Philadelphia, Pa.

SIX BEAUTIFUL TEA-ROSES

We will send Six Beautiful Tea-roses, and the Farm and Fireside the Remainder of This Year, for only 40 Cents.

Premium No. 410.

All Hardy Ever-bloomers.

So many of our northern readers have written us asking if our rose offer would be good a little later on that we have arranged to continue the offer for a few weeks. However, the stock is limited, and we advise all who want the roses to order without delay.

The roses can be planted in a box and started in the house, then transplanted outdoors when the ground gets warm; in fact, they are likely to do better if this plan is followed.

SIX COLORS

Red, White, Pink, Yellow, Blush and Salmon.

We heartily recommend this collection of tea-roses to all our flower-loving readers. The roses are grown here in our own city, and because of an overstock we are enabled to make this bargain offer. All the roses are on their own roots, and will bloom freely this summer, either in pots or planted in the yard. They are hardy ever-bloomers. We guarantee them to reach you in good condition. They will be sent by mail, postage paid.

Instructions how to plant and care for them will be sent with the roses.

All On Their Own Roots and Will Bloom This Summer.

This collection of Six Tea-roses given free as a premium for a club of THREE subscribers to Farm and Fireside. The subscribers may accept any premium offer in this issue of Farm and Fireside.

One of the Funniest of Funny Books is

"FRONTIER HUMOR,"

BY PALMER COX.

The Book contains
343 Pages.
36 Stories.
74 Illustrations.

Happy is the man who can see the humor which bubbles up in daily life; doubly happy is he who can tell the fun to others; but thrice happy is the man who can tell and also picture it for others' eyes, and so roll on the rollicking humor and spread the glad contagion of a laugh. In this volume Palmer Cox tells and pictures genuine fun.

One of the 74 Illustrations.

"'Wal,' ses Jim, 'without the tail pulls out, I cal'late to travel mi'ty close in the wake of this swine for the next half hour.'"—*Extract and picture from the story of "Dudley and the Greased Pig."*

TITLES OF THE STORIES.

Sam Patterson's Balloon
Jim Dudley's Flight
An Old Woman in Peril
Dudley and the Greased Pig
My Drive to the Cliff
Dudley's Fight with the Texan
A Terrible Nose
Dudley's Fight with Dr. Tweezer
Going Up the Spout
Jim Dudley's Sermon
My Neighbor Worsted
A Visit to Benicia
The Conntryman's Tooth
A Rolling Stone
Mistaken Identity
Jim Dudley's Race
A Trip Aeross the Bay
The Poisoned Pet
Seeking for a Wife
The Art Gallery
Riding in the Street-ears
The Value of a Coliar
Quaint Epitaphs
The Champion Mean Man
The Cobbler's End
Dining Under Diffieulties
Answers to Correspondents
Court-room Scenes
A Country Town
Christmas Eve
Heels Up and Heads Down
The Bitter End
A Trip to the Interior
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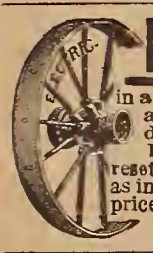

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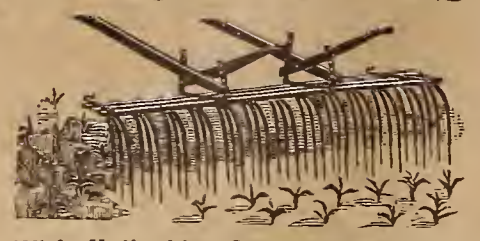

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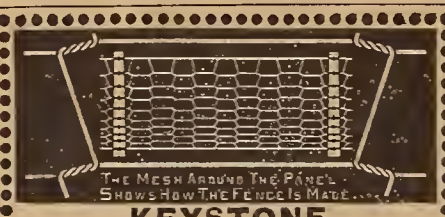

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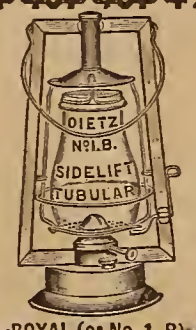

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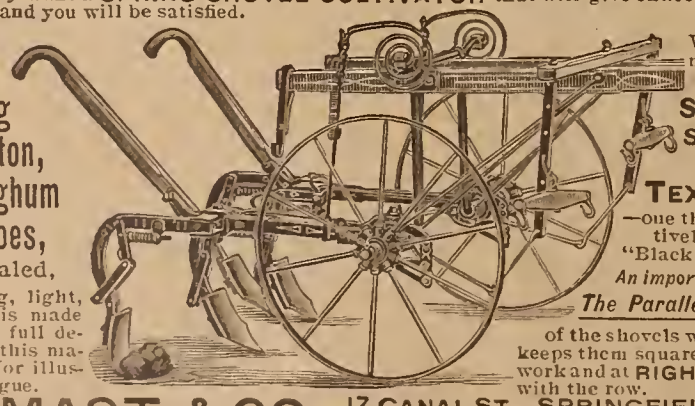

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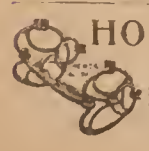

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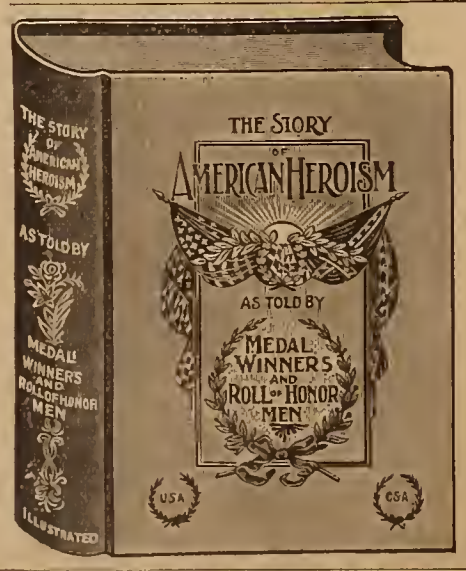

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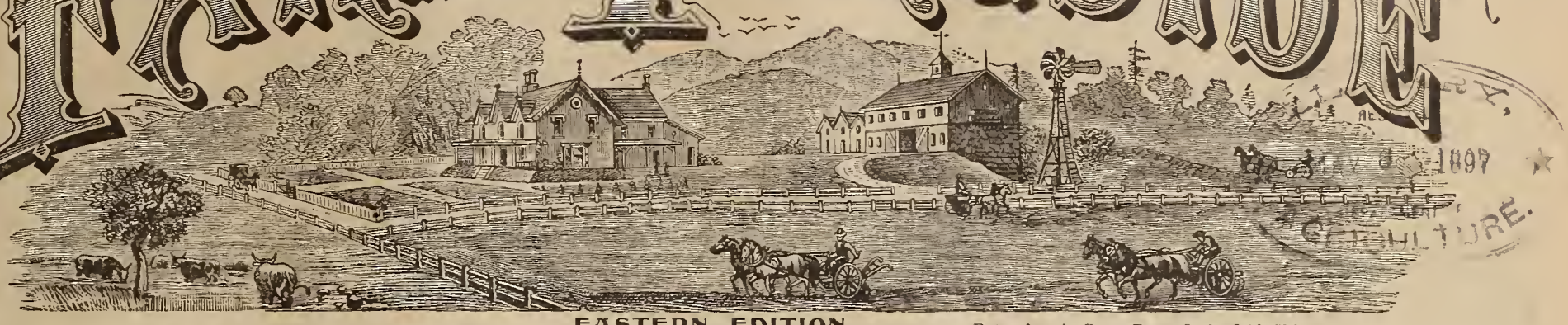

EASTERN EDITION.

Entered at the Post-office at Springfield, Ohio, as second-class mail matter.

VOL. XX. NO. 15. MAY 1, 1897. TERMS { 50 CENTS A YEAR. 24 NUMBERS.

WITH THE VANGUARD

IN Athens on April 6th there was celebrated with the greatest enthusiasm the seventy-sixth anniversary of the declaration of the independence of Greece from Turkish rule. Speaking of the Greek revolution of 1821-28 an historian says: "Athens awoke from her slumber of centuries: the sons of modern Greece looked once more to the Acropolis for inspiration, and ships of war were manned in the Piraeus. The islanders of the Archipelago soon joined their fortunes with those of their fellow-Greeks on the continent. Popular leaders appeared, whose fiery valor aroused the native tribes to the highest pitch of enthusiasm. Chief of these were Marco Bozzaris and Alexander Mavrocordatos, the latter of whom presently became president of the Hellenic confederation. The measures adopted by the Turks for the suppression of the rebellion were the most bloody and cruel of modern times. Such were the heroism of the Greeks and the cruelty of the Turks that the sympathies of all Christendom were aroused for the former and the aversion of all mankind excited against the latter. For five years the Greeks continued to struggle. At length, Great Britain, France and Russia came to the rescue and put an end to the war."

Now again Greece is struggling against the Turks in the cause of liberty. The free Hellenes have taken up the cause of their kindred in the island of Crete and in Macedonia, determined to liberate them from the tyranny of Turkish rule.

The interference of the six great powers of Europe in the revolution of the Cretans against the Turks has precipitated war between Greece and Turkey. The interest of the world is now centered on the historic territory where the Grecian and Turkish armies are engaged in deadly conflict, a conflict fraught with the gravest possibilities. No one can predict the outcome of this war. It may be confined to Greece and Turkey. It may finally involve all Europe. It may cause only minor political changes. It may light the flames of a great religious war and bring about the greatest events of modern times.

On account of their jealousies and rivalries and plots and counterplots of diplomacy the concert of the powers to maintain the peace of Europe is a very unstable affair, and the popular sentiment of western Europe is on the side of Greece and against the powers aiding the Turks.

In a recent letter to a Macedonian leader Gladstone speaks for the people of his country as follows:

"You might, and all Hellenes might, count upon the sympathies of the people of this country, and in most matters, when you have the sympathies of this people, you can count upon the action of our government, but it is not the people or government of Great Britain that are directing the course of the Cretan and Greek questions. Under the present deplorable scheme all our government has to do is to plead for its opinions as if it were before a tribunal of those youthful despots, the emperors of Germany and Russia, and to abide by and help execute their final determination. They tow Austria behind them, and through one of the two have a resistless hold upon France.

"Our disgraceful office seems to be to place our ships and guns and soldiers and sailors at their disposal for the purpose of keeping down the movement for liberty in Crete and securing to these young despots, who have in no way earned the confidence of Europe, the power of deciding questions which, in point of right, belong to the Cretans to decide."

LAST year the United States made more butter than was required for home consumption, and the Department of Agriculture is now endeavoring to find the best means of enlarging the foreign market for it.

"It is necessary," says Secretary Wilson, "to ascertain for our people what the world's markets want, and when

CHARLES H. CHAPMAN, PH.D.

we speak of the world's markets we mean England's market. The English bought sixty-five million dollars' worth of butter last year, and of that the United States supplied about six hundred thousand dollars' worth, or about one per cent. The United States furnished the feed to the Europeans who make the butter for British consumption. To this end it is proposed that information be obtained by the department for the American butter-makers by purchasing first-class creamery butter in different localities of the United States and having it put up in different kinds of packages, sealed cans, etc. The agents of the department will see to the transfer from the refrigerator cars to the refrigerator steamboats in New York, and make proper provisions for care of the butter while crossing the Atlantic. If necessary, the department will have boxes made to protect the butter from bad odors which might come from fruits, meats, etc. When the butter arrives in London it will be met at the wharf by an agent of the department and put upon the market. It will be ascertained what style and package best suits the British taste, and what their likes are as to color, saltiness, etc. This process will be repeated again and again with variations until the butter wanted in the British market can be supplied regularly here by the average creameryman."

SPECIAL correspondence from Washington tells that the new secretary of agriculture is following out the lines indicated that he would. His department is now busily engaged in distributing beet-seeds to be tried by the farmers of the country in order to see if their lands are adapted for growing beets containing a sufficient percentage of saccharine matter to make the industry profitable for them. Henry T. Oxnard, the beetman of Nebraska, has presented over half the quantity of beet-seeds on hand to the department for distribution for trial. The remainder was purchased by the department. All the seed is imported stock, and the entire amount used is about five tons, each farmer getting from one to two pounds. Quantities of seed have been sent to the experiment stations in many of the states, and applicants in other states are getting seeds direct from the department. The department does not recommend the planting of the seed in hilly or rocky soil, and suggests a light, sandy and fairly rich loam as suitable. As a rule, it is not believed that the warm climates will be favorable to the growth of the beet. Farmers are recommended to take twenty-five pounds of the grown beets and send them to their state experiment stations for test. If they yield more than twelve per cent of sugar their cultivation will be regarded as profitable; otherwise not.

This work of experiment is largely for the purpose of ascertaining in what localities it will be profitable to locate beet-sugar factories. After the factories shall have been established the further development of the culture of the beet among the farmers will follow as a matter of course—as to their best mode of cultivation, fertilization, etc. In these matters the work of the experiment stations will be of great benefit. The outlook is extremely interesting and hopeful. Not only will the establishment of this industry bring profit to the farmer directly from the sale of beets, but many thousands, if not millions, of dollars will be expended in labor and construction of the great plants required for the extraction of the sugar. The farmers living in the vicinity of any of these plants will have the advantage of an increased market for their other products by reason of the large number of hands employed.

CHARLES HIRAM CHAPMAN was born October 28, 1859, on a farm near Portage City, Wis. He attended Galesville University, in Trempeleau county, in the fall of 1872. He taught school in various places in Wisconsin, Nebraska and Minnesota until 1887, when he entered the normal school at Oshkosh, Wis., and graduated the following spring. During this part of his life he studied hard at mathematics, Latin, Greek, French, German and several sciences, often rising at three o'clock in the morning to work at mathematics until school-time. Mr. Chapman entered Johns Hopkins University in the fall of 1888; took the degree of B.A. soon afterward; was made fellow in mathematics in 1889, instructor in 1890 and associate professor in 1892. In 1893 he was elected president of the University of Oregon, which position he still holds.

FARM AND FIRESIDE

PUBLISHED BY

MAST, CROWELL & KIRKPATRICK.

OFFICES:

108 Times Building, New York City. Springfield, Ohio. 1643 Monadnock Block, Chicago, Illinois.

Subscriptions and all business letters may be addressed to "Farm and Fireside," at either one of the above-mentioned offices; letters for the Editor should be marked Editor.

TERMS OF SUBSCRIPTION:

One Year - (24 Numbers) - **50 Cents.**
Six Months - (12 Numbers) - **30 Cents.**

The above rates include the payment of postage by us. All subscriptions commence with the issue on press when order is received.

Subscribers receive this paper twice a month, which is twice as often as most other farm and family journals are issued.

Payment, when sent by mail, should be made in Express or Post-office Money-orders. Bank Checks or Drafts. When neither of these can be procured, send the money in a registered letter. All postmasters are required to register letters whenever requested to do so. Do not send checks on banks in small towns.

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To Puzzlers.—On the consolidation of the "American Farmer" with Farm and Fireside the puzzle column of the former, conducted by Mr. Charles H. Coons, was discontinued.

NOTES ON RURAL AFFAIRS.

The Coming Road. "Good roads" is not a new subject in newspaper discussion, hut a scarce article in reality. The coming road must be a better road than the road of the present. That mnch seems certain. Every fall and spring we are virtnally blocked in for weeks at a time, at least so far as wagon travel is concerned. Just when we are in greatest need of good roads for the purpose of marketing our products—potatoes, grain, hay, straw, apples, etc.—the roads are in horrible condition, and nnfit to drive over. But discussion and talk alone will not give us better roads. Even the New York state legislature (which, like all legislatures, nsually has so little understanding of the needs and wishes of the rural popnlation) seems to be in a fair way to realize the fact that deeds, not words, are wanted. One of the bills introduced into the state senate, and now in the hands of the committee on finance, is "An act to provide for the improvement of the pnblic highways." This act provides for the creation of a "state highway commission," and for material aid from the state treasury in building good highways. It seems a good bill in many of its provisions.

* * *

Road Drainage. From the Ontario Department of Agriculture Road Bulletin No. 2, written hy A. W. Campbell, provincial instructor in road-making. On its title-page I find the illustration here reprodnced (Fig. 1), which gives a good general idea of the construction of a cheap country road. The bulletin speaks of lack of drainage as the most frequent cause of bad roads in Ontario. And lack of drainage is snre to make bad roads everywhere. Mere excavations called "drains," made at the sides of the road, will not help matters much nnless they are provided with free-running ontlets. If water is allowed to stand in them, it soaks into and softens the foundation of the road, and loose dirt taken from these "drains" when piled into the center of the road only makes a bad matter worse, hoiding water on the surface and producing pitch-holes. You cannot cover water with gravel or crushed stone. The strength of the road-bed must be had, not so much in the road-covering as in the natural soil beneath it. Mr. Campbell says on this point:

* * *

"Under-drainage is as necessary as surface drainage. A dry foundation is more necessary than a dry surface. Under-drains are needed, not so much to carry away water which falls on the snrface of the road as to interrupt the water rising in the saturated earth from the impenetrable stratas heneath to lower the water-line. Common field-tile should be used, three or fonr inches in diameter, hard, well-bnrned and unwarped, every care being taken to lay it in the trench with a constant fall to a free outlet. Usually it is best to lay two tile-drains, one on each side of the road, abont two and one half or three feet below the bottom of the open drains. Thns placed they may be used as outlets for the surface drains if hetter cannot be obtained, proper catch-basins heing provided. Lay the tile to an even and uniform grade, and make the joints close. It is a good practice to cover the

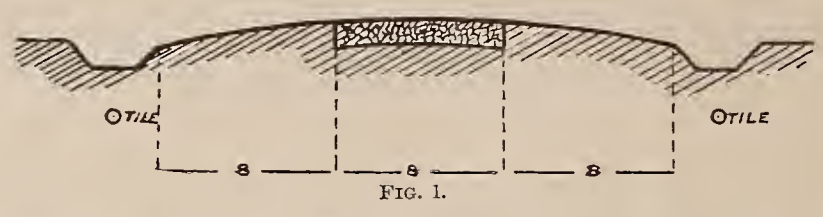

Fig. 1.

joint with sod, grass side down. A coating of straw is good in quick or running sand, but it is much better to completely surround the tile with sawdnst. A perfect system of drainage is obtained by surface and tile drainage. The surface of the road must he sufficiently rounded or crowned in the center to shed the water readily to the side-ditches, or gntters. The water in its course to the gutters must not be impeded or held by hollows, tracks or ruts in the roadway. The gutters must be carried to a free outlet as often as possible, having a good fall." These hints will come in good season for the annual spring road-work. Too much pains cannot be taken in taking off the water, and keeping it away from the road-hed.

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A New Idea in Road Construction. The "good-roads" bill already mentioned also refers to the use of steel plate or other flat-rail construction in single

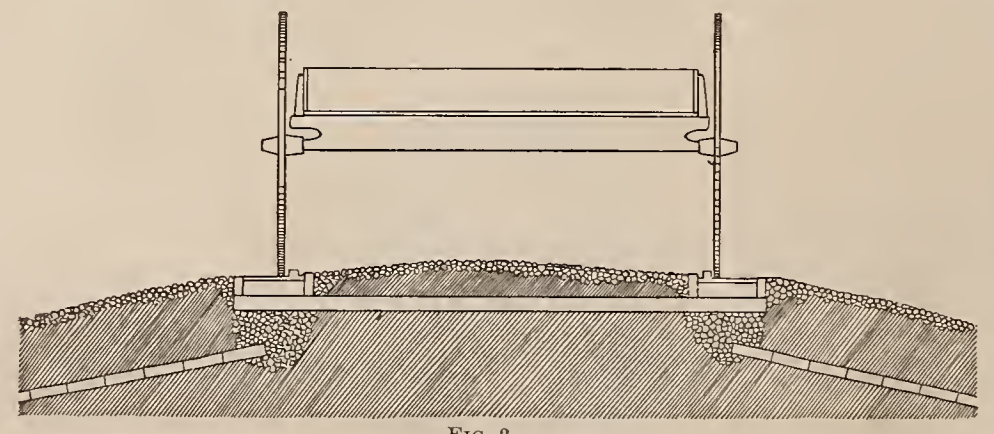


Fig. 2.

or double track for public use. On investigation I find that one of my neighbors, Mr. D. N. Long, has devised and suggests a new way of making a country road. His plan is clearly explained in Fig. 2. The rails are placed at such distance apart that the rims of the wheels run outside of the elevation, which tends to keep the wheels on the main surface of the track, and when made heavy enough also provides a suitable track or bed for trolley or motor cars to run upon. The track-beds may be made of sufficient width to allow bicycles to rnn on them, and having the npward projection on the inside, enables a bicycle to readily get on or off the track, onto the ontside road-bed, without any difficulty or inconvenience, and without crossing the raised portion. My neighbor claims that with this plan a solid, smooth and perfectly drained road is secnred with the use of the least possible amount of ballast, ties and weight of rails. A very thin rail only is required. Perfect drainage is at all times absolntely secnred by means of the drain-tiles located in the bottom of the ballast. The cost of material is estimated at $585 a mile, while the labor wonld not greatly exceed that ordinarily put upon the road for two or three seasons, and could mostly be done by the farmers instead of the ordinary road-work. A good macadamized road, on the other hand, will cost at least $2,000 to $3,000 a mile, and be much inferior to the steel road. I offer this for what it is worth.

* * *

Diseases and Insects. The interrelation hetween insects and plant diseases is a very close one, no doubt. When we give insects full sway in our gardens and fields we also invite all sorts of plant diseases. Many of the latter are dangerons only to plants of weakened vitality. This, for instance, is the case with the common early potato-blight, which seldom attacks a vigorous young plant, hnt waits until summer heat, flea-beetles, the Colorado potato-slngs and advanced age have lowered the plant's vitality before making a victim of it. Flea-beetles, on account of their large number and their peculiar mode of attack—perforating the leaves in many places—are especially active in transmitting the disease from plant to plant. The Colorado potato-beetle carries the germs of the hacterial disease of the potato, tomato, egg-plant, etc. (which also causes the northern potato-rot). In short, the insect world greatly aids in carrying diseases from plant to plant and from patch to patch. Professor Erwin F. Smith, assistant pathologist of the Department of Agriculture, says in regard to some experiments recently made with the Colorado potato-bug and the bacterial disease of the potato: "These experiments seem to fully warrant the conclusion that insect enemies are largely responsible for the spread of this disease. The direct injury resnlting from their bites and pnnctnres is not the only injury nor the worst one. Given one diseased vine in the field and plenty of insects to feed upon it, and the transmission of this disease to all parts of the field, and thence to the whole neighborhood, is only a question of a few weeks."

* * *

Preventing Plant Diseases. What Dr. Smith says in regard to preventive measures for the mentioned potato disease might well be applied to almost all other plant diseases. The prevention of the disease, he states, "lies in the direction of the prompt carrying ont of the following measnres: First, early and complete destruction of insect pests; second, early and complete removal of diseased vines; third, in case of the potato, the prompt digging of the tubers and their immediate nse or storage in a cold, dry place; fourth, selection of land for subsequent plantiug which has not heen planted in tomatoes, egg-plants or potatoes for several years; fifth, selection of tomato and egg-plant seeds and potato tubers from plants in localities where this disease does not prevail." T. Greiner.

SALIENT FARM NOTES.

Said an old and successful farmer to me a few weeks ago: "I think yon can safely predict a wet season and a short corn crop. I am not much of a prophet, hnt my past experience admonishes me to look out. We've been growing too much corn—so much that prices have been smashed flat, and we have all been growling and grumbling about the snrplus. Now, I think we'll soon have an opportunity to grumble about the scarcity of corn, and we'll have rails and cribs to sell. Don't get frightened at what I am saying, but open the drains and don't miss any opportunity to get in lively work."

* * *

That's the kernel of the nut. The successful farmer—the man who grows a crop if anybody grows one—is the man who never lets an opportunity slip past him. Even in very wet seasons there are chances to plow and plant a part of the land intended for corn, and to do it right. These chances may be very short ones, bnt they come, and every farmer should be quick to take advantage of them. This, of conrse, means that his plows should he bright, his harrows ready to hitch to and his planter in perfect working order. If any part of the harness or any tool is weakened in any part, the necessary repairs should be just where he can lay his hands on them at a moment's notice, for it won't do to waste a second when the soil is in the right condition for planting.

* * *

The farmer should avoid all fretting and worrying when rain comes pouring down day after day at planting-time. Worrying wears a man out faster than hard work, while it does no good whatever. He is doing all he can if he keeps his drains open and everything in complete readiness for a dash when the chance comes. He may sometimes have to wait until it seems almost too late to accomplish anything, but I have seen corn that was planted the first of July make a fair crop.

* * *

I have seen farmers miss a grand opportunity to grow fifteen to thirty acres of good corn through trying to do more than they were able. They put all their forces at work plowing, and tried to turn over a great field before planting a kernel. A heavy storm stopped the work, and a succession of showers kept them out of the field so long that it was necessary to replow the ground before it could be planted. Those who planted as fast as they could prepare the ground had corn a foot high before the men who tried to finish plowing had a grain planted.

* * *

It is always best to keep the planter near the plows, whether the season be a dry or a wet one. I know a little fellow who has always followed this plan, and he has never failed to grow some good corn. He watches the weather closely as he plows, and rarely does a shower catch him with an acre plowed and not planted. His farm is small, and he does all the work himself, and he manages to keep his work together far better than many who run three to five teams.

* * *

Every experienced farmer knows well enough that corn should he planted as soon as possible after the ground is plowed, so that it may get a good start before the weeds come, yet hundreds will plow for a week or ten days before planting a grain. The result is that corn and weeds come together, and the work of cultivating is made very much more difficult and laborious. I have seen corn that was planted close after the plow reach a height of six to eight inches before it was necessary to run a cultivator among it. Then a man could cultivate as fast as the horses could walk. We all know how much better it is—how much easier—to cultivate corn that is six to ten inches higher than the weeds than to go poking along with your nose almost on the ground hunting a row that is almost hidden in weeds. The man who tries to farm twice as much land as he is able to is the lad that is often caught in this snap. He begins plowing before the soil is in fit condition, a shower runs it together and packs it, the young corn-plants are strangled at the outset, the weeds come up, and the prospect for a full crop is gone glimmering. It costs some farmers more than twice as much to grow a light crop of corn as it does others to grow a full one, simply because their management is poor and short-sighted from start to finish. One truism every farmer should paste in his hat is, The best methods in farming are always the easiest. Fred Grundy.

Our Farm.

FARM THEORY AND PRACTICE.

Buying Corn.—Some farmers of my acquaintance, whose soil is better adapted to other crops than corn, have thought that it did not pay them to grow the grain needed for farm stock. They have figured that they could not afford to produce an acre of corn for eight or ten dollars, and this is quite true; but invariably these farmers put too low a valuation upon the fodder, if they made an allowance at all for it. Many growers outside the heavy corn sections get as much income indirectly from the fodder of an acre of corn as the grain is worth at present prices. Instead of letting the fodder damage in the field, and using high-priced hay to supplement it in feeding farm animals, the fodder is housed, and has entirely displaced the hay for winter feeding. The latter is converted into cash, and thus the fodder from one acre secures an income often equal to the value of the grain. This is a most important point while close figuring is so necessary. Cheap as corn is, the eastern farmer may not safely abandon it if the fodder, rightly handled after husking, can have his entire hay crop intact for market.

* * *

Blue-grass Pasture.—On many farms that have no permanent pasture-fields an investment in a good blue-grass sod would be profitable. Conditions vary too much to permit any general rules to hold good, it would seem; but the tendency in this country must be more and more toward permanent pastures. Blue-grass furnishes earlier green feed than any other grass, and a field of it makes a desirable saving of dry feed in the spring. This grass makes a slow start from the seed, and I prefer to sow it with timothy, which furnishes pasture and keeps weeds down until the blue-grass gets rooted. Its habit of growth is such that within a few years it crowds out the timothy, and, in fact, very few varieties of weeds are able to get any foothold or retain it where blue-grass has a soil adapted to it. Rough, broken, and even thin portions of our farms should be furnishing cheap feed in the form of blue-grass instead of being planted in crops that can yield no profit so long as labor is high and grain is low in price. There is no cost for harvesting by the stock, and the risk of loss is thus kept small. Seed the unprofitable land to blue-grass and keep near shore until the skies grow brighter.

* * *

Watering Work-horses.—In the beginning of the working season in the fields I would like to make a suggestion in the interest of the farm-horses and their owners. I do not believe that it is right or profitable to make a horse work five hours in hot weather without water. When an animal is suffering, the tendency is to lose in weight, and that a heated horse does suffer when deprived of water for a number of hours is evident to all who have tried to restrain our teams from drinking when the stable is reached at noon or night. At ten o'clock in the forenoon and four in the afternoon, or near those hours, water should be furnished. It pays me to stop my work and take the team one fourth of a mile for water, if none is nearer at hand. The animals are refreshed, suffering is prevented, and more work can be done upon a given amount of feed. Best of all, the driver feels more like a Christian. A small barrel swung upon a bent axle of two cart-wheels, with a pole attached, can be used for fields remote from water. The cart can be drawn behind wagon or cultivator, or drawn direct by horses when no implement need be taken. For young horses especially water should be kept in the field. When this humane plan is adopted it should be adhered to strictly.

* * *

Two-horse Cultivators.—It is a matter of surprise to me that more solid-arch cultivators for narrow rows are not made by manufacturers. Possibly I have been unfortunate, but considerable inquiry has failed to bring to light a single solid-arch walking-cultivator suitable for potatoes in rows thirty or thirty-two inches apart. A few "makes" track sufficiently narrow to do well until the tops are a few inches high, but do damage when tops are half grown. I believe that there is a demand for more surface cultivators that have a narrow tread. Manufacturers are aiming to supply this demand by furnishing an adjustable arch, but many, at least, are failing to give us an implement that satisfies a careful man. The slightest sagging of the arch, or a little play anywhere, permits the wheels to spread at the bottom. That means that the inside ends of the axles are lower than the outside ends, which causes the inside shovels to run deeper than the outside shovels. That is just what we do not want; the reverse, if there is any variation, should be the way. Manufacturers say that their own adjustable arches do not get out of line. Users should measure the distance between rims of wheels at the ground and at the top when the cultivator is at work. All such arches may not sag, but all that I have seen do so. Give us a narrow-tread, solid arch. Advertise it.

* * *

The Land-roller.—Last winter a good farmer said, "There are comparatively few farmers of clayey soils that should be permitted to own a roller." He had in mind the damage so often done by the misuse of rollers, though he recognized their great value when rightly used. The condition of the soil and the future weather have everything to do with the advisability of using a roller in the spring. In the case of late spring plowing, however, there can be little question that rolling at the best time does much to insure a crop. It not only fines the clods, but in the case of sod it helps to fill the air spaces in the bottom of the furrows and settle the soil upon the grass plowed under, so that moisture from beneath may rise. Settling late-plowed ground with a roller and then loosening it with a disk-harrow may give nearly as safe a seed-bed for a dry summer as earlier plowing would have done; at least the roller helps the condition much. The firming should be done immediately after the plowing, settling the turf below, and then the harrow loosens and fines as far down as it reaches.

* * *

Caring for Tools.—It is the rule on some farms to house all farm implements during the winter and leave them exposed to the weather during the summer. Really, more harm is done by exposure in summer than in winter, especially to the parts made of wood. The sun checks the wet wood, and after the next rain more damage is done. The metal parts of implements rust, and time is lost getting implements into working trim. The cure for all this is to form the habit of drawing implements to the shed at night instead of unhitching in the field. There is little more trouble in doing things this way, and much time and trouble is saved by having all the tools in one place when for any reason plans are changed and other work is undertaken. Do the unhitching at the shed when the day's work is done, and have all implements under cover. Money, time and patience are saved. David.

BEES NOT WORKING IN BOXES.

Time and again have I been asked by farmer beekeepers the question, "What is the reason my bees don't work in boxes?" The answer to this question is, first, because nature does not provide a sufficient quantity of honey; and second, bees are not in proper condition.

We have in this section three distinct sources from which we can expect surplus honey: White clover in June, basswood, or linden, in July, and buckwheat in August, each one of these three furnishing a flow of about two weeks. The first, white clover, has in later years greatly diminished in importance, so much so that we can hardly consider it a source of surplus honey to any great extent, like the other two. The reason of this is probably the fact that land is being more and more cultivated, pastures are, with the advance of better and more systematic cultivation, reduced; white clover, therefore, is driven out of existence, except in rough fields or side-hills which are not very well adapted for tillage.

The second flow of honey comes from basswood; its period of highest productiveness lasting from about the tenth to the twentieth of July, varying some with early and late seasons. A few days more in opening, and the same when closing, makes the whole time of basswood-honey secretion from two to three weeks. If it should happen that the weather is unfavorable for bees to work any portion of that time, this short period is then cut down that much, and the basswood-honey crop with it. Fortunately, this source is quite reliable, not more than one out of six or eight years being a complete failure.

The third, buckwheat, begins to yield honey in sufficient quantity for bees to store surplus when it has reached its full growth. Before that time fields may be white with buckwheat-blossoms and many acres near by, yet bees fail to work in supers, although the atmosphere may be filled with the peculiar aroma of buckwheat honey, which they store and use in the brood-chamber. As soon as the buckwheat begins to turn its color the honey flow is ended, and with it the production of surplus honey for the season.

We have, then, outside of these three main honey-producing plants a great many honey-plants of minor importance, which furnish more or less honey and pollen almost continually the whole season, from the opening of spring until winter sets in But all of these have no direct bearing on our honey crop. The way they are helpful in this direction is by stimulating a colony to breeding up. Especially is this the case in early spring, when willows furnish their pollen, elm, soft maple and the various fruit-trees their honey. If the weather is favorable at that time, the forces that gather the basswood honey are then produced.

My second part of the answer, bees are not in proper condition, is very little understood by the amateur beekeeper. A hive must be crowded to have the swarm work in its super. If an old swarm, all combs must be filled with brood in the various stages of development from the egg to the hatching bee, and capped honey. All the available space must be crowded with bees, and in this condition alone can we expect bees to do their best. Unfortunately, this is also the right condition for bees to swarm. It is too often the case that when a colony has fairly begun to store surplus honey, they send out a so-called young swarm, and, of course, all work ceases at once. And this is not strange. If we examine the hive from which a swarm has just issued, we find it completely depopulated, nearly all the bees having left with the young swarm; the combs are comparatively deserted, hardly bees enough left to insure the perpetuation of the old household. The super, which before swarming was almost a solid mass of bees, is now empty, not a dozen bees to be seen. Is it any wonder, then, that bees don't work?

The young swarm, if hived in the usual way, as non-professionals always do, is in no better shape to store surplus honey than the mother colony. They have the bees, but an empty hive. It matters not how strong a young swarm may be, if hived in the same size of hive as the one it came from, it will not be crowded.

G. C. Greiner.

THE OUTLOOK FOR LIVE STOCK.

Owners of live stock throughout the country have reason to be encouraged. During the past five years unusual depression has been the rule. The past year has perhaps been the worst of all in unfavorable conditions all around. The year 1897, however, has witnessed gradual improvement. The fact that values are slowly rising gives promise of more permanent advance. Sudden fluctuations are the bane of any business. The professional feeder who gathers up cattle, hogs and sheep into droves has only one rule of safety in buying stock and grain with which to feed the creatures—he must buy the live stock ordinarily for less than it is worth, and must also buy his grain at prices that are ruinous for the grain-grower, hence such transactions are of little worth to the sellers of both live stock and the people who are compelled to sell their grain.

The time has arrived when the surplus grain is mainly in the hands of capitalists who are able to hold it. Fairly well-to-do farmers will not sell grain in store during the next four months. They will wait until the new crop is assured, as will also the professional speculator. There is, therefore, little in the situation of the grain market of the coming summer that will tend to depress prices in cattle, hogs or sheep. Owners of cattle and hogs will in some cases feed cheap corn in connection with grazing. This policy will also tend to reduce the supply of grain. All owners of swine will probably be liberal feeders of grain, and the advancing markets for pork should insure a good return for their grain and the labor of handling the swine. The careful feeder of meat-producing animals during the past three months should come out of his operations with a slight profit at least, in view of the all-around good values for meats.

When grain is very abundant there is always a tendency to very high prices for stock suitable for consuming the cheap grain. Reports from the various districts indicate that there are unusual advances for grazing stock, which should be very encouraging to the breeders of all kinds of domestic animals who are not prepared to feed them out to a fattened finish. Large losses of cattle are reported upon the western ranches, which will prove a favorable factor in maintaining advancing value for the ordinary farmers of the central West who must grow their stock on food produced on high-priced land.

Encouraging conditions prevail now for improvement of the flocks and herds. The breeder who would realize a full measure of profit should hasten to adopt the best methods in his work. In the case of hogs, sheep and poultry it is not difficult for any one who owns a farm, even with a small mortgage on it, to procure the best grades of substantial breeding stock. At least any one can avail himself, if he will, of the services of pure-bred sires. In this course of improvement pains should be exercised to make full use in the neighborhood of the very best in all branches of live stock. The policy of patronizing the cheap fellows simply to save on the fees is not by any means economy in view of the encouraging advances now in prices of animals. It is settled that there are great reductions in numbers of all classes of domestic animals. There is no evidence that there has been any decrease of population in the last five years, so as many people must be fed as ever. Assurances are, therefore, very strong for the producers of wool, meat and dairy articles.

At no time in five years have the prices been so favorable for horses as at present. The diminished supply bids fair to make very great advances over the gains made at this time. If only the farmers who own good breeding stock will act wisely and endeavor to furnish the best animals possible, this action alone would be of great avail in enhancing their prosperity. The future, however, is one of close competition. One must give attention to all the details of finishing the products he brings to market. Early maturity, so valuable in all lines of live stock—growth and finish—is especially to be commended in the growing of horses. The colt of the future must be taught as much in the first eighteen months of its life as it was formerly taught in the first six years. It should be as quiet and tractable at three years of age as the average horse in former times was at fifteen. It should, however, possess all of its youth, vigor and strength, and should be so carefully handled as not to be injured in the least or have its limbs, joints or any part of the framework injured by any overtasks. It must be remembered that three fourths of the value of the horse on the market is in its appearance, disposition and training. These go for naught if it is not physically sound. M. A. R.

Our Farm.

NOTES FROM GARDEN AND FIELD.

The American Coffee-berry.—In many of the agricultural papers at this time I find advertisements describing the merits of the "American coffee-berry," and offering seed at five or ten cents a packet. The only objection I can have to this novelty is the name. It is a bean, not a berry; of oriental rather then American origin: and it has nothing much in common with coffee, except that it may be used as a coffee substitute in the same way that barley, bran and molasses, wheat or even acorns are sometimes used. On the other hand, I think there is some value in this bean for more general cultivation.

The Japan soy, or soja, bean is about the richest of all cereal products; but I have been unable to produce paying crops on account of its lateness, and possibly because my land was so rich that the plants made foliage rather than fruit. This so-called "American coffee-berry" seems much earlier than the other sorts of the soy-bean I have thus far tried, and it must be quite productive, for my friend Mr. A. I. Root says he would like the job of raising it for one dollar a bushel. If it can be grown profitably at such a figure (and I have no reason to doubt it), it will become available as a food for farm stock, poultry included. Hens, pigeons, etc., will eat the soy-bean quite readily, and it surely is a highly concentrated, albuminous food, well calculated to balance a corn ration.

* * *

A Coffee Substitute.—It is undoubtedly true that many of us drink far too much strong coffee for our own good. I myself am a great coffee-drinker; in fact, strong coffee has been almost the only liquid that I have taken as a drink for years. I now see that I must let up on it, and have begun to use in place of the strong coffee a mixture of very much hot water and a very little coffee, made palatable by the addition of plenty of rich Jersey cream and of sugar. Sometimes I use a little chocolate in place of coffee for flavoring the hot water. Possibly I might learn to like the taste of barley coffee, or of the "coffee" made of the "American coffee-berry," and any of these drinks would surely be more wholesome and safer to use as an every-day drink than the genuine coffee in the full strength taken by most people. If the infusion of the browned "American coffee-berry" were to become a national American drink in place of the regular coffee, it would be a great blessing for the nation.

* * *

Tobacco-dust for Garden Uses.—I am constantly in receipt of inquiries where tobacco-dust can be obtained, and these inquiries, when from the West or far South, usually are embarrassing to me, simply because I can practically give but one address. Of all the leading seedsmen I know of only one who offers tobacco-dust for sale. Price $3 a barrel. It seems to me that every seedsman should catalogue an article that is so necessary and valuable in every garden. Surely it cannot be difficult to secure a supply at reasonable rates. And why not put it up in ten or twenty-five pound sacks like flour? If properly advertised, there would be call enough for it. This is meant as a suggestion to seedsmen.

* * *

Crimson Clover.—Much has been said about crimson clover for a year or two, and I believe too much cannot be said about it, at least for planting in suitable localities. Whether we here, in western New York, can grow it to advantage is yet a question. Some of our most noted orchardists recommend it as a cover crop, and claim that it has made growth enough in their orchards before winter to make a good mulch, adding humus and nitrogenous matter to the soil in sufficient quantity to make it a profitable crop, even if it is winter-killed. In several years' trials I have never been able to get crimson clover to make much of a growth before winter, and for my soil I have doubted that it was really so very valuable unless I can succeed in wintering it. For this reason I am much pleased just at this time to see the plants in my young Bartlett pear orchards come out entirely uninjured. The winter was not very severe, and the ground during all very cold spells was more or less covered with snow. This probably accounts for the outcome. But as seed is not expensive, and only a small amount (say ten pounds or little more) is needed, I think it will always be worth while to sow it in young orchards and other suitable spots along in the summer, and run the risk of its wintering. If it does winter, we get a most excellent crop of most excellent green fodder in spring before ordinary clover is ready to cut or be pastured, and if it does not live through the winter, we secure at least some benefits from it as a cover and manure crop.

T. Greiner.

ORCHARD AND SMALL FRUITS.

CONDUCTED BY SAMUEL B. GREEN.

Strawberries for Western Kentucky.—F. H., Paducah, Ky. You had better try Warfield, Haverland and Lovett's Early.

Katydid Eggs.—H. W., Elmer, N. J., writes: "While trimming an Abundance plum-tree I found a twig with some scales or insect eggs. What are they?"

Reply:—The eggs are those of the katydid, which is a harmless insect.

Time to Prune Fruit-trees.—S. S., Cuba, Mo. The best time to prune fruit-trees when only a small amount of pruning is to be done is in June, but where a large amount of wood must be removed, pruning should be done in the latter part of the winter or early in spring before growth has started.

Chair's Choice Peach.—B. M., Hastings, Mich. The Chair's Choice peach has a good many friends in Michigan and New York, but it is seldom in the lists recommended for general planting for market. At South Haven, Mich., it has been but fairly productive. I think, however, there are some localities where it does exceptionally well, and where it might be largely planted to advantage. It is of largest size, deep yellow with red cheek; flesh very firm; freestone; a little earlier than Smock. It has been tried at the experiment station in your state, and they will gladly advise you in regard to it. Address Experiment Station, Agricultural College, Mich.

Excessive Growth.—E. P., Alma, Oreg., writes: "Can you tell me the cause of currant and gooseberry bushes and fruit-trees making an excessive growth of new shoots? The ground is new, and has not been manured, but does not produce very large crops. Currants especially grow out so thick as to hide the older bush, and grow so fast that a heavy rain bends them over and they remain crooked, except a few of the strongest shoots."

Reply:—They are apt to do so on moist land, and in seasons of excessive rainfall when growing on rich land. It is probable that a dressing of unleached wood ashes would make the stems stronger. After the bushes and trees get into bearing there will be less liability of this excessive growth.

Worms in Currants.—A. J., Georgiaville, R. I., writes: "What will kill the worm that eats currants when they are about two thirds grown?"

Reply:—The only known remedy is hand-picking and the destruction of the infested clusters of fruit as soon as the insect makes his appearance. These insects are so protected that spraying with poisons would do no good. When they appear in large numbers it is pretty certain that some parasite will soon work on them and destroy large numbers. Some growers think that dusting the bushes freely with air-slaked lime early in the spring, and renewing it when washed off, will deter the moths from laying their eggs.

Dark Cider Vinegar.—L. V. S., Peachland Cal. Pure cider vinegar can be very dark in color and still suit the markets, providing it contains the requisite acid, is perfectly clear and free from floating particles and has the delicate aroma of the pure apple vinegar. If it is still clear and no sediment is formed after exposure to air, I should not worry about the color; but if a sediment is formed or floating particles appear, then repeated rackings will clear it. You cannot rack it off too much, and I should keep at it until I got it into shape where it would remain clear. If troubled about removing the sediment, I would filter it through a sand-filter. Undoubtedly by the use of sulphite of soda you could bleach it out, but such treatment is not desirable, and I believe always injures the flavor of anything into which it is put.

Cranberry Culture.—P. S., Northkent, Conn. The land should be level, free from weeds, grass roots, etc., and covered with about four inches of sand preparatory to setting the vines. The sand should then be moistened, and the vines set about four cuttings together in hills eighteen inches apart each way; set the cuttings about four inches deep. As soon as this is done raise the water sufficiently to keep the sand moist. The cuttings should be kept moist, but not wet. The spring of the year is preferred for setting the cuttings, but they may be set at any time during the spring and summer, providing the cuttings are kept under running water. The bog should be flooded after the crop is gathered, and remain flooded all winter. The newly set vines should be flooded in winter the same as old vines. You had better visit some good cranberry-bogs if you can get a chance, and buy a little book on the subject, called "Cape Cod Cranberries," or else ask your congressman to get you "Farmers' Bulletin on Cranberries," published by the Department of Agriculture.

Apple Seedlings.—G. H., Cleveland, Ohio. The apples from seed will not be true to the kind from which the seed came, nor will many of them be desirable. A better way for you to do would be to take along some seed with you to sow, and also get some scions of your best cultivated kinds and graft them when you get there. But, of course, this presupposes that there are now some apple-trees growing in the location you have chosen onto which you can graft. If you have no assurance of this, and on account of high freight rates, or for some other reason, you cannot use nursery-grown apple-trees, then I think you had better take with you a few hundred apple-root grafts of good kinds. These root-grafts are made up in large quantities by nurserymen; are easily transported when packed in moss, and cost very little. They can generally be bought for less than one cent each, and often for one half this price. I think, however, you will be able to buy the varieties you wish after you get to Arizona.

Prune-plums—Quinces—Pears.—L. W. S., Mansfield, Ohio, writes: "Please tell me how to cultivate prune-plums. They bloom every year very full, and all drop off when they get to forming.——How about quinces? ——What is the best treatment for pears?"

Reply:—There are many kinds of prune-plums. The German prune I have found to do very well. I am inclined to think that your trouble is with the curculio, for the remedy for which see reply in recent number of Farm and Fireside.——Quinces have been much troubled of late years with the blight and scab, so that many growers have given up growing them; but if a good location is at hand they are well worth growing, and the scab may be prevented by spraying with Bordeaux mixture.——I do not understand what you mean by this question, but take it you want to know the best location for pears. The best location for pears is on rather high, heavy, rich land, and the soil should never be seeded down, but be kept cultivated and occasionally manured.

A STORY OF CHUMS.

BAREFOOTED BOYS AT THEIR SPORTS—MAKE-BELIEVE HEROES—THEIR UNTIMELY PARTING.

Chums!

They'd been chums from barefooted boyhood.

Thirty years ago they'd trudged together through swamps and thickets and stubble-fields.

There was an old sunken log in the slough just out of town, where they used to stand knee-deep in the water and pull out sunfish. The bottom of the slough seen through the clear spring water was a landscape of green, moss-built mountains, hills and valleys. You could see Mr. Sunfish come "nosey ing" up a deep ravine in

moss, nosing a mossy mountain or hillside here and there for a dainty morsel of worm or fly. Now was your time. Impale a squirming angle or grub-worm on your hook, carefully hiding the forked head, and drop it gently down the sloping side of the mossy mountain, just a little way from Mr. Sunfish. A flash of light, a tug at the line, a rush, and then a sweep of the pole and Mr. Sunfish was doing acrobatics on the shelving sands of the slough.

It wasn't long before the chums had a nice string of beauties gilled on a forked sprig of willow, and safely anchored to the sunken log.

Then off to the marsh, each armed with a stout club with which to rap elusive frogs on the head. It was hit and miss—and miss oftener than hit.

When half a dozen fat fellows were bagged, back to camp by the sunken log. Build a bonfire, dress the frogs, fill an old tomato can with clear spring water, drop in the frogs, salt the whole with gunpowder, and put it on the fire to stew.

Those used to be feasts fit for the gods, especially if a neighboring farmer had thoughtfully cultivated a watermelon patch that would provide dessert.

Then in the fall the chums would "go a-nutting" in the big woods and camp out over night. They'd start at noon and by sundown would have all the nuts they could carry. After a blackbird stew, cooked in a tomato can over an open fire, they'd prepare for the night. A big bonfire was built. Two couches, one on either side of the fire, were made from twigs and boughs of maple and hemlock. The firelight flickered through the big trees and transformed stumps and logs a rod away into grotesque grizzly bears and crouching catamounts.

And then the chums played Indian scouts. There wasn't an Indian within a thousand miles, but they made believe that these woods, within hearing of the church bells and factory whistles, fairly swarmed with blood-thirsty red men. And they really believed themselves daring heroes taking desperate chances. While one slept, the other sat on the stump of a tree, well out of the firelight so that he could pierce the surrounding darkness, and watched for Indians. Thus for an hour or more this trusty sentinel would sit statue-like on a stump, with gun across his knee, and peer into the night. Then, when the stars told him his time was up, he'd waken his chum and take his turn at sleep, or, as he put it, at "ponnding his ear."

At last, as daylight came on, the fire would seem to get low and there'd be a chill and damp in the air that made the chums yearn for home and hot coffee. And so, having been heroes for a whole night, they'd shoulder their harvest of nuts and in the early morning twilight trudge homeward through the swishing wet grass, just as the all-night places up in the sky were putting out their lights.

And then the chums went to college together and were partners in business and lived neighbors.

And now one is gone before, and the other stands with uncovered head beside the grave of his chum.

Life is a story of happy "chumhood" and sad partings. The old chums of thousands of sincere mourners might to-day be alive and well if they had only taken as good care of their health in manhood as their mothers took of it when they were boys. In boyhood days when chums got home wet and tired from an excursion into the woods, mother not only fed them, but if there was a little cough or cold she promptly dosed them. She didn't let them try the experiment of "wearing out a cold." She knew better.

Seven out of every ten of the "chums" who die before their time, die of that dread destroyer, consumption, that foster-child of neglect. There is no necessity for these deaths. There's a sure and speedy remedy at hand. It is Dr. Pierce's Golden Medical Discovery. It cures 98 per cent. of all cases of consumption. It corrects all derangements of the digestive organs. It "gets a move" on the liver. It causes the life-giving elements of the food to be properly assimilated. It braces up. It builds up. It drives out impurities. It clears the lungs and lets the vivifying oxygen of the air penetrate every lung cell. It is the great blood-maker and flesh-builder. It is not only an almost unfailing cure for consumption and allied diseases like asthma, bronchitis, catarrh, throat troubles, weak lungs and bleeding from lungs, but is also a marvelous remedy for all wasting diseases and diseases of the blood. Thousands who were mourned as doomed to an untimely death have testified to its almost miraculous virtues. Copies of their grateful letters may be obtained by writing to the discoverer of this wonderful medicine, Dr. R. V. Pierce, chief consulting physician to the Invalids' Hotel and Surgical Institute, at Buffalo, N. Y. "Golden Medical Discovery" is sold by all druggists—nothing else is "just as good."

Dr. Pierce's Common Sense Medical Adviser teaches you all about the home treatment of diseases. It contains 1,008 pages and 300 illustrations. It used to cost $1.50; now it's free. For paper-cover, send 21 one-cent stamps, to cover mailing; cloth-cover, 10 cents extra. Address Dr. R. V. Pierce, Buffalo, N. Y.

Our Farm.

GOOD ROADS.

GENERAL ROY STONE, the director of the road department of the Department of Agriculture, recently delivered a very interesting address before the state board of agriculture at Augusta, Maine, in the course of which he said:

"The actual work for good roads in the United States has been done to a great extent by farmers. I do not mean the campaign of education and the agitation for good roads, but the actual preparation of measures and the carrying out of measures for good roads have almost altogether originated with the farmers in the United States. The wheelmen have done capital work in stirring up public sentiment, but the practical working measures have been almost entirely organized by the farmers. The farmers of New Jersey, for instance, were the authors of the state aid law in that state, and that is one of the best solutions of the good-roads problem that has been made anywhere.

"The farmers have great reason to take up this question, and they have a reason that many of them have never thought of. It is due to them, in absolute justice, that the whole business of road construction should be remodeled, and a portion of the burden that they have unjustly borne ever since the organization of our government be taken from their shoulders. The farmers of the country have been charged with the whole expense of building and maintaining the roads for all the people of the country. The farmers in the state of Maine own one fifth of the property in the state, and that one fifth of the property has paid the entire expense of building and maintaining the roads of the state, which are just as necessary to the people who live in towns and the people of other occupations than farming as they are to the farmer. It is time that justice should be done in this matter. The farmers in the state of New York own only one fourteenth of the property in that state. Every farmer in that state has been making roads for thirteen other men to travel on, and he is getting tired of it. He means now that something shall be done to stop it; and as far as I am able to ascertain, the people of the cities and large towns, the manufacturing people and the commercial people, are perfectly willing to bear their proper share of the expense of improving the roads of the country. There are a thousand considerations that make it to their interest to do so. There is no need to go into these, since they have discovered them themselves. Any of them will tell you at once why he wants good roads in the country, and why he is willing to do something toward obtaining them.

"The very first thing to be done is to find out just what can be done to obtain better roads. You cannot find out in the short duration of a session of the legislature exactly what you can do. You must put somebody to work upon this question, just as the state of Massachusetts, the state of Rhode Island, the state of Vermont and the state of Michigan have done, and as the state of New York proposes to do. The state of California also has begun with a commission of inquiry, to find out what could be done. Every state that has done anything in the way of road improvement has begun in a similar manner. Some of these commissions of inquiry have been gentlemen who have volunteered their services, and the state has paid something toward their expenses; others have been gentlemen who devoted their whole time and received a small salary. The commission of the state of California consists of three men, and they have actually traveled over nearly all the roads in the state. These men give their whole time to this work, and that state has gone into the matter of road-building in a thoroughly businesslike way.

"Taking it for granted that you want good roads in the state, and that you are going to try to get them, it seems to me that the question of the local administration of the road funds, the actual expenditure of the money and labor that are put upon the roads of the state, is something that you can take up and act upon at once. You all know from your own experience how valueless a great portion of the labor and money that are put upon the roads of this state is. You all have some idea of how an improvement might be made. If the farmers of the state will take up this matter and see that the money which is spent on roads and the labor that is supposed to be put upon them is as well expended and as well applied as the money and labor they use upon their own farms, you can start road improvement in your state this year. You could start with improved methods of application of the present funds and labor, which would show results before the season was over, and your summer visitors would go home and say, 'They have begun the improvement of roads in the state of Maine.'

"Good roads are the highways to wealth. If I could take you with me North, South, East and West to where the beginnings of road improvement have been made, I could show you small farming communities growing rich in these hard times, contented and happy, and troubling themselves not at all with the great problems of finance which agitate their brethren. They have no time to waste in talk. If their fields are too wet to work, they go on the road. Their marketing is done in bad weather, and in rainy spells they bring from a distance cheap fertilizers to enrich their farms, such as marl, city refuse, etc. Philadelphia refuse is carried twenty miles on the stone roads. In these fortunate communities every day brings its earnings to man and beast, for there is always paying work on a good road, and if a man has no hauling of his own to do, he can get work from others at good wages. Extend these conditions, and imagine, if you can, the prosperity that would burst upon the country if every farmer and every farm team could earn a fair day's wage for every day in the year, rain or shine: if every farm could be cultivated and improved to its utmost extent.

"It is not an uncommon thing in France to see a farmer forty or fifty miles from home in wet weather with a heavy load. If he sees a prospect of a three days' rain, he puts his tarpaulin over his load, a cover over his horses and a waterproof coat on, and starts off to market. He may go fifty miles before he finds a market that suits him, or he may know in advance just where he is going. You do not often find anybody driving fifty miles through a rain-storm in the United States to find a market for a load of hay, but it is not at all uncommon to see farmers' wagons forty or fifty miles from home there. They choose the wet weather for that purpose. Their roads are just as good then as at any time."

PICKED POINTS.

The universally abundant apple crop last year has led everybody to believe that this fruit will be very scarce the coming season. This view will undoubtedly prove to be correct. This brings up the question again, naturally, of how to cause a portion of the trees to be fruitful in "off" years. The general answer to this is, pluck the flowers or young fruit in a bearing year, and the tree will become an off-year bearer. This is true to a certain extent. It will be an off-year bearer until some late-spring adverse weather kills the incipient fruit, and then the tree at once reverts to its former habit. In an experiment by the writer the trees reverted in six years. In a recent conversation with that noted horticulturist, Professor L. H. Bailey, he said this reversion usually occurs in from six to nine years. But the time of the reversion depends entirely upon the weather. A bad feature of trees bearing in off years is that all the insects of the season concentrate upon a few trees, and the orchardist must give battle all the season to save his partial crop. In view of this and the liability to reversion, and that it cost about fifty cents a tree to pluck the flowers or young fruit, and that spraying and plucking occur at the farmer's busy time, there will be but little of it done.

* * *

A seventeen-year-old lad in Maine, who conducts his own little sheep-farm of forty-five acres, in writing me for information about breeds discloses a feature in his own practice which older heads in sheep husbandry might do well to imitate. Wool being only fifteen cents a pound in the fleece did not satisfy him, and he planned to get more. He had it manufactured into yarn, and sold the yarn at a dollar a pound. It took two pounds in the fleece to make one pound of yarn, and he paid for scouring the wool and having it made into yarn thirty cents a pound of yarn. Now, what rate a pound did he get for his wool in the fleece? Let other youths figure this out.

* * *

It is only since eight or ten years ago that hothouse lamb-growing began to attract any public interest. Residing where this branch of sheep husbandry was started at an early day, and where now all sheepmen, with rare exceptions, are engaged in it, I have had much to say in its favor in the public press, and can say truthfully I do not regret a single word, but rather wish I had said more in the same strain. These lambs are sold by the carcass when six to eight weeks of age. Until the recent depression in prices of farm produce hothouse lambs brought about ten dollars. As with everything else, the price has gone down, but in not so great a ratio as other farm products. A neighbor just sold a lot. Half of them brought $7 each, one fourth of them $6.50, and the other fourth $6, averaging $6.62½. It does not cost so much to grow them as to grow lambs on cultivated farms in the old way up to six or eight months of age. A hundred ewes now should produce one hundred dollars' worth of wool and six hundred and sixty-two dollars and fifty cents' worth of lambs; seven hundred and sixty-two dollars and fifty cents in all. What branch of farming pays better? DR. GALEN WILSON.

EXTRACTS FROM CORRESPONDENCE.

FROM OKLAHOMA.—As a permanent resident of Oklahoma, and one who has no land to sell and in no manner interested in any "boom" movement, and as a crop and weather correspondent as well as a practical farmer and writer for many farm journals, so having a reputation at stake for fairness, I would object to the broad statement of N. S. S., of Waynoka, Oklahoma, in FARM AND FIRESIDE of March 15th, which says, "This is a cattle country, not a farming country. Without stock one is nowhere." If he had said this as to his particular locality, within a few miles of the west line of Woods county, I would not call such statement in question. But I know that good corn is raised in the southern part of that county, and has sold as low as ten cents a bushel the past season. I very readily admit the advisability of giving more attention to stock-raising, but very few settlers of a new country have much stock. I do not think there was an average of one cow to the family in this section at settlement, five years ago. But farmers have lived at general farming, and are working into stock as fast as possible. I am within five miles of the territory, counting from the extreme outside points in every direction excepting one county—the panhandle—formerly called No Man's Land, now known as Beaver county, extending one hundred and fifty miles west of the main territory. I would say the eastern third is not especially adapted to cattle-raising, being largely timber land, and corn and cotton are the leading crops; and while not as heavy crops of corn have been raised, as a rule, as in the great corn belt further north and east, yet the best of cotton has been raised, and a great variety of other both northern and southern crops are fairly successful. The central third is best adapted to wheat and cotton, with some fair sections for corn and the sorghum crops, especially Kafir-corn, our leading feed supply. It is undoubtedly true that cattle should be a leading feature, and will eventually be so. In the western third, where N. S. S. is located, will be found the large cattle-ranges, only a small portion of it being homesteaded for farming purposes; but it is only fair to say that, especially in the southern half, there have been as fine crops of wheat, corn and cotton raised as any place in the territory. It is very true that Oklahoma has an uncertain climate, but there are surprises of extra good crops as well as of failures. My sons and I have a section of land, and in five years I think we have grown as much feed as in any other place that we could have got a home and opened up farms with the same capital. While there are serious drawbacks here, I do not know where a man with five hundred dollars or less could do any better. With a larger capital I would prefer locating a farm elsewhere. J. M. R.

Winview, Blaine county, Oklahoma.

FROM TEXAS.—This is a beautiful and very fertile country, partly timber and partly prairie. It is fast becoming a fine small-fruit and truck-farming country. Our markets at home consume all we can raise, at good prices. The climate here is fine, never very cold or hot. The old settlers here are nearly all cattlemen, but most of the old ranches are now offered for sale in small farms. All the truckers, as they are called here, are from the North. I am an old Pennsylvania soldier, and think this is a fine climate for the old boys to live. I like it the best of all places I ever lived.

Pasadena, Harris county, Tex. J. L. P.

Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

CUT BONE.

ONE pound of cut green bone for a dozen hens once a day, which should not cost over one cent a pound, will produce more eggs than five times as much grain, because the cut bone is complete in egg-making substances while the grain is largely deficient in many respects. Some persons affirm that it does not pay to procure a bone-cutter for a small flock. That is a mistake. Bone-cutters are now cheaper than many ordinary garden tools, and are strong, durable and efficient. The cost of the bone-cutter is soon regained in the increased number of eggs laid. It is almost indispensable to success, no matter how small the flock, for no one should keep a flock unless fully determined to secure the largest profit possible. The great saving of bones and meat and the utilization of materials that could not be appropriated as food for fowls without their use have given green-bone cutters a place on all well-regulated poultry-farms. They are sold at from five dollars to ten dollars—a price which places them within the reach of all—and they have added to the profits of poultrymen, farmers, butchers and poultry-supply houses.

KEEPING FLOCKS SEPARATE.

Where a flock of about twenty fowls have been kept for a week in the poultry-house until the hens are acquainted they will not allow a stranger among them, nor will they stray away, but the more active breeds will forage over a wider area, and frequently go beyond the limit. The reception on the part of the other flock will not be very cordial, but the stray hen may become confused, and soon have to remain and become one of the flock. This is due partly to the resemblance of the houses. Where there are a number of poultry-houses they should be painted in different colors, or be of different designs. If fowls are to be thus separated, however, the males should be removed, as they will soon begin to battle for supremacy, and the winner in a contest deprives his beaten antagonist of his entire family, which he will induce to join his own. Also, in feeding, let each flock be fed at the door of the house to which it belongs, and feed only at regular periods.

FEEDING GREEN FOOD.

To give green food to fowls confined in yards it must be considered that the birds pick the grass and cannot utilize it unless it is cut fine or is given as a piece of sod. If a sod of grass is placed in the yard once a day it will be sufficient, but it is not always that one having a flock in a yard can devote his time to securing green food in that manner, hence a bunch of grass, consisting largely of finely cut clover, and placed in a trough, will be readily consumed. If this is not done, and the grass is long, the result may be hard crop, due to clogging of the crop by the grass packing therein.

BUYING FOWLS TO RETAIN.

To increase the flock one must be very careful where to buy the extra fowls. It is difficult to find as many as one hundred hens for sale in a neighborhood, and the neighbor then goes to the city to purchase a few coops of them, which is the most risky undertaking that can be attempted, for it is seldom that such coops do not contain hens that are affected with lice or disease, which may be brought on the farm, and all the fowls subjected to the drawbacks, the final result being that the poultryman retires in disgust, and loses his investment.

ROOFS AND DAMP QUARTERS.

There will be more annoyance from leaky roofs in the spring than in the winter, because more rain occurs. In winter ice and snow may remain for weeks on a roof without melting, and really assist to protect against the winds, but in spring any leaky places will be openings for beating rains. Roofs should be repaired at once, if necessary, or the result will be damp quarters and the flock destroyed by roup.

TREATMENT OF OVERFAT HENS.

Hens that have been highly fed are usually too fat to lay. Their combs will be bright and red, and they may appear thrifty, but when they are very fat the owner will wait quite awhile before he will get many eggs from them. There is but one course to pursue, and that is to cut off the supply of food until the hens are willing to work. A hen that is fat will not starve until the stores of fat on her body are utilized, as this reserve of warmth is just so much carbonaceous food in the form of fat. Begin by giving no food at all. For a day or two the hens will insist on your supplying them. At the end of two days scatter a gill of millet or rape seed in the litter. Hunger will induce them to work. Withhold the food for a week or ten days, or until they have lost weight. They will then have concluded that they must work, and by then feeding them judiciously they will begin to lay, and continue to do so if properly cared for.

GROW A CROP OF SUNFLOWER-SEED.

Every farm can be made to produce a crop of sunflower-seed. Its advantages should not be overlooked at planting-time. It is claimed that any climate where corn will grow the sunflower can thrive. In Russia it is a staple crop. The seeds may be fed whole or ground as meal. All classes of stock will accept the meal as readily as they will cotton-seed meal or linseed-meal. It is necessary to have the soil rich, but the yield is from twenty to forty bushels an acre, and as food the value is much more than that of grain. If one desires to grow a special crop for poultry, try a field of sunflowers, which can be grown and cultivated in the same manner as corn. The seed also produces a valuable and nutritious oil when ground and pressed.

CROWDING THE FOWLS.

Two points in favor of egg production are food and sleep. If the fowls are crowded at night they will not rest, hence the poultry-house that contains more fowls than the number for which it is adapted is a very expensive building. Too much economy of space is a fault frequently found. The tendency is to allow too much food and too little room. The feeding of grain in summer is detrimental, because it creates heat or is stored as fat. Even when meat is given every ounce of fat should be removed. When the roosts are arranged they should be low and as near the floor as possible. If near the roof of the house the heat is excessive at night, as the sun warms a low building in summer beyond the degree when it should be comfortable; and as heat rises, the warmest place is near the roof, an overcrowded house being almost a death-trap to the fowls.

GET THE BEST PRICES.

Experienced poultrymen do not believe in the maxim of "quick sales and small profits," as applied to poultry and eggs, as good articles always sell rapidly; nor should any farmer be satisfied with small profits, but aim to secure the most to be had. It costs no more for time and labor in producing good poultry than to work with inferior kinds, and for that reason the quality should always be an object of importance. A cent or two a pound is quite an item where large amounts of poultry are sold from the farm.

UTILIZING THE LAWN.

There is no better place for hens with chicks than on a clean, closely mowed lawn, for the reason that there is no high grass to cause the chicks to become wet, and they can see their enemies better. Cats, rats and hawks commit depredations more easily when the chicks run in high grass or weeds. The mother hen will better defend her brood on a clean lawn, and the chicks can also find little dainties that would otherwise not be seen. It is an excellent arrangement to confine the hen on the lawn and allow the chicks their freedom.

A MODEL RAILWAY.

The track and road-bed of the C., H. & D. Ry. between Cincinnati and Indianapolis is considered by experts to be the best piece of railroad in the country.

FATTEN BEFORE SELLING.

Put the fowls in yards for two weeks to fatten them before selling. This is urged to prevent loss. When the market is full only one class of poultry sells—those that are fat. Inferior fowls will not pay for shipping and commission. Buyers always aim to buy at low prices when there is an oversupply, but there is never a large supply of choice, fat fowls. Attention has been frequently called to this matter, and with the present low prices for grain there is no excuse to send the fowls to market to be sacrificed or given away.

GOSLINGS AND PONDS.

Geese seem to be sufficiently wise not to bring forth their young too soon, but they hatch the goslings early enough to lose some of them unless the farmer is careful. The goslings are covered only with down, which allows them to become chilled if they go on ponds of cold water before they are well feathered. By keeping them away from water when they are young they should thrive and no losses occur, as they are usually hardy, and have good appetites.

POULTRY IN GARDENS.

The keeping of poultry does not interfere with gardening, except when the seeds are in the ground. After the plants are well under way the hens will prefer the young and tender grass and weeds; and while some of the garden-plants may be eaten also, yet there will be a large number of insects destroyed. If green food is plentiful the hens will do but little damage. A hen with a brood of young chicks will find many worms and insects that would perhaps do more damage than that inflicted by the hen and brood.

NON-SITTERS.

Because a hen is a non-sitter it does not imply that she is a better layer than the sitter or is as profitable. The non-sitter thrives best in spring and summer, and is an active forager. There is a time when she takes a rest, even if she does not sit. She will lay more eggs in the summer than the sitter, but in the long run the sitter overtakes her, and at the end of the year will have laid as many eggs, as well as produced one or two broods of chicks, giving fully as much profit and being more contented in confinement.

YOUNG TURKEYS.

Look for lice every day, as a large louse on the head of a young turkey will kill it. Dampness is fatal to them, so keep them dry. Stale bread dipped into milk, also curds, finely chopped onions, finely chopped boiled eggs, a little wheat and cracked corn and some fine gravel are all food for them. Do not feed enough to waste, but give them food every two hours. They must have clean water, but must not get wet in any way; also keep the coops very clean.

PREPARING BROILERS FOR MARKET.

This month and next the prices for broilers will be high. First be careful to pick them clean, removing the pin-feathers, and do not tear the skin. Pack them in boxes or barrels—no paper, cloth or straw—and send them to your commission merchant by express. Be sure to let him know when you will ship, so that he can sell them in advance, if possible.

INQUIRIES ANSWERED.

Bantams.—S. R. T., Winslow, N. J., writes: "Which is the smallest breed of Bantams?"

REPLY:—The Game varieties; they are also among the most beautiful.

How Many Fowls.—C. O., Halstead, Kan., writes: "How many fowls can I keep in a poultry-house 12x24 feet?"

REPLY:—Allow ten square feet for each fowl, which will permit of about thirty hens.

Young Turkeys.—J. S., Lower Lake, Cal., writes: "My young turkeys walk on their knees and sides of feet, but are otherwise healthy."

REPLY:—It is due to rapid growth, the food being forcing. They will probably recover, as the ailment is not usually fatal.

Lameness.—Q. M. B., Jewett City, Conn., writes: "I have had two or three hens whose legs failed them, and they could not walk, but are otherwise well."

REPLY:—You do not mention mode of management. It may be caused by high roost and overfeeding. Remove hens from the male.

Lice.—C. W. McW., Bradshaw, Neb., writes: "Our poultry-house is infested with lice. How shall we exterminate them?"

REPLY:—Saturate every portion of the house with kerosene emulsion twice a week. Add one gill of crude carbolic acid to every gallon of the emulsion. Kerosene alone is excellent, but more expensive.

Sleepy Disease.—E. F., Salem, O., writes: "What is the cause of hens and chicks staggering, are always sleepy, and some die?"

REPLY:—It is due to the large gray lice on the skin of the heads and necks. Anoint heads with melted lard.

Roup.—A. P., Mattoon, Wis., writes: "One of my hens has a lump under her head, wheezes when breathing, and now three others are affected."

REPLY:—It is probably roup, aggravated by cold drafts coming on them from above at night. The symptoms indicate the scrofulous form, and it will be economical to destroy them, as there is no sure remedy.

Mites and Snakes.—M. A. W., Mountain Springs, Texas, writes: "How can I kill lice on my chickens? Also, how can I prevent snakes from eating the chicks and eggs?"

REPLY:—First clean the poultry-house by saturating with kerosene or kerosene emulsion once a week; then dust the fowls well with insect-powder, anointing the heads with melted lard. There is no mode of protecting against snakes except with fine wire or placing the fowls where snakes cannot approach them.

Our Fireside.

A DILEMMA.

'Tis a pitiful plight, and I'm not quite sure
What's the proper thing to do,
Or if my case has a radical cure:
But the fact is, I love two.

I see the blonde, and I vow that she
Is the one I cannot forget;
But her vision pales quite visibly
When I view the sweet brunette.

There is no help for me, I ween,
And I'm leading a double life:
For somehow I cannot quite choose between
My little girl and my wife.

—Tom Masson.

THROUGH A GLASS DARKLY

BY VIRNA WOOD.

CHAPTER I.

IN accordance with the patient's wishes the nurse had put out the light in the sick-room, and had fallen asleep on the lounge. It was quite dark, and no sound was audible save the ticking of a clock in an adjoining room. The patient lay silent, with wide-open eyes, hovering between sleeping and waking, between consciousness and delirium. For two weeks the fever had beaten in her veins and burned into her brain fantastic visions and dreams. Now, indeed, by repeated efforts of the will, she was conscious of her identity. To assure herself of the fact she kept silently repeating a formula until it had almost lost its meaning. "I am Margaret Fenton, twenty-two years old; and I have a mother and a little sister Flo. I live in San Francisco, and I have the typhoid fever." Her thoughts became confused, and she dropped the last sentence from the mental recitative. Then the words went on repeating themselves in hopeless monotony.

"I am Margaret Fenton, twenty-two years old—"

She stirred in bed, and looked eagerly at the wall on the opposite side of the room. A light from the second story of the adjoining house had flashed through the open window by the bed, and fallen across a mirror, picturing upon it the interior of a bath-room, in the center of which stood a young girl, her hand still uplifted in the act of lighting the gas. She turned down the light, withdrew her hand and passed out of the room.

"I suppose that is the housekeeper's daughter, and the judge has come back from Sacramento," said Margaret to herself, surprised at the fluency of her thoughts. She remembered that the house had been taken recently by Judge Withington and his young half-brother, Richard Deane, a medical student; and that an elderly woman with a young daughter was keeping house for them. She had not become acquainted with either of the gentlemen, but she knew them quite well by sight; and she knew, also, that it was the custom of the judge to go to Sacramento at regular intervals.

All these thoughts passed rapidly through her mind as she still looked at the patch of light on the mirror. Suddenly her attention, vague and idle at first, became riveted on the little space of light, and her breath seemed suspended in the intensity with which she watched the reflected scene.

Judge Withington entered the door, a tall, portly man of dark complexion and with gray side-whiskers. He advanced to the center of the room, lifted his hand and turned on the gas. As it flamed up, brightening the patch of flickering light on the mirror to a steady brilliance, and the judge was crossing the room as though to close the blinds of the window, the door slowly opened again, and in an instant a dark figure, springing upon him from behind, dragged him down out of sight. For moments that seemed hours to the spectator lying speechless and frozen with horror, the light burning steadily on revealed an apparently empty room; then one of the figures slowly arose, and stood for a moment facing the window. For a flash of time the face of the intruder was distinctly visible in the glass. It was dark and emaciated, with receding forehead and sunken, flaming eyes. A full, short beard concealed the lower features, and in the uplifted hand something glittered in the light. The figure turned, and advancing to the center of the room, raised the left hand to the light. In an instant the mirrored scene was wiped out, and through the darkness of the sick-room rang a startled shriek.

When the nurse had lit the lamp and the terrified family, aroused from sleep, had gathered about the bed, they found that the patient had fainted; and on her rigid white face was a look of unutterable horror.

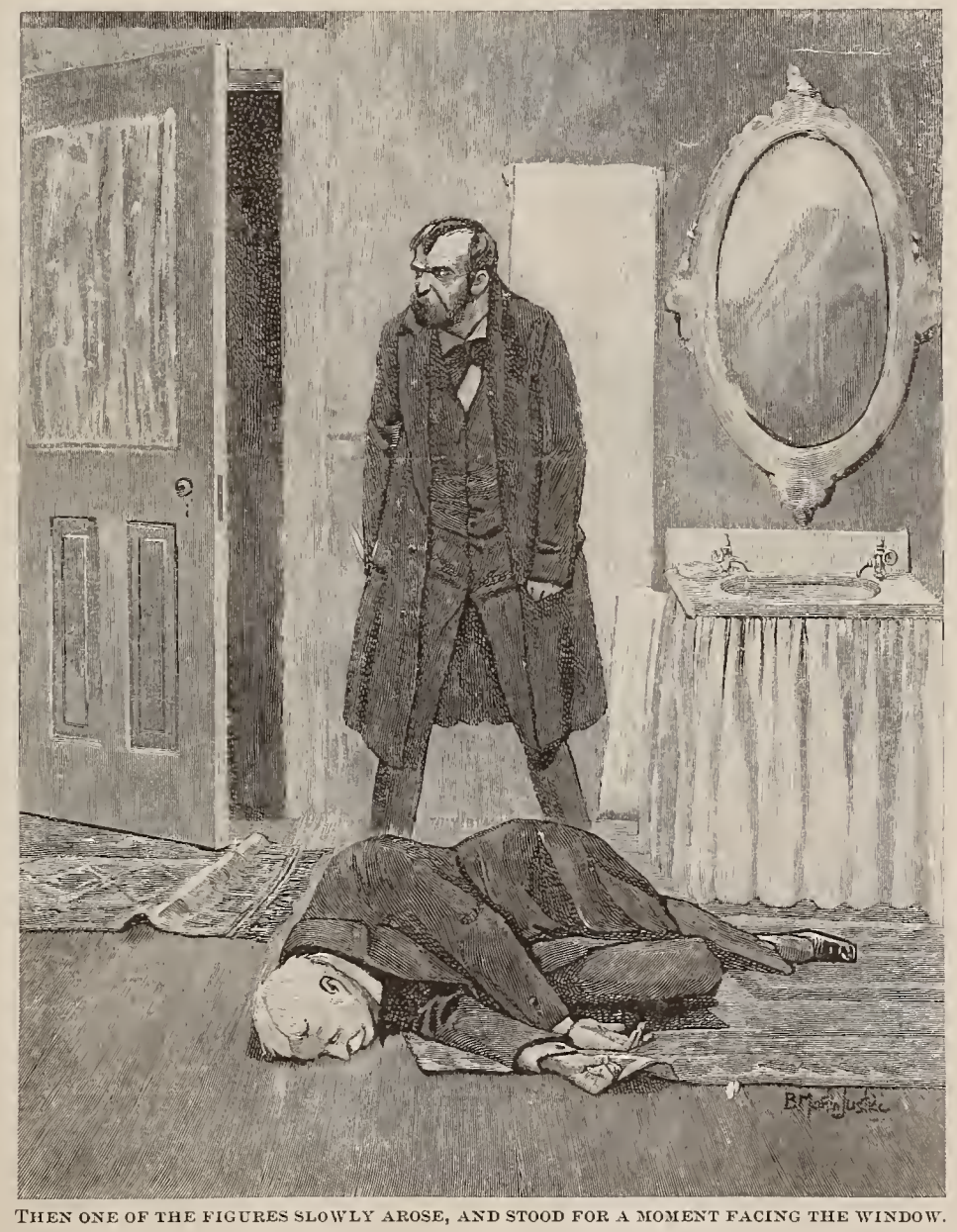
CHAPTER II.

That Richard Deane should be accused of the murder of his half-brother, Judge Withington, was a surprise and shock to the entire community. He was a handsome, bright, impetuous young man of twenty-four, a favorite among the doctors and students at the medical school and in general society. His friends were bitter in their denunciations of the police and the press; and yet the circumstantial evidence against him was very strong.

The morning after the murder the body of Judge Withington had been found by the housekeeper lying in front of the bath-tub in a pool of blood. She had gone to Mr. Deane's room to rouse him, when she was surprised to find his door slightly ajar. Pushing it open, she saw him still lying in bed and slumbering heavily. The right hand, which lay on the outside of the covering, was stained with blood, as was also the pillow and the socks, which hung over the back of a chair. Her shrieks aroused him, and as he followed her through the hall, hurriedly throwing on his clothes, she noticed that his feet were stained as though he had stepped in a pool of blood.

Then the motive for the deed was not wanting. It was well known that the judge, in his will, had bequeathed to his brother his entire property; and the damaging evidence of a recent quarrel was given by the housekeeper, Mrs. Peterson, under ineffectual protest. This quarrel, the first and last she had ever heard between them, occurred a few days before the judge went to Sacramento. Perhaps the young man had been too free with the liberal allowance his brother gave him; but however that may be, the trouble was about financial matters. The woman overheard them as she was going up the stairs.

"I must have the money before the first of the month," the young man was saying.



THEN ONE OF THE FIGURES SLOWLY AROSE, AND STOOD FOR A MOMENT FACING THE WINDOW.

"And I tell you," was the reply, "that your allowance is enough. I shall not encourage extravagance."

"Do you mean that you refuse me?" Richard demanded, his fair face flushed with anger.

"That is just what I mean," the judge answered, as he passed into his room, closing the door behind him. Richard brushed by the astonished housekeeper on the stairs, put on his hat and flung himself out of the house.

How the quarrel was made up Mrs. Peterson did not know; but the next time she saw them together they were on friendly terms, and the day the judge went away the younger brother carried his valise down to the cab, and shook hands with him on the sidewalk in front of the house.

All this was brought out at the preliminary examination, and Richard Deane was held to answer to the charge of murder. The evidence was so damning that he was not allowed to give bail, and the house where the tragedy had occurred was closed and deserted.

Feverishly, again and again, Richard went over all the details of the crime, as far as he was acquainted with them; but nowhere did there seem to be a door of escape for him. How did the blood-stains come to be on his person and his clothes? He remembered locking his door as usual that night when he went to bed. How did it happen to be ajar? He was a light sleeper, and how would it have been possible for any one to enter his room and smear his hand and feet with blood without waking him? And why had he slept so far beyond his usual hour, and wakened with such difficulty at Mrs. Peterson's calls? It was all strange and incomprehensible to him.

Then he thought with passionate regret of the man who had been both father and brother to him, to whom he owed his education and whatever prospects of success he had had in life. That he, who loved and admired him so much, should be charged with causing his death seemed intolerably cruel. Then he reviewed his past, scene by scene, and recalled the family annals as he had heard them from other lips. At the time of his mother's marriage to her second husband, a wealthy merchant in a small city in one of the north central states, her only son, then a young man of twenty five or six, who had gone to California several years before to seek his fortune, had not yet started in his professional career. It had been his intention to send for his mother when his business was sufficiently established; but her marriage had postponed this event for eighteen years. At that time her husband died, and she removed with her young son to California, taking up her residence with the judge, who had never brought a wife to preside over his house.

Toward his younger brother the judge had always shown the greatest interest and affection. He sent him to the university, and later to the medical school; and when their mother died, having no heirs of his own, he made a will in his brother's favor.

The thought of all these things passed again and again through the young man's mind, accompanied by trivial yet permanent associations, such as the scent of lilacs in the garden of his early home, and the bird-calls in the forest that he had learned to imitate when he was a boy.

How safe and happy his childhood seemed to him, and how immeasurably distant. Even his student days were far away in the past, separated from the present by a dreadful barrier like an impenetrable mist; and over the future, that so short a time before he had pictured as a succession of brilliant achievements, hung a nameless horror that he dared not contemplate. The only time he roused himself was on the occasion of the visits of his lawyer, a wiry, active little man, who had a habit of rubbing his hands together and nodding his head to emphasize his remarks.

"Cheer up," he would say; "we will never let them convict you on circumstantial evidence; and you are sure to be satisfactorily cleared in the end. For murder will out, you know; murder will out."

But the time of the trial approached and nothing occurred to throw further light upon the mystery.

Meanwhile Margaret Fenton was slowly recovering from her illness. She sat one day by the window in her invalid's chair, gazing out idly upon the street. She looked pale, but pretty, in her dressing-gown of rose-and-tan eider-down, her dark eyes seeming unnaturally large from her recent illness, and the blue veins showing at the temples through the white skin. Her mother sat near her in a willow rocker reading the morning paper. Mrs. Fenton was still a pretty woman, with the lustrous dark eyes and delicate features of her daughter. She looked up from her paper and glanced meditatively at the invalid.

"I wonder," she said, "if it can be true that Richard Deane did it."

"Did what?" asked Margaret, starting and flushing slightly. For although she had never become acquainted with her neighbor, his frank, fair face had aroused in her an unacknowledged interest.

"Why," said Mrs. Fenton in surprise, "haven't you heard us talking about it? But I suppose not; you were so sick at the time. I remember it was the very night of the murder that you had your relapse."

"Murder?" echoed her daughter, passing her hand across her forehead with a look of mingled perplexity and alarm in her eyes. "What murder?"

"That of Judge Withington," said her mother.

"Oh, yes!" said Margaret, dropping her head on her hand and resting her elbow on the arm of her chair. "I knew he was dead. I must have heard it—or dreamed it; but I cannot remember anything about it."

"And they accuse Mr. Deane of the crime," Mrs. Fenton went on.

With an exclamation of horror Margaret sprang from her chair. Her cheeks were flushed and her eyes dilated and bright.

"It is not true," she said, vehemently. "I know it is not true. He could not have done such a deed."

"Calm yourself, my dear," expostulated her mother, rising and replacing her gently in her chair. "We know very little of him, and the evidence is all against him."

"But I know he could never have done it," repeated Margaret, and she burst into tears.

CHAPTER III.

The house that Judge Withington and his brother had occupied had been closed since the tragedy; the grass had grown rank in the once carefully trimmed garden, and the flowers had run in tangled riot over the paths. It was a daily stab to Margaret Fenton to see the neglected place, and to think of the young man who had once filled the house with merriment and laughter. For the trial, which had begun some time before, was indisputably going against him. Public sentiment, too, had changed, and the daily papers sympathized with the prosecution.

One morning Margaret startled her mother by jumping from her chair and throwing the paper impatiently on the floor.

"Mama," she said, with mingled determination and confusion, "I am going to the trial this morning, and you must go with me."

"Why, my dear child," protested her astonished mother, "I do not see why you are so excited about this case; and for my part, I would much prefer not to attend a murder trial."

But Margaret had her way.

An hour later Richard Deane, sitting beside his counsel, saw two ladies enter the court-room, and as they sat down and turned toward him, he gave a slight start and the color mounted slowly in his pale face.

"Ah!" he said to himself, "it is my pretty neighbor. I wonder why she has come?"

As he looked at her for a moment their eyes met, and in that glance he knew that she believed him innocent. A warm thrill passed through his heart.

Day after day Margaret and her mother went to the trial, and day by day the defendant and the handsome young lady who sat with her mother among the curious spectators exchanged that swift glance of sympathy and gratitude. In his lonely cell at night the thought of the frank, sweet eyes, full of belief and trust in him, kept his soul from despair and his heart from bitterness.

As the trial went on and the girl heard the recital of the discovery of the crime, the finding of the body in the bath-room, stabbed, apparently with a long, sharp knife, strange shadows of memories began to haunt her mind like a forgotten dream. Surely she must have known something about it, and yet she could not have done so, she reasoned to herself. And morning after morning as she stood before her glass, its clear surface reflected nothing but her own face, hiding its secret well.

One day as she was walking up Market street, troubled with these haunting thoughts, she saw ahead of her in the crowd a form that seemed vaguely familiar. She quickened her pace, that she might overtake the man and get a view of his face. Before she could do so he reached the crossing, and going out to the middle of the street jumped on a Valencia street-car. As he turned to her his profile the impression of familiarity increased, but in the moment that she caught a full view of the face, as he was stepping

on the car, she recognized it. It was the face she had seen in the mirror—dark, emaciated, with sunken, burning eyes. Like a ray of light it flashed before her, illumining her mental darkness. The face was clean-shaven, and a long scar extended from the lower right cheek half across the chin. But though the lower part of the face in the glass was concealed by the beard, the identity of the two could never be mistaken; and in one terrible moment Margaret saw again the mirrored scene that delirium had obliterated from her memory. She sprang forward and signaled to the conductor to stop the car, which had already begun to move. He shook his head and pointed back to the car behind. She ran, and by repeated signals tried to induce him to wait for her; but in vain. She took the next car, trying to keep the one ahead in view and to watch the passengers as they alighted; but she soon had to abandon the idea. She got off and waited for the next Valencia street-car. She rode to the end of the line, looking to right and left in a vain hope that she might see some trace of the murderer.

"I am only losing time," she said to herself. "I must tell his lawyer."

By the time she had returned to the business part of the city and had reached the Mills building, the lights had already been lighted on the streets. She was afraid Mr. Jordan had returned home. The elevator had stopped running, and she rushed up flight after flight of steps until she stood before his door, panting and breathless. She paused a moment, then opened the door. The lawyer was sitting at his desk.

"Mr. Jordan," she said, starting toward him impulsively, "your client is innocent."

The little man looked at her keenly over the rims of his glasses, and gently rubbed his hands together.

"My clients are all innocent, madame," he said, dryly. "To which one do you refer?"

"Richard Deane," she replied.

In a moment his apparent indifference disappeared, and motioning her to a chair, he sat down before her. He leaned toward her eagerly and nodded his head.

"Of course he is innocent," he said, "but have you testimony to prove it?"

"I think I have," she replied, and told him her story.

"The weak point in your testimony," he said when she had concluded," is your mental condition before and after the occurrence. We must put a detective on the man's track at once. I will hold back your evidence, partly because it might be ruled out now, and partly not to give the alarm to the murderer. Can you go with me to see Hamilton Keith, the detective, this evening? He will insist upon hearing the story from your own lips."

"Yes," said Margaret, rising, "I can go now."

They found the detective at home, busy over some papers. He was a man of medium height and physique, with nothing remarkable about his appearance but a pair of alert gray eyes. He listened attentively to the story, occasionally asking a question, but making no comment until the girl had concluded.

"The motive was revenge," he remarked, sententiously. "Do you know of any enemies the judge had made?"

"No," said the lawyer, "for a man in his position, he was singularly without enemies."

"I must see your client," Mr. Keith replied. "He will probably be able to throw some light on this point. You will not put the young lady on the witness-stand until you hear from me?"

"No," Mr. Jordan replied; "we want the evidence conclusive."

Time passed, and notwithstanding the persistent efforts of Hamilton Keith no trace could be found of the murderer. The detective felt certain that he had left the city. On the other hand, he could gain from Richard Deane no clew as to a possible motive for the crime. Mr. Jordan had exhausted the patience of the court in the matter of time, and the trial was drawing to a close. It was at last necessary for him to produce his most important witness without support for her testimony.

The court-room was crowded when Margaret Fenton, accompanied by her mother, entered and sat down near the defendant and his counsel. There was a stir of expectancy, for notwithstanding the secrecy that had been observed, it was known that an important witness for the defense was to be produced that day. Richard Deane, leaning over toward Margaret, spoke to her in a low tone.

"I want to thank you for all you have been doing for me," he said.

The words were commonplace enough, but the tone was full of gratitude and an indefinable warmth that thrilled her heart. She had talked with him but once before, and yet it seemed to her that she had known him for years.

When she was called to the witness-stand, she began her story in the midst of a profound silence. The prosecuting attorney, ignorant of the nature of her testimony, had for some time no opportunity to enter an objection. In accordance with Mr. Jordan's instructions, Margaret had omitted the fact of her illness until she had finished the description of the vision on the mirror.

"Then," she concluded, knowing that the fact would be disclosed in the cross-examination, "I fainted, and being ill of typhoid fever, remember nothing that occurred for several subsequent days."

The judge, the jury, the counsel and the spectators in the court-room had followed her recital with breathless attention, and as she paused and glanced over the room she saw in the faces about her a sudden change of sentiment in favor of the accused. Only around the lips of the prosecuting attorney played a sarcastic smile.

"I object to this testimony," he cried, jumping to his feet. "By her own admission the witness was delirious after seeing this vision, or hallucination. She was undoubtedly delirious before."

"If your honor please," interposed Mr. Jordan, rising, and rubbing his hands excitedly, "this testimony is entirely competent, and I will prove it by further evidence of this witness, relating to occurrences that have taken place since her entire recovery, and which substantiate these facts."

"Are we to accept the ravings of delirium as testimony in the court, your honor?" thundered his opponent. "Any subsequent events based upon such fallacies must be unreliable, and in the name of justice and of common sense I move that this testimony be stricken out."

"The arguments of the counsel are preposterous and absurd," Mr. Jordan replied. "The witness is obviously in her right mind now, and these occurrences took place two or three months after her recovery from disease."

The objection was overruled, and Margaret proceeded with her testimony. In a clear, graphic style she described her encounter with the murderer on the street, her sudden recollection of the crime and her unsuccessful attempts to follow him.

When she had finished and replied to one or two questions of the attorney, it was evident that the recital had produced a profound impression. Margaret was pale but calm. Richard Deane, leaning back in his chair with folded arms, never took his eyes from her face. Mr. Jordan sat rubbing his hands softly together; the judge, thin and bent, leaned forward a little not to lose a word of the testimony; but Mr. Rivett, the prosecuting attorney, sat back carelessly in his chair, with half-averted face, and about his lips played the shadow of his sarcastic smile.

When Mr. Jordan had finished his questioning, Mr. Rivett turned to her.

"You were delirious at times during the evening preceding the murder?" he asked.

"So I have been told," Margaret replied.

"And you fainted that night, and afterward awoke delirious?" he continued.

"Several days succeeding the event have always been a blank to me," she responded.

"You cannot swear, then, that you were not delirious at the time you saw this scene on the mirror?"

"Yes," she said, firmly; "I can swear that I was not delirious at that time."

"Do you dare to swear to the man's identity when several months had elapsed since you saw the reflection?" he continued.

"I do," she replied.

He could not force an admission of doubt from her; but in his closing speech, which was delivered the following day, he emphasized the uncertainty of the mental condition of the witness at the time of the crime, and the failure to find the alleged murderer.

"This man," he said, "has never been seen, as far as we know, by any human being but the witness; his very existence is as chimerical as that of the face in the mirror."

The case was given to the jury, and in less than an hour they returned with a verdict of guilty.

Mr. Hamilton Keith alighted from the station at the mountain town of Minerville, and took the bus to the Harris hotel. The vehicle rumbled heavily up the narrow street, following a canon between pine-covered hills, and drew up before a wide frame structure of pioneer times. The doors and windows were open, and on the long verandas that surrounded both stories of the house servants and guests alike stood in groups, watching the arrival of the bus and the dusty yellow stage that had just driven up in the opposite direction.

The landlady, a good-natured German woman, stood at the door; at an upper window the detective saw an old man reading, the only person who did not seem interested in his arrival.

The landlady's son, a round-faced boy of fourteen, took the traveler's valise and led him to a room on the second floor. The visitor was pleased to observe that it was next to the room where the old man was reading. His window, like those of all the other rooms, extended to the floor and opened out on the upper veranda.

A few moments later Keith, having removed the traces of travel from his person, stepped out through the open window, and stood gazing down on the quiet street. Turning around, and starting a little as though he had observed the old man for the first time, he spoke to him.

"Sit down, sit down," said the old man, handing out a chair and drawing his own closer to the window. "You come from the city, I know. It is a pleasure to see people from the city. There are few that one can talk to here—men of education, I mean. I have been here since pioneer times, and I have seen this place a metropolis. I have known nearly all its young people from the time they were born. I used to practise medicine, but I gave that up long ago. I am writing a book on the early history of this place."

For some time he talked on, commenting upon the present conditions of California life and recalling reminiscences of pioneer days until the detective checked his volubility by a question.

"Did you know Henry Withington?" he asked.

"Henry Withington, Henry Withington," repeated the old man. "Yes, certainly," he added, suddenly. "He boarded here about six months, some time in the sixties. He was a pleasant young man. He went to Mexico from here."

"Did he make many acquaintances while he was here?" asked Keith.

"He knew every one," was the reply. "He was the kind of a man that every one liked. By the way, he occupied the room that you have now. I was here, of course. I have lived in this room for forty years."

"Do you remember who were boarding here at the time?" asked the detective.

"Let me see," mused the old man. "There was Mr. Scholes, the schoolmaster, and Mr. and Mrs. Moseley, the minister and his wife, and Mr. Weston, the superintendent of the Look Up mine, and Bill Hurst, the blacksmith, and Jerry Knowles, the stage-driver. There must have been others, but I don't recall them now. Henry Withington was interested in the Look Up mine, but he gave that up and went to Mexico; and the next I heard of him he was studying law in the city. Are you a friend of his?" he asked, suddenly. "Do you know what has become of him?"

"Ah! my friend," said the detective, "don't you read the papers?

"Read the modern newspapers?" said the old man, contemptuously. "No; I haven't time for it."

"Judge Withington was murdered in February, and his half-brother, Richard Deane, has been convicted of the crime, and sentenced to death. The case has been appealed, and will come up next month."

"Well, well; such a bright young man. And he was a judge?" queried the old man.

The detective nodded.

For some time he continued the conversation, then retired to his room, and paced the floor with a smile on his lips. He thought he had found a clew.

(To be continued.)

SOME WATER USES WELL TO REMEMBER.

The "Phrenological Journal" gives the following useful hints on the applications of water in severe attacks of illness. The adult members of a family should keep them in mind for an emergency:

A strip of flannel or a soft napkin, folded lengthwise and dipped into hot water and wrung out, and then applied around the neck of a child that has the croup, will usually bring relief in a few minutes.

A proper towel folded several times, and dipped into hot water, quickly wrung and applied over the site of toothache or neuralgia, will generally afford prompt relief.

This treatment for colic has been found to work like magic.

Nothing so promptly cuts short a congestion of the lungs, sore throat or rheumatism as hot water when applied early in the case, and thoroughly.

Hot water taken freely half an hour before bedtime is an excellent cathartic in the case of constipation, while it has a soothing effect upon the stomach and bowels.

This treatment continued a few months, with the addition of a cupful of hot water slowly sipped half an hour before each meal, with proper attention to diet, will cure most cases of dyspepsia.

Ordinary headaches almost always yield to the simultaneous application of hot water to the feet and back of the neck.

TELEGRAPHY WITHOUT WIRES.

The Post-office Department of Great Britain is experimenting on a new system of telegraphy which is embodied in the following idea: "The system depends not on electromagnetic but electrostatic effects; that is to say, on electric waves of a much higher rate of vibration not less than 250,000,000 a second; that is, Hertzian waves. These vibrations are projected through space in straight lines, and, like light, are capable of reflection and refraction. Indeed, they exhibit all of the phenomena which characterize light. More than ten years ago the discovery was made in a London office in the telephone exchange that operators read from sound messages that were in transit from London to Bradford by telegraph wires. Other experiments have demonstrated the possibility of telegraphing even though the wires were broken. The probabilities are that the attraction is strong enough to continue the sound through the space between the broken ends of the lines.

A CONFLICT.

Tyres—"Have you named your boy yet?"

Spokes—"No; my wife and I can't agree. She wants to name him after her wheel, and I want to name him after mine."—Judge.

JOE'S BURNING HEART."

From his father Joe Berwick inherited the blacksmith-shop, his trade and a love for drink. The smithy, a weather-beaten old brick building with bleared, cobwebby windows and crumbling foundations, stood in an open lot near the center of the village. This lot was covered with a bed of black cinders, the accumulation of twenty years, and on top of the cinders all manner of rusty wheels, tires, plows, farm implements and broken-down carts which had been collecting there for about the same length of time.

Joe, a great swarthy, stalwart fellow, was a splendid workman, and when the ring of his hammer made the sparks fly cheerily from the anvil, how his mother in that little cottage next to the smithy listened to the music of it!—and all the neighbors could tell you how she used to sing. But the days and days when Joe was off on a drunk and the old smithy was dark and silent—only the Lord knew how his mother used to pray!

Joe had been away to a Keeley cure for months, and when he returned he was cured, as they all hoped. But poor Joe! he no sooner entered the smithy than the old temptation, which seemed still lurking about the smoky walls and the bleared windows, all leaped upon him whichever way he turned, and no man ever began a braver fight with the powers of darkness than did Joe Berwick that day.

Just a month Joe had been home, and the old thirst was on him that morning with something like madness. To resist it was like trying to stand in the way of a lightning express-train. Joe found himself trembling and giving way. He threw down his hammer and went to the open window feeling faint and sick. The strip of dooryard by his mother's cottage lay fresh and green in the April sunshine, and a robin, lighting on an apple-bough bursting with buds, was whistling joyously. Joe's mother in her sunbonnet, with her skirts carefully pinned back, was weeding out her bed of grass-pinks in the garden. Joe could hear her singing:

"The Prince is ever in them,
The daylight is serene,
The pastures of the blessed
Are decked in glorious sheen."

Joe loved flowers and sunshine; he loved this peaceful little home; more than all he loved his mother. He leaned his face heavily in his hands—oh, how the battle was raging! There was a strange look in his eyes when a few moments later he put on his hat in a shamed way and walked out of the shop.

"I'm afeared Joe's goin' to give in," muttered the foreman, with a troubled look on his face.

"Goin' to give in?" laughed the customer who chanced to be waiting. "Nobody ever expected him to hold out more'n a week."

The old foreman turned back to his work with something like a groan. He had known and loved Joe since he was a little lad. Through the open window still came the mother's voice, clear, almost shrill, in its sweetness:

"The Prince is ever in them,
The daylight is serene,
The pastures of the blessed
Are decked in glorious sheen."

The customer had paid for his work and gone away before Joe's familiar step was heard returning, and then he went straight past the shop into his mother's flower-garden. He had something in a pot which he was carrying, and the foreman, glancing out of the window, heaved a sigh of relief, for he knew that Joe was all right when he heard the lad say in his hearty voice:

"Why, Joe! Whatever made you do it?" primrose."

"Why, Joe! Whatever made you do it?" cried the little mother, putting down her trowel with such a look of surprise and delight, and her hands trembled so she almost let the pot fall as Joe handed it to her.

From time to time all summer Joe kept bringing home flowers, until the tiny garden spot was crammed full, the borders of the walks were filled, and even the porch was overflowing with them. Mrs. Berwick, no longer surprised or delighted, began to think that her son had gone out of his senses.

"Never mind," she said, soberly, as she put up the last hanging-basket; "he'll get over it when cold weather comes."

But cold weather came, and Joe still kept up his mania for buying flowers. One night when he came in with a great burly chrysanthemum, his mother lost all patience.

"Why, Joe, this house is so cluttered up with plants now I can hardly find room to set my foot down, and the windows are so filled up we can't see out of 'em—and what do you keep on buying more for?"

"Mother!" said Joe, taken aback, for she was a woman who never scolded. "I hadn't noticed the house was filled up so, and I thought you liked flowers—and the truth is, when the old cravin' came back drivin' me most mad, I just took to spendin' that money for flowers I might have spent in drink, and the Lord knows how it helped me. Do you mind now, mother?"

"Joe, my lad!" and the tears were streaming down his mother's cheeks, "you can buy flowers until we have to move out on the sidewalk if you'll only keep sober and steady. Of course I don't mind," and then Joe's mother was fast in Joe's arms, and they were crying together.

While Joe slept that night Joe's mother was praying—praying as no mother ever prayed for a son on a battle-field before—that her son might not give in.

After this Joe gave his mother a little purse to keep, and whenever he felt the old passion coming back, he put in it the money he would have spent for drink. The purse was filled over and over, and his mother saved it all until such time as it could be spent for "Joe's flowers."

The garden being full, another summer the waste ground around the smithy was cleared up, soil was put there in place of cinders, and all neatly sodded, with a great heart of flowers in the center. This heart Joe kept filled with blazing red flowers, and the old foreman, who knew the story now, could not help telling the neighbors, he was so proud of Joe. The neighbors, who were all fond of Joe, could not help speaking of it to each other as they passed and repassed many times a day, and so it came that even the children knew every one of these flowers meant a battle and a victory, and they used to speak of this bed reverently as "Joe's Burning Heart."

The old smithy hardly knows itself any more since its foundations have been rebuilt so square and true, its windows cleaned and brightened, and its weather-worn walls covered with shining ivies. On the south side facing the cottage a greenhouse has been built, and here Joe spends every spare moment busying himself in the care of his flowers or reading and studying about them, for it is his ambition to become not only a florist, but a botanist.

Nor does Joe forget his old comrades, and when he meets one in the street, out of work, it may be, or down-hearted, or bound for the saloon to have it all out in a spree, Joe will ask him in the greenhouse to see the flowers or to offer him some odd bit of work, or just to give him some little potted plant to take home to the children; and what with Joe's kindness and friendliness and the sweetness and brightness of the flowers and the encouragement of it all, the poor fellow will be tided over that hard place and saved from the spree.

"An' that's the way Joe works it," says the old foreman to a neighboring gossip. "That's the way he lends a helpin' hand. An' the boys are willin' to take a word of advice from Joe—they know what he's been through."

It was one summer morning that I first saw Joe's flower-garden, and this story was told to me. Fine blush roses and tall madonna lilies were filling all the June air with fragrance, and as Joe's mother walked between them she was singing softly but with confidence:

"The Prince is ever in them,
The daylight is serene."

It was a busy morning, with the sound of Joe's anvil ringing out lustily and cheerily, and as I stood looking and listening, it seemed to me I had never heard such eloquent preachers of temperance as those lovely, innocent flowers opening in the sunshine—"Joe's flowers."—Frances Bennett Callaway, in Union Signal.

LETTER-WRITING ETIQUETTE.

There is an etiquette about everything, even about the way a woman ought to write her notes. Considering all things, it is perhaps as well that woman should read, mark and inwardly digest the laws that ought to rule her conduct when she "takes up the pen." Two things, above all others, betray the inelegant or unaccustomed letter-writer. If she be guilty of neglecting the margin at each side of the page, or if she so far forget her precepts as to add a P. S., she is forever doomed. Society is exact in details, and society declares such omission or commission to be the unpardonable sin. The note, to be correct, must be written upon paper of medium size, preferably cream white, and must be clear and distinct. The monogram is stamped on the paper, or the crest if one have the right; but upon the inside of the flap of the envelop must be the address. When the writer has borne all these facts in mind, and has signed her unabbreviated name, she may rest content.

STINGY HUSBAND.

The man who begrudges his hard-working, long-suffering wife every dollar that she spends for her own pleasure or comfort deserves to be made a reproach. Ex-secretary Morton, of the Department of Agriculture, is reported by the St. Louis "Republic" as having lately expressed himself freely about husbands of this class. Their meanness is indeed surprising; and so, in a different way, is the meekness with which their wives submit to this unworthy behavior. Says Mr. Morton:

"I happened to be in a store in my town one day during the war when an old fellow, whom I will call Jones, came in with his wife to buy some goods. Jones had settled in Nebraska when it was still a territory, and by economy and thrift he had now got a farm of something like one thousand acres. He was considered wealthy. Shortly after he entered the store Mrs. Jones took up a piece of calico and admired it very much. As she looked at it she said to her husband:

"'Pa, I ought to have a new dress, and I like this very much. Don't you think we could afford to buy?'

"'Oh, I suppose so,' replied the old man, and he thereupon asked the clerk the price. He was told it was fifty cents a yard. Old Mr. Jones raised his eyes at this, and asked his wife how much it would take. She replied she didn't think she could get along on less than twelve yards, and he answered:

"'Why, ma, twelve yards of that goods at fifty cents a yard would cost six dollars. Now, don't you think that is pretty high?'

"'Yes,' she replied, 'I do, but I need the dress.'

"'Well,' said the old man, 'times are hard, and I do wish you could get along without it just now. Couldn't you?'

"'Yes, I suppose I could,' replied the old lady, with a sigh, and the calico was dropped.

"A moment later Mr. Jones asked the same clerk if he had any tobacco, and whether he had any of that good old Virginia leaf which they used to keep in stock.

"The clerk said, 'Yes, we have, but it's awful high. It's two dollars a pound, and I think it will go higher before it gets less. We have just one caddy left.'

"'You think it will go higher?'

"'Yes,' said the clerk, 'it's sure to go up.'

"'Well, you might put me up five pounds,' said the old man, and a moment later I saw him carrying it out of the store. He had not six dollars to spend for his wife's calico dress, but he thought nothing of putting ten dollars into plug tobacco. I don't suppose old Mr. Jones realized his selfishness. Probably he loved his wife, but he had been brought up the wrong way."

A PRETTY CUSTOM.

There is a pretty custom in the imperial family of Germany which dates from time immemorial. On the birthday of one of the royal children the empress goes through the stock of toys which has been accumulating since the child's last birthday, and sends all, except a few special favorites, to the sick children in hospitals. The present kaiserin, who is the most motherly of women, has paid special attention to this custom, and on the occasion of little Princess Victoria Louise's birthday, which occurred some time ago, her majesty packed with her own hands a large case of dollies, picture-books and little dishes, all in a fair state of preservation, and had them sent to the little sufferers. The sick children are always told who sends the presents, and in past years this has resulted in the saving of some curious and interesting relics. In this way the battered tin soldiers which amused the childhood of old Kaiser William have been saved from the wreck of time.

SOUTH DAKOTA.

WHAT A MAN CAN DO WITH $1,000.

He can buy 160 acres of good land for $1,000. Pay $400 down; balance in three payments due in 3, 4 and 5 years at 7 per cent. He can also buy 100 choice ewes for $300 and ten good cows for $300. The milk and butter from the cows will pay all farm and family expenses. The increase of sheep and wool will pay off the mortgage before it is due. In five years he will have a farm all paid for and well stocked. For descriptive lists and prices address H. F. Hunter, Immigration Agent for South Dakota, 295 Dearborn Street, Chicago, Ill.

Our Household.

YOU NEVER CAN TELL.

You never can tell when you send a word
  Like an arrow shot from a bow
By an archer blind, be it cruel or kind,
  Just where it may chance to go.
It may pierce the heart of your dearest friend,
  Tipped with its poison or balm:
To a stranger's heart in life's great mart
  It may carry its pain or its calm.

You never can tell when you do an act
  Just what the result will be;
But with every deed you are sowing a seed,
  Though the harvest you may not see.
Each kindly act is an acorn dropped
  In God's productive soil;
You may not know, but the tree shall grow,
  With shelter for those who toil.

You never can tell what your thoughts will do
  In bringing you hate or love;
For thoughts are things, and their airy wings
  Are swifter than carrier-doves.
They follow the law of the universe—
  Each thing must create its kind,
And they speed o'er the track to bring you back
  Whatever went out from your mind.

—Ella Wheeler Wilcox.

THE STORY OF TOOTS.

WHEN a friend gave Miss Frances Willard a little Angora kitten one day she never dreamed that this fluffy ball would grow up to be so distinguished a cat, a White-ribbon cat, who works for the temperance cause and has correspondents abroad.

Miss Willard herself has not much spare time to look after frisky kittens, but fortunately she had living with her at the time thirteen spinster ladies who liked cats. In this kind family Toots was as happy as any kitten could be—happy in every hair if its fur.

While Toots was still very young Miss Willard resolved that he should grow up to be an intelligent cat with a well-ordered mind, and she herself attended to his education. First she trained him at the word "kang" to sit upright like a kangaroo, then she taught him to eat nicely from a fork, and finally to wear a bib. Toots had his own chair at the table, and he never grabbed for anything, for he knew if he did he would be promptly sent to the kitchen.

At dinner Toots has been seated between Miss Frances Willard and Lady Henry Somerset, the daughter of a hundred earls—a distinction no mortal cat ever enjoyed before; but no other cat outside of a fairy tale was ever so accomplished in table manners.

Another of Toots' accomplishments is the game of hide-and-seek, which he plays beautifully. When Anna Gordon had leisure for a game in the evening she would call to him to let him know she was in hiding, and then Toots would run and rush through the rooms until he came to the door behind which Miss Gordon stood, when he would bound up on the door, and jump with delight as a little child would.

If Toots has a weakness in any particular direction it is for sweet-scented flowers. When a box of sweet violets is brought into the house his mistress can hardly get the cover off before Toots has his nose in the box, and the next thing he is running off with a bunch of violets in his mouth.

Miss Gordon says it is hard to keep any flowers on the table when Toots is around, and she tells the following remarkable story about some carnations: One evening two of the family sat reading by the table on which stood a cut-glass bowl of very beautiful carnations. Toots, attracted evidently by the fragrance of the flowers, jumped upon the table, and deliberately selecting the finest spray in the bowl, a spray with three carnations on one stem, took it in his mouth, and jumped down to the floor with it. Miss Gordon immediately took the spray away from him and put it back into the bowl. Hardly was she seated before Toots jumped upon the table, seized his favorite stem of carnations and was off with it. This happened three times. The last time Miss Gordon said to herself, "Toots ought to have some reward for his fine appreciation of flowers," and she gave him an insignificant little bunch, which she thought good enough for Toots to play with.

No sooner was she seated again when Toots took the poor little flower in his mouth, and jumping upon the table, flung it back into the dish; then selecting his favorite spray, marched triumphantly off with it.

Toots has an interesting correspondent in England, a cat named "Fluffy," who lives in a manor-house by the sea. When a letter comes to Toots from Fluffy it bears the imprint of Fluffy's inky little paw as the signature. When the children of the Loyal Temperance Legion heard of Fluffy's letters they had letters sent from their own pet cats, until Toots found himself quite overwhelmed with correspondence.

Toots works for the Loyal Temperance Legion by having his picture taken, and this might well be called "work" when one considers the struggle it is to have a picture taken with Toots so frightened at the photographer's of all the strange people around him. Toots' picture has earned many dollars for the Loyal Legion, and is still being sold. The money is used for the benefit of children in foreign lands.

Toots wears the white-ribbon badge of this Loyal Temperance Legion, a band of children organized in every English-speaking country, who pledge themselves to work for temperance and purity, and to be kind to everything that feels. Hundreds of thousands of children in this strong legion clasp hands, and lifting their young faces toward heaven, are saying, "We are old enough to do right in God's sight."

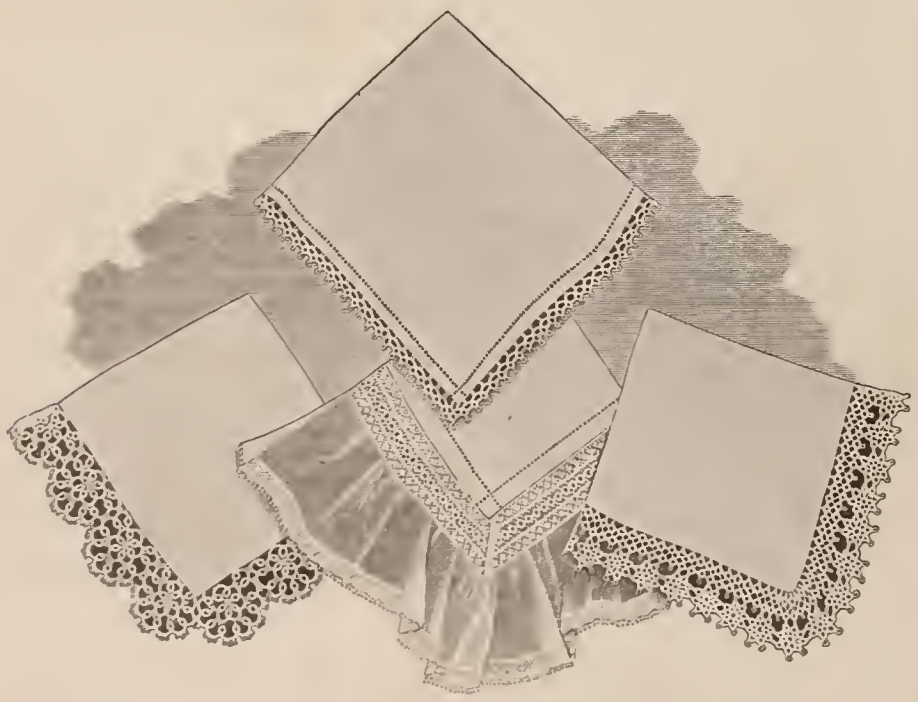
So the white ribbon is twisted all around the world, and these little children, like violets in April, are coming to make our homes glad and sweet and good.

Frances Bennett Callaway.

FINE HANDKERCHIEFS.

With the revival of many other old-time fancies has come the rage for fine hand-made handkerchiefs.

These were always a part of our mothers' and grandmothers' dainty wardrobe, but the day of cheap embroidered batiste handkerchiefs nearly consigned the dainty linen kerchief to oblivion.



The ones we illustrate are made of fine linen lawn, which comes at $1.25 and $1.50 a yard. A yard will make eight. They are hemstitched, narrow drawn-work used, and the edges trimmed with fine tatting in a number of patterns, or insertion and ruffles of footing, either plain or dotted, which has also a narrow lace run upon the edge. They are very pretty and dainty, and all the girls are busy making them for themselves or for sale. If one is handy with the needle, one can sell all one can make for one dollar or one dollar and a half, according to the work on them. One young girl of my acquaintance sells all she can make. This would be a good way for money-making at home. If you do not know how to make tatting, find some older lady who knows how, and

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can soon teach you. Some are made in pale blue and pink. The footing comes in these colors. It ranges from seven to ten cents a yard, and takes from two to three yards for a handkerchief.

If you use insertion, you will have to miter the ends to have it look well. It takes dainty sewing to make these, but they pay for the pains taken with them.

Christie Irving.

POLKA-DOT EDGING.

This edging is very pretty for pillow-cases, picture-throws, scarfs, lambrequins, etc., and after the first row is made the groups and the polka-dot, when making, are to be crocheted and joined in the center (second). 3 ch of group, and between the center (6 and 7 st of 12 tr) stitches in the polka-dot of previous row. They will also be numbered and called groups, same as 1, 2, 3, etc. And be sure to make only one group and one joined dot in each place at a time, of each row. After the first scallop is made, repeat these rows only to **, the third row to **, then 1 s c in the ninth tr st of first dot, ch 3, turn; fifth row to **, 1 s c in the fourth tr st of second dot, ch 3, 1 s c in eighth tr st, turn; seventh row to **, 1 s c between the sixth and seventh tr st of the third dot, turn. Make a chain of forty-two stitches.

First row—Make one group in the sixth st of ch (this forms a group, 1 tr, ch 3, 1 tr, ch 3, 1 tr, ch 3, 1 tr, and each group will be made in the same way), * ch 10, 1 s c in 6, 7, 8 and 9 st of 10 ch, turn work, 5 tr in the loop of 10 ch (6 tr in all, counting the stitches on 10 ch as 1 tr), miss 5 st of ch, 1 s c in next st, 6 tr in the same loop, ch 1, turn work, miss 5 st of ch, 1 group in next st, miss 5 st, * 1 group in next st; repeat from * to * once more, ch 5, 1 s c in the last stitch of foundation chain, ch 3, turn.

Second row—12 tr under 5 ch, * 1 group in center ch of group, ch 1, 1 s c in first tr st (in the loop), 12 tr in the same loop, 1 s c in the last tr st in loop of previous row (this finishes the polka-dot), ch 1, 1 group in next group; repeat from * once more, ch 1, 1 tr in the fourth st of 5 ch, ch 5, turn.

Third row—Make 3 groups, ch 10, 1 s c in 6, 7, 8 and 9 st of 10 ch, turn work, 5 tr in the loop, 1 s c in next group, 6 tr in same loop, ch 1, turn work, 2 groups, ch 2, 1 tr in the first st of 12 tr, * ch 2, miss 1 st, 1 tr in next st; repeat from * six times, ch 2, ** 1 tr in same st with last tr st, ch 3, turn.

Fourth row—3 tr under 2 ch eight times (24 tr in all), 2 groups, ch 1, 1 s c in first tr st in the loop, 12 tr in loop, 1 s c in last tr st in loop, ch 1, 3 groups, ch 1, 1 tr in 4 st of 5 ch, ch 5, turn.

Fifth row—* 1 group, ch 10, 1 s c in 6, 7, 8 and 9 st of 10 ch, turn work, 5 tr in the loop, 1 s c in next group, 6 tr in same loop, ch 1, turn work, 1 group; repeat from * once more; * for the scallop, 1 tr, ch 3 and 1 tr in the first st of 3 tr, miss 2 st; repeat from * nine times, ** ch 3, turn.

Ella McCowen.

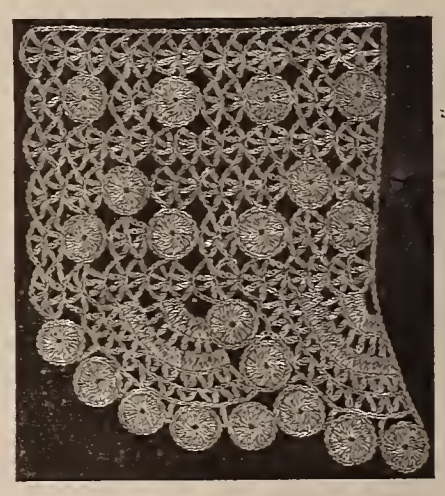
ABOUT THE HOUSEHOLD.

Gasolene has become to us one of the recognized and appreciated labor-savers of the household. It is inexpensive and effective and does rapid work. It is explosive to a dangerous degree, and every precaution is taken against possible accidents from use of it.

A pint bottle is kept filled with gasolene, and kept in a safe and convenient place in the kitchen. Does the galvanized wash-dish become "gummed" about the inner surface, as galvanized iron articles are so apt to become, a cloth well dampened with gasolene and brought to bear makes it almost instantly clean. Has the clothes-wringer become discolored or very dirty, as it is sure to be after wringing colored clothes and strips of carpets, the rollers are soon cleaned and whitened again by a vigorous application of a gasolene-saturated cloth. It is effectual where soap and hot water scarce make an impression. The tin tea-kettle polished with the gasolene cloth brightens and shines.

When the work is finished that is required of the gasolene cloth, it is dropped into a tin can with tight-fitting cover. When wishing to start a fire, the cloth is dropped into the empty stove, a lighted match thrown on, and therein is found an excellent fire-starter. Never use gasolene about a fire except as mentioned—the cloth that has been used for cleaning. In its fluid state nothing could be more explosive or dangerous. As fuel for the properly constructed gasolene-stoves it is safe, and a valuable helper to every housewife who has learned its value, and who has been enabled to purchase the comfort-giving summer stove.

Table-salt is usually bought by the quarter's worth, making several sacks of it to lie about gathering dampness. Always annoying to the housekeeper is the salt-shaker of damp salt. To keep it always dry, place a quantity in dripping-pans in



the oven, dry thoroughly, crush, and put through a sieve, and to every small sack of salt add three tablespoonfuls of corn-starch. Mix well, and fill salt-bottles and the kitchen salt-shaker, and to the last it will be found dry and powdery.

Tarnished and lusterless silverware is objectionable, and prepared materials for polishing usually quite expensive. Preparations of less expensive kinds are known in some instances, and used. If you have no such home-mixed or prepared article, try the following:

Of Spanish whiting purchase six pounds, English castile soap, one fourth of a pound; aqua ammonia, one and one half ounces; olive-oil, one ounce, and sassafras-oil, one ounce. With this one pint of soft water is necessary for mixing. Dissolve the soap in a part of the water, and add the olive and sassafras oils, and then the ammonia and half the whiting. No other so effectual way of mixing can be employed as that of mixing with the hands. Add remainder of whiting and water, a little at a time, until all is put in. And it takes patient work to mix this dough. But it will eventually mix, and must be kneaded, made out into cakes and thoroughly dried. Any fractional part of the above recipe may be called for, for the full recipe makes many cakes, and it will last a great while if not disposed of to one's friends. To use, powder a small portion of a cake, and with a soft, damp flannel cloth rub the surface over with the powder. When perfectly dry, rub it off with a clean, soft piece of cloth, and the silver will be clean and brilliant. Additional luster may be given by polishing with a chamois-skin.

The finest of whiting alone makes an excellent silver-polish. It is applied with a cloth dampened with alcohol, and when dry treated as above described. Five

cents' worth of whiting goes a great ways, and a dime's worth of alcohol will last a year for several pieces of tableware.

An unexcelled furuiture-polish is made by a thorough mixiug of equal parts of olive-oil and good sharp viuegar. It should stand three days before usiug, and be frequently well sbaken in the bottle duriug this time. It is especially effective when used on oak and other ligbt-colored woods, but works admirably upon walnut and others of the dark woods. Apply with a soft flannel cloth, and rub briskly with a large cloth, also of flanuel. The more thorough the polishing process the handsomer grows the article of furniture to which it is applied. Under the magic touch of this fluid for furniture, scratcbes and mars disappear, and the entire surface of wood takes on the look of new. Do the work well, and be thus amply repaid. ELLA HOUGHTON.

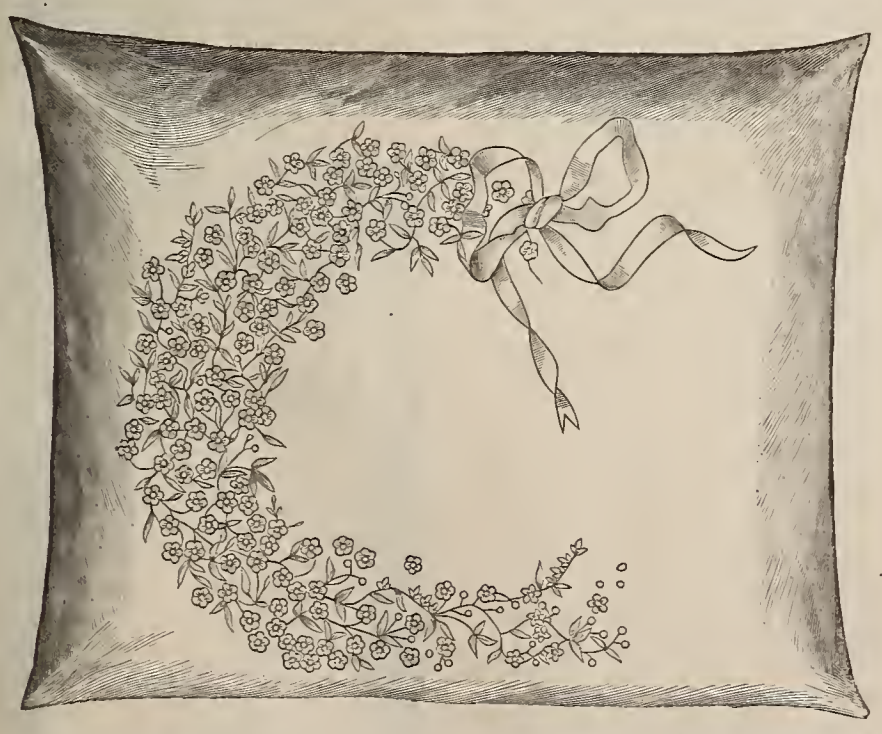
LUXURIES FOR BABY.

All must have the necessities, and a great many can have more than that, and a few can have luxnries. With a fine baby-carriage there are little appointments that can go with it that will make it all the more dainty. Some of these are a half dozen beautifully embroidered pillow-cases for the carriage-pillow. The one we illustrate is of forget-me-nots worked in baby-blue filo. Other designs in blue flowers

can be carried out in the others, such as bluebells, eyebrights and any tiny blue flowers.

If the wash-silks are used, there is no danger of the colors fading. It can be worked on handkerchief linen of a firm quality, and the pillow must be covered with blue silk to carry out the idea. Buttonholes can be made in both sides of each end, and the pillow kept in by bows of pale blue ribbon.

A forget-me-not design can be worked on a piece of double heavy linen to answer as a carriage-strap. Ribbons should be used for fastening it.



With this outfit a robe of pale blue eiderdown, covered with fish-net lace, is a pretty covering. BELLE KING.

NEW WAYS OF SERVING THE COMMON TUBER.

Although the potato is the standard vegetable, and is expected to take its place at the family table at least three hundred and sixty-five times a year, mayhap nearly thrice that many times, like many an old faithful friend we are apt to forget or overlook its possibilities, and fall into the way of treating it with scant courtesy; that is, serving it but one or two different ways, day after day, week in and week out.

POTATO SOUP.—Place one half pound of veal, a chopped head of celery and a minced onion in a stew-pan, with one quart of water, simmer gently for twenty minutes; add one pint of sliced potatoes, simmer for two hours, rub through a sieve, return to the fire, add one pint of cream and one tablespoonful of butter; let boil up, and serve with crisp crackers.

POTATO CHOWDER.—Cut enough salt-pork into bits to make perhaps a scant teacupful. Mince an onion, place it and the pork in a saucepan, with a spoonful of butter, and fry until the onion is a delicate brown; add three large potatoes evenly sliced, cover with boiling water, and cook until tender; add one pint of hot milk, season with salt, pepper and celery salt, and add a scant tablespoonful of flour smoothed in a little cold milk. Place toasted crackers or bits of toasted bread in the tureen, add the chowder, and serve hot. If the bread is very dry before being toasted, it is preferable to use crackers.

CELLEROLE OF POTATOES is made by mashing with the potatoes, and beating very light, salt, pepper, butter, cream and the well-beaten yolk of an egg. Heap on a platter, with a hollow in the center filled with finely minced meat, fish or oysters cooked in a thick cream.

POTATOES ITALIA are prepared by beating very hot mashed potatoes to a foam, with two tablespoonfuls of cream, two of grated cheese, one spoonful of melted butter and the beaten yolks of two eggs; lastly stir in the whites, which are stiffly beaten. Pile on a platter, sprinkle grated cheese over it, and brown in a quick oven.

CLARA S. EVARTS.

MEMBRANOUS CROUP AND DIPHTHERIA.

The experiments and examinations made by Drs. Biggs and Park, the bacteriologists of the New York City board of health, have established beyond doubt the close "family" relation of these two formidable diseases. The same bacteria are found doing their evil work in both, the difference consisting in the locality in the person where it is going on. In small children it fastens upon the larynx—the organ where the voice is formed and whence it is produced—in the adult it attacks the tonsils; but in both the same rapidly multiplying and destructive bacillus is at work, and in both the poison generated by the bacillus enters the blood. Many cases might be cited to prove the above assertion, but one "near home" will be quoted here:

In a small village near the city of Columbus two children died of membranous croup. The local physicians said it was not diphtheria, and not contagious. A woman nursed one of these children, and it died in her arms. Her boy, a lad of nine, went with his mother to see the child. The lad was sick for two weeks with sore throat, which was not considered diphtheria; but about the time of his recovery his mother developed an exceedingly severe case of diphtheria. The marked paralysis in her case left no doubt of the nature of the disease. If one asks why the boy had only membranous croup while the mother had the severer disease, there are two answers that can be made: We know that croup is distinctly a disease of childhood, that is, is more apt to be seen in the child than in the adult, and in the comparatively severe symptoms of the mother we see the different action of the same germs on a boy who was healthy, and whose blood had the disease-resisting power known to exist in the vigorous, while the mother, who had nursed another child in addition to the care of her own family, was physiologically below par—her blood was not up to the high standard of vitality that marks perfect health, so the microbes could "get in their work" more effectually.

The statement of the New York bacteriologists is founded on thousands of examinations. Happily the great majority of physicians who have actually used the anti-toxin shows its great value, especially when used within the first twenty-four hours after the attack; and it is now made in such quantities and in so many localities as to be within reach of all physicians who mean to do their whole duty by their patients. The Massachusetts board of health considers hospitals good depots of distribution, and deposits large supplies of it—free to the poor, to be paid for by the rich, as it is a costly remedy. But the idea is that the intervening time in which to send to Boston makes a fatal delay, and as there are hospitals in nearly every county of the state, the practical putting it within easy reach is a wise preventive measure. The only condition they make to the poor is that the doctor shall send them an account of its action.

MRS. H. M. PLUNKETT.

A FEW WORDS.

Turn your heads one moment, little ladies, and listen to a bit of advice from a woman who was once as young as any of you, and who would have thanked anybody for the same advice to her at your age. If you have a voice, whether remarkable for strength or sweetness, or neither, strive to cultivate it. A woman who cannot sing is as a flower without perfume, a butterfly without wings. If you do not want to feel at times like a little graven image set on a pedestal by itself, why, learn to sing. I do not mean you must sing scales and trills by the hour; these notions have long since left me. Learn operatic wonders if you like, only be sure to learn them correctly; but they are easily forgotten. Learn a hundred or more beautiful little ballads. Not the kind that takes the town by storm and dies out in one season, but real songs that never grow old, whose words are poetry and whose tunes are melody.

Vocal music has an important place in our festivals and social functions. What would Decoration day and Fourth of July be without "America," "Hail Columbia" and other grand old songs?

The years are coming when you will find your joy and love, your modesty and pride blend more sweetly as you sing "Annie Laurie" or some such song than in executing the most wonderful gymnastics with your voice.

In sorrow, too, some song with all the sweet memories of the past clinging about its tender notes will call forth tears to ease an aching heart.

My idea is that you should learn instrumental music if you love it and have time for it. Unless you have some talent, it is a task to learn to perform brilliantly. If you have the time and the money, I suppose you can learn, but there is more enjoyment to yourself in vocal music. So, girls, while yet there is time learn to sing; the benefit lies in the elevation of your own spirit, and in fitting you for a spiritual peace and happiness hereafter that "passeth all understanding."

AUGUSTA MILLER.

DESTROYING CHICKEN-LICE.

Having found a number of good recipes in your valuable paper, I will send one for chicken mites and lice: For an ordinary-sized roost take one half cupful of sulphur, one half cupful of kerosene, one half cupful of lard; thoroughly mix, and spread on the perches just before the chickens go to roost. If very warm weather, stir in enough flour to keep from running. For mites in the nests put two inches of road-dust under the straw. I have used this for ten years, and it never failed me. MRS. C. B. WALKER.

"The extremely moderate price for FARM AND FIRESIDE and WOMAN'S HOME COMPANION induces many to order when at a higher price the agent could not succeed." So writes Mr. James Symington, of St. Clair county, Michigan. "I intend to get my other affairs straightened up at once and devote myself entirely to literary agency, and I have never seen any other agency combining the same advantages as Peerless Atlas and a year's subscription for FARM AND FIRESIDE or WOMAN'S HOME COMPANION for one dollar."

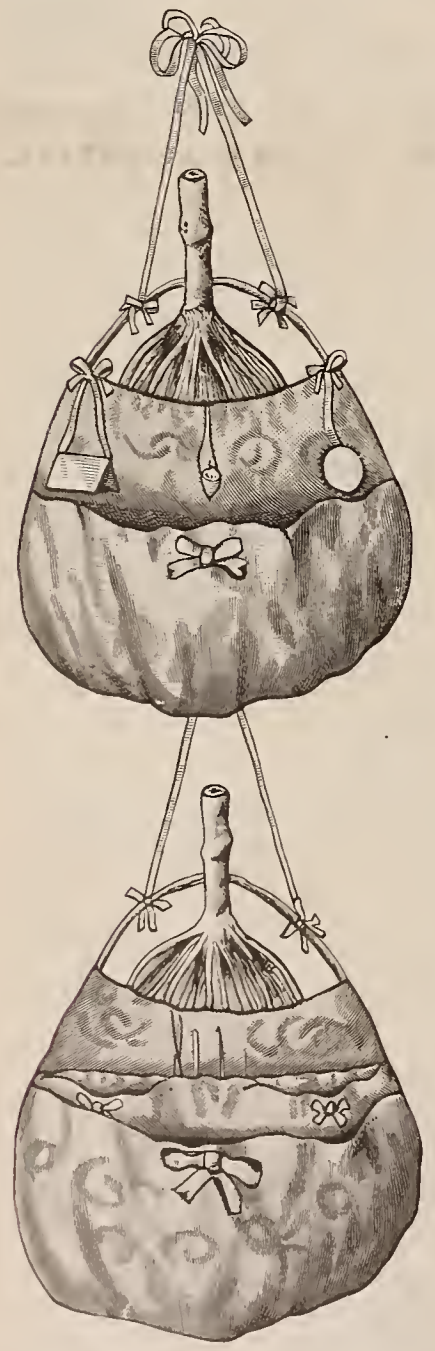
Our Household.

HOME TOPICS.

Water-cress Salad.—This is one of the most appetizing salads for early spring use. Sort and wash the cress well, put it into the salad-bowl in which it is to be served, and set it in a cool place. Make a dressing of a well-beaten egg, one half teaspoonful each of sugar and salt, one half teacupful of vinegar and one tablespoonful of melted butter; heat all together in a double boiler, stirring it constantly until it thickens. When the dressing is cold, and a few minutes before serving, pour it over the cress, and garnish with slices of hard-boiled eggs.

A Kitchen Apron.—If there is anything the good housewife particularly desires it is to have a good supply of kitchen aprons. They should be made long enough to come quite to the lower edge of the skirt, and wide enough to reach well around over the hips. There should also be a bib, which will cover the front of the dress-waist. A useful addition to this apron is a pair of full sleeves. These should be long enough to reach above the elbows, with an elastic in the top and a band to button around the waist. With such an apron and sleeves the dress will be kept clean, no matter what the work, and as soon as they are slipped off the wearer is ready to meet expected or unexpected guests.

Troublesome Feet.—Many weary housekeepers well know what troublesome feet are. Sometimes the trouble is partly caused by ill-fitting shoes, but more often by constant trudging. The woman who is obliged to be on her feet the greater part of the time ought to have the most comfortable shoes possible. Have them made of soft leather with good, broad, flexible soles and low heels. But the feet will often suffer when even the best of



shoes are worn. In that case take a warm foot-bath at night, and after it rub the feet well with carbolated vaseline. Rub it well into the skin, especially on the soles and over the joints. Persistence in this treatment will surely bring relief. I know, for I have tried it.

Controlling the Temper.—Temper is a good thing when kept under the control of the reason and seldom exhibited. A person without a temper would be of little worth in the world, but the man who has a temper kept under perfect control is capable of becoming a leader among men. It is an old saying that he who would govern others must first learn to govern himself. No one needs this absolute self-control more than the parent. It is not only the bad example of one who gives way to temper which injures the child, but he will either lose all spirit himself and become an abject slave or he will become a hypocrite and a dissembler. I believe more children have been made untruthful and deceitful through fear of those in authority over them than in any other way.

A child should be trained from infancy to be frank, truthful and in a measure independent and self-reliant. They should be early left to decide questions of minor importance themselves, and profit or suffer by their own decisions. If everything is planned and marked out for them they will always be dependent on some other person's opinion. We sometimes hear a person say of a child, "He has such a strong will; it must be broken."

No, no: do not seek to break the will of any child, only to train it in such a way that its will shall be subservient to its reason.

Maida McL.

KNITTED HOLDER.

This pretty holder is knit in imitation of an ear of corn. Use very coarse steel needles and two shades of yellow Germantown yarn. Cast on 45 stitches, and then work with two threads as follows:

Knit 9 rows plain.

First row—Knit 5 with one thread, take the other thread and draw it tightly across the back of the knitted stitches to produce a curved effect, like a kernel of corn; knit the next 5 with the second thread, and draw them up with the first thread; use these two threads alternately in this way across the row.

Second row—Knit back, taking first the thread which was used in making the next to the last kernel: knit as in preceding row, except that you must keep the threads on the wrong side of the work, which in this row is next to you. The secret of success in knitting this holder is the drawing of the threads to form the kernels. They must be drawn tightly and not allowed to slip.

Knit back and forth in this manner until the holder is 25 kernels long, sew or knit the plain ends together. Draw the upper end in and finish with four pointed ends of light green satin ribbon made into a sort of cap; or the small end can have a fringe of green silk while the upper end can be finished with a crochet ornament of the same silk made as follows:

Pick up a loop through the end kernel, make a chain of 3 stitches, 1 double stitch (very loose) in each of the remaining 8 kernels, 3 chain, 2 doubles between every double underneath, and fasten to the chain of five.

M. E. S.

SOURCE AND USES OF BORAX.

Borax is a white or gray crystalline salt. It occurs native in certain mineral springs here in Colorado as well as in various other parts of the world.

It first appears to have been used in Tibet, where it was found in a lake; and so abundant was it, and so manifold its uses, that it obtained ready market all over Europe under the name of "tincal." A large per cent of it at the present time is made from the boric acid of hot springs in Tuscany.

It is largely used in the arts and sciences, but that does not concern us as much as the practical uses to which we housekeepers can put it.

Physicians tell us that boracic acid has many uses in medicine, and although we are not doctors, there are many times when we can save a doctor's bill by knowing how to use borax in its powdered form.

For sore throat or for catarrh in the head there is nothing better than the following: Dissolve one half teaspoonful of borax and one full teaspoonful of salt in one pint of water; use it hot as a gargle.

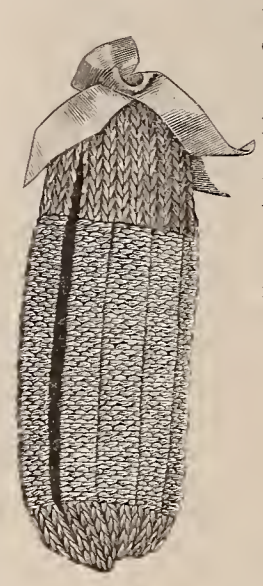
One half teaspoonful of the acid stirred well into two quarts of milk will keep it from souring, and is perfectly harmless.

Borax is a splendid disinfectant. It will relieve an acid stomach quickly. When a small quantity is dissolved in baby's bath-water the delicate skin is not nearly so apt to chafe.

It is excellent for burns, scalds or cuts. In some hospitals almost all kinds of wounds are bathed in a solution of it.

In the kitchen and pantry much labor can be saved by the use of this same powdered borax. Its cleansing properties are remarkable.

It is in itself a soap, and is soluble in twice its bulk of boiling water. It can be utilized wherever ordinary soap can, and is much more efficacious. For cleansing sinks, sewer-pipes, etc., nothing can be better.



For washing flannels it is absolutely indispensable.

If a little is dissolved in the water that baby's oil-cloth pads are washed in, all disagreeable odor will disappear.

Borax will purify a ham that is slightly mildewed. Dissolve one tablespoonful in one gallon of tepid water, then scrub the ham with a soft brush in this water.

Borax being found in India, the Hindus make use of it for the purpose of keeping their gods clean.

Ella Bartlett Simmons.

A SEWING CATCH-ALL.

A very dainty and useful catch-all for the lover of fine sewing or crochet work is here pictured.

It can be fashioned with little trouble, and the expense can be made as light or as heavy as desired. Nearly every house which contains one of the old-fashioned "rag-bags" can produce almost all the necessary material for its construction.

Fancy-figured cretonne is here shown, and answers the purpose very nicely, giving almost as pretty an effect as figured silk.

About one and one half yards of cretonne, five or six yards of baby ribbon (or a little wider if preferred) and two ordinary round fans are required.

Both sides of the fan are here shown, with the trimmings, though the latter may be omitted on one side of the fan if desired, leaving that side plain.

Cut two pieces of cretonne a little larger than the "fan" or body part of the fan: one of these pieces tack neatly to one side of the fan.

Cut another piece of cretonne about two thirds the length of the first piece and about one third again as wide; this is to form the two wide pockets for the spools of thread, etc., and the half dozen straight, narrow pockets for the crochet-needles. This piece is first basted, and then sewed into position on the remaining one of the two pieces of cretonne already cut, which piece is then tacked on the uncovered side of the fan, thus completely covering the body part of the fan.

Cut two more pieces of cretonne the shape of the rounded half of the fan, only one and one half times as large, forming a sort of semicircle. Put a one-inch hem in the straight top of each; gather the curved edges, which must be sewed neatly to each lower half of the fan. Put an extra strong running or gathering string in each straight top, which draw as tightly or as loosely as your judgment would suggest.

Make your little thimble-holder out of a piece of shirred cretonne, shaped round like a bag.

Your needle-book is made of two covered pieces of pasteboard for shape, with pinked flannel leaves between.

The pin-case is made of two round pieces of pasteboard, with a layer of cotton between, and then covered on each outer side with cretonne, the pins to be stuck each time between the pasteboards into the soft cotton.

Ornament your catch-all with ribbon bows and a long loop by which it can be hung up, or otherwise if preferred.

In a catch-all of this character there is considerable chance for elaboration. Fewer compartments may be attached; other conveniences, such as emery-bag, wax, silk-winder, etc., may be added to the above or used in place of them.

The idea of the ornamented fan is not a new one, as from time immemorial almost it has been worked upon for various purposes, but it still continues to be a great favorite in the home.

Emma Louise Hauck.

Our Sunday Afternoon.

PRAYER.

My God! is any hour so sweet,
From blush of morn to evening star,
As that which calls me to thy feet—
The hour of prayer?

Blest is that tranquil hour of morn,
And blest that hour of solemn eve,
When on the wings of prayer upborne
The world I leave!

For then a day spring shines on me
Brighter than morn's ethereal glow,
And richer dews descend from thee
Than earth can know.

—Charlotte Elliot.

THE BRAVEST THING.

THE eminent and popular writer, Colonel T. W. Higginson, of Boston, was recently asked regarding the bravest thing done within his knowledge in the civil war. He wrote:

"On mature reflection I should award the palm to something done by a young assistant surgeon of mine, not quite twenty-one years old, Dr. Thomas T. Miner, then at Hartford, Conn., at an exceedingly convivial supper party of officers, to which a few of my younger subalterns had been invited.

"They sat late, and the fun grew fast and furious, the songs sung becoming gradually of that class which Thackeray's Colonel Newcomb did not approve. Some of the guests tried to get away, but could not; and those who attempted it were required to furnish in each case a song, a story or a toast. Miner was called upon for his share, and there was a little hush as he rose up. He had a singularly boyish face, and his manliness of character was known to all. He said, 'Gentlemen, I cannot give you a song or a story, but I will offer a toast, which I will drink in water, and you shall drink as you please. That toast is, "Our mothers."

"Of course, an atom of priggishness or self-consciousness would have spoiled the whole suggestion. No such quality was visible; the shot told; the party quieted down from that moment and soon broke up. The next morning no less than three officers from different regiments rode out to my camp, all men older than Dr. Miner and of higher rank, to thank him for the simplicity and courage of his rebuke. It was from them I first learned what had happened. Any one who has had much to do with young men will admit, I think, that it cost more courage to do what he did than to ride up to the cannon's mouth."
—The New Crusade.

THE ONLY REMEDY.

On an outermost bough of a cedar which projects over the sea and grows from a crevice in an inaccessible cliff a king-bird built her nest and brought her three nestlings to maturity. The mother led them up from the nest to the edge of the cliff, only to find a cat ready to snatch her brood. She fought as only a mother king-bird can fight, but she lost them all but one. The man who saw the care of the mother and the disaster to the family bethought him of the temptations which wait for the nestlings of his own home. And when he named over the dangers from which he had most to fear, lo! the grog-shop led all the rest. For that traffic is bold when boldness pays, and as silent and as secret as a cat when this will best win. And there is no remedy but to kill the cat.—New York Christian Advocate.

KEEPING YOUR OWN COUNSEL.

It is an old saying among school-boys and college men that the fellow who keeps his mouth shut is always the big man: that he who deliberately says little quickly wins for himself the name for wisdom. Such statements are quite as true in the outer world to a certain degree as they are in college and school. The pith of the matter is that if in any way you arrive at a position of any importance, the less you talk to every one the more credit you receive for care, for thoughtfulness, for sound, well-considered opinions. Here is nothing which urges a boy to have no opinions or to never express them; and, in fact, this "wise silence" at school and college as often, perhaps, covers up an empty mind as it does the wisdom of Solomon. There is, however, a good rule to follow, which may be given briefly, to the effect that it is well to say little until you have thoroughly made up your mind, and then not to hesitate in your statements. The temptation of the average man is to express some opinion at once, but if that is changed later, the full force of the final opinion is lost.

Let others do the wrangling. Your opinion will have all the more influence if you come out strong with it at the close of the discussion, when not only are the others considerably in doubt as to what they do want, but you have also had the advantage of hearing many sides of the case.

That is to say that in your daily behavior toward the others in school it is well to keep your "talk" in reserve. It is a habit easily acquired, and one that in the end works both ways. It adds both to the value of your advice, because the advice is better considered, and it gives the advice an added value so far as others are concerned, because when you only say a little, that little has the more consideration.—Harper's Round Table.

OPTIMISTIC PRISONERS.

Some of the best things ever written were produced in prison. It was while a prisoner at Rome that Paul wrote his epistles to the Colossians, to Philemon, to the Ephesians and to the Philippians. Some of the best things Paul wrote were written while bound to the soldier that kept him. Some of the best things in Christian literature since Paul's day have been written under similar circumstances. What some one has called "the prison literature of the church" is full of the spirit of triumph. Savonarola, whose name makes Florence famous, wrote his matchless commentaries on the thirty-first and fifty-first Psalms while in prison. It was while a prisoner in the Tower of London that Francis Baker wrote the hymn beginning, "Jerusalem, my happy home." Most of the letters of Samuel Rutherford, unique for their unction and holy rapture, were written from Aberdeen jail. George Wither, the Puritan poet, wrote many of his best pieces when in prison. James Montgomery composed many of the hymns which lead the devotions of the church to this day when confined in York castle. John Bunyan wrote "Pilgrim's Progress" in Bedford jail. William Tyndall, from Vilvorde jail; Anna Askew, from Smithfield; and Judson, from the Burmese prison, have written some of the most comforting and inspiring messages in all Christian literature.

BUILDING A HOLY LIFE.

A holy life is made up of a number of good things; little words, not eloquent speeches or sermons; little deeds, not miracles of battles, nor one great heroic act of mighty martyrdom, make up the true Christian life. The little constant sunbeam, not the lightning, the waters of Siloam that "so softly" move in the meek mission of refreshment, not the "waters of the river, great and many," rushing down in noisy torrents, are the true symbols of a holy life. The avoidance of little evils, little sins, little inconsistencies, little weaknesses, little follies, indiscretions and imprudence, little foibles, little indulgences of the flesh; the avoidance of such little things as these go to make up at least the negative beauty of a holy life.—Bonar.

MAKE YOUR MARK.

He who makes up his mind that he came into the world to do something, and then goes to work to do it, will be of service to mankind. He is the one who will make his mark among men. It may be a humble mark, but it will be well worth preserving. He will not be forgotten when his life is ended.—Forward.

A SELF-SUPPORTING WIDOW.

About a year ago my husband died and left me in rather destitute circumstances. Just after our marriage his health failed, and for that reason he was unable to lay by for a rainy day. A friend of mine from Illinois called on me and told me how much money she was making by selling the Iron City Dish Washer, and said she thought I could at least make a good living by doing the same. I wrote the Iron City Dish Washer Co., Dep't H 6, Sta. A, Pittsburg, Pa., for a sample. Since then I have been making a splendid living for my children and myself, and still attend to my household duties. Last month I cleared over $200, and am delighted with my success. The Dish Washer works like a charm, and the distasteful work of washing dishes can be done in a few moments without soiling the hands a particle. Any one who sees it work wants one at once, so they are no trouble to sell. I would advise any one out of employment to write for full particulars, as they started me in business and will do the same for others. MRS. J. C. R.

GRACE FOR ALL.

Professing Christians sometimes attribute their spiritual poverty to nature. One is penurious, another is passionate, another cowardly; and they say it is because they have been less generously endowed by nature than others, and cannot help it. It would be quite as reasonable for one whose father's table, to which he has free access, is daily loaded with wholesome food, to go about the streets with gaunt, bony fingers and ghastly countenance, starving to death, and saying, "I cannot help it." God is able to make a penurious man liberal, generous and benevolent, or a cruel man as gentle as a lamb, or a passionate man as calm and serene as the bosom of the mountain lake when the winds are hushed to rest. He is able to make all grace abound toward all his children.—Christian Advocate.

"SHALL HE FIND FAITH?"

The prevalent tone of criticism and skepticism which is found both in seminary and saloon, and which denies miracles, contradicts revelation, despises prophecy, and subverts faith, and which gravitates toward the lower depths of infidelity, atheism, anarchy and nihilism, gives painful evidence that we have entered upon an age of unbelief, and warns us to hold fast the profession of our faith without wavering, and cast not away our confidence which hath great recompense of reward. "For yet a little while and he that shall come will come and will not tarry;" and now as then, "the just shall live by faith."—Christian.

GET RIGHT AT NIGHT.

"Let not the sun go down upon your wrath." Let us instantly crush the beginnings of envy, jealousy and hate in our hearts, never allowing the day to close on a bitter feeling. The hour of evening prayer, when we bow at God's feet, should always be a time for getting right everything that may have gone wrong with us during the day. Then every injury should be forgiven when we pray, "Forgive us, as we forgive." Then every spark of envy or jealousy or anger should be quenched, and the love of Christ should be allowed to flood our hearts. We should never allow the sun to go down on our anger.

Our Miscellany.

NOT IMPRESSED.

President Kruger, of the Transvaal, is a man not easily impressed by rank, title or wordly splendor of any kind, and not in the least ashamed of his own plain origin and rough upbringing. Sir James Sivewright, upon whom once devolved the duty of taking an important and rather pompous English duke to call upon the president, told an American about the conversation which ensued. It was, of conrse, carried on through an interpreter, and ran about like this:

Duke—"Tell the president that I am the Duke of ——, and have come to pay my respects to him."

Kruger gives a grunt signifying welcome.

Duke (after a long pause)—"Ah! tell him that I am a member of the English Parliament."

Kruger gives another grunt, and puffs his pipe.

Duke (after a still longer pause)—"And—you might tell him that I am—er—a member of the House of Lords—a lord—you know."

Kruger puffs as before, and nods his head, with another grunt.

Duke (after a still more awkward pause, during which his grace appears to have entertained doubts as to whether he had as yet been sufficiently identified)—"Er—it might interest the president to know that I was a viceroy."

Kruger—"Eh! What's that—a viceroy?"

Duke—"Oh, a viceroy—that is a sort of a king, you know."

Kruger continued puffing in silence for some moments, obviously weary of this form of conversation. Then, turning to the interpreter, he said, gruffly, "Tell the Englishman that I was a cattle-herder."

This closed the interview.—Youth's Companion.

PATRIOTIC AMERICAN FARMERS.

The patriotism of the American tiller of the soil has been well illustrated by the fact that their recent inquiries for "Our Heaven-born Banner," the magnificent picture issued in special recognition of the heroes of the late war, has made it necessary for the "Big Four Route" to produce a seventh edition of 35,000 copies to supply the demand. This beautiful patriotic picture illustrates Drake's classic ode to the American flag, and it is well worthy a place on the wall of the finest American home. The C. C., C. & St. L. Railway (Big Four Route), with its more than 2,300 miles of track, will carry thousands of the Boys in Blue to the G. A. R. Convention in Buffalo, N. Y., next August, and they want every reader of Farm and Fireside to have a copy of this exquisite picture before June 1st. They will send it to you for only 10 cents to cover the bare cost of packing and postage, if you mention this paper. Address E. O. McCormick, Gen. Pass. Traffic Mgr. "Big Four Route," Cincinnati, Ohio.

SAND-CRANES PLAYING LEAP-FROG.

S. W. Cunningham describes in "Forest and Stream" the curious antics of some sand-hill cranes he saw on the Des Moines river in Boone county, Iowa. He was riding along in a buggy one day, when his attention was attracted by the actions of a group of about a dozen of the cranes on a bare spot near a small lake that may have been cleared for the purpose by the birds. The birds were playing a game similar to leap-frog. The leaping was preceded by a short run and flapping of wings. The birds, naturally and by training exceedingly shy, paid no attention to the observer, though he passed within two hundred yards of them in plain view.

During May the Nickel Plate Road will inaugurate an improved passenger train schedule of three solid through trains daily. In addition to the through vestibuled sleeping car service between Chicago, Buffalo, New York and Boston via the West Shore and Fitchburg Railroads, a daily New York Sleeper will be placed in service via the D., L. & W. R. R.

DARE TO DO YOUR DUTY.

Neither let us be slandered from our duty by false accusations against us, nor frightened from it by menaces of destruction to the government, nor of dungeons to ourselves. Let us have faith that right makes might, and in that faith let us to the end dare to do our duty as we understand it.—Abraham Lincoln.

NEW PLANT THAT CURES ASTHMA.—FREE.

The New African Kola plant is Nature's botanic cure for Asthma in every form. Mr. A. C. Lewis, editor of the *Farmer's Magazine*, writes that it cured him when he could not lie down at night for fear of choking. Rev. J. L. Coombs, of Martinsburg, West Va., testifies to his entire cure after thirty years' suffering, and many others give similar testimony. Its cures are really wonderful. If you are a sufferer, send to the Kola Importing Co., 1164 Broadway, New York, who will send you a large case by mail free, to prove its power. It costs you nothing, and you should surely try it.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Hay-presses.—H. C. M., Gouverneur, N. Y., asks for the addresses of manufacturers of hay-presses. Who will furnish them?

Remedy for Cucumber-beetle.—C. C. A., Burkittsville, Md. The best preventive and remedy is tobacco-dust or a mixture of it with bone-meal—and plenty of it—on every hill.

Bushel Boxes for Potatoes.—G. S., Tipton, Mo. To hold a heaping bushel of potatoes make the boxes 10½ by 11 by 22 inches in size. Ends may be solid and bottom and sides slatted.

Paint for Floors.—C. B. H., Clarence, N. Y. For a good, cheap paint for floors take equal parts of linseed-oil and Japan varnish, and add yellow ocher until the mixture is of proper consistency. Before applying fill up the cracks with a mixture of putty and lithrage. Use sandpaper after the second coat.

Tallow Candles—Mrs. S., Bonner's Ferry, Idaho, writes: "What will harden tallow for making candles?"

REPLY:—Mix a little beeswax with the melted tallow. Use small wicks that have previously been dipped into turpentine and dried, to improve the clearness of the light.

Potatoes After Potatoes.—J. A. S., Reynoldsville, Pa., writes: "Would it be safe to plant potatoes on the same land where they grew and blighted last year?"

REPLY BY T. GREINER:—I would prefer to plant on another (new) piece of ground. The blight may stay off, but it is more liable to come on again if the season is favorable for it. Rotation is always a good thing. If I can have strictly new ground I feel safest.

Butter-fat in Milk.—A. A. P., Amboy, Wash., writes: "Do different feeds make any difference in the quantity of cream in milk or only affect the quantity of milk? In other words, does richer feed make richer milk?"

REPLY:—Different kinds and qualities of feed affect the quantity of milk, not its quality. In other words, you cannot feed butter-fat into milk.

Dry Rot in Cabbages.—A. M. S., Big Sandy, Tenn., writes: "Is there anything to prevent dry rot in cabbage? I had such fine cabbage last year, and it commenced to rot at the lower leaves, the latter dropping off, and at last heads and all dropped—only the stems remained."

REPLY BY T. GREINER:—I would look for some trouble at the root—maggots, etc., or perhaps club-root. If not this, perhaps the cause was exhaustion of the available plant-food in the soil.

Navy-beans in Tennessee—Mrs. M. McH., Lofton, Tenn., writes: "Will the northern navy-bean grow here in Tennessee? Are they a bush or pole bean? What kind of soil is required, and how should they be planted?"

REPLY BY T. GREINER:—I see no reason why the navy-bean could not be grown there as well as elsewhere. Try it. Use any ordinary corn-land (warm, dry, medium fertile), and plant in rows say two and one half or three feet apart, leaving one plant every six or eight inches in the row. The navy is a bush-bean, and should be cultivated and harvested like any other field-bean.

Raising Celery.—Mrs. E. M. M., Vermont, and Mrs. R. D. P., Montana, ask for full directions for raising celery from start to finish, and whether it is now too late to sow seed.

REPLY BY T. GREINER:—It is rather late now for sowing seed, even of the late crop. But if on very rich soil, and season be favorable, you can yet raise good plants to set out in July. Make the seed-bed very fine, and sow seed of White Plume or Giant Pascal in shallow drills, drills to be one foot apart. Cover lightly, but firm well. Keep ground moist and well cultivated until plants are large enough for transplanting. For earliest crop I sow White Plume, etc., in flats in greenhouse in February, and transplant to cold-frame in April, then to open ground in latter part of May. In next issue I will try to give more information on setting the plants and managing the crop up to maturity.

Japanese Millet—Japanese Buckwheat—Jerusalem Corn—Sunflowers.—T. G. S., North Weare, N. H. Japanese millet is very much like common barn-yard grass. Would not advise you to sow it until it has been further tested by the experiment stations. It is said that when thinly sown in rows about a foot apart it will yield from fifty to ninety bushels of seed to the acre.——Sow the Japanese buckwheat broadcast about the middle of June. The yield varies with soil and season. It is said to be much superior to the common kind.——Jerusalem corn is better suited to hot, dry climates than to that of your latitude.——Plant and cultivate sunflowers just about as you would corn. Sunflower-seed is excellent for poultry. The yield varies.——Small grains, rye, barley, oats, etc., should be drilled. A reliable fertilizer for all these is good, well-composted manure.

Feeding Young Chicks.—Mrs. W. D., Niagara county, N. Y., writes: "I wish to raise about one hundred chickens for market at the age of two months; breed, Plymouth Rock. After they are two weeks old, would it do to give them for their principal feed cooked beans and potatoes in about equal parts, mixed with a meal formed of oats and corn ground together? It is not such feed as I usually give to young chicks, but I thought it would make very cheap feed if it were suitable."

REPLY BY T. GREINER:—I would feed such a ration to young chicks very carefully and experimentally. The safest food for young chicks is granulated oats, and next whole wheat. But if I had plenty of beans or peas, corn and oats, I would have all ground together, and then bake bread or cake of the mixture. This should be allowed to get a little stale, and then be moistened with milk enough to be crumbly. If meat or meat-meal or finely cut bone could be mixed in with it, all the better.

VETERINARY.

Conducted by Dr. H. J. Detmers.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

Indigestion.—E. D. W., Weavermill, N. C. Your cow, according to your statements, died of indigestion, and perhaps of impaction of the food in the third stomach.

Aborted Twice.—C. C. A., Catskill, N. Y. A cow that has aborted twice, two years in succession, is very apt to abort again, no matter what precautions may be taken.

Swelled Leg.—C. A., Bethany, W. Va. Give your mare exercise every day, and give the swelled part of the legs mornings and evenings a good rubbing with the hand. Work, if not too severe, is beneficial.

Probably Spinal Meningitis.—J. T., Spokane Bridge, Wash. What you describe appears to be a case of spinal, or cerebro-spinal, meningitis. When this reaches you the horse has either recovered, or, what is more likely, has been dead for some time.

Lame.—C. A. O., Jeffersonville, Vermont. You say your horse is lame in one front foot, and has been by spells for a year or more, and this is all the information you give, which is insufficient to make a diagnosis. Have the horse examined by a veterinarian.

Foreign-body Pneumonia.—H. J. M., Miner, S. D. Your calf died of foreign-body pneumonia. When the same was bloated and constipated, and you drenched the same with oil, you succeeded in pouring the oil, or some of it, into the trachea, and consequently into the lungs, and thus killed your calf.

Paralysis.—E. L. D., Benton, Ill. It appears, according to your description, that the penis of your hog is paralyzed. The life of the animal can probably be saved if the paralyzed member is amputated; an operation which, of course, can be performed only by a competent veterinarian.

No Milk from Two Teats.—R. A. W., Church Hill, Ohio. In the first place, you did not allow your young cow a sufficient length of time to go dry, and now nature retaliates. Still, there is no danger that the cow will not ultimately come to milk again, unless you spoil her udder with all your useless applications, or have already done so. If a part of the udder is once spoiled, degenerated, there is no more help.

Swine-plague.—S. H. M., Bird's Eye, Ind. You give a very good description of swine-plague (so-called hog-cholera). Unfortunately the disease, especially in an advanced stage, does not yield to any treatment, for the simple reason that the morbid changes already produced cannot be repaired. Consequently, only in such cases in which the latter are not of vital importance the affected animal will survive, and will do so without any treatment beyond good care, cleanliness and separation.

Prolapsus of the Vagina—Swelling.—M. A. G., Otis, Mass. See to it that your cow, when in the stable, has a level floor—one which is not sloping backward—and tie her in such a way that she cannot step back and off the floor of her stall, and the prolapsus of the vagina will probably not reoccur, especially if you avoid feeding her sloppy and very voluminous food, particularly while she is with calf.——In regard to the swelling your information is too meager to enable me to form any idea of what it may be.

Probably Tuberculous.—J. H. R., Hammond, N. Y. According to your description it appears probable that your cow suffers from tuberculosis. If she is not yet in a dying condition and has yet sufficient vitality, the simplest way to arrive at a definite diagnosis would be to ask a veterinarian to subject the cow to the tuberculine test; which, however, will do no good, even for merely diagnostic purposes, if the cow lacks vitality or is in a dying condition, because such animals very often do not react. In such a case the diagnosis is best secured by a post-mortem examination.

Lung-worms.—J. W. P., Olive Branch, N. C. Your pigs, or, at any rate, the one of which you made a post-mortem examination, are suffering with lung-worms, Strongylus paradoxus. What has been said in FARM AND FIRESIDE of April first about lung-worms of calves applies equally well to your case, because the natural history of both kinds of worms is essentially the same. Still, the presence of the worms does not exclude the presence of other diseases—for instance, swine-plague—although these lung-worms, if present in large numbers, are abundantly able to kill a young animal—pig, calf or lamb.

Lampass.—E. P. A. L., Fairbank, Arizona. Verily, old superstitions die hard. There is no such disease as lampass. In young horses the gums always are succulent, especially if the same are in the pasture or kept on succulent food. If the gums are swollen, the swelling is only a symptom of something else; for instance, a concomitant of the cutting through of the permanent teeth, particularly the molars; of the presence of a diseased tooth or of some internal disease, such as a gastric disorder or catarrhal disease, which also causes a swelling of other mucous membranes. To burn or to cut lampass is not only quackery, but cruelty to animals.

Vitiated Appetite.—J. M. K., Brownville, N. Y. Since the vitiated appetite (for fence-hoards) of your cows has existed two years and has become a habit, the food is probably not any more at fault; at any rate, the food, which, according to your statement, your cows are now receiving cannot be accused. I therefore deem it advisable to give to each cow once a day, three days in succession, a hypodermic injection of apomorphinum hydrochloricum. The single dose for a cow is 0.2 gram, or 3 grains of apomorphin dissolved in two grams, or about one dram, of distilled water. At any rate, it is claimed that this treatment immediately effects a cure.

Possibly Swine-plague.—I. G. L., Custer, Ohio. If you desire me to make a diagnosis you must describe the symptoms of the disease and make such other statements as may have a bearing upon the case. Instead of doing that you only say that the pigs crawl out of the nest from the rest and die. It is possible that the pigs died of swine-plague, but there are a good many other possibilities; for instance, they may have found no milk in the teats.

Weakness in the Hind Quarters.—G. L., Maytown, Pa. The weakness in the hind quarters shown by your sow after pigging, and also a little later, is probably not as much of a "puzzle" as you seem to think. Its solution is not so very difficult. If you had fed your brood-sow with food richer in nitrogenous compounds, in phosphates and in lime-salts, and had allowed her more voluntary exercise, you would have had no puzzle to ask.

Grease-heel.—G. A., Detroit, Minn. Grease-heel, if not inveterate, or of too long standing, will be brought to healing in a comparatively short time if you make twice a day to all the sores a liberal application of a mixture of liquid subacetate of lead, one part, and olive-oil, three parts, keep your horse on a dry and clean floor, out of mud, manure and water, and avoid bringing water in contact with the sores. If the case is inveterate or of long standing, the treatment, of course, will have to be more complicated, and is best intrusted to a competent veterinarian.

Probably a Case of Swine-plague.—W. J. J., Greenlawn, Tenn. What you describe was probably nothing more nor less than a case of swine-plague, a disease in which the principal morbid changes are quite often confined to the lungs. The two worms, fully six inches long, which were found in the trachea, were undoubtedly ascarides, which, when the hog died, or soon after, migrated from the stomach, ascended through the esophagus and found their way into the larynx and into the trachea, where they were found. Such worms, at any rate, do not occur in the bronchi; but ascarides, finding that their food supply ceases at the death of their host, are apt to commence crawling to some other place.

Bone Injured.—L. M. B., Winchester, Va. When your cow was kicked on the head by a horse about a year ago, the bone, at any rate the periosteum, was injured, and perhaps cracked, hence the bony swelling (exostosis). Perhaps your son is right concerning the (fistulous) opening in the swelling. Examine closely, and if you find the opening, probe it to the bottom with a thin probe (a whalebone probe may be the best), and then burn out the whole canal, clear to the end, with a stick of lunar caustic. If the opening should prove to be narrow, enlarge it with a gimlet, but be careful to follow the old canal, and make no hole where there is none. The exostosis itself is permanent, although it probably will somewhat decrease in size after a healing has been effected.

Capped Hock.—C. L. W., Milton, Iowa. A capped hock, especially if of long standing, does not easily yield to treatment, and as long as the cause (or causes), usually a propensity to kick, is not removed, any treatment, as a rule, is in vain. If your horse has stopped kicking, get an ointment composed of biniodide of mercury, one part, and hog's lard, twelve parts (one dram of the former and one and one half ounces of the latter will be enough), have it thoroughly mixed by triturating it in a mortar, and then rub in a little of it once every three or four days on the swelled part. If any application should produce too much soreness, wait one day longer with the next one, but continue the treatment for several weeks.

A Fistulous Abscess.—G. A. M., New Paris, Pa. The offensiveness of the pus discharged from the fistulous abscess on the median side of the lower jaw of your cow indicates that the fistulous canal leads either to the bone or perhaps to a tooth. If the latter is the case, it will probably be necessary to have the tooth pulled. At any rate, before any attempt to bring the abscess to a healing can be made with any prospect of success, the whole fistulous canal must be carefully probed, so as to learn where it leads, and what parts have been injured. After this has been done, it will be necessary to provide a free exit for the pus and exudates, to destroy by caustics or otherwise all degenerated tissue that has lost its vitality, to bring the diseased parts of the bone to exfoliation, to extract a tooth that may have become diseased; to keep the wound or fistulous canal clean by the use of mild antiseptics, to be applied by injection or otherwise, as the case may be, and to keep the part clean and free from adhering pus, exudates and dirt. Since the treatment requires not only a careful examination, but also, very likely, a surgical operation, and since there is no lack of good veterinarians in Pennsylvania, the best thing you can do will be to have the animal examined and treated by a veterinarian.

FREE STOP-OVER AT WASHINGTON.

On all through tickets between the east, west, north and south, reading via Baltimore & Ohio Railroad, a stop-over at Washington can be secured, without extra charge for railroad fare, by depositing the ticket, upon arrival at Washington, with the B. & O. station ticket agent at that point. Washington is always attractive to visitors, and particularly so while Congress is in session. This arrangement for stop-over privilege will doubtless be appreciated by the public, and will bring to the National Capital many travelers to view its superb public buildings, monuments, museums and thoroughfares.

Smiles.

CLAIRVOYANCE UP TO DATE.

"Are you the celebrated Mme. Roulette?" he asked, after he had climbed four flights of stairs, and was admitted into the mysterious interior.

"Yes," replied the bizarre-looking personage who had received him.

"The great clairvoyant?"

"Yes."

"And you foretell the future?"

"It is so."

"And read the mind?"

"Verily."

"And unfold the past?"

"I do."

"Then," said the visitor, eagerly, as he took a large wad out of his pocket, "please tell me what it was my wife asked me to bring her home to-night."—Life.

IT WORE KNEE-PANTS.

A well-known physician on the Park Slope employs as coachman an Irishman who, when about the house, assists the servants by attending the door. On Sunday last the doctor on his return from church was informed that some one had called during his absence, and when he went to the stable he said to his man:

"Well, Patrick, they tell me some one called for me. Was it a lady or gentleman?"

"By gorra, sir, you've got me," was the reply. "The divil a one of me knows which it was. It talked kind o' tender-like, and looked sort of mild and quiet; but it wore as nate a pair of knee-pants as a man could wish for."—Brooklyn Citizen.

A STUDY.

One Philistine, who for a moment let her mind wander from the people, was pleased to find fault with the painting that took the prize in figure. The picture represents several mermaids lashing their finny tails through the briny deep.

"That's the last thing I should call that," announced the Philistine, with characteristic frankness, "a study in figure, indeed; why, their figures don't show, only their heads and—"

"Well, what would you call it?" interrupted her long-suffering artist companion. "Seascape, or Finnish women, or—"

"Nothing of the sort," said the Philistine. "It's a study in head and tail pieces."

OTHER PEOPLE'S MONEY.

Pingree wants millionaires prohibited by law from salving their consciences by giving large sums of money to churches and charities. The good man would thereby punish, not the unfortunate millionaires, but the objects of their benevolence, and that would not do at all. Colonel Ingersoll presents the better plan of obliging the unhappy rich men to disburse their surplus by dividing it up among the workers who earned it for them. But we must not forget the plan of John Most, who proposes that all large sums shall be distributed in payment of the beer so sorely needed by the struggling millions. —Judge.

A LITERARY SPIRIT IN NEVADA.

Stranger—"I presume the literary spirit is not very largely developed yet in this part of the country."

Nevada Ned—"Well, that's where ye're mistaken, mister. We had a debate down in Cactus Gulch last night that lasted until sun-up."

Stranger—"You must have worked up considerable enthusiasm. What was the question under discussion?"

Nevada Ned—"Resolved, That fer a first offense, tarrin' and featherin' is better'n lynchin'."—Truth.

ASPIRATION.

The India-rubber man wrung his hands.

"Ah, yes!" he exclaimed; "I, too, have felt the pulsing of those aspirations for the real in art that awaken naturally amid the quickening influences of our glorious age. But, alas for me! I never even saw India. I was born and raised in Connecticut."

The soul may be carked by present circumstances, and yet have hope. It is in the yearning for the unattainable that it gets the fried egg.—Puck.

BY INSTINCT.

Tom—"Miss Fanny Denslow Otis has sent me her card. Who is she? One o. your friends? Will I have to call on her?"

His sister—"Why, it's Ella's baby. She was born last Friday."

Tom—"Well, by Jove! It doesn't take these girls long to pick out the desirable men, does it?"—Princeton Tiger.

NOT ORDINARY.

"Darling," he said, falling upon his knees before her and covering her little white hands with kisses, "darling, can't you see—can't you guess that I love you?"

She drew herself up to her full height, looked at him for a moment, and then said: "Well, I should hate to think that this was just your natural way of behaving in company."—Cleveland Leader.

REASON ENOUGH.

"Why haven't I a six-hundred-acre farm as well as that man riding by in his carriage?" yelled a red-nosed anarchist as he glanced at the crowd.

"Because he saved six hundred dollars and bought his farm when it cost him one dollar an acre, and you poured your six hundred dollars down your throat," responded a man on the back seat, and the orator asked no more conundrums.—Chicago Tribune.

A LAD OF PARTS.

Fond mama—"Why, you naughty, naughty boy! What are you smoking that vile cigarette for?"

Hopeful—"I'm goin' ter join th' Anti-Cigarette League up to our school."

Fond mama—"Well, then, you mustn't smoke them!"

Hopeful—"Huh! Think I'm goin' ter be nothin' but er high privit? I'm goin' ter reform, 'n' be president!"—Puck.

HER STANDARD OF BEAUTY.

"She said she thought I was looking well," remarked the young man, who was looking pensive.

"Um—yes. But you'll notice that the next minute she asked me if I didn't think her pet bull-dog was the handsomest animal in the city."—Washington Star.

SUFFICIENT CREDENTIALS.

Careful parent—"Before I can give consent to your proposed marriage to my daughter I must know something about your character."

Suitor—"Certainly, sir, certainly. Here is my bank-book."

Careful parent (after a glance)—"Take her, my son, and be happy."—New York Weekly.

HE KNEW.

O'Hara—"She was a good wife to me, poor woman. Many's the word of good advice she gave me."

McGoogan—"Thrue for yez, an' many's the time Oi've heard her advisin' yez when Oi lived in the house beyant, a mile up the road."—London Figaro.

SOCIETY.

Little chick—"What do you let that ugly little thing come under your wing for?"

Old hen (who had inadvertently hatched a duck's egg)—"I can't help it, my dear. We've got to put up with the creature because she belongs to our set, you know."—New York Weekly.

NEXT.

Brown—"Lend me five dollars, will you?"

Jones—"I most certainly will not."

Brown—"All right. You're not the only pebble on the beach."

Jones—"And you're not the only sponge in the drug-store."—Truth.

ONLY NATURAL.

Brown-Jones—"Do you expect an office under the new administration?"

Jones-Brown—"I am a Republican, ain't I?"

Brown-Jones—"Yes."

Jones-Brown—"Well, I'm human, too."—Truth.

MADE BLUE.

Brown—"Isn't there a blue room in the White House?"

Smith—"I think so. I believe it's the room in which the president expresses his private opinion of the office-seekers."—Puck.

CUTS BOTH WAYS.

Pierrot senior—"Now, my son, this will pain me more than it will pain you."

Pierrot junior—"Well, pa, don't hurt yourself too much. I ain't worth it."—Pick-Me-Up.

WANDERING WITS.

"Do you think that druggist is really deranged?"

"Yes; crazy as a bicycle-rider. He sold me a nickel's worth of peppermint, and didn't stick his own label over the one already on the bottle."—Chicago Record.

Selections.

TWO BOYS.

Between two bonny boys I stand,
On each fair head I rest a hand.

Two faces bright are raised to mine,
And both with boyish mischief shine;

Two eyes of gray, two eyes of blue,
Where childhood's happy heart looks through.

On each dear head a hand I lay,
"God keep my bonny boys," I pray.

Dream, children! Visions of the night,
You vanish with the morning light.

Between two baby graves I kneel,
Too tired for tears—I only feel.

Babes ever! Never older grown,
So young they could not walk alone.

On each short mound a hand I lay;
"God keep my bonny boys," I pray.
—Floretta N. Crawford, in the Youth's Companion.

HOW THE CHICKENS GOT OUT.

A CORRESPONDENT who spent the summer at Lake Placid, in the Adirondacks, bears witness to a pleasing display of ingenuity on the part of a domestic hen, a creature not commonly supposed to possess any high degree of intelligence.

The chickens were getting large enough to injure the sprouts, and Mr. Frazier, their owner, put them into the hen-yard, having first laid boards edgewise on the ground against the slats all the way around the yard.

To his surprise the chickens were soon found in the garden. They were put back into the yard, and the fence was carefully examined. There was no sign of an opening large enough for the tiniest chick to squeeze through. And for all that the chickens were soon out again.

This time Mr. Frazier determined to see how the thing was done. He had not long to wait. The fugitives were hardly back in the inclosure before the mother sat down near the middle of the yard, as if she were brooding. The next moment two of the chickens hopped upon her back; whereupon she rose, and with slow and stately mien proceeded to bear them to the edge of the yard, where she ranged herself alongside the board that bad been expected to prove an insurmountable barrier to all chickens.

No sooner bad she brought her precious burden within reach of the board than they hopped upon it, passed between the slats, and were on their way to the garden in triumph.

The manoeuver was repeated until the hen had conveyed her entire brood, two by two, to the top of the board—but not until after another witness had been called to enjoy the novel sight.

WHEN A GIRL SHOULD MARRY.

A girl should marry when she is capable of understanding and fulfilling the duties of a true wife and thorough housekeeper, and never before, says the "Penny Press." No matter how old she may be, if she is not capable of managing a house in every department of it, she is not old enough to get married. When she promises to take the position of wife and homemaker, the man who holds her promise has every right to suppose that she knows herself competent to fulfill it. If she proves to be incompetent or unwilling, he has good reason to consider himself cheated.

No matter how plain the home may be, if it is in accordance with the husband's means, and he finds it neatly kept, and the meals (no matter how simple) served from shining dishes and clean table-linen, that husband will leave his home with loving words and thoughts, and look ahead with eagerness to the time when he can return.

Let the girl play the piano and acquire every accomplishment within her power; the more the better, for every one will be that much more power to be used in making a happy home. At the same time, if she cannot go into the kitchen, if necessary, and cheerfully prepare as good a meal as any one could with the same material, and serve it neatly after it is prepared, she had better defer her marriage until she learns. If girls would thoroughly fit themselves for the position of intelligent bonsekeepers before they marry, there would be fewer discontented, unhappy wives and more happy homes.—The Voice.

OBEYING INSTRUCTIONS.

Much is said in these days about the want of obedience to parental authority displayed by the rising generation, but an incident in which the contrary spirit was manifested is narrated by a prominent western lawyer.

His twelve-year-old son, a boy of great spirit, but with no overabundance of strength, went to pass a vacation with a cousin who lived on the banks of a broad river. His father, in his parting instructions, placed one restriction upon the boy's amusement during his visit.

"I don't want you to go out in your cousin's canoe," he said, firmly. "They are used to the water, but you are not, and you haven't learned to sit still anywhere as yet. You'll be there only a week, and with all the other amusements the boys have, and the horses and dogs, you can afford to let the canoe alone for this time, and keep your mother from worrying all the while you're away."

The boy readily gave the desired promise. On his return he was enthusiastic over the pleasures he had enjoyed.

"And I didn't mind canoeing a bit, pa," he said, addressing his careful parent with a beaming smile. "The boys taught me how to swim, and the only time they used the canoe was the last day, to go over to the other shore. But I remembered my promise, and I wasn't going to break it the last day, so I swam across.—Chicago News.

A GREAT DISCOVERY BY ACCIDENT.

Mr. Edison states that he discovered the principle of the phonograph by the merest accident.

"I was singing into the mouthpiece of a telephone, when the vibrations of the voice sent the fine steel point into my finger. That set me to thinking. If I could record the actions of the point, and send the point over the same surface afterward, I saw no reason why the thing would not talk. I tried the experiment first on a strip of telegraph-paper, and found that the point made an alphabet. I shouted the words 'helloo, helloo' into the mouthpiece, ran the paper back over the steel point, and heard a faint 'halloo, halloo' in return. I determined to make a machine that would work accurately, and gave my assistants instructions, telling them what I had discovered. They laughed at me. That's the whole story. The phonograph is the result of a pricking of the finger."

INTERMARRIAGE OF BLOOD RELATIONS.

With regard to deaf-mutism, says the "Medical Press," statistics show, for the most part, that the closer the degree of relationship between the parents, the more numerous are the deaf-mute children born. For example, one marriage between an aunt and nephew produced three deaf-mutes. Four marriages between uncle and niece produced eleven deaf-mutes; twenty-six marriages between first cousins produced thirty-eight deaf-mutes; sixteen marriages between second cousins produced twenty-eight deaf-mutes; forty-seven marriages between blood relatives produced seventy-two deaf-mutes. These are important facts, which leave no measure of doubt as to the influence of the intermarriage of blood relations in causing deaf-mutism. But just in the same way as consanguineous marriages should be avoided, so also should the intermarriage of persons tainted with hereditary disease be discouraged.

TOO REFINED AND TOO LATE.

She kissed the old man, says an exchange; she showered upon him kisses and tears. She told all the people how good he was. I thought if she had only given two of those kisses a quarter for the last ten years how the tender-hearted old gentleman would have smiled through his tears. But now he took it all very coolly. He was dead. He was old and poor, and she was young and rich. She had ten rooms, but no room for father. Yet he had made room for her when he had only two. The "old man" was not educated. She was, at his expense. He had fed and clothed her for twenty years at home and at college, until she had risen into more "refined and cultured society," and married among them. The old people's dress and dialect were too coarse. She kissed him, and buried him in a beautiful coffin. "Dear father" is to have a costly marble monument. A warm kiss while living is better than cold marble when dead.

SELF-DEFENSE.

"Have you ever studied self-defense?" said a young fellow to a man of magnificent physique and noble bearing.

The elder man looked at his questioner with a quiet smile, and then answered, "Yes, I have both studied and practised it."

"Ah!" said the other, eagerly, "whose system did you adopt?"

"Solomon's," was the reply; "and as I have been in training for some time on his principles, I can confidently recommend his system."

Somewhat taken by surprise, the youth stammered out, "Solomon's! And what is the special point of his system of training?"

"Briefly this," replied the other; "'A soft answer turneth away wrath.'"

SCOWLING.

Don't scowl; it spoils faces. Before you know it your forehead will resemble a small railroad map. There is a grand trunk line from your cowlick to the bridge of your nose, intersected by parallel lines running east and west, with curves arching your eyebrows; and, oh, how much older you look for it! Scowling is a habit that steals upon us unawares. We frown when the light is too strong and when it is too weak. We tie our brows into a knot when we are thinking, and knit them even more tightly when we cannot think. There is no denying there are plenty of things to scowl about.

A DISTINGUISHING SIGN FOR MUTTON.

In the meat-shops of towns in New Mexico and Arizona the visitor from the East is apt to notice that the dressed carcasses of sheep have a tuft of the wool still attached to the head and the tail. This is left by the butcher to assure the customer that it is mutton, and not goat flesh, that he is buying, for in these territories many flocks of goats are reared and pastured by the small Mexican ranchmen to be killed for food for the poorer natives. Roast or stewed kid, with chilli-pepper sauce, is an esteemed dinner dish at the tables of many well-to-do American and Spanish-American citizens. — Baltimore Sun.

THE COMING OF NIGHT.

A gray hand out of the paling west
Makes shadowy passes o'er meadows green.
The frightened color fades from their breast,
As life and love leave a soul to rest
When the shadow of death is seen.

The young leaves shiver; from earth a sigh
Follows the touch of those fingers chill;
All song is hushed; the wee birds cry
'Neath mother's wings, as an owl flits by,
And she tenderly tucks them closer still.
—Elizabeth Ferguson Seat, in Sunday-school Times.

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Full descriptions and directions—as the number of yards of material required, the number and names of the different pieces in the pattern, how to cut and fit and put the garment together—are sent with each pattern, *with a picture of the garment to go by.* These patterns are complete in every particular, there being a *separate* pattern for *every single piece* of the dress. Your order will be filled the same day it is received.

For ladies, give BUST measure in inches. For SKIRT pattern, give WAIST measure in inches. For misses, boys, girls or children, give both BREAST measure in inches and age in years. Order patterns by their numbers.

Satisfaction guaranteed or money refunded.

To get BUST and BREAST measure, put the tape measure ALL of the way around the body, over the dress close under the arms.

Special price of each pattern, 10 cents.

Postage one cent EXTRA on skirt, tea-gown and other heavy patterns.

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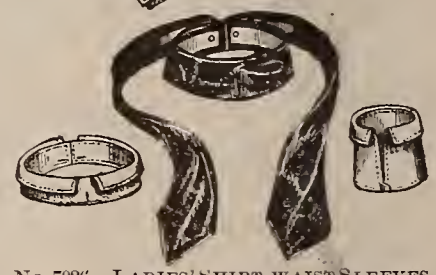
Sizes, 12, 14 and 16 years.
No. 6874.—Misses' Circular Skirt. 11c.
Sizes, 12, 14 and 16 years.

No. 7005.—Ladies' Tucked Shirt-waist. 10 cents.
Sizes, 32, 34, 36, 38 and 40 inches bust.
No. 7006.—Same Pattern—Misses' Size. 10 cents.
Sizes, 10, 12, 14 and 16 years.

No. 6459.—Ladies' and Misses' Sunbonnets. The two patterns for 10 cents.
Cut in two sizes—Misses' and Ladies'.

No. 7009.—Ladies' Shirt-waist. 10 cents.
Sizes, 32, 34, 36, 38, 40 and 42 inches bust.

No. 6806.—Ladies' Belted Basque. 10c.
Sizes, 32, 34, 36, 38 and 40 inches bust.



No. 7026.—Ladies' Shirt-waist Sleeves, Stock, Collar and Cuffs. 10 cents.
Sizes, 32, 36 and 40 inches bust.

No. 7037.—Ladies' Waist. 10 cents.
Sizes, 32, 34, 36, 38 and 40 inches bust.
No. 6993.—Ladies' Circular Skirt. 11 cents.
Sizes, 22, 24, 26, 28 and 30 inches waist.

No. 7010.—Misses' Shirt-waist. 10c.
Sizes, 10, 12, 14 and 16 years
No. 6998.—Same Pattern—Ladies' Size. 10c.
Sizes, 32, 34, 36, 38, 40, 42 and 44 inches bust.

No. 6864.—Ladies' Waist. 10 cents.
Sizes, 32, 34, 36, 38 and 40 inches bust.

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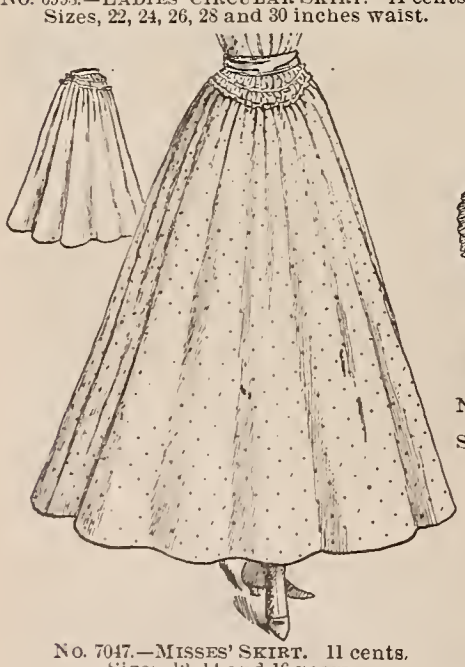

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Sizes, 12, 14 and 16 years.

No. 6685.—Ladies' Drawers. 10 cts.
Sizes, 22, 24, 26, 28 and 30 inches waist

No. 6705.—Ladies' Shirt-waist. 10c.
Sizes, 32, 34, 36, 38, 40, 42 inches bust.

No. 7022.—Ladies' Waist. 10c. Sizes, 32, 34, 36, 38 and 40 inches bust.

No. 6738.—Boys' Shirt-waist, with Byron or Sailor Collar. 10c.
Sizes, 4, 6, 8, 10 and 12 years.

No. 6326.—Ladies' Waist. 10 cents.
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Sizes, 10, 12, 14 and 16 years.

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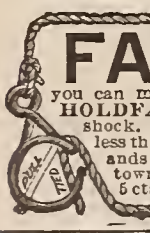

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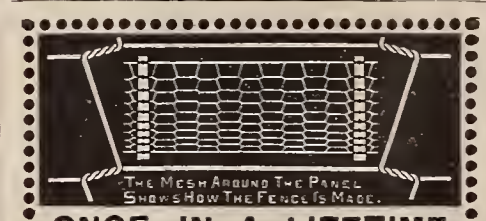

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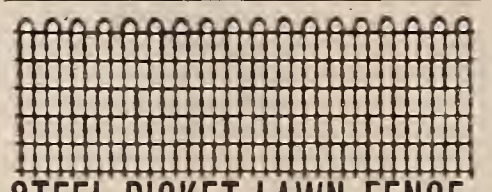

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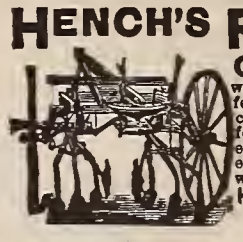

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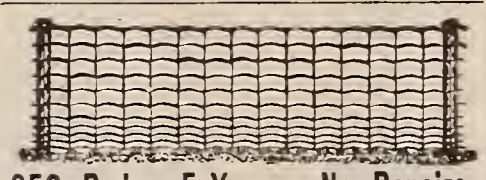

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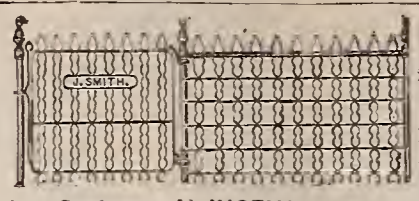

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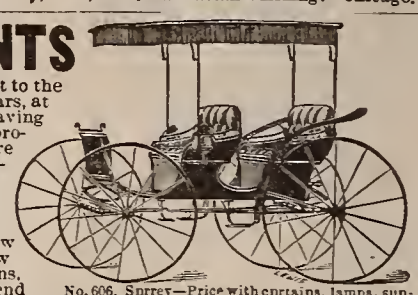

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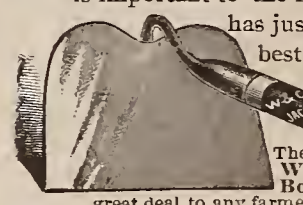

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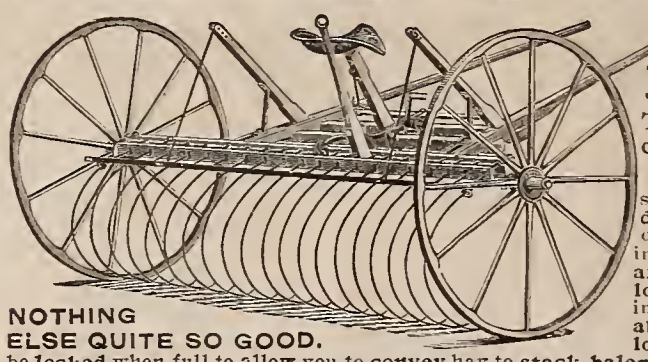

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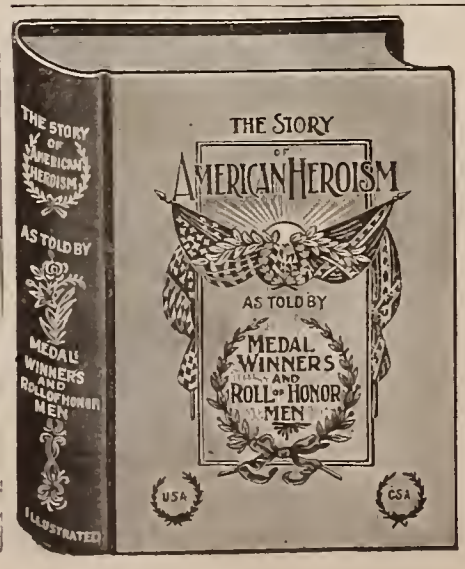

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FARM AND FIRESIDE

EASTERN EDITION.

Entered at the Post-office at Springfield, Ohio, as second-class mail matter.

VOL. XX. NO. 16. MAY 15, 1897. TERMS { 50 CENTS A YEAR. 24 NUMBERS.

WITH THE VANGUARD

THE party in power is, and always has been, in favor of a protective tariff. Its platform in the late presidential campaign declared unqnalifiedly in favor of protection. That policy was indorsed hy the vote of the people, and they now justly expect prompt, practical legislation in accordance with that policy. The bill introduced into Congress called in special session, which has passed the House and is now before the Senate, is entitled "A bill to provide revenne for the government, and to encourage the industries of the United States." The farmer's interest in the pending bill is that agriculture shall have adequate protection along with other industries. He demands that the classifications shall be honest and the rates fair. For the wool of Ohio and Texas, the oranges of Florida and California, the sugar of Louisiana and Nebraska, he demands the same consideration given to the fabrics of Massachusetts and to the iron manufactures of Pennsylvania. Besides this, he stands with an overwhelming majority of the people for prompt action. The legislative obstructionist will find favor in bnt few eyes.

IN a circular letter Hon. J. H. Brigham, after stating what may be confidently expected from legislation to hasten returning prosperity for the farmer, says: "We mnst not expect too much from legislative enactments.

"It is our business to produce sufficient for our own needs, and a snrplus to sell to meet other expenses. We should study conditions carefully and be governed by business principles. If we raise products for which there is little demand, or raise more of any commodity than the market will readily absorb at fair prices, we shall realize no profit, and 'hard times' will linger. The fact that there are those who say that 'overproduction is impossihle' will not help the farmer in the least. Every practical business man knows better. Excessive production in any line brings disaster to the producers. If we raise ten per cent more corn than the market will readily absorb, we knock down the price from twenty-five to thirty per cent, and realize loss instead of profit on our labor. If some philanthropist would pay the freight on the surplus to India we might give it away and then hope to realize better prices for what is left, and more profit. Supply and demand, taken in the broadest sense, have always heen the chief factors in regulating price, and always will be; and the farmers can help themselves by recognizing this fact and governing themselves accordingly.

"There always have been nnreasonable persons, and I presume there always will be, whose chief delight seems to be the abuse and harsh criticism of the real workers, who, recognizing that something is wrong, are striving by reasonable and attainable methods to drive hard times from our homes and country. Organized, energetic farmers can do almost anything that is right in this country. Let us differ as we will on some questions, but by all means let us work together on practical lines for the common good.

"We must not expect to reach the 'top of the hill' of prosperity at one bound. It takes longer to climb the hill than it does to slide down, as every one who has 'coasted' when a boy knows, but patient, persevering effort, if properly directed, will certainly bring its reward."

DAVID STARR JORDAN was born in Gainesville, N. Y., January 19, 1851. At sixteen he was an accomplished botanist. In 1870, while a student, he became instructor in botany at Cornell, and graduated from that nniversity in 1872. Subsequently he settled in Indianapolis, and graduated from the Indiana Medical School in 1875. After teaching the natural sciences one year in the Indianapolis high school he became, in 1876, professor of biology at Butler University. In 1879 he was appointed to a similar chair in Indiana University. In 1884 he was elected president of Indiana University, and entered upon his duties in January,

DAVID S. JORDAN.

1885. During his term the general administration of affairs was largely remodeled, the nnmber of professors increased, greater opportunities were made for students desiring to take special studies, and the university made extraordinary progress.

In 1891 President Jordan was selected by Senator Stanford to preside over the new university at Palo Alto, Cal., built in memory of Leland Stanford, Jr. The university had been planned on the largest scale, and with the devotion of Senator and Mrs. Stanford behind it, and the enthusiasm of President Jordan and the faculty of young and able men he had called together, the institntion at once took a leading place among American universities. In its spirit of freedom and high scholarship, its lack of hampering traditions, its simplicity of organization and its frank and hearty relations between students and teachers, in all of which President Jordan has been the inspiring force, it is representative of the highest type of American university.

During all this time of active college work President Jordan has kept np researches in natural science, traveled extensively, written books and papers of great value, and delivered many popular lectures on educational and scientific snbjects. A special work with him has been the stndy and classification of North American fishes. During 1879-81 Professor Jordan was a special agent of the United States census for the marine indnstries of the Pacific coast, and at various times he has held appointments as assistant to the United States Fish Commission and the United States National Museum. In June, 1896, he was appointed hy President Cleveland as head of the Bering sea expedition to investigate the seal fisheries. He is a member of a number of scientific societies; in 1895 he was elected president of the California Academy of Sciences. Among his published works are nearly two hundred and fifty papers on North American ichthyology, "Manual of the Vertebrates of the Northern United States," "Science Sketches," "Care and Culture of Men," and "The Innumerable Company and Other Sketches." President Jordan received the degree of Ph.D. from Butler, and in 1886 the degree of LL.D. from Cornell.

IN New York, April 27th, with impressive ceremony and wondrous pageant on land and river, the nation dedicated the tomb of General Grant. A million people witnessed the great celebration by which the nation paid tribute to the memory of its soldier, patriot and citizen. The magnificent monument at Riverside now stands as a perpetual reminder of a hero's life dedicated to the service of his conntry.

In his eloquent memorial address President McKinley said: "A great life never dies. Great deeds are imperishable, great names immortal. General Grant's services and character will continue undiminished in influence, and will advance in the estimation of mankind so long as liberty remains the corner-stone of free government and integrity of life the guaranty of good citizenship.

"Faithful and fearless as a volunteer soldier, intrepid and invincible as commander-in-chief of the armies of the Union, calm and confident as president of a reunited and strengthened nation which his genius had been instrumental in achieving, he has our homage and that of the world; but brilliant as was his public character, we love him all the more for his home life and homely virtues. His individuality, his bearing and speech, his simple ways, had a flavor of rare and unique distinction, and his Americanism was so true and uncompromising that his name will stand for all time as the embodiment of liberty, loyalty and national unity. . . . With Washington and Lincoln, Grant has an exalted place in history and the affections of the people. To-day his memory is held in equal esteem by those whom he led to victory and by those who accepted his generous terms of peace. The veteran leaders of the blue and the gray here meet not only to honor the name of the departed Grant, but to testify to the living reality of a fraternal national spirit which has triumphed over the differences of the past and transcended the limitations of sectional lines."

FARM AND FIRESIDE

PUBLISHED BY

MAST, CROWELL & KIRKPATRICK.

OFFICES:

108 Times Building, New York City. Springfield, Ohio. 1643 Monadnock Block, Chicago, Illinois.

Subscriptions and all business letters may be addressed to "Farm and Fireside," at either one of the above-mentioned offices; letters for the Editor should be marked Editor.

TERMS OF SUBSCRIPTION:

One Year - (24 Numbers) - 50 Cents.
Six Months - (12 Numbers) - 30 Cents.

The above rates include the payment of postage by us. All subscriptions commence with the issue on press when order is received.

Subscribers receive this paper twice a month, which is twice as often as most other farm and family journals are issued.

Payment, when sent by mail, should be made in Express or Post-office Money-orders, Bank Checks or Drafts. When neither of these can be procured, send the money in a registered letter. All postmasters are required to register letters whenever requested to do so. Do not send checks on banks in small towns.

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NOTES ON RURAL AFFAIRS.

Farmers' Boys and the Agricultural College. My remarks and quotations on this subject in April 1st issue have brought a remonstrance from Professor I. P. Roberts, the accomplished director and teacher of agriculture at Cornell University. The complaints which I only recently have heard at farmers' gatherings, from the mouths of college authorities, that farmers are not making the full use they should of the opportunities offered them and their sons for getting an agricultural education at Cornell and other colleges, and the urgent appeals to farmers to send their sons to the agricultural colleges, have hardly led me to expect such a favorable showing as given by Professor Roberts. The following is his letter:

* * *

"So far as Cornell University is concerned I can say that we have had in regular attendance during the past two years from one hundred and thirty to one hundred and fifty students regularly entered in the various courses in agriculture. This year twelve to fifteen of them are men who have already completed a four-years' course in agriculture at some agricultural college, and are here for a fifth or sixth year to perfect themselves in the branches which they have already pursued, and for the purpose of entering into those studies to which but little time could be devoted during their regular course.

"It may be said that in addition to free tuition in the agricultural course there are five hundred and twelve students at Cornell University distributed among the other courses who do not pay tuition. There are also eighteen free scholarships which pay students in any department two hundred dollars a year bonus. These students are selected from those who pass the best examinations when they enter; and provided their scholarship remains good they hold these free scholarships for the four years.

"In addition there are scholarships and fellowships (thirty-nine) for graduate students from Cornell or any other university in the United States. These are selected from the best students we can find in the country, and are paid three hundred to five hundred dollars a year respectively.

"In addition to all this Cornell University has over one thousand four hundred students who are studying in the college of agriculture by means of correspondence. The lessons are published in the form of leaflets, and are distributed to the scholars throughout the state.

"More than this, last year sixty-four schools were held which gave instruction in science studies related to agriculture. These were in the common and primary schools of our state.

"Over fifty experiment and illustrative plots are now located throughout the state. This work is in addition to the regular experimental work being carried on at the Cornell University farm.

"Some twenty-five field-schools for adults were held throughout the state last year. These field-schools were conducted on farms where illustrative material was at hand. For instance, on a potato-farm spraying apparatus is brought together, the farmers called in to the number of three or four hundred, and spraying-machines are exhibited. After this a meeting is held in the barn and instruction by professors and teachers of the university is given.

"We are now planning our work for the summer, and will without doubt increase the number of our schools very largely. Our expectation is that by the end of another year we will have several thousand students pursuing studies at home under the direct guidance of the college.

"True, we have kept very quiet about this work we have been doing, nevertheless we are now giving direct instruction to nearly two thousand students in agriculture, and these are boys and girls on the farm."

* * *

The farmers of the state of New York may well feel proud of an institution which does such a vast amount of educational work in the agricultural field. Possibly Cornell stands as an exception in this line. But I wanted to know whether the rural population of the state fully appreciates these advantages, and on my request received from Professor Roberts the following additional data: "It is impossible for me to get statistics of all the students in the college of agriculture at Cornell. I am now giving instruction to thirty-three students. They are post-graduates, juniors and seniors and two-years' special students. A vote reveals the fact that twenty-five of them are from farms and eight from villages or cities, and every one of these students intends to make the profession of agriculture his life-work. The one thousand four hundred students whom we are teaching by correspondence are, so far as I am able to learn, young men and women who are now on farms. I believe that fully ninety-five per cent of the students who come to us during the winter for special work in the short courses come from and return to the farms."

* * *

Popular Bulletins. Most of the bulletins, as they are distributed by our stations and the Department of Agriculture, are far too scientific in their subjects and expressions to be understood by, and therefore be of value to, the average farmer. I have frequently called attention to the crying need of a thorough change in the methods of sending out among the farmers the results of the valuable experiments and discoveries made by the stations. The director of the New York state station, at Geneva, Professor Jordan, now announces that the station is ready to carry out the new idea (long since suggested by me) of publishing, for extended distribution, a condensed bulletin written in plain language, without scientific phrases, something like a story, so that any man having a common country-school education can understand. Director Jordan says:

* * *

"Two forms of bulletins are to be issued. The extended bulletin, which will be mailed only on request, will completely set forth the plans, methods, data and conclusions which were involved in the study of particular problems, while the popular edition, which will be sent to the entire mailing-list, will display in 'soluble' language, if possible, the practical relations of the results reached. This is in some respects a new plan which has not previously been adopted by any experiment station. It is in itself an experiment. The preparation of this popular bulletin, as well as the editing of all the station publications, will fall upon the new officer who has just been added to the staff of that institution as editor and librarian in the person of Mr. Frank H. Hall, who comes from the office of experiment stations, Washington, D. C.

* * *

I hope Professor Jordan's experiment in station literature will prove wholly successful. It would mean much to the farmers of this and adjoining states, and possibly result in a similar reform at other stations. But the task which Mr. Hall has to solve is by no means an easy one, and if he solves it with success, great credit will be due him. The emperor of Austria once asked the great composer Mozart why there were so few good books on music. Mozart replied, "It is because those who understand music cannot write; and those who can write do not understand music." There can be no doubt about Mr. Hall's qualification so far as the full understanding of agriculture as a science is concerned. If in addition to this he knows how to translate the language of the scientific bulletin into the language which the common, unscientific farmer can understand, and how to put warmth and color into the newly evolved cold and colorless facts through an interesting explanation, he is exactly the man for the position as station editor, and one among very few equals. This task is like the one of the parent pigeon, which latter has to partially digest the food before this is fit to be stuffed into the open mouths of the baby pigeons.

* * *

Birds and Reptiles. There are some birds, and likewise some reptiles, that do a heap of damage to the soil-tiller. And yet I am the friend of birds as well as of reptiles, for in a general way they do us more good than harm. In a "leaflet" issued by the Humane Education Committee (Providence, R. I.) the writer, Mary F. Lovell, combats the senseless fashion of women wearing egret-plumes, and calls attention to the fact that the birds are caught and killed for their plumes while caring for their young, as in the defense of their brood they lose their natural fear of man, and allow him to approach close to them. I quote the following paragraph: "Besides the cruelty involved in the extermination of birds and the training in habits of heartless brutality which such employment gives to men, there is the injury to agriculture which is sure to result, and of which the signs are now apparent in some localities. Through the destruction of the herons in one part of Florida there was a noticeable increase in the number of snakes, the young of which had formerly been killed in great numbers by the herons. Man's folly, or perhaps in this case it would be better to say woman's, has disturbed the economy of nature." While in hearty sympathy with the sentiments expressed in this leaflet, the reported increase of snakes would not greatly scare me. Even snakes do a great deal of good, although I am not prepared to strike a balance. I know the creeping vermins destroy an enormous lot of insects, both good and bad, but mostly bad, because that class is in the great majority.

T. Greiner.

SALIENT FARM NOTES.

Last year there was a spot about 15x20 feet square on my lawn that was as bare of grass as a board, while all the rest was covered with a fine blue-grass sod. I discovered that by paving along the edges of the lawn I could obtain about six square feet of sod without injuring the lawn in the least. The bare spot was dug over with a spading-fork, and raked fine and smooth, a little well-rotted manure being worked in at the same time. The sod was then pared off two inches thick, cut into squares three to four inches across, and planted far enough apart to go over the entire bare spot. In planting the little squares of sod were placed on the mellow soil and stepped on by the person planting. This forced them down below the level. When the planting was completed, the spot was again raked smooth, the small sods being covered with one half inch to one and one half inches of the mellow soil. It was mowed three times during the summer, and is now a fine, smooth, even sod.

* * *

A short time ago a friend said, "Where is that bare place you had somewhere about here last year?" I showed him the fine sod. "How in the world did you get it sodded so smoothly?" The process was explained. "Well, well! Now, if you had told us about that in the Farm and Fireside last year you would have saved me six dollars and no end of hard work. I had a bare spot nearly like that was, and I hired a man and team and bought enough sod to cover it entirely over. We pounded and rammed two whole days to get it level and smooth, and then I carried water to keep it damp and make sure it would live for at least six weeks."

* * *

This shows the value of an agricultural paper, and the need of almost constant reminders of the simplest processes. This method of "inoculating" to obtain a good, smooth blue-grass sod quickly has been practised a great many years, and all landscape gardeners, as well as thousands of other people, know all about it. But there are other thousands on thousands that never heard of it. It may be done any time from the opening of spring to the last of May, and all that is necessary to make it a success is that the soil be fine and damp, and the pieces of sod be put in well. If sod is scarce, the pieces need not be over two inches square, and they may be placed a foot apart. Keep the grass and weeds mowed close all the season, and by the following spring you will have a fine sod.

* * *

The state agricultural experiment station has induced me to plant a few rods of ground with sugar-beets this spring by way of experiment. It is the belief of the foremost agriculturists of this state that all of the sugar we consume can easily be produced within the state, and the experiments conducted this season will determine in which counties beets containing a sufficient quantity of sugar for profitable working can be grown. My quota will be grown on corn ground that was manured two years ago with a heavy dressing of stable manure.

* * *

This reminds me of a test of a new variety of strawberries made by a neighbor. The plants were sent to him with a request to test and report. He selected the best and most sheltered spot in his garden, spaded it fifteen inches deep, adding a scoop-shovelful of well-rotted manure to each spadeful of soil. The plot was then pulverized to powder, and the plants set eighteen inches apart. The runners were carefully guided about so that the young plants set evenly over the bed and not too closely together, and not a weed was allowed to show itself. Result: An immense crop of fine berries and a "testimonial" that was a stunner. I told him that the Warfield, Haverland or any of the good, well-known sorts would give as good, and probably even better, results if treated as well. He would not believe it, but I induced him to try twenty Haverland plants under the same treatment, and the result astonished him. The berries were quite as large, some even larger than his new sort, while the yield was twenty-five per cent greater.

* * *

Many people living in the suburbs of towns say they would like so much to grow strawberries enough for their own use, but the quantity of land at their command is too limited. If properly treated, a space 10x20 feet will grow enough of this luscious fruit for a small family. I knew a solitary old fellow that used to grow all he could eat and lots to give away on a little 9x10 plot. Many a poor family was sent into ecstacies by the receipt of a basket of fine, large berries from the old man's little bed.

"Can't grow 'em 'cause the chickens would get 'em!" is the plaint or excuse of many a farmer. Fence in a little warm corner with woven wire—it can be done for a few dimes—thoroughly enrich and work it up, as my neighbor did for his new sort, set it with plants and give them a few minutes' care every day or two, and you can have fresh, luscious berries, and lots of them, as well as anybody. Rich soil and good care fill the basket.

Fred Grundy.

Our Farm.

FARM THEORY AND PRACTICE.

Clover Hay.—It is within bounds to say that twenty-five per cent of the value of our annual clover-hay crop is lost through delay in harvesting. This loss amounts to a very large sum of money, and yet we farmers have no money to throw away. Much has been written on this point, and it must be that many do not believe that the claims for early-cut clover have foundation in fact. I see no other grounds for accounting for much negligence and delay in the matter of starting the mower at the right time. Formerly I cut clover rather late, and in recent years have made it a point to cut early. The difference in value of the hay is so marked that once more I urge the wisdom of harvesting clover as soon as it seems to be in full bloom, or, at least, that those who are doubtful should experiment with one field, putting up a few tons as a test. Idle horses fatten in winter upon clover hay alone when made right, though I am not recommending exclusive feeding of hay. This fact proves its feeding value. When in full bloom clover is full of digestible nutriment; later it loses in value rapidly, becoming less digestible, less palatable and more dusty. Why not prove this oft-repeated assertion by experiment?

* * *

The Curing.—One reason that some farmers do not like to cut clover when most nutritious is that the curing at that stage is difficult. It is then full of sap, and the leaves burn to a crisp before the stems are sufficiently cured to keep in the mow. We know that a thin leaf will lose all its moisture quickly when exposed to the sun, while a thick stem will retain the water a long time. This leads us to see that clover should not be wholly cured by exposure to the sun, and that the true way is to protect the leaves as much as possible while the curing is taking place. The rule is imperative that the clover should not lie untouched in the swath until the leaves begin to crisp, and crisping will occur in a very few hours in midday, no matter how green the clover. Probably a tedder is always needed, but as I have none, I must depend upon the windrow for much of the curing. Having turned the heaviest bunches with a fork, the rake is used just as soon as it will work at all freely. This exposes the hay to the air, and gets the most of the leaves under cover. Then, if the weather promises to be fair, the ideal way is to finish the curing in the cock. Grand hay is made in this way. If the weather threatens it is better to make the windrows small, and by some turning and loosening of the windrows the clover is prepared for the mow.

* * *

Clover-seed.—When a crop of clover-seed is wanted it is important that the hay crop be removed early. Rules have their exceptions, and a good yield of seed may be obtained from a field when the crop of hay was left until late, but the chances are against it. Drought usually hurts the second crop that starts late in the season. Probably the heaviest yields of seed can be obtained only by clipping the first crop before it comes into bloom, thus hastening the growth of the second crop. The next best thing is to get the first crop off the ground in time to secure a rank second growth before midsummer. Even if early-cut clover made hay of no better quality than late-cut, the gain in the yield of seed from the ground by reason of early removal of the hay crop would more than compensate for the extra work involved in making hay from clover when in first bloom. I find clover-seed a fairly profitable crop, and it pays to give it a show to do its best. Clean seed is a cash article, and the expense of producing it is not heavy.

* * *

Weedy Clover-fields.—Frequently one sees clover-fields that contain more weeds than clover. A field in wheat is seeded to clover, and after wheat harvest a fair showing of clover-plants leads one to let the field stand, although a close examination would show a host of plantain or white-top weeds starting in the stubble. The next May the white-top nearly takes the ground, or plantain shows up thick. The primary object of sowing clover is improvement of the soil, and it is important that weeds do not ripen seed, as plantain will surely do if the clover sod be left standing until fall. Clipping with the mower will not prevent this. Whenever weeds make the clover undesirable for hay, or later for seed, the breaking-plow should be used, and another manurial crop grown for the sake of the land, or a forage crop for stock, the manure being returned to the land. A growth of clover and weeds plowed under the middle of May will not sour the soil, so far as my experience goes, and adds much fertility. There remains plenty of time to grow corn for feed, if that be needed, or to grow cow-peas, where they thrive, or soja-beans or buckwheat as a crop to be plowed under to supplement the clover. In this way weeds are eradicated and humus is added to the ground. Help that weedy clover-field to add to its power of production. It will pay. David.

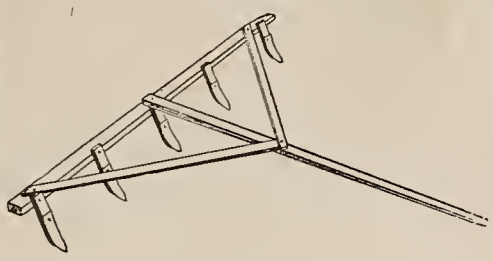
MULCHED POTATOES.

Potato-planting comes in with our first seeding operations in this region, and is pursued more continuously and later than any other spring work. To do it well and with dispatch is therefore an item of greatest importance. A large number of people still continue to plant potatoes in the moon, and never change their method of earthly procedure, whether they live in New Jersey or in the arid districts.

I have been in Oklahoma three full seasons, and have been diligent in my efforts and diverse in my methods to grow enough potatoes for family use, but failed until last season, when I secured good returns for my labor.

Among other methods I decided to try mulching, and this is the way I did it:

I prepared the ground by deep plowing and thorough harrowing, using no fertilizer of any kind. I then made a marker by fastening five wooden teeth made of 2x4 scantling, each about ten inches long, fifteen inches apart on a beam. These teeth were sharpened and set slanting on the beam, so as to go into the ground. I fastened and braced a pole, or tongue, to the cross-beam, making a marker resembling this rough sketch. Then fasten-



ing double-trees, hitching on team and mounting, and standing on the beam to force the teeth into the ground, I soon had the ground marked off in furrows fifteen inches apart and about five inches deep.

Having already prepared the potatoes by cutting them, two eyes to the piece, I dropped them about fifteen inches apart in the furrows, then harrowed the ground crosswise until the potatoes were well covered. A few days later I put on a hay mulch, thickly covering the entire planting. The mulch may be of straw clean of seed, but prairie-hay is best, and should be at least ten inches thick or deep to insure against weed growth. The potatoes will find the way through in good time.

Though I was early in planting this mulched patch, a couple of neighbors had planted two weeks earlier in the old way, and tauntingly suggested that they would give me a mess of early potatoes. I had new potatoes from this patch nearly two weeks sooner than either of them, and of course I furnished them with their first mess; besides, my potatoes were much nicer and smoother, being free, or almost free, of scab.

The potatoes set on the vines right at the surface of the soft, moist earth, so that by simply forking away the mulch I would expose from three to eight fine tubers to each hill.

This patch covered an area of about twelve square rods, and furnished my large family daily with potatoes from the first of June until we dug the remnant the last of October, when we secured thirteen bushels. We had used from the patch not less than twenty bushels, and with this estimate, which is low, the patch yielded at the rate of more than four hundred bushels an acre.

But I did not confine myself to this method. At the same time I prepared the ground for the mulched patch I prepared ground on either side of it—the same area on one side and one fourth as much on the other. Two weeks after the first planting I furrowed out with the plow and planted one half of the larger vacant patch, and still two weeks later I planted the other half, using the same seed, cut two eyes to the piece. And six weeks from the first planting I furrowed out the smaller space and planted whole potatoes of the same seed.

These three plantings I harrowed once, plowed twice and hoed once.

I dug all at the same time, getting equal rates of yields from the last three plantings, each averaging about one hundred bushels an acre.

July, August and most of September were very dry and hot, and it had been my observation and experience that potatoes dug in hot weather would not keep; and for this reason I deferred the digging to the last moment, only watching that fall rains did not start new growth, which would have necessitated immediate digging. I am well satisfied with that part of the experiment, for my potatoes are yet firm and nice in the cellar, while neighbors who dug early have lost theirs by decay.

Two thirds of my potato area will be mulched this season, and were I certain of a season similar to the last, I would plant in no other way; but experience has taught me to use various methods in this country as well as in any other. Many insist that a wet season would prove disastrous to the mulching method. I am not prepared to refute it, though I believe it would increase the yield and would probably necessitate early digging.

The reader must bear in mind in comparing the yields noted herein that just fifty per cent more seed was used by the mulching method than that on the same area at its side.

For some reason I am unable to explain, the mulched patch was not attacked by the bugs, so as to need my attention, while the patches on either side were.

I have neglected to state I sprouted a peck of potatoes in the cellar, allowed new tubers to form up to the size of a quail's egg, according to the directions of a writer in a Texas paper, and planted them carefully and exactly in the manner prescribed, and I secured a great big goose egg for results.

Wm. Howard Phelps.

MONEY IN CUCUMBERS.

The pickle trade increases every year, and the demand for good, marketable cucumbers is always first-class. An acre will produce from eighteen to thirty barrels of salable cucumbers, which can be sold in any of the large cities at from eight dollars to twelve dollars a barrel. The smaller the specimens the better, and if any exceed four inches in length the market will not be good. There is not much labor in growing and harvesting an acre of cucumbers when the value, in comparison with other crops, is made a consideration. In some sections, especially in Illinois and the Mississippi valley, the farmers realize from one hundred and fifty dollars to four hundred and fifty dollars an acre from their pickle-patches. My experience in the West shows that even more can be made by careful tillage, judicious fertilizing and correct application of water by irrigation.

The land should be well prepared and fertilized, if possible. If in an irrigation country, the ditches should be made about four feet apart, and the land irrigated before planting. The seed should be planted, about five in a hill, four feet apart, as soon in the spring as danger from late frosts is over. Cultivation must be as perfect as for melons or squashes. Where irrigated, great care should be exercised in watering, as but little water is necessary until the plants begin to branch out for running vines. The best varieties I have planted are Long Green, White Spine, Green Prolific and Boston Pickling. There may be others just as good, or better, but I have not grown them. I find that liberal pruning of the vines with a sharp pair of shears is an excellent plan for increasing the yield.

Small cucumbers always command good prices and sell where large ones are not wanted. The best method of picking is to clip from the stems with shears, so as to keep the vines in position. Any disturbance of the vines by pulling about, running stock through, or any other means, cuts the crop short by stopping the bearing. Pulling the cucumbers will not do at all, and cutting with a knife is not advisable. A stem about one half inch long should be left on every pickle. When picked or clipped, they should be placed in small baskets and carried to where needed to pack in the kegs or barrels. The picking should not be done too early in the forenoon, as dirt or mud upon the vines or leaves will cause rust, and thereby decrease the crop. Care should be exercised in walking about, so that the vines are not bruised.

Barrels and kegs should be kept in readiness for packing. The cucumbers should be hand-laid in the vessels, and not pitched or dropped in. They should be covered with good strong brine heated to almost boiling-point. This must be put on and kept entirely over the cucumbers. A little alum might be used to keep them hard and green, though many packers are more successful with salt brine only. A false head can be placed in the keg or barrel, with a stick, say six inches in length, extending from the smaller head to the stationary one, which should be put on as soon as filled. The pickles are then ready for market, and are known as salt pickles. If they are to be prepared for the table, they can be taken out, and soaked in fresh water over night, given a good washing and covered with vinegar.

Joel Shomaker.

FOR BREACHY BULLS.

For the benefit of those who may have breachy bulls or other kind of cattle that throw the fence, I will state what I have found to be a good preventive, and I have had one of the worst animals I ever saw to experiment on.

I had a ring, something like the accompanying cut, made of one-fourth-inch iron, three and one half inches wide. I attached a short piece of trace-chain to each side of the ring where holes are shown, crossed the chains over the animal's nose, and fastened them to opposite horns close to the head, making the chains as tight as the animal can stand it without pain. When the animal put his nose against the fence the chain rolls or presses to one side, giving the animal instant pain in the nose. One or two attempts to throw the fence after this ring is on will satisfy him, and he will stay where he is put. J. W. McCoy.

KAFIR-CORN.

I believe the time is not far distant when Kafir-corn will take its place with our principal cereals. It is very nutritious. Stock of all kinds will eat it readily. In weight it is equal to wheat. In countries subject to drought and chintz-bugs there is no other grain that equals Kafir-corn.

Last season I got a quart of seed, enough for one acre, and planted it according to directions, three to five grains twenty inches apart. The soil was rather thin. I harvested from this patch forty-five bushels, an average of about forty bushels to the acre, while the Indian corn in the same field and soil produced but twenty-five bushels to the acre. I expect this season to experiment with the cow-pea and Kafir-corn, and will sow one peck of peas to three pecks of Kafir-corn.

Illinois. J. J. Cordier.

* * *

I purchased some Kafir-corn seed last year and planted five acres, and had a good crop. It makes as much grain to the acre as Indian corn, and much more fodder. It grows on poor land better than any other crop that I know of. Old worn-out land where clover does not stick I think Kafir-corn would improve. I think the best way would be by drilling it thinly in rows three feet apart, and cultivating it once. As soon as it begins to head turn it under and plant again, and before frost it can be turned under again or cut and used for feed. If planted in May it will stay green until frost kills it in the fall. I fed horses and cattle with it, and they did well. For poultry the grain is excellent—equal to wheat.

I have two varieties—the red and the white. The white is better for grain, as it has a larger head. Albert Matzker.

Illinois.

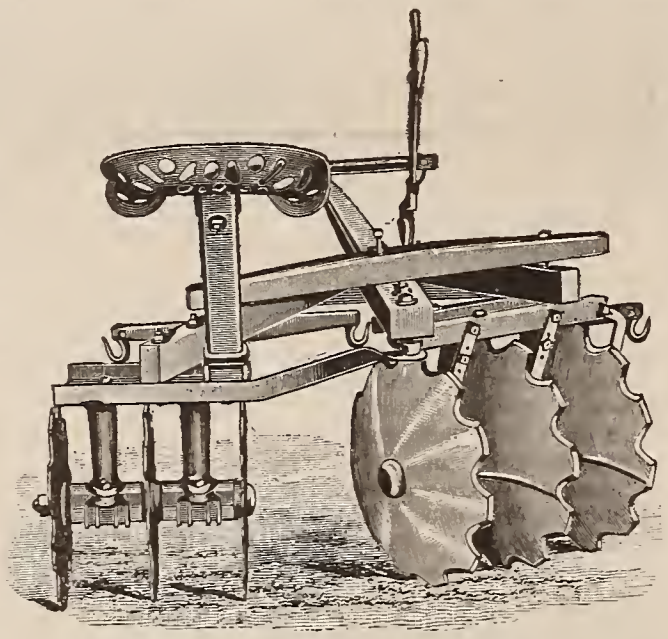
Our Farm.

NOTES FROM GARDEN AND FIELD.

Rolling the Meadows.—I have just gone over some of my meadows with the roller. This is a most important job, and in many cases can be neglected only at the loss of a good portion of the next hay crop. Wherever a meadow is somewhat low and considerably affected by the repeated freezes and thaws of early spring the tufts of timothy, clover and other grasses will be found badly lifted out of the ground. The heavy roller presses them down again into the soft earth, firms the roots and gives the plants a chance to make a good and satisfactory growth and crop. Of course, the work should be done while the meadow is still wet and soft. It takes but little time to do it, and the benefits are great. The hay crop, especially in the vicinity of larger cities, is one of the best and most profitable of all money crops which the farmer can grow.

* * *

A New Idea in Plowing.—The most valuable new discovery which I have made in my farm operations for many years is the fact (new to me) that in the fitting of ordinary, stone-free stubble ground for sowing oats, peas, barley, wheat and others of our common farm crops we now have tools that are more serviceable than the ordinary plow. Turning over a single slice seven or eight inches wide with the plow means a good deal of time and labor in plowing an acre. In a late spring like this we are usually in a terrible hurry to get our plowing done. The time when the ground is in best condition for plowing, neither too wet nor too dry, in many years lasts only a week or two, and before we can have half of the fields plowed the best time for the work is over. Now comes this new tool—the "Tornado"—made by the cutaway harrow people, and relieves us of over one half of the work. I use the 24-inch size, which one good, strong team can handle easily, and which cuts three furrows eight inches each in width and from five to seven inches in depth. So I can do my plowing not only from two to three times as fast as formerly, but also even better, if anything, and there is no walking behind or holding and lifting the plow. In short, the spring plowing has lost all its terrors for me. A glance at the illustration will show the whole arrangement of the machine quite plainly. On the left we have the gang of straight disks (three on the 24-inch Tornado). The weight of the driver, and if necessary of a bag of sand, sends these disks down into the soil for cutting the slices and opening a way for the three hollow disks of the right-hand gang, which at the next bout turn these three slices over as neatly as the best plow could do it. All my larger garden-patches are fitted up by means of this new plowing device. It is not particularly recommended for plowing sod ground, nor have I tried it for such purpose. But I will soon test it, and am fully convinced that it will work well on loose new clover sod and anywhere where sod is not too tough.



* * *

Starting Celery-plants.—For several seasons I have found it difficult to get my celery-plants for general crop started nicely in open ground. The soil and atmospheric conditions must be just right in order to make success assured. Sometimes hard rains pack the soil soon after the seed is sown, or rains fail altogether, and the seed fails to germinate for lack of the needed moisture. Between the two extremes I often come to grief, and instead of having a lot of nice celery-plants (for which there is usually a good demand) to sell I may have to buy my own supply. This year I have started a lot of plants in flats under glass, more than I wanted for setting in cold-frame for early use. While small these plants stand crowding very well, and some thousands can be started on a square foot of flat area. I am now taking these plants up, not really singly, but in bunches as they grew in the little rows across the flats, and by somewhat spreading them set them in rows in open ground, in good soil, and while the latter is just right for the operation, and, of course, freshly prepared. This is not such a tedious job, and I soon will have some very nice plants growing in the garden.

* * *

Soaking Seeds.—Some of these garden-seeds, and among them especially celery, start very slowly, and really too slow for my impatience in a late season like the present one. Sometimes I can hurry them up by giving a soaking in tepid water, and then drying with sand or plaster, and thus get them ready for sowing. The only drawback to this is my inability to forecast the weather. The soil may be just right for sowing the seed. Then if I put the seed to soak over night, thinking to sow it the next morning, a long rain may have set in, making it impracticable to do any sowing in open ground. This has just happened to me with a good lot of celery-seed.

T. Greiner.

ORCHARD AND SMALL FRUITS.

CONDUCTED BY SAMUEL B. GREEN.

WHAT VARIETIES OF APPLES SHALL I PLANT?

Plant varieties that are reasonably hardy, that will bear good crops and retain the fruit on the trees until ripe. The apples should be of fair size, good bright color, and the larger the better, other conditions being equal; in a word, be attractive to the eye.

Size and appearance have much more to do with selling apples than actual quality. They should have sufficient firmness to bear shipping long distances, and should be mainly good keepers.

In buying the trees, after you have made up your mind what you want, be very certain that you get good trees and true varieties. A blunder in this can never be remedied without serious loss. Never buy sorts you do not want because the trees look nice, or because the nurseryman, being overstocked, offers them at reduced price. Such sorts might be all right in a family orchard, but all wrong in your market orchard. It would be far better to pay two, three—yes, half a dozen—prices for the most valuable trees than to plant poor stock as a gift. We have known parties to plant wrong sorts, not knowing what they had until the trees bore, and then when their trees ought to have been worth ten dollars apiece they went into the orchard and grubbed them out.

INQUIRIES ANSWERED.

Cranberry-plants.—W. M., Shannon, Ill. Cranberry-vines may be bought through most of the nurserymen in the northern states. The Lovett Company, of Little Silver, N. J., will furnish cuttings at 50 cents a hundred and $2.50 a thousand.

Grafting Plums.—L. M., Fontainbleau, Mo. As stated several times in Farm and Fireside, plums should be grafted early in the spring. The scions should not be cut in the fall, but in the spring as wanted, because while the wood may winter well in a cellar the buds are liable to die. But plums may be successfully grafted any time before the buds start much.

Snowy Tree-cricket.—J. C., Austin, Minn., writes: "What is it that lays eggs in rows on my raspberry-canes that makes them weak, so that they break off when loaded with fruit?"

Reply:—It is the snowy tree-cricket that lays eggs in your raspberry-canes. She also lays eggs in other wood having a big pith. They do not eat the raspberry or other plants at all. They may be kept in check by gathering and burning the infested canes. They are seldom abundant for more than a few years at a time.

Young Orchard Not Fruiting.—E. S. H., Hiram, Texas. I cannot answer you intelligently until you give me more of the facts connected with your orchard, such as the names of the varieties, whether it is located on high or low land, whether the flowers have been hurt by late spring frosts or by insects. If you will answer these points I can perhaps help you.

Whitewashing Trunks of Fruit-trees.—C. S. A., Sharpsburg, Pa. It does no harm to whitewash trees, and it may do good, as to some extent it makes an unpleasant surface for insects to run over, so that it may help in keeping out insects; but it is not very much of a preventive. If it had Paris green and a little carbolic acid added it would be more effective.

Mulching Grapes.—J. W. E., North Alton, Ill. As a rule, the soil about grape-vines should never be mulched, but should be kept constantly cultivated during the growing season. If it is mulched the roots are liable to run too near the surface, and the soil is kept too cold for best growth. I once mulched a vineyard that came into my charge that was located on very steep, gravelly land that was apt to dry out badly. This treatment helped matters for a few years and prevented the soil from washing, but it did not save the vineyard.

Blueberries.—M. S., New Boston, Mo. You can probably get blueberry-plants of Geo. J. Kellogg, Janesville, Wis., but it is extremely unlikely that they will do anything with you. If you do not get the plants, buy a quart of the berries, rot them for three weeks in water, and sow in the open ground. The seed starts slowly, and often fails to grow, but if you have a suitable location they might do well if sown broadcast. You will probably get more satisfaction out of growing the Success Juneberry, which resembles the blueberry, and does well under cultivation.

Walnut and Hickory Seedlings.—E. T. G., Memphis, Tenn. If black walnut and hickory-nuts are gathered in the fall, spread out in a shady place in the woods about four inches deep, protected from mice, squirrels, etc., and covered with three inches of leaves, they will grow easily if planted in the spring about three inches deep. In more severe sections they may be safely piled deeper, or even be planted in the autumn, but they must be allowed to freeze hard a few times before planting in any case. The nuts you may find on the ground at this season will generally grow.

Dividing Old Currant-bushes.—E. P. F., Cochecton, N. Y. When a currant-plant has made a broad bush with many shoots it can generally be divided into two pieces, and make two good plants, and sometimes into more than two, but the best results will depend much on the good judgment exercised in doing the work. You may have to use an ax or a saw to separate the parts if the roots are large. Such plants often do very well. The single sprouts from the bushes may also be set out with good results, if they are well rooted. The large pieces from large clumps will not cease bearing if the work is well done.

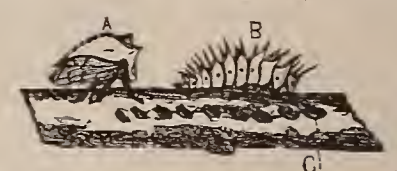
Oyster-shell Bark-scale.—H. H. C., Hendersonville, N. C. The twig received is infested with the oyster-shell bark scale, or louse. These insects are a great nuisance, and seriously check the growth when abundant. Under each scale the eggs are laid, and these hatch into little active lice early in the summer, which crawl out from under them. These lice can move for only a few days. These are so very small that they are seen with difficulty by the naked eye. The only sure remedy is to watch for the time when the eggs hatch, and then spray the wood with a solution of washing-soda made by dissolving half a pound of it in a pail of water, or with a strong solution of whale-oil soap. The scales may be removed from the trunk and big branches by scraping, and then painting the wood with a paint made by adding strong soda-lye to a soft soap. Applications to the tree do no good after the lice become fixed in place and the scale commences to form.

Rabbits Injuring Trees.—E. J. W., Gambler, Ohio, writes: "Last spring I planted some black walnuts in accordance with your directions, for which please accept thanks. They came up nicely, and as last season was an excellent growing one they did well; but last winter, on a few pieces of waste land where some were put, I noticed that the ends of some of the trees had been cut off, in some cases almost as smooth as if it had been done with a knife. I suspected rabbits, as there were some about, but never caught any in the act of gnawing them off. Will such work injure the trees by destroying the terminal buds, or will the trees come out practically as good as unmolested trees?"

Reply:—The tips of your black walnut seedlings were undoubtedly cut off by rabbits. They often do it. But such pruning does not often injure the trees. It will sometimes cause an extra leader to grow, but this is easily removed or dwarfed by being shortened with a knife. The only remedy is to remove the rabbits or fence them out with woven wire.

Umbrella-plant.—W. J. H. K., Marion, Iowa. By umbrella-plant I take it you mean a sort of reed with several or many stems called by botanists Cyperus alternifolius. It is a common plant in greenhouses, and it may be propagated by division; that is, by cutting out some of the stems and a piece of root, and potting at once. It may also be grown by cutting the top off close to the leaves, and putting the top into moist sand the same as the cuttings of most house-plants are rooted. Be sure to put the base of the lower leaves in the sand. In either case you should remember that the divisions, or cuttings, need lots of water.

Buffalo Tree-hopper.—W. J. H., Elmwood, Ill. The apple wood sent is infested by the eggs of the buffalo tree-hopper, which is very injurious in some sections, and is found in nearly every section of the country. The illustration shows the insect in its different stages of growth. The scars on the wood are the places where the eggs are laid; each of the scars contains forty or more eggs. These will hatch out in the early summer into little sucking lice, which may



A, adult form; B, larva; C, scars on wood where eggs are laid.

be killed by kerosene emulsion when young; but this material is of no avail when the insects are mature. When full-grown they may be killed by shaking them from the trees onto an oiled sheet. The mature insect moves very quickly, and tries to keep out of sight; it is a peculiar three-cornered affair, and hence its name. The most satisfactory remedy, where the insect is not very abundant, is to cut off and burn the wood that is infested with the eggs before they hatch.

Currants—Buffalo-berry.—P. H., Gadsden, Ala., writes: "Are the Crandall tree-currant and the Dakota tree-currant the same? I notice quite a difference in the price.——Do you think either of these and buffalo-berries will succeed this far south?"

Reply:—I do not know the Dakota tree-currant, but I am pretty sure I should were it a good thing. I have very little faith in any new plant that is introduced without the best nurserymen knowing something about it. I am well acquainted with the professors of horticulture in the Dakotas and with nurserymen there, and were this currant a good thing I would undoubtedly hear about it from them. The Crandall currant is the same species as the common yellow-flowering shrub known as the Missouri currant, and commonly grown in dooryards at the North.——The buffalo-berry is of no value for fruit where the currant succeeds, as the fruit is not so good as the currant. One plant of this will not fruit alone, because the male and female flowers are on separate plants, consequently when buying one must get both kinds or no fruit is produced. I do not think any of these fruits will prove valuable in the South.

Black Locust and Walnut.—W. J. S., O'Leary, Iowa, writes: "In March 1st issue O. S. wanted to know about black locust. Seventeen years ago I sowed four pounds of seed; some came up the first spring and some the second. The third spring I set out two acres in rows six by eight feet. They grew well for seven years, when the borers took them by storm. In three years there was not a live tree of the original setting. There were thousands that came up from the roots and seeds of the old ones. The worms killed many of these at first, but their ravages seem to have ceased in a great measure the last two or three years. In eight years they were large enough for good posts. While they last well, there is one objection to them for posts: When they are dry they are of adamantine hardness, so hard it is difficult to get a staple into them very far, then when the staple is in the post will check, and the staple will drop out. While they are a very fast-growing hardwood tree, if the worms will let them alone, I would not advise any one to get them onto his place. They scatter badly, but I've had no trouble with them on my plow-land. I should think black walnut would do well in the latitude of southern Ohio."

[The honey-locust grows fully as fast as the yellow locust, and is free from most of the objections to the latter, and it is about as durable. It does not sprout from the root. The black walnut is one of the most profitable trees for timber-planting on rich alluvial soils.—S. B. G.]

Our Farm.

PREPARING THE SEED-BED.

If it pays to do any kind of farm-work more thoroughly than another, it is certainly the preparation of the seed-bed. No matter how much time and work we may bestow upon a crop afterward, it will not make up for any neglect in this most essential requirement—a perfect seed-bed.

In preparing a field for a potato crop this fact is of more importance than with most any other crop. All after-culture is more than half done if the seed-bed has received the necessary amount of work to make it what it should be.

There is a great difference in plowing a field by different plowmen; one will do it in a sort of slipshod way, while the other

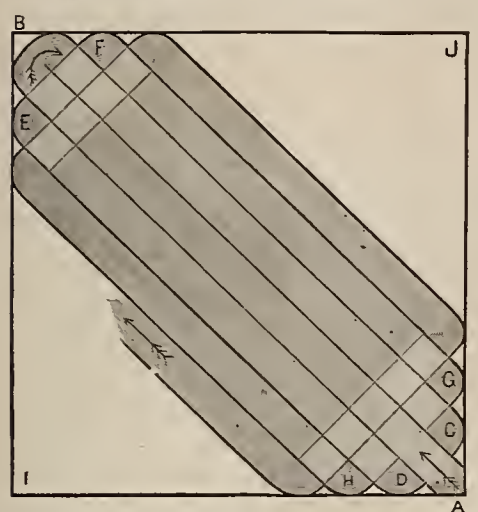


Fig. 1.

does it with the object of preparing a perfect seed-bed. I emphatically prefer the latter; but I do not think that the difference between good and poor plowing has as much to do with the crop as the next operation, the harrowing. The old saying, "Harrow your field until it is good enough, and then go over it two or three times more," is a good rule, but too many of us fail to follow it. We overlook the fore part entirely, and make ourselves believe that the "two or three times more" is sufficient.

As a rule, a good, heavy clover sod is preferred in this section for a potato crop. When this is plowed it requires a considerable amount of harrowing with the furrows to keep it from pulling up when crossing square across the furrows; in fact, it will always pull up more or less when harrowed in this way. This makes the field unsightly, and does not put it in the best possible shape for after-culture. A better way is to cross the furrows at an angle of about forty-five degrees, which reduces the chance of pulling up to a minimum.

Fig. 1 shows a way which has many advantages over the old way of going back and forth at right angles to the furrows. In going over the whole field only one whole turn, the first one, has to be made; all the rest are turns at right angles or half turns. All farmers know how teams dislike to make short turns. Horses are very apt to calk themselves or step onto one another's feet. The plan here illustrated cuts every furrow diagonally both ways. The result in regard to pulverizing and leveling a field can in no other way be obtained with the same outlay of work and time. It also leaves the surface of a field so that the marking in either direction is plainly visible.

Let us suppose Fig. 1 represents a square field. We start in at A, go diagonally across the field to the corner B,

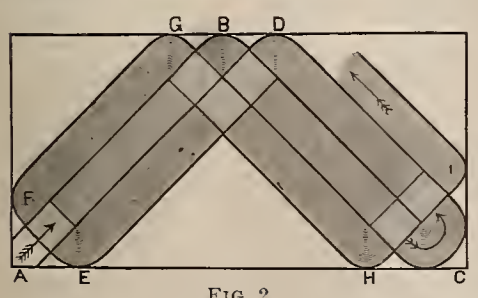


Fig. 2.

make the whole turn (see arrow), and return along the first track to C, turn to the right, cross the first track to D, turn to the right again and go to E, another right turn to F, the same turn to G, then to H, and continue in this way until the field is finished, which will be when the corners I and J are reached.

It will be noticed that all turns are to the right; if for any reason turns to the left are preferred, it is only necessary to start at the left corner of the field, and all turns will be to the left.

If a field is oblong, like Fig. 2, it can be harrowed in the same way; but the furrows will not be cut all at the same angle. If this is desired, a landing about half way has to be made. After starting at A, make a turn to the right at B, go to the corner C, make a whole turn to the left, follow the first track back to D, turn to the left, cross the first track, and go to E, then to the right to F, then to G, H, I, and so on until we reach a landing on the opposite side from B, and finish on the diagonal corner from A.

To the uninitiated this principle of harrowing a field may at first seem like a labyrinth, hard to unravel; but a very little experience will soon set the teamster to rights. It is almost impossible to get puzzled, if one started in the right way, and in this one cannot fail if the following rule is observed: If you come out on the right corner, turn to the left; if on the left, turn to the right. The arrows on the corners of both diagrams where the whole turn is made (B and C respectively) indicate this rule. G. C. Greiner.

SORGHUM FODDER.

My way of raising sorghum for fodder is to lay off as for corn, drop about twenty grains every sixteen inches, and cover one half inch deep with the foot. Do not thin; let the crop grow until seeds mature.

Tie four hills together to shock around like corn. Cut half shocks, tie with twine, and let stand three or four days before finishing the shocks. Let the shocks stand three or four weeks to cure. The fodder must then be shocked under shelter; if laid in deep piles it will mold and become worthless. D. N. Mullins.

Kentucky.

THE SPINELESS GOOSEBERRY.

It is conceded that a rose without thorns will smell as sweet as one with them; and surely a gooseberry without spines would be no less grateful. Indeed, the thorns of the gooseberry form one of its objectionable features. The new race of spineless gooseberries marks a new era in fruit-garden culture. To an American especially, who firmly believes that time is money, it is profit to have the time spent on avoiding spines spent on gathering the fruits.—Meehans' Monthly.

EXTRACTS FROM CORRESPONDENCE.

From Arkansas.—January, 1896, I sowed one acre in oats, and June 2d I harvested 40 bushels; June 3d and 4th I planted the same ground in watermelons. In September and October I sold $150 worth of melons. About the last of October I sowed the same piece of land in oats again, which gave about two months' grazing in the winter for my horses. J. M. C.

Pine Bluff, Ark.

From Michigan.—The land here is a dark, sandy soil, yielding good crops. My orchard of apples, cherries and plums was loaded with fruit last year, and there was not a stung or wormy fruit in the lot. The woods are full of blackberries, red raspberries, gooseberries and wild currants. The timber is maple, beach, elm and hemlock. There is some land here that can be bought for $8 an acre, and the timber will nearly pay for it. There is a sawmill three miles from us, where all the logs can be sold, and the tops can be taken to the coal-kilns four miles from here. Nine miles from here is Kalkaska, a lively little town on the G. R. & I. R. R. Seven miles north is another fine little town on the same road, called Mancelona.

Westwood, Kalkaska county, Mich. E. J. S.

From Kansas.—Southern Kansas is one of the most healthful spots in the Union, a natural sanatorium, with winters so mild that to people from the North they seem like pleasant fall weather. The state is very large, and what describes one portion is no description of some other part; the northwest corner is high and cold, the southeast corner is warm. The country has been misunderstood, lied about and abused, and only now have people who first settled the southern part come to know its capabilities and how to realize them. As is the case in new countries, single-crop farming was the rule; failing in one, rushing into another; failing in that, and always broke. Now, however, we are trying varieties, and are succeeding. Cattle can be wintered with only a pretense of a shelter, and feed is plentiful. Hogs do well, and cholera is not so deadly as in some states. Poultry is profitable and easily kept through our short winters. Wheat, corn, rye, Kafir-corn, sorghum and alfalfa do well; also all kinds of fruits and vegetables. With windmill irrigation the finest gardens can be raised easily and more surely than by old rain-when-you-want-to methods. Being centrally located, our markets are good, and year by year New Orleans and Galveston are becoming greater grain exporters and bringing Europe nearer to us. Land is still cheap—eight dollars to fifteen dollars an acre—and all good rolling and beautiful prairie. Streams are rapid and clear; our roads the best in the world. But the chiefest of all is the remarkable healthfulness, and without health all else is vain. J. G.

Bluff City, Harper county, Kan.

From California.—The Manton country, in northern California, is at the present time enjoying a season of prosperity. Crops are grown by irrigation in this country, which, of course, means abundant crops year after year with no possibility of failure. This is a fine fruit country. The winters are short and mild. Stock runs at large all through the winter. There is never snow enough for sleighing, and the ground seldom freezes too hard to plow. Here the sun shines about 300 out of 365 days in the year. The Sacramento river furnishes an abundance of salmon and other fish. This climate is remarkably healthful. Rheumatism and pulmonary diseases yield rapidly to the healing influence of this warm, dry climate. Under irrigation agriculture is made a source of safe investment. H. B. G.

Manton, Cal.

From Missouri.—We are located about the geographical center of the state, on the northeast slope of the Ozark hills. We have a most healthful climate here, and the soil is very productive. Everything we plant grows to perfection. I lived, until twelve years ago, in the great fruit belt of Michigan, and can truly say that the fruit here is much finer in color and flavor, and the fruit season is much longer. Our strawberries begin to ripen in May, and then it is ripe fruit all the time until we wind up with the persimmons after frost in October or November. Corn yields from 25 to 60 bushels to the acre, and wheat, 10 to 25, according to the way a man farms; and all other crops produce in about the same proportion. This seems to be the home of the clovers. There is plenty of small game and good fishing for those that enjoy the sport. We have prairie and timber land, both very cheap. Homeseekers can have their choice, and there is room yet for some more good workers.

Eldon, Mo. J. H. S.

From Nebraska.—Red Willow county is in the south tier, seventy miles from Colorado. The Republican valley, widely noted for its lovely land and rich soil, runs through the central part of the county. Several small streams empty into the river in the county. There is some timber on the streams. The river-bottom is two to four miles wide. It does not overflow. In the county there are more than sixty thousand acres of level bottom land, very rich, the best of alfalfa land. Alfalfa yields three to four crops of hay every season, and I have known it to make five crops in a season and yield over eight tons to the acre. In the year 1894 was the worst drought ever known here, and yet it made three to four crops, and a good many fields yielded over six tons an acre that year. A thirty-acre patch yielded three tons of hay and fifteen bushels of seed an acre. The amount of feed an acre will furnish is almost beyond belief. That dry season a twenty-acre field made three tons of hay an acre, and it kept sixty-five steers from August 1st until October, when they were shipped to Omaha, "fat as butter." A ten-acre field kept twenty-four hogs and thirty-two horses and cattle that dry season. Three acres kept ninety-seven hogs and pigs, five horses and cattle, and the patch was mowed twice that season, and made a ton an acre at each cutting. Last season ten acres kept one hundred and sixty-three hogs and sixty-two tons of hay were taken from that field the same year. Last season four acres kept one hundred hogs and one hundred and twenty-seven pigs. The last of July fifty hogs were taken to market. I do not know of any kind of crop in any country that is as sure every year as alfalfa is here. We did not know the worth of alfalfa until that awful drought of 1894 came along and opened our eyes and taught us a lesson. It is over fifty years since I first followed the plow, and have been at it ever since, and I don't know of any kind of farming at which money can be made so easy and fast as with alfalfa, hogs and cattle. I have farmed here fifteen years, and commenced seeding in February every year but one. This year wheat was sown February 17th; then it got cold and stopped us. Now, March 9th, farmers are busy as bees in the fields. The soil is in better condition now than it has been for ten years at this time of year. I have not fed my cattle two months any winter here, and some winters fed none. Have not fed ten days this winter. Most of the time in winter it is Indian summer. The sun shines bright and warm nearly all winter. Only two days this winter the sun was not seen. The ground is bare, and roads dry and smooth nearly all winter. There is no time of year that roads get so muddy that a good team can't draw a ton ten miles to market.

McCook, Neb. W. C.

Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

HOW TO BEGIN.

If an inexperienced person should begin the poultry business on a large scale by going out into the country and buying five hundred or one thousand hens, he would probably make a failure of his venture, because he would incur the risk of bringing lice and disease on his farm, and would also accept a great many nondescript fowls which would prove worthless. One should not expect to begin in a day, nor should any profit be expected the first year. The beginner should select fifty healthy, hardy hens, procured from some reliable source, and which are pure-bred or well-bred stock. He should use only pure-bred males of the breed he prefers. Use the eggs for hatching from the best hens, and endeavor to hatch the pullets not later than April. If five hundred pullets are hatched and raised, it will be a large number, but the real result will be nearer three hundred pullets. Save them, and increase the number next year. Always breed for the kind of hens you desire, and never buy one. It is the first three years that must be met, but after that time the work will be easier, the difficulties fewer and the profits larger.

THE YOUNG PULLETS.

If the young pullets for next year were hatched in March they should now be large enough to make a selection. It is important that they grow rapidly, so as to have them begin laying next November. Do not be tempted to keep all of them unless you can give them plenty of room, for crowding will do more to retard them than anything else. Among the pullets will be noticed some that are apparently stunted and which do not keep up with the others. Sell them off with the young males. Do not keep the cockerels and pullets together. If you object to having two inclosures, then get rid of the cockerels. They will bring better prices when small than if permitted to grow larger. Feed young pullets on bone and meat, allowing but little grain at any time, as the object is to supply the element which produces bone and muscle instead of fat. If with good care you find that the pullets do not grow, look carefully on their heads and necks for the large gray lice, and rub a few drops of melted lard well into the skin of the heads, necks, under the throats and around the vents; but the lard should not be used too freely, as grease of any kind is injurious to poultry when applied on the bodies.

FOWLS OUT OF CONDITION.

During very warm weather bowel disease puts in an appearance and debilitates the members of the flock. The first thing to do is to allow no food whatever unless it is a teaspoonful of powdered cinnamon in a pint of milk for twenty fowls. Be sure to secure the pure article, as cinnamon is often adulterated. A teaspoonful of tincture of nux vomica in a quart of drinking-water may also be allowed, but be careful to give no food. When the hens cease laying and get out of condition resort is sometimes had to egg foods and condition-powders, which may be just the things to be avoided. Egg foods and condition-powders have their places; they may be beneficial where the flock is lacking in hardiness and health, but the best course to pursue is to give no medicine or stimulants to healthy fowls, as they do not require them.

GROWING CHEAP FOODS.

Cheap food is not the result of buying at an advantage in price, but in the use of the kinds that will make the hens lay or induce rapid growth of young stock. One who was famous for the choice fowls brought into market had a secret which could not be gotten from him. At last some individual discovered that the fortunate farmer's secret consisted in growing a lot of cow-peas upon which he turned his fowls after the pods of the peas were well filled. The hens would pick the seeds from the pods and eat until they were well filled, fattening rapidly and in a manner which promoted their health. Another who always marketed choice poultry kept them in a clover-field, giving wheat at night. It is well to utilize waste pieces of ground by growing something thereon for the hens, as they will eat young weeds, and also find many insects as well. Cheap foods are those that give the best results, and should be of a variety, as variety provides the hens with all the elements of egg production, promotes digestion and enables the fowls to make the greatest gain in the shortest period of time.

CLEANING THE POULTRY-HOUSE.

During the summer months it is a serious matter to allow the droppings to accumulate in the poultry-house, as they serve as harboring-places for lice when dry. The proper mode is to carefully sweep the poultry-house every morning with a broom, and then to scatter dry dirt on the floor and under the roosts. The dry dirt makes the sweeping an easy matter if the work is done daily, but if postponed for two or three days some of the droppings will stick to the floor. It is but a few minutes' work if plenty of dirt is used. After sweeping the floor, put the droppings into a barrel or throw them on the land. There will be sufficient dirt with them to preserve them. If the floor, after being swept, is well dusted with air-slaked lime once a week, and dirt scattered on the lime, it will serve to assist in preventing lice; but the lime will injure the droppings some, though it matters not, provided the droppings are at once spread on the land. When the droppings accumulate the result is ammonia and odors in the poultry-house which are disagreeable to the hens, often compelling them to roost outside.

LOCAL MARKETS.

It is not always in the large markets that the highest prices are obtained for eggs. One reason why so many farmers ship their eggs to a distant market is because it is easier to do so than to sell nearer home. When a lot of eggs can be sent away in a crate to be sold by an agent the work is done, and when sold in the nearest town more time must be given. If the towns were better supplied prices would be higher in the large markets, and it will no doubt pay to build up a local custom for eggs, as better prices are obtained in that manner than by shipping to the cities.

VALUE OF THE DROPPINGS.

Various estimates are placed on the value of the droppings from a hen in a year, and some have estimated that they can produce one dollar during that time in the value of the droppings. As the amount of food consumed by a hen in a year is equal to five pecks of grain (or its equivalent), it is plain that the droppings cannot exceed that from which it is obtained, while the maintenance of the hen and the eggs laid must also come from the food, thus leaving a small proportion only in the droppings.

PURE BREEDS FOR BROILERS.

No one can raise choice broilers for market by buying eggs for the purpose from neighbors and others who give no attention to improving their flocks. It is not difficult to secure uniform chicks if pure-bred males are used. If a Plymouth Rock male is mated with a lot of hens, even if such hens are of different kinds, the chicks will strongly partake of the character and color of the male. If the pullets are retained and mated with another Plymouth Rock male the next year, so much the better. Thus one can, by the use of only two pure-bred males, in two years have a flock that is uniform. If there is a necessity for buying eggs from neighbors, the proper course is to put young Plymouth Rock males in such yards in exchange for the common males, selling the latter at once. This can be done by raising pure-bred males for that purpose, and it will pay to thus dispose of the surplus pure-bred males where one purchases eggs for hatching purposes.

MEAT IN SUMMER.

What should the hens receive in order to make them lay in the summer season? It is evident that warmth is not required, being more detrimental than otherwise, hence no heating food should be allowed. If the hens are well fed and do not lay, then it indicates that the ration is not balanced, being too carbonaceous. The proper food, therefore, to make the hens lay is lean meat or cut bone. When this is given, cut off the allowance of other foods; give but one meal a day, and let the hens forage for grass.

CORRESPONDENCE.

General Management.—As I have always taken a great interest in chickens ever since I was a boy, I have become acquainted with their habits, their likes and dislikes. I have raised many breeds, and, as Davy Crockett said, "Be sure you are right, and then go ahead," I find that the Buff Cochin fowls are the best I can get for all purposes. They are very tame, fair layers, hardy, make good mothers, cover fifteen eggs and stick to their business. In this mild climate I set hens every month in the year. I have chicks now six days old, well feathered, running out with the hens, hearty and healthy. They roost under the hen at night in tight coops closed all around, except the front, which is covered with woven wire, the coops having a small door at the end. They all go to their own coops by dark, and I shut them up. The Cochins bred with White Brahmas produce fine birds, as they are heavy and very tame, weighing from six to ten pounds, which at five cents a pound will pay better, I find, than other breeds that weigh from two to five pounds. If eggs are wanted, then the little Brown Leghorn is the best. Hens must have meat and bone if you want them to lay in winter. As rabbits are a nuisance here, I shoot and trap them, skin and clean them, and chop them up (bones and all) with a sharp hatchet on a block of wood. The birds soon know by the sound of the hatchet what I am about, and flock around me, and as soon as the meat and bones are finely chopped I scatter it around. This furnishes both meat and bone, and costs nothing except for the shot. I save all the broken glass and crockery I can find and pound it up on the block, and they will eat all of it. Smooth gravel is of little use, as a sharp, cutting edge is necessary to grind up the corn in their gizzards. Many hens die in winter for want of suitable material for reducing their food. I give warm water in cold weather. I feed wheat-screenings and corn in winter when rabbits cannot be had. Cracklings from the butcher, mixed with coarse meal, with a little salt and red pepper, chopped fine, the whole mixed into a stiff dough, and given warm, is my ration in the mornings. Now, the most important thing is the house. It should be built facing the south, 10x16 feet, of lumber or boards, 10 feet high on the back and 12 feet in front. One end inside should be floored, 6 inches above the ground, to allow the cats to enter underneath to watch any stray rats. The boards should run down below the sills 6 inches, leaving one small opening, and then banked up tight. A strong door is all that is needed in front, and one in the end entering the laying-room. In the daytime the door in the roosting-house is left open for light and sunshine. The roosts should be poles laid level across both ends, with an open space in the middle, all the bark and rough edges being smoothed off and each one nailed to crosspieces permanently. Ladders of sharp-edge strips should not be used, as the fowls' breast-bones will become indented. The poles should be nailed fourteen inches apart, so that they will not crowd each other, and to enable one to walk between them to keep them free from vermin, which is done by passing a brush over them once a week, dipped in kerosene. The roosts should be five feet from the ground, to enable one to clean out the droppings from under them. The roofs should be covered with roof-boards tightly nailed to the plate and centerpiece, and battened over the cracks outside and all around. Such a house can be built for twenty dollars. In the laying-house, which must be separated from the roosting-house by a board partition, leave an opening twelve inches high and twenty inches wide at the bottom for the hens to enter. This room should be dark, as hens prefer a dark place to lay in. Nests should be made of empty nail-kegs, which can be had of any hardware-store for nothing, as when a hen sits the eggs are then always under her, and do not roll out. A board should be nailed in front of the kegs, the board to be six inches wide. The kegs should be on the floor. F. F. A.

Chetopa, Kan.

INQUIRIES ANSWERED.

Blindness of Chicks.—J. H. T., Morantown, Kan., writes: "I have a nice flock of chicks, all well; but two seemed to be blind, not at first, but it gradually appeared."

Reply:—It may be due to exposure—taking cold—or from being pecked by the others. It is something that frequently happens to fowls and chicks during windy weather.

Lice Remedy in the Food.—W. J. L., Middleton, writes: "It has been stated that sassafras-oil in the food will destroy lice; but I do not see how that is possible. Is there any other remedy?"

Reply:—It is doubtful if lice can be prevented by remedies in the food. Thorough and complete drenching of the poultry-house with kerosene or kerosene emulsion has been a success.

Capital Required.—F. C., Angel's Camp, Cal., writes: "In your opinion, will a capital of two hundred and fifty dollars enable one to make a living from poultry in southern California?"

Reply:—Considering that buildings, food and stock must be procured, it would be difficult to accomplish much the first year with such limited capital; but a beginning can be made and a business built up in three or four years by good management.

Egg-eating—Drooping Chicks.—A. M. M., Anselma, Pa., writes: "What is the cause of hens eating their eggs?——What is the best food to make them lay?——My chicks droop, have bowel disease, and die."

Reply:—It is a habit caused by an egg becoming broken, one hen beginning to eat eggs and teaching others.——It depends on a great many conditions. Meat ranks very high.——They are probably attacked by the large lice on the heads. Anoint with a few drops of melted lard.

Our Fireside.

MY SWEETHEART.

To me there is no other girl
  Half so dear as she
Who always comes at eventide
  And sits upon my knee.
There's laughter in her sparkling eyes,
  There's sunshine in her hair.
Of all the maidens that I know
  Not one is half so fair.

Without her life would be to me
  Not half so sweet as now;
And to her will, whate'er it be,
  Submissively I bow.
Whene'er she smiles, my heart leaps up
  And throbs with fierce delight.
Her tears, for me, whene'er they flow
  Turn daytime into night.

I've loved her now for seven years,
  Since first I saw her face,
And to this maid each year has brought
  A new and charming grace.
What wonder, then, that I rejoice
  Whene'er this girl draws near,
And whispers as she kisses me,
  "I love you, papa dear."

—Thomas Holmes.

THE MESSAGE.

My baby, who has passed to fuller life,
  Waked in the April sunshine one fair morn.
A bird was calling; clearer than a fife
  That note upon a waudering breeze was borne;
It caught the fancy of the ten-months child,
  Who knew no other language than sweet cries.
She answered it with note as clear and wild,
  She answered it with such gladness in her eyes,
I have since wondered if the message came,
  Brought by a bird, of some far lovely clime
Shut out from mortal's gaze by gates of flame,
  She seemed so much of heaven from that time.

—Elizabeth Cherry Haire.

THROUGH A GLASS DARKLY

BY VIRNA WOOD.

CHAPTER IV.

By considerable questioning of the old doctor he had learned that at the time Henry Withington hoarded at the hotel there was a pretty waitress in the house named Nellie Pierson. The old man had never thought of coupling their names: hut he remembered that shortly after the young man had gone to Mexico the girl disappeared. It was afterward reported that she had gone to San Francisco, and had died there. He had a vague recollection of having heard that the girl claimed she was married to a man who deserted her. She had a niece living in the town, a Mrs. Winters, who might be able to throw some light upon the subject. He remembered that there was a dark young fellow who came sometimes to see the girl, and who left the town shortly after her disappearance. If there was a wrong done, the old doctor concluded, he was probably the man that did it, hut the detective did not agree with him. However, he kept his ideas to himself, and elaborated his theory in the privacy of his own room.

The next morning he started out in search of Mrs. Winters. He found her in a little house on Ravine avenue, a pretty young woman, the wife of a clerk in the post-office. She received him politely, hut was not inclined to he communicative.

"I have heard my mother speak of my aunt," she said, "but I do not know much about her. I think she died in San Francisco."

"Was she married?" asked the detective.

"She was married," was the emphatic reply.

"The ceremony took place in San Francisco, I believe," Keith suggested, "and the marriage was kept secret."

"Yes," Mrs. Winters replied, with some asperity.

"What was the husband's name?" continued the detective.

"I do not think that I have ever heard it," she said. "Perhaps," she added, "you will be good enough to tell me why you are so interested in my family affairs."

He looked at her, and decided to take her into his confidence. She was much interested by his story, and immediately declared that she would give him all the assistance she could.

"I am sorry," she added, "that I know so little of the circumstances. I believe, however, that no proofs of the marriage exist. It was never recorded, and the minister who performed the ceremony died shortly after. My mother and a friend of the husband's were witnesses, and they are hoth dead. I do not remember any of the names. My mother died when I was a child, and I have heard nothing of these things since."

"Do you know what was the object of secrecy?" asked Keith.

"The husband was afraid his mother would disown him if she knew he had married a waitress," she replied. "Then he was himself a proud man, and I believe he wanted to have my aunt educated before he introduced her as his wife. After he deserted her she still concealed his name, and bound my mother to do so, because her lover threatened to kill him. There was a child born a year after the marriage, but I think it died. I remember my mother said that my aunt had all the letters her husband had written her buried with her."

"We must have them, then," said Keith, decidedly. "Do you know nothing of the discarded lover?"

"Nothing but what I have told you," she said; "that he threatened to kill the husband."

The detective remained in Minerville several days, trying to learn the name of the lover. At last he obtained it from an old hostler, hlind and in his dotage. He was not sure the information was reliable, but it was the best he could do. The name was Oscar Sayles.

A week after his return to San Francisco Hamilton Keith stood in his own room, with a bundle of old letters in his hand. Several days had been consumed in finding Nellie Pierson's grave and obtaining permission of the authorities to open it; but at last he was alone, with the precious packet in his hand. The papers were yellow and stained, and were tied together with a faded blue ribhon. He opened them reverently, and glanced over the creased and torn pages. The letters were dated "Mexico" and signed "Henry." At the hottom of the pile he found a larger paper, and eagerly opened it. It was the certificate of marriage of Henry Withington and Nellie Pierson, signed by Gilbert Evans, officiating clergyman, and witnessed hy Julia Withington and Stephen Richards. Something fell to the floor with a metallic sound, and stooping down he picked up a package wrapped in tissue-paper. He tore off the wrappings, and found an old-fashioned locket. Opening it he saw two daguerreotypes, one of which he readily recognized as that of Henry Withington, taken in his youth; the other was the portrait of an exceedingly heautiful young girl. Something about the delicate features, the frank and merry expression, and the cloud of light curls haunted him as vaguely familiar; but it was in vain that he tried to associate the resemblance with any face that he had seen.

He was interrupted by the arrival of Margaret and her mother, to whom he told what he had learned, showing them the letters and the marriage certificate, and finally the locket. As Margaret looked at the portrait of the girl a strange possibility flashed across her mind; hut it seemed a fancy, and she laid the thought aside.

"What are you going to do now?" she asked.

"I am going to try to identify Oscar Sayles with the man you have seen," he replied; "and I shall want you to help me."

"What can I do?" asked Margaret, flushing slightly.

"It is probable that Oscar Sayles followed Nellie Pierson, or Mrs. Withington, as we ought now to call her, to San Francisco. If so, there is a possibility that we shall find his name in the first great register for the year 1867. It is possible, also, that we shall find his name in the last register, with the description of personal appearance that is now required."

"Would a criminal register under such requirements?" asked Margaret.

"We have no evidence of his having heen a criminal before the murder," said Keith. "Then, if we are on the wrong track, we may discover the fact from the description in the register."

So the three set out for the county clerk's office, and were soon bending over the old book.

"Here it is," said Keith, pointing to the entry.

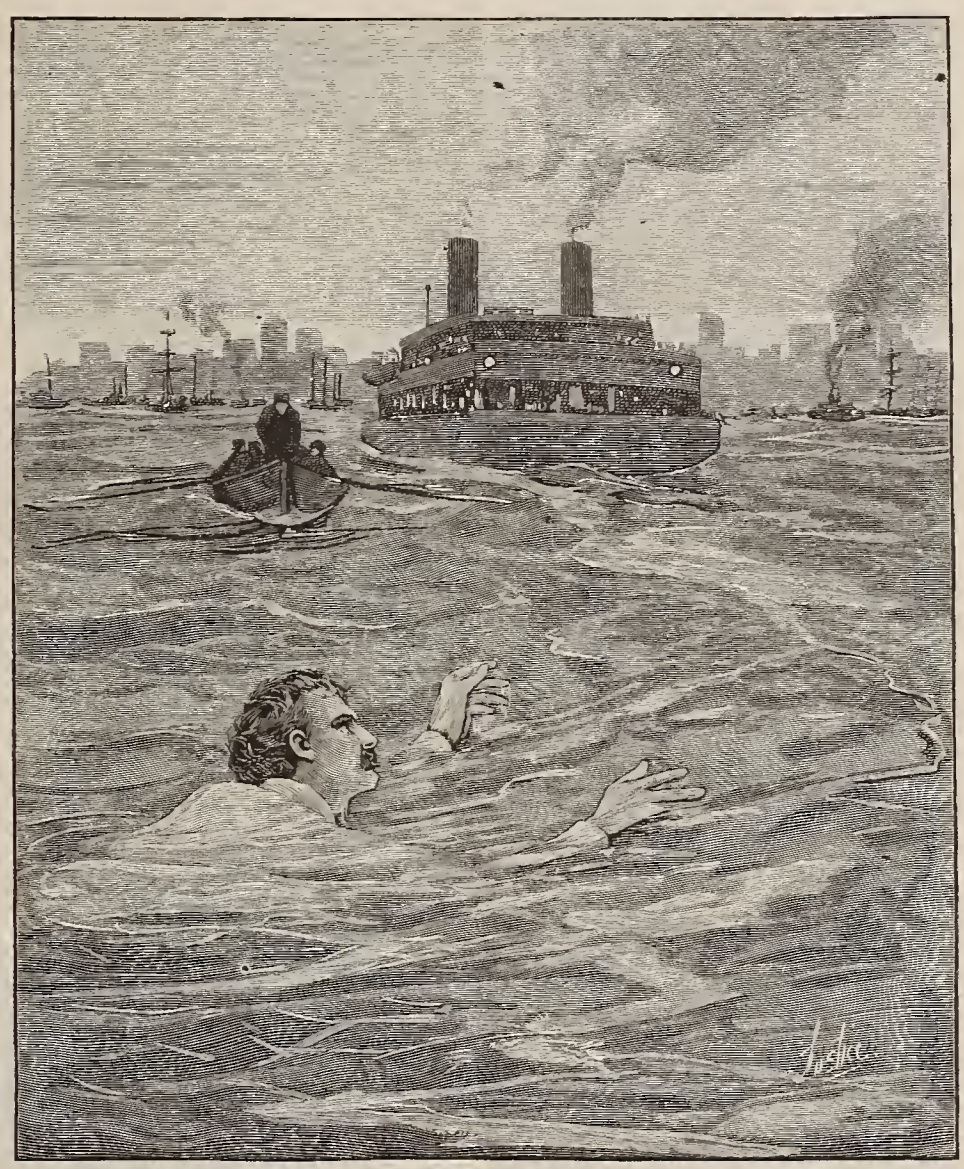
Oscar Sayles was registered in 1867 as a native of New York, twenty-two years old. The residence was No. —— Mission street.

The detective copied the entry, and turned to the last register. Suddenly a cry escaped Margaret's lips. She put her finger on the page, and they read after the name the following description: Age, forty-seven; height, five feet ten inches; complexion, dark; color of eyes, black; color of hair, black; long scar on lower right cheek half across chin. The residence was No. —— Minna street.

"It is the same," said the detective.

"Yes," Margaret replied; "undouhtedly."

After making a copy of this entry also, Keith led the way out, and they started for Minna street.



THROWING OFF HIS COAT AND HAT, HE LEAPED INTO THE WATER.

"What will you do if you find him?" inquired Margaret.

"Arrest him," was the laconic answer.

They turned down the narrow street at last, with its tall, dingy tenement-houses, and finding the number, tapped at the discolored door. The door opened a little, and from behind it appeared an unkempt head.

"What do you want?" said a woman's voice.

"We wish to see Oscar Sayles," said the detective.

The door opened a little wider, showing an untidy wrapper and a pair of slippered feet.

"Mr. Sayles?" queried the voice. "Mr. Sayles sailed for Australia more than a month ago."

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CHAPTER V.

On referring to the books at the steamer office the detective found the name of Oscar Sayles among the passengers on the "Pelican." He telegraphed to Australia to arrest the man if found, and to send a description of him as soon as he was apprehended. His inquiries at the office failed to elicit any information about the man. So many took passage on the steamer, the clerk said, that it was impossihle to remember individuals. When he had done everything he could think of at present, he went to see Richard Deane, and reported to him the progress of the case. The young man, passing his time in the solitude of his cell, had allowed his mind to dwell with painful intensity upon the details of the case. Again and again he thought over all the chains of the evidence as one who gropes in a dark room, seeking a door of escape. That Margaret believed him innocent, that she knew him to be innocent, was his greatest comfort in his trials; and yet in a sense it was his keenest pain. Her sweet face moved him as no other face had ever done, and yet it seemed worlds away from him. He knew the evidence they had already in their possession would never acquit him without the apprehension of the murderer; and on that hung all his hopes, for even if they failed to convict, as long as there was a cloud upon his name, he could never speak to Margaret as he would speak to her if he had an honorable name to offer her.

After the detective left him he paced wearily up and down his cell; the suspense of waiting seemed intolerable. He felt a mad longing to beat his hands against the walls of his cell, as though he could force his escape and shout out his innocence to the world. Confinement, anxiety and sorrow had worn upon him, and his fine face was pallid and drawn. Back and forth within the narrow limits of his cell he walked, with hands clasped behind him and head drooping on his breast. Before him he saw constantly two visions of the future: one full of honor and happiness, a successful career and a beautiful home; the other, a few days of shame and fear, ending in the darkness of an ignominious death. He stood at the crossing of the roads, unable to direct his steps; and before him on the one hand was the altar, and on the other the gallows.

Meantime Margaret and her mother had returned home. They were met at the door by little Flo. Margaret was worn out with excitement and fatigue, but the first words of her little sister dispelled these feelings, and aroused anew her hope.

"Margaret," the child exclaimed, "there was a woman here to see you; such a funny old woman!"

"Who was she?" asked Margaret in surprise.

"She wouldn't tell her name," replied Flo; "but she said she would call again some time to-day."

It was already past two o'clock. Though Margaret and her mother, absorbed in the events of the day, had eaten nothing since the usual breakfast hour, the girl scarcely tasted her dinner, and was in a state of intense excitement all the afternoon. She did not hesitate to connect her strange caller with the subject nearest her heart, though her mother prepared her for disappointment by warning her that the woman was doubtless an agent or a solicitor of funds for a charitable institution.

The interval of waiting seemed very long to Margaret; but before five o'clock her strange caller came. She was a woman of about sixty, large and evidently Irish, though she had lost the brogue.

"You're the young lady that's interested in Richard Deane?" she said, interrogatively, as she followed Margaret into the room and seated herself.

Margaret assented, with a blush.

"I've been in the country, and I've just heard about it from my daughter, and it's better late than never, as the saying is; so I came this morning to tell you what I knew about it all."

"Come to Mr. Keith's with me," the girl said, rising. "He must hear what you have to say."

Shortly after they entered Hamilton Keith's office. They found the detective pacing the floor with a gloomy hrow.

"We're off the scent," he said. "I received a reply almost immediately from Australia. The Oscar Sayles that landed there is five foot six, and has ruddy complexion and sandy beard. The real Sayles has in some way induced the man to take his name, and he himself is doubtless in the city at the present moment."

"Faith, and I hope so," ejaculated Margaret's companion.

"She has something to tell us about the case," said Margaret in reply to his look of surprise; and the woman began her story.

"My name is Mrs. Monogue," she said, "and I've heen here since the early days. I was a nurse, and I had my sign up at the front of the house, and one day a woman comes to me and says she wants me to take care of her sister. And when I went to the house I asked the sister her name. 'You may call me Mrs. Alexander,' says she; hut I knew that wasn't her name at all. The next day her baby was horn, and the day after that she died. Then the sister gives me the baby to keep, and some money, and goes away; and I've never seen her since. A few weeks later a gentleman comes to me and says the child is his; and he asks about the mother, and cries when I tell him about her; and says he was in Mexico, and was sick and away from the post-office, and didn't know nothing about it."

"Do you know these pictures?" interrupted the detective, handing her the open locket.

The woman looked at the daguerreotypes, and nodded her head.

"Sure, and I wouldn't forget the likes of them," she said. "It's the same, Mr. Keith,

and I'd swear to it on the Bible. And did you ever see any one that looks like the lady, miss?" she suddenly asked, turning to Margaret.

Margaret took the locket from her hand, and looked searchingly at the girlish face. The possibility that flashed across her mind when she first saw it returned to her with the certainty of conviction.

"Yes, I have," she replied, her eyes shining with excitement. The detective bent forward in an attitude of strained attention. The woman went on with her story.

"And he kisses the baby and cries over it like a woman, and says he can't keep it, and he knows only one woman he'd trust it with, the saints forgive him; for I'd kept myself awake at night and wore myself thin the good care I'd taken of him. And he gives me a lot of money to go East with the baby and hunt up his mother, Mrs. Deane, and lay it on her steps, and watch to see if she took it and took care of it. And I was to leave word for the sister of the baby's mother that the baby was dead. And he made me promise not to tell a living soul: and I've kept my word, as the saying is, till this very minute."

"And it is true," exclaimed Margaret, "that Richard Deane is Judge Withington's son!"

"And I thought that same," said Mrs. Monogne; "and I don't believe he did that murder at all," in her excitement lapsing into the brogue; "but a spalpeen of a dark young man with a bathenish scar on his face that hung around the house and threatened to kill the masther; but got tired waiting for him and lift on the stamer, and I've niver laid eyes on him till this blissed day; but twinty odd years or not, I'd know the scar on his ugly face."

"You've seen him to-day?" cried Margaret, springing to her feet.

"Yes, and I followed him into the ticket-office at the Grand hotel and saw him get a ticket for New York; but niver his own name did he give the man, but a bathenish-soundiug name at him that I niver heard before."

"We have no time to lose," cried Keith, rising and putting on his overcoat. "Will you go to the ferry with me, Miss Fenton?"

Margaret assented, and a moment later they were on the street.

They had not reached the corner where they were to take the car when Margaret clutched her companion's arm.

"There he is," she said.

"Where?" asked the detective.

"He is on the front seat of the dummy on that car," she said, pointing to a car that had just passed; "and he has a valise with him."

They got on the next car and rode to the ferry. It was early evening, and there were as yet no lights on the street. They could see the hands of the clock on the tower of the "Chronicle" building pointing to five minutes before the time for the boat to leave. It seemed to them hours that they were passing down the crowded street. The buildings, the hurrying people flashed by Margaret's eyes like the phantasmagoria of a dream. She was conscious only of an intense desire to reach their destination—to be in time. The arrest of Oscar Sayles meant life and liberty for Richard Deane; and for her the possibility of a happiness that she dared not contemplate. The last time she had visited the prisoner in his cell, accompanied, as usual, by her mother and the detective, she had seen in his eyes what he dared not express in words; what he would never dare to express until he was exonerated in the eyes of the world. As yet, of course, he was ignorant of his true relationship to Judge Withington; and Margaret had thought with sympathy of his emotions when he learned it all. But now, as they sped swiftly down the crowded street, the wind following them and blowing the dark curls about her face, every thought, every emotion was swallowed up in the overwhelming desire to be in time. They had passed the "Chronicle" building, and as they neared the station they watched the ferry clock with alarm. There was not a minute to lose. The pursuit had become to the girl's imagination a wild flight. At last the car ran down on the turn-table just as the hand pointed to the even hour. They rushed through the crowd that was surging in opposite directions, dashing under the heads of the expressmen's horses and between wagons and trucks and into the waiting-room just in time to see the gatekeeper close the gate.

Margaret fell back with an exclamation of despair, but the detective rushed to the door, and knocking loudly, cried, "Open to Hamilton Keith."

In a moment the door slid back, and they rushed through. The place was deserted; the crowd had already gone on the boat. They ran through the long, winding passageway, Margaret tripping over her dress in her hurry, and Keith shouting. The passengers, attracted by his cries, had crowded to the end of the boat, and were eagerly watching the wild chase. Just before they reached the edge of the wharf the gangway was pulled up, and the boat began to move; while in the midst of the crowd, leaning over the railing of the upper deck, stood Oscar Sayles, observing them with quiet amusement.

For a moment Hamilton Keith looked about him; then, throwing off his coat and hat, leaped into the water, and began to swim toward the boat.

Chapter VI.

By the time Hamilton Keith had made several strokes toward the ferry the life-boat had been lowered to him; but weighted by his clothing he was unable to reach it, and sank out of sight. The passengers, crowded on the deck at the stern, watched with breathless attention, and no one noticed that the face of the dark stranger with the valise had turned a ghastly white, and that the long scar across his cheek and chin quivered against the livid flesh; nor did any one observe that he put his hand in his breast and did not withdraw it. Even Margaret did not see him, for she stood at the edge of the pier with clasped hands, watching the spot where Keith had disappeared.

After a moment of suspense his head reappeared near the boat, and the sailors grasped him by the shoulders and quickly drew him in.

As soon as he found himself on the ferry he dashed up the steps and through the throng of people, who drew away from his dripping garments. Only the dark stranger remained where he had been standing, his left hand stroking his mustache. His face had resumed its natural color, and he seemed quiet and indifferent.

"Oscar Sayles, you are my prisoner," said Hamilton Keith; but before he had slipped the handcuffs over his wrists the left hand had brushed lightly across the stranger's lips.

"For what do you arrest me?" he asked, quietly.

"For the murder of Judge Withington," was the reply.

"Ah, indeed!" said Sayles, carelessly. "I thought his brother was convicted of the crime."

"Not his brother, his son," said the detective, giving him a keen glance.

"His son, his son?" gasped the murderer, his face turning livid again. "Not—Nellie Pierson's son?"

"Yes," returned the detective, "Mrs. Withington's son."

"Mrs. Withington?" echoed the murderer, a dazed look falling across his face. "He did not—marry Nellie Pierson?"

"Yes," said the detective, "he married Nellie Pierson."

"Have you the proofs of all this?" demanded the man.

"I have the marriage certificate in my possession," was the reply; "and I have witnesses to prove the identity of the son."

"Then I committed the crime in vain," said Oscar Sayles, dropping his head a moment on his breast; "but I will yet save the son. Take down my confession as quickly as you can; I have taken poison, and it is beginning to work."

"Is there a physician here?" demanded Hamilton Keith, turning to the crowd of bystanders.

As no one responded the detective took out his note-book and prepared to take down the confession. The passengers had gathered about them, forming a semicircle, within which the two men stood by the railing; Keith with stern, set face, Sayles, cool and self-possessed. By this time they were about midway across the bay.

"When did you take the poison?" Keith asked.

"Just before you handcuffed me," was the reply. "I have carried the powder in my pocket ever since—that night."

Then he began his confession.

"Nellie Pierson's father had been a man of education and means; but he lost everything in the mines, and died when the children were small. Mrs. Pierson, like many wives of pioneers, was an uneducated woman and could do nothing to support herself but go out by the day to clean house. As soon as the children were old enough they became waitresses; Nellie in the Harris hotel and Julia in the Iowa house. Soon after this their mother died.

"At that time I was a clerk in the express-office; poor, of course, and unable to marry, but I became engaged to Nellie Pierson, and she loved me once," his voice for a moment dropping to a meditative tone; "but suddenly a coolness sprang up between us that I could not understand, and one night she gave me back my ring. This is it," he said, lifting his manacled hands and showing a plain gold circlet on the little finger of the left hand. "I did not know for some time what the trouble was; but one night I saw him walking with her on Ravine avenue, and then I knew."

"You saw whom?" asked the detective.

It was with difficulty that the prisoner replied. He could hardly force himself to speak the name.

"Henry Withington," he said at last. "The next time I saw her," he continued, "I charged her with it, and she denied it. I said some hard things, too, about gentlemen that paid attentions to servant-girls; and she fired up and said she never wanted to see me again. Not long after that he went to Mexico, as people thought; and soon after Nellie disappeared. I went to San Francisco as the most likely place for her to go to, and after several months succeeded in finding her. My worst fears were realized when I saw her condition. I tried to get her to tell me where he was, but she would not; and neither would her sister. They denied that he had anything to do with them, but I knew better. They begged me to go away and let them alone; but I would not do so, and threatened to kill him. If they were married, as you say, he must have made her promise to keep the marriage secret, and she would rather die than break her word to him. And she did die the day after her baby was born. Then I waited for him to come, but in vain. At last, unable to learn where he was, and not believing he had gone to Mexico at all, I took passage in a sailing vessel for Liverpool. I did not care what became of me, whether I lived or died; only I vowed that if he ever came across my track I would kill him. I have been pretty nearly all over the world since then. I have worked in the mines of Africa and Australia and Brazil; and I have always had enough money to live as I pleased. At last I came back to San Francisco, and found it grown almost completely out of my recollection. I inquired about Henry Withington, and found that he had become a wealthy and successful man. I settled myself in a quarter of the city where I thought I would attract little attention, and awaited an opportunity to have my revenge.

"Twice before I was successful I attempted his life. That night I saw him come from the ferry, and followed him. I had been watching the boats for two days, and was prepared. I followed him to the house, and with my skeleton-keys opened the door almost as soon as he had locked it behind him. I crept up the stairs after him and found him in the bath-room. I sprang upon him from behind, and before he had time to defend himself or utter a sound I had dragged him down and stabbed him through the heart. Then I chloroformed the occupants of the house and smeared blood on the clothing of Richard Deane, to draw suspicion upon him. I hated him because he was Henry Withington's brother; if I had known it was his son I would never have done it."

He paused a moment with head bowed on his breast.

"I have never really thought I would be discovered," he said. "I do not know now how you have found me. But after the young lady's testimony I moved to a different part of the city, and told my landlady I was going to Australia; then, the more completely to baffle pursuit, I gave a man a hundred dollars and his passage to sail under my name to Australia, telling him I did it to get rid of my creditors. I think that is all," he added, "that I have to say. Henry Withington wronged her; but not so deeply as I thought. Yet he was too proud to acknowledge her as his wife, and he has paid the penalty. As for me, I shall soon be out of reach of the law."

He smiled a ghastly smile. His face had become colorless and was slightly contorted.

Hamilton Keith had taken down the substance of the confession, and now read it aloud. He freed the prisoner's hands, and the latter signed his name to the confession. There was a sudden jar, and the boat had stopped at the Oakland pier. Oscar Sayles was taken to the receiving hospital, where he died within an hour.

Chapter VII.

A year had passed. The house in which Judge Withington was murdered had been sold by his son, and the adjoining house was still occupied by Mrs. Fenton and little Flo. Dr. Withington himself, formerly known as Richard Deane, had purchased a fine residence in a different part of the city, and had just brought home his bride after three months of European travel. Margaret sat one evening on a stool beside him, with her head on his knee.

"And you are sure you did not love me because you pitied me?" he asked for the hundredth time as he stroked her soft hair.

"Oh, no!" she replied for the hundredth time to his question. "I loved you always."

"Before you ever saw me?" he asked, quizzically.

"Before I knew you, at least. Wasn't it—dreadfully improper?" she replied, with a saucy look.

"And I," he responded, "I thought I had the dearest little neighbor in the world; but she always looked so proper and demure that I was afraid to speak to her."

They laughed softly, and did not seem to remember that the same conversation had taken place on the deck of the steamer in midocean, in a quiet corner at the British Museum, in the ruins of the Colosseum, in the heather-fields of Scotland and the forest of Fontainebleau; and, indeed, in almost every sequestered nook of Europe where they found themselves alone.

They sat long with the soft glow of the firelight and the lamplight on their faces; and together, with clasped hands and shining eyes, they dreamed the world-old dreams of youth and happiness and love.

Two more years went by. Young Dr. Withington, who practised more for love of his profession than to add to his sufficiently independent means, was already spoken of as a man with a career before him. His young wife, beautiful, entertaining and hospitable, was a recognized leader in social circles, notwithstanding which she found much time to spend in the sunniest, airiest room in the house, where Master Henry Withington, the veritable master of the

house, kicked and crowed in his crib, and bumped his sunny head against the wall in his premature efforts to accomplish the circuit of the room without the indignity of descending upon his knees. But for the dignity of his father he had not the slightest respect. He clambered upon his back and scrambled over his knees and tangled his plump hands in his beard; and the young doctor enjoyed it all, and notwithstanding his growing popularity and success found his happiest hours at home with his wife and child.

But in the fullness of their happiness they had not forgotten the dead; for the grave of Nellie Pierson had been opened a second time and the remains moved to the family lot of the Withingtons, where they were placed beside those of the husband. And on the white stone at the head of her grave was this simple inscription: "Sacred to the memory of Nellie, wife of Henry Withington. Died January 3, 1868. Aged eighteen years." And the white cross on Lone mountain watched over the grave, and the hands of her children kept it beautiful with flowers. And perhaps her loving heart would have counted it atonement that the happiness of Richard and Margaret and the possibilities of the budding life intrusted to their care grew out of her sorrows.

THE END.

THE ORIGIN AND HISTORY OF BRIDE-CAKE.

THE prominence attached to the bride-cake in the marriage ceremonies of our own and other countries is one of those interesting survivals of early symbolical customs which have been transmitted to us from the distant past. Indeed, a wedding feast without the time-honored bride-cake would be considered by almost general consent thoroughly incomplete; and he would be a bold person who should even so much as dare to suggest its omission on this festive occasion. So universal, too, is the practice of connecting bride-cake with our marriage rites that even the poorest country peasant contrives to deck the nuptial board—however frugal the fare may be upon it—with this necessary adjunct. It may naturally be asked, therefore, why the bride-cake should be invested with so much superstitious reverence as to render its absence at the marriage feast, in the eyes of most persons, an ominous and ill-starred affair.

The answer to this question, like the origin of so many other of our social customs, has given rise to various conjectures. Thus, according to one popular explanation, we have in the bride-cake a survival of the old Roman form of marriage by "confarreatio," or eating together. It appears that at a marriage ceremony of this kind offerings of a cake and a sheep were made to the gods. The skin of the sheep was spread over two chairs, upon which the bride and bridegroom sat down, with their heads uncovered. Then the marriage was completed in the presence of the pontifex maximus and ten witnesses, after which another sacrifice was offered. A cake was made of far and mola salsa by vestal virgins, and was carried before the bride when she was conducted to the residence of her husband.

It is by no means clear, however, that we have adopted the custom from the Romans, inasmuch as the same practice, under various forms, has existed from time immemorial among remote savages or semicivilized people, who cannot be supposed to have obtained it from the Romans. Thus, Sir John Lubbock, in his "Origin of Civilization" (1870, page 85), tells us how among the Iroquois the bride and bridegroom used to partake together of a cake of "sagamite," which the bride offered to her husband. The Fiji islanders have a very similar custom. Among the Tipperahs, one of the hill tribes of Chittagong, the bride prepares some drink, sits on her lover's knee, drinks half and gives him the other half; they afterward crook together their little fingers. In one form or another a similar custom is found among most of the hill tribes of India.

The true derivation of bride-cake, therefore, is probably to be sought, not so much in the old Roman marriage rite of "confarreatio" as in its symbolical nature, corn in one form or another—either in whole grains or made up into a cake or biscuit—having been from a very remote period in the world's history regarded as the emblem of plenty and prosperity. Among the Liburnians, before the dinner was over, the bride and all the guests rose from the table, and she threw over the roof of the bridegroom's house a cake called "kolarh," which was made of coarse dough. The higher she threw it the happier it was supposed would the marriage be; and as the houses were low and the cake hard, the bride seldom failed to insure a lucky omen. According to an Esthonian wedding custom a can of beer is poured over the bridegroom's horse, and a handful of rye is scattered over the heads of the bridal couple for good luck's sake. In Sweden the bride has her pockets filled with bread, it being a popular belief that every piece she gives to the poor on her way to church will avert some misfortune. In eastern countries rice, which is the staple food, is substituted, and holds a prominent place in the nuptial ceremony. Thus, on the Malabar coast of India the priest sprinkles the bride and bridegroom with rice; and among the Brahmans the bridegroom throws three handfuls of rice on the bride's head. In Java the bride and bridegroom partake of rice out of the same dish to insure good luck. Hence, we may trace the practice in our own country of scattering rice on the bridal couple. In Italy the mother of a newly married man, on his arrival home with his wife, throws some rice behind the back of the bride.

Without enumerating further illustrations, it is evident the idea of corn in some form as an emblem of prosperity has been most extensively interwoven with the marriage ceremonies of most nations, to which, therefore, may probably be ascribed the reverence attached to our bride-cake.

Again, that this is so seems further clear from many old marriage customs still kept up in different parts of the country, and in which the bride-cake, as the symbol of good luck, holds a prominent place. In Yorkshire and the northern counties the bride-cake is cut into small square pieces, and then thrown for luck over the heads of the bridal couple, after which it is passed through a ring. Occasionally, also, on the bride's arrival at her father's door, a plateful of cake is flung from an upper window upon the crowd below. An augury is then drawn from the fate which attends the plate, for should it be unbroken, the sign is ominous; but otherwise—and the more pieces it breaks into the better—good luck will follow the marriage. The same practice prevails in Scotland, where, on returning home from kirk, one of the oldest of the inhabitants throws a plateful of short-bread over the bride's head. A scramble for the broken fragments then ensues, it being deemed very lucky to get a piece. Sometimes, by way of variation, a currant bun is broken over the head of the bride; but it is considered very unlucky if the bun, by mistake, should be broken over the head of any person other than the bride. It is to this usage Herrick refers:

While some repeat
Your praise and help you, sprinkling you with wheat.

In Smollett's "Humphry Clinker" (1771) we have another allusion: "A cake being broken over the head of Mrs. Tabitha Lismahago, the fragments were distributed among the bystanders, according to the custom of the ancient Britons, on the supposition that every person who ate of this hallowed cake should that night have a vision of the man or woman whom heaven designed should be his or her wedded mate." Again, in Moffatt's "Health's Improvement," we are told that when the bride comes from church the friends are wont to cast wheat on her head; and when the bride and bridegroom return home one presents him with a pot of butter, as presaging plenty and abundance of all good things.

Referring to other bride-cake customs, it appears that in Westmoreland at the conclusion of the marriage ceremony the company returned in cavalcade to the bride's father's house, where they had dinner. On their arrival home every one was presented with a slice of bride-cake—locally known as wineberry (currant cake), which the bride cut up, and the bridegroom handed round to the guests. Macaulay, in his "History of Claybrook" (1791), describes another custom: "A pole was erected in front of the house, three or four yards high, with the cake stuck upon the top of it. On the instant that the bride set out from her old habitation a company of young men started off on horseback, and he who was fortunate enough to reach the pole first, and knock the cake down with his stick, had the honor of receiving it from the hands of a damsel on the point of a wooden sword, and with this trophy he returned in triumph to meet the bride and her attendants."

As might be expected, the bride-cake did not fail to become an equally important source of attraction in love divinations; and Rowe, in his "Happy Village" (1796), speaks of it as such:

The wedding-cake now through the ring was led,
The stocking thrown across the nuptial bed.

To endow the bride-cake, however, with prophetic virtues it was considered essential to pass it through a wedding-ring; and, according to Braud (Pop. Antiq., ii. p. 165), once was not sufficient, many performing this magic rite as many as nine times. Numerous illustrations of this superstition occur in the literature of bygone times.

In the "Spectator" the writer tells us that he resolved to try his fortune: "Fasted all day, and that he might be sure of dreaming upon something at night, procured a handsome slice of bride-cake, which he placed very conveniently under his pillow." The "Connoisseur" also notices this mode of divination: "Cousin Debby was married a little while ago, and he sent me a piece of bride-cake to put under my pillow, and I had the sweetest dream; I thought we were going to be married together."

In the northeast of Scotland, says Mr. Gregor ("Folk Lore Society's Publications," 1878, vol. vii. p. 98), great preparations were formerly made for the brewing of the bridal ale and the baking of the bridal bread. In baking the latter special care was taken with the first cake, lest it should be broken—a broken cake portending unhappiness.

Again, we are further told by Mr. Napier, in his "Folklore of the West of Scotland" (1879, p. 52), that immediately after the marriage ceremony the bride-cake, a large and elaborately prepared article, is cut up and distributed. Young girls still put a piece of it under their pillows, in order to obtain prophetic dreams. "In some cases this is done by a friend writing the names of three young men on a piece of paper, and the cake wrapped in it is put under the pillow for three nights in succession before it is opened. Should the owners of the cake have dreamed of one of the three young men therein written, it is regarded as a proof that he is to be her future husband." In some parts of the north of England a practice has existed from time immemorial of putting a ring among the ingredients of the cake, and to invite the guests in succession to cut a slice. The person who is lucky enough to hold the knife when it comes upon the hidden ring is considered to be sure of happiness for the ensuing twelve months. At Burnley we find a variation of this custom, it being the practice to put a wedding-ring and a sixpence into a flat currant-cake. When the company are about to retire at the close of the day's festivities the cake is broken and distributed among the single ladies. No small excitement is now occasioned, it being a popular notion that she who gets the ring in her portion of cake will shortly be married, whereas the one who obtains the sixpence, it is believed, will die an old maid. It is unnecessary to add further illustrations of these bride-cake divinations, as those we have quoted are a fair sample of the whole class. They are not confined, moreover, to our own country, but are found, in one shape or another, on the Continent, where the bride-cake figures prominently in many of the marriage customs. Thus it may be remembered how, in Lockhart's Spanish ballad entitled "The Marriage of the Cid" (sixteenth century), we have a graceful allusion to a bridal custom:

Then comes the bride, Ximena; the king he holds her hand;
And the queen, and, all in fur and pall, the nobles of the land.
All down the street the ears of wheat round Ximena are flying,
But the king lifts off her bosom sweet whatever there is lying.

Again, in days gone by it was customary in this country to present the bridal couple in the church with "sops in wine,"—a mixture of wine and sopped cake—a practice to which we find numerous allusions made by old writers. Thus Beaumont and Fletcher, in "The Scornful Lady," refer to it:

Believe me, if my wedding smock were on,
Were the gloves bought and giv'n, the license come;
Were the rosemary branches dipp'd and all,
The hippocras and cakes eat and drunk off:
Were these two arms encompassed with the hands
Of bachelors to lead me to the church;
Were my feet at the door, were "I, John," said;
If John should boast a favor done by me,
I would not wed that year.

In the "Taming of the Shrew" (act iii. scene 2), Gremio relates how Petruchio "quaff'd off the muscadel, and threw the sops all in the sexton's face."

Originally, we are told that these "sops in wine" were blessed before they were given to the bridal couple, a direction relating to which occurs in the "Sarum Missal." In Coates' "History of Reading" (p. 225, in the church warden's account of St. Lawrence's parish, under the year 1561) occurs the following entry: "Brydepast. It., receyd of John Radleye 6 shillings and eightpence." A note further adds that the allusion is "probably to the wafers, which, together with sweet wine, were given after the solemnization of the marriage." In Circassia there is generally set upon the carpet, in one of the rooms in the bridegroom's house, a cup of wine and plate of dough, and the first thing the bride does on entering is to throw over the wine, and to scatter the dough with her hands about the room. In Holland it is customary to send to friends and acquaintances at a wedding two bottles of wine highly spiced and sugared and decorated with ribbons. Customs, therefore, of this kind all seem to point in one direction and to refer, as we have already said, to the notion of plenty and prosperity, indicated by the various fruits of the earth employed on this occasion.

Lastly, among some of the very many old customs connected with the wedding-cake may be mentioned the following from Aubrey's "Remains of Judaisme and Gentilisme:" "When I was a little boy (before the civil wars) I have seen, according to the custom then, the bride and bridegroom kiss over the bride-cakes at the table. It was about the latter end of dinner, and the cakes were laid upon one another, like the pictures of the shew-bread in the old bibles. The bridegroom waited all dinner." In some of our country villages it is still customary to give a pice of wedding-cake to the bees, informing them at the same time of the names of the parties married. It is commonly believed that if this little mark of attention is omitted the bees become irate, and sting every one within their reach.

We must not omit to notice that the bride-cake in its present form is of comparatively modern introduction. In olden times small rectangular buns were in request, these being composed of sugar, eggs, milk, spices and currants. Such, says Mr. Jeaffreson in his "Brides and Bridals" (vol. i. p. 204), were "the little blocks that were made in Selden's time by every couple for their marriage banquet, and also by many of the persons bidden to the feast. The quantity of these squares of food brought together at an ordinary wedding in Elizabethan England by the official caterers for the party and by the many guests, who arrived with packets of them in their hands, was very great." In process of time these cakes were artistically piled up in solid squares, and then iced with a crust of hardened white sugar, the top being adorned with sundry devices considered suitable for the festive occasion. This again gave place to the manufacture of the bride-cake somewhat as we see it nowadays; and as made in the seventeenth century it is thus described by Herrick:

This day, my Julia, thou must make,
For mistress bride, the wedding-cake;
Knead but the dough, and it will be
To paste of almonds turn'd by thee;
Or kiss it thou, but once or twice,
And for the bride-cake there'll be spice.

FREE STOP-OVER AT WASHINGTON.

TO RENOVATE CLOTHING.

First remove all dust with a brush. Spots may be taken out of dark goods with a brush dipped into equal parts of ammonia, alcohol and water. This will brighten the goods as well as cleanse them. If the fabric is very much soiled it would be better to wash in water with soap-bark, then rinse well, and nearly dry. Benzene should be used for removing grease spots, and a soft flannel should be employed for silk, and a fine brush for velvet or cloth.

CRIPPLE CREEK INVESTMENTS.

Our Household.

SORROW AND JOY.

Tell me what is sorrow? It is an endless sea.
And what is joy? It is a little rose,
Which in that garden grows.
I plucked it in my youth so royal red,
To weave it in a garland for my head;
It pricked my hand, I let it drop again,
And now I look and long for it in vain.

Tell me what is sorrow? It is an endless sea,
And what is joy? It is a little pearl,
Round which the waters whirl.
I dived deep down, they gave it up to me,
To keep it where my costly jewels be;
It dazzled me. I let it fall again,
And now I look and long for it in vain.

Tell me what is sorrow? It is a gloomy cage.
And what is joy? It is a little bird,
Whose song therein is heard.
Opening the door, for I was never sage,
I took it from its perch: with sudden rage
It bit me—bit, I let it go again,
And now I look and long for it in vain.

Tell me when my sorrow shall ended, ended be?
And when return the joy that long since fled?
Not till the garden-bed
Restores the rose; not till the endless sea
Restores the pearl; not till the gloomy cage
Restores the bird; not, poor old man, till age,
Which sorrow is itself, is youth again—
And so I look and long for it in vain!

—Richard Henry Stoddard.

A HOUSEKEEPER'S APRONS.

Practical, plain and plenty are the three essentials worth especial mention in connection with the above subject. Aprons easily washed and laundered, and aprons that are dark in color, long and wide in dimensions, quickly made and serviceable, are what the housekeeper in every home is in daily and hourly need of.

Dainty aprons will answer for occasions, but not for all occasions. The apron that envelops from shoulders to dress-hem is the article of kitchen apparel that all housewives need. But they are so seldom found in use. The apron of simple widths gathered into bands is the one most in vogue among women who work in the kitchen. It would not long be so were the better adapted style of kitchen apron but well introduced. For the wearing of one would be followed by the making of many.

An apron of the kind mentioned may be cut and made in an hour's time. Of the German blue prints three yards will usually make an apron for almost any woman. Shirtings in black and white make neat and serviceable aprons also, and it is strict economy to make them of good wearing materials. They are made up of three pieces, open in the back, and measure about the bottom some forty inches in width.

The front is all in one piece, gored from bottom to top, cut with arm-scye and sloped out at the upper part, making them low about the shoulders. Shoulder-seams are not more than three or four inches in length. The backs are but two gored pieces of desired length, leaving all the width the cloth will allow at the bottom, hemmed straight up the back, cut in arm-scye and shoulder slope to correspond with the front. Doubtless a pattern of such an apron could be obtained from the pattern department of this paper, and would cost no more than ten cents.

A one-and-one-half-inch hem is sufficient finish for the bottom of apron, and narrow bindings are all that will be necessary for finish to arm-scyes and about the shoulders. A handkerchief-pocket stitched upon the left side (out of the way of the pump-handle), two buttonholes and buttons, and the apron is completed. Two long seams have been taken down the sides, shoulder-seams fitted and sewn, when hemming, binding, buttonholes and pocket have made the garment complete.

But this apron should not be considered quite finished until sleeves, or half-sleeves rather, have been made to go with it. These may be made of the same goods as the apron, or back breadths of dress-skirts may be made into several pairs of kitchen sleeves. These, when soiled, are quickly washed out in a basin of water. If new, an extra yard of goods will be needed for the sleeves. Let them be half a yard in length minus the hems at top and bottom, in which flat, narrow elastic is run to fit the wrist, and arm above the elbow. Full width of calico is not too full to make the sleeves.

Thus equipped for kitchen detail, a dress may long be kept clean. It is covered effectually from soil of dish-water and the work about the cook-stove, and when the work is finished, to dispense with sleeves and apron leaves one looking neat for the sitting-room.

Such aprons are becoming to all ages and sizes. The same cannot be said of the straight apron of banded widths. The ones we illustrate are easily made without a pattern.

Ella Houghton.

FRUIT AS A DESSERT—ORANGES.

While nearly every one is fond of fruit—one kind or another—it is not a general dessert, because it is apt to be considered an expensive one—beyond the means of many households—even though it is conceded to be exceedingly healthful.

And yet fruit in its season is not expensive, unless in those cases where a blight has fallen upon certain crops. When there has been an ordinarily fair season fruit is sure to be cheap, and if utilized then—each kind in its turn and served in various ways—it is easily within the means of the average income, and will prove more appetizing and healthful than many of the desserts now placed upon the table.

Very refreshing are desserts made with oranges, and if care is taken in their selection, they will not make expensive dishes.

Oranges (plain).—It is necessary when serving oranges in their natural state to select fine, large specimens of fruit, such as the navel orange (seedless), retailing for forty cents and upward a dozen.

Some people prefer eating the orange with a spoon, in which case (unless the fruit is passed at the table) a partly folded napkin should be placed over the individual dessert-dish, the orange halved crosswise and the two pieces placed daintily upon the napkin. The regular orange-spoons are, of course, to be preferred for oranges served in this manner, although the ordinary teaspoon will answer just about as well.

Another pretty way to serve oranges in their natural state, and one which is considerate in the extreme of the guest's comfort, is to prepare the fruit beforehand in the shape of a water-lily, or again opened fully on a long, narrow strip of the orange-peel, as shown in the illustrations, which are plain enough to preclude the necessity of explanation. The fruit in either of these cases should be served on the napkin-covered individual dessert-dish.

Sliced Oranges.—For nearly all other orange desserts the small fruit, inexpensive and not always sweet, will answer the purpose nicely, and in many cases is to be preferred because of its tartness or decided acidity.

Peel your oranges carefully, so that as little as possible of the white skin remains; then slice thinly crosswise into the dish in which the dessert is to be served—first a layer of oranges, then a generous sprinkling of powdered sugar, a layer of oranges, then sugar, and so on. This should be done a couple of hours before serving, in order that the sugar may have a chance to well penetrate the oranges. If the oranges are paticularly sour, the sugar should be added proportionately. A slight sprinkling of cocoanut added to each layer of oranges and sugar varies the dish very pleasantly. Sweetened and flavored (with any preferred extract) whipped cream also increases the richness of the dessert, although many prefer omitting same.

Orange Jelly.—This makes a very dainty dish when served in either large or individual fruit-molds with designs of flowers, fruit, etc. Dissolve one ounce of gelatin in one pint of hot water. When sufficiently cool, add the juice of five or six oranges and two lemons; strain, and let partially harden. Beat the whites of two eggs, and add to the above mixture; then beat the whole five minutes or more until stiff. It is now ready for your molds, which should first be wet with cold water to prevent the jelly from sticking to same. After pouring into your molds, place in a cold place to harden. Jelly of this sort always seems to taste better when kept cool. Just before serving turn the jelly from your molds onto your large plate or your individual dessert-dishes, as the case may be, when it will be an easy matter to serve individually at the table.

Orange Pudding.—One quart of milk, one cupful of sugar, one half cupful of rolled crackers, two eggs (well beaten), one half tablespoonful of butter and one orange (grate the rind, and squeeze the juice) are required for this pudding, which is baked like a custard, and then served.

Orange Cake.—Cream (rub together) one tablespoonful of butter and one cupful of powdered sugar. Add the beaten yolks of six eggs and the grated rind and juice of three oranges. Also add one cupful of flour into which has been mixed one teaspoonful of baking-powder. This should be made as stiff as pound-cake, and more flour may be added if necessary.

Orange Custard.—A nice custard can be made as follows: Take the juice of six oranges, strain, and then sweeten with loaf-sugar. Stir this mixture over a slow fire until the sugar is dissolved, and then remove from the fire. (The scum which arises should be taken off.) When nearly cold, add the yolks of six well-beaten eggs and a pint of cream. If cream is not available, milk will do. Then stir over the fire until the custard thickens, when it should be poured into glasses (previously wet), and put in a cold place. When served in dainty custard-glasses, the custard, while perhaps not tasting any better, at least makes a prettier dish.

Orange Float.—To one quart of water add the juice and pulp of two lemons and one cupful of sugar; place over the fire, and when boiling, add four tablespoonfuls of corn-starch. This mixture should boil fifteen minutes, and should be stirred all the time. When cold, pour it over four or five peeled and sliced oranges, and over the top spread the beaten whites of three eggs sweetened and flavored with a few drops of vanilla.

Orange Gelatin.—Soak a package of gelatin in one pint of cold water for one half hour; then add one and one half pints of hot water to the above, and stir until dissolved; then sweeten to taste with sugar; peel and slice four or five oranges, carefully remove the seeds, and add same to the gelatin mixture. Be careful when slicing the oranges that the juice is not lost. Set away in a cool place for several hours; in fact, it is much better and even essential in warm weather to make this the day previous to serving it.

The above desserts may vary somewhat to suit the tastes and desires of the individual housewife, as some prefer one flavoring to another and require more or less sweetening.

In serving desserts care should be taken to have the dish made as neat and dainty as possible, as this always adds more than one would perhaps think to the success of the dessert itself.

Emma Louise Hauck.

EMBROIDERY FOR FLANNEL.

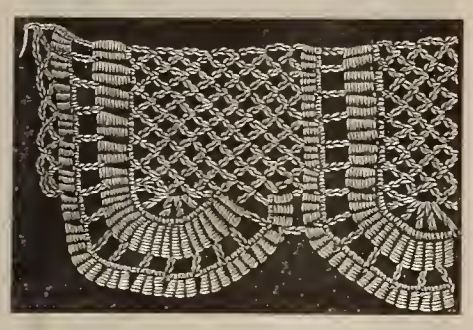
Mark this pattern on cardboard, using only one complete scallop, and use that

with which to mark upon the flannel. Work in Spanish floss. Hand-worked flannels wear so much longer, it pays to do them one's self.

EGGS.

It is economical to make the most of an article or edible when it is cheapest and most abundant, and therefore a few varied and carefully selected recipes may not now come amiss, particularly as one soon tires of the same thing cooked in the same old way.

Eggs, with Browned Butter.—While every American housewife knows how to fry eggs, it is only those having French friends who have learned how to utilize



the butter in which the eggs are fried. After taking the eggs up on toast, put into the pan with the butter about one teaspoonful of vinegar for each egg; let it boil for a minute, then pour it over the eggs, and serve.

Plain Omelet.—Take four eggs, a small teacupful of milk, butter the size of a walnut, one tablespoonful of flour and a pinch of salt. Beat the yolks of the eggs, then add the butter, flour, milk and salt, and last of all the beaten whites of the eggs. Butter a frying-pan just large enough to hold the mixture; let it stand for a moment on the range after it is poured into the hot frying-pan; then brown in a quick oven.

Omelet Souffle.—Six eggs, one teaspoonful of flour, three tablespoonfuls of powdered sugar, a pinch of salt and any flavoring preferred. Beat the yolks of the eggs thoroughly, then add the flour, sugar, salt and extract; then beat the whites of the eggs to a stiff froth, mix lightly with the yolks, pour all into a buttered dish, and bake in a hot oven. It is done when well risen and lightly browned on top. Then roll it out on a hot dish, sift pulverized sugar over it, and serve.

Poached Eggs.—Salt the water; when it simmers, drop each egg from a saucer into it; cover the top lightly with spoonfuls of water. Serve on toast sprinkled with butter, pepper and salt.

Eggs a la Mode.—Remove the skin from a dozen tomatoes, medium size, cut them up into a saucepan, add a little butter, pepper and salt; when sufficiently boiled, beat up five or six eggs, and just before you serve turn them into the saucepan with the tomatoes, and stir one way for two minutes, allowing them time to be well done.

Scrambled Eggs.—Beat up four eggs, with salt and pepper to taste. Put an ounce of butter into a saucepan; as soon as it is melted, put in the eggs, and keep constantly stirring with a spoon until they are nearly set. A little finely minced parsley added is a great improvement. Compiled by Emma Louise Hauck.

WAISTBANDS.

Few women realize how much grace they lose or how much injury they inflict upon themselves by wearing bands fastened tightly around the waist.

The chest and abdomen are bound around with firmly knit, flexible muscles, which give such ease and elastic grace to a young girl's every motion. When the girl laces a stiff-boned corset and tightens half a dozen waistbands around these yielding muscles, all chance of the elastic freedom and grace which expresses youth and joyfulness is taken away. To be sure, she may look "spindlin' as a cob," as one old lady expressed it, but these "spindlin' waists" are no longer in favor. The most artistic gowns require the curves and suppleness of a waist that has never been touched by corsets or tight bands.

Besides taking from a woman her appearance of youthfulness and grace, these tight waistbands inflict a most serious injury by weakening the abdominal muscles.

A woman's muscles about the abdomen are really intended to be much stronger than those of a man, in order that she may endure the burdens of maternity. The reason we hear of so many weak women to-day is because they prevent the proper circulation of the blood by such strictures around the waist, and so weaken these strong, splendid muscles.

When these muscles around the waist become weak and flaccid the organs of the abdomen, left without their natural and proper support, fall gradually down, pushing each out of place, and the result, in extreme cases, is most agonizing suffering.

One helpless invalid confessed to her physician that in dressing for a ball she had worn seventeen skirts, the bands all tightly fastened about her waist. Her dress stood out beautifully, and she was the most admired of any woman in the room for her lead-pencil waist. After dressing in this way for a time the muscles about her waist weakened so that it was difficult for her to stand on her feet. When driving out to make calls, she would send the coachman in first to ring the bell, to save herself the fatigue of standing at the door; and if, as sometimes happened, she was obliged to wait at the door a few moments, she would kneel on the steps in agony. She finally became perfectly helpless, and only by the most patient care in strengthening the muscles which she had abused was this patient partially restored.

A young mother who had injured these abdominal muscles in girlhood was so completely prostrated that for years she could not walk a step or sit up without fainting away. Her little daughter was six years old when she saw her mother walk for the first time.

Physicians who know of hundreds of such cases find that the poor working woman suffers as well as her rich sister in society. The young dressmaker who sits bending over her work all day long with her waist tightly laced and banded, grows pale and ill, and the poor washerwoman who goes to a hard day's work with heavy skirts hanging from these bands that drag down her waist muscles, often brings upon herself terrible suffering.

Women of sense are now wearing the reformed underwear and long underwaists on which are rows of buttons for all the underclothing, and also for the dress-skirt. In this case there are no bands whatever about the waist, and no unnatural strain of any kind upon the waist muscles.

F. B. C.

LACE TAB FOR COLLAR AND CUFFS.

We give this pattern in working size, so any one can readily use them. Four of these points to fall over the collar-band and two for the wrists is a very pretty trimming for a dress. It takes about seven yards of the Honiton braid and three of the lace-braid. The pattern is filled in with twisted bars and wheels. The little edge is easily worked, and is a plain loop with two buttonhole-stitches in each.

Thread a little coarser than used in the points is best.

These are easily laundered and keep nicely. No starch should ever be put in them.

THE CHAFING-DISH.

Though at present this is only a fad among the fashionable young men and women, yet many times it is very convenient to know how to do just these faddish sort of things.

In all sorts of light housekeeping and cooking for the sick things can be handled in a dainty manner that adds much to their taste.

To see a dainty dish turned out of a chafing-dish, cooked just right, is appetizing in itself. A nice chafing-dish outfit can be purchased for two dollars and a half, nickel-plated, and with a half pint of alcohol to burn, you are ready to go to housekeeping, so to speak.

The under dish holds hot water, into which the chafing-dish is set. This will keep warm any article while the kettle boils for tea.

The idea is an old one revived, and years ago they were called "blazers."

In some of our large cities there are chafing-dish restaurants, where everything is cooked while you wait. They are presided over by neat, well-trained women.

In homes some of the preparation is done in the kitchen beforehand, so that little remains to be done when the guests arrive.

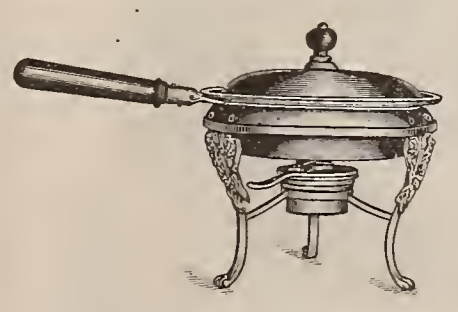
Many young gentlemen are learning the art from their sisters, and give swell little suppers of their own. Oysters are a popular dish to serve with wafers, tea and a salad. These are prepared either as a stew, fried or panned.

Welsh rarebit, a favorite dish with many, adapts itself very kindly to this way of cooking.

It is a lovely way to cook omelet. Few people ever turn this out in a very appetizing manner, so it is one of the arts to be able to do so.

Eggs and bacon are very readily prepared, and this is a dish that should be served piping hot to be relished, so nothing could cook it better than the chafing-dish.

Accompanying this outfit a few neat linen towels must be always at hand to lift and handle the dishes, some neat white



linen aprons to reach to the bottom of one's gown; and when you have acquired a deftness of handling you can defy Bridget if she threatens to leave, knowing your John will appreciate and enjoy the dainty meal served from your chafing-dish.

Belle King.

FANCY ROLL-STITCH LACE.

Abbreviations.—St, stitch or stitches; ch, chain or chains; d c, double crochet; l-tr, long treble; *, repeat.

This lace pattern is very suitable for pillow shams and cases, also narrower for trimming of underwear, etc., if wanted. Chain 35 stitches.

First row—2 d c, 1 stitch in the ninth and tenth stitch from needle, * ch 5, miss 3 st, 2 d c in the next two stitches; repeat from * 5 times, chain 8 st, turn.

Second row—2 d c under 5 chain, * ch 5, 2 d c under the next loop of chain; repeat from * 5 times, chain 8 st, turn.

Repeat the second row until there are thirteen rows. Then begin the scallop, also along the edge, first ch 3 and 1 l-tr in the second space 5 times, ch 3, and on edge fasten in next space with 2 d c, ch 4, 2 d c in the next space, ch 1, turn.

Fourteenth row—In each space of the scallop work 3 long roll st (thread over hook 20 times), and in the last 6 spaces work 2 roll st, ch 8, turn.

Fifteenth row—A long tr between the second and third rolls, * ch 4, miss 2 roll st, 1 l-tr between second and third roll from needle; repeat from * 14 times, ch 4, and 2 d c in each of last 2 spaces, with 3 ch between; to the edge, ch 1, turn.

Sixteenth row—Fill each space in over the scallop with 5 small roll st (thread over hook 6 times), and in the last 6 spaces work only 3 small roll st, ch 8, turn; also to join each scallop together, after the first scallop is made, when making the next, after the first 5 roll st are made of sixteenth row, a picot (ch 6, 1 d c in the first stitch), and join to the first space after 5 roll st, over l-tr of the last scallop made.

Seventeenth row—Begin the next scallop by crocheting 2 d c between the rolls (over l-tr of previous row) for 6 spaces, ch 8, turn; repeat from the second row for the length required. Ella McCowen.

Our Household.

A HEROINE.

Some hearts she gladdened with each numbered sun,
By truthful counsel or by ready hand;
Yet with evasive modesty were done
The deeds that prayer and inspiration planned;
But yet she suffered, suffered and grew strong,
As doth the mountain-daisy fix its root
To brave the blast, so she to buffet wrong
Stood on the heights of faith on firmer foot!

A heartless parent, abject slave to drink,
A wayward lover whom she dare not wed;
Sorrows that would a weaker spirit sink
Rose to her lips, and died there all unsaid!
Naught of deceit her bosom would conceal,
As spreads a ripple o'er a glassy sea,
The least emotion of her heart would steal
To her fair face that all the world might see.

A heroine indeed! Thank God that she,
Spared for a reason from that home above,
Did clearly prove what human hearts can be,
And what sweet lives are possible to love!
'Twere vain to chisel epitaphs for her.
The marble's breathless praise seems insincere;
Her moss-grown grave our reverent steps would lure,
Though but a cross of wood were standing near!

HOME TOPICS.

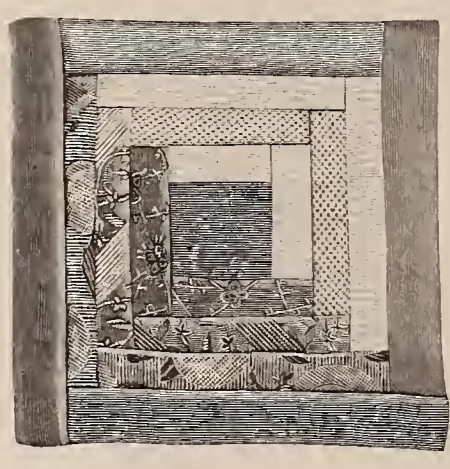
Croutons.—Instead of frying the croutons, butter the slices of bread, and cut them into strips about as long and wide as your finger; then lay them on tins, and put them into the oven, where they will dry through and brown a delicate color. These are nice served with tomato bisque or any light soup. If you wish to serve them with salad, dip the "fingers" into grated cheese before they are put into the oven.

Sandwiches.—This name used to signify two slices of bread with a slice of cold meat between, but now the kinds of sandwiches are innumerable, and the filling is made of almost every conceivable eatable besides meat—hard-boiled eggs chopped fine and seasoned, grated cheese, chopped peanuts, grated cocoanut; and a most delicate and appetizing sandwich is one made with lettuce and a little salad dressing. Of course, these last should not be made until a few minutes before they are to be served.

Lemon Sherbet.—The ingredients required for sherbet are four lemons, a pint of sugar and a quart of boiling water. Shave off the yellow peel from two lemons, being careful to take none of the tough white rind below the oil-cells; put these parings into a bowl, pour in the boiling water, cover the bowl closely, and let it stand ten minutes. Cut the lemons into halves, remove the seeds, squeeze out the juice, and add it with the sugar to the water. If liked very sweet, add more sugar. When it is cold, strain it into the can, and freeze.

Strawberries.—After trying several ways to preserve strawberries for winter use I have decided that the following is the most satisfactory: Select a firm, dark red variety of berry. If they must be washed, do it before stemming them, by putting them into a colander and dipping it into a pan of water. Shake it a little after lifting it from the water, and lay the berries on a folded white cloth on a table to dry.

After the berries are stemmed, weigh them, and put them into a large earthen or granite bowl with three fourths of their weight of sugar sprinkled among them. I usually do this about six o'clock, and then set them in a cool place until morning. In the morning drain off the juice, and put it over the fire in a large-bottomed porcelain or granite-iron kettle. Skim the juice, and then put in the berries; let them boil about twenty minutes, taking off all scum that rises; then skim out the berries into pint or quart glass jars, filling each jar three fourths



full; fill up the jars with the boiling syrup, and seal them.

Washing Blankets.—Many think that blankets and all flannels should be washed in hot water, but this is a mistake. Use only lukewarm water for washing and rinsing. Flannel should never have soap rubbed on it, neither should it ever be rubbed on a washboard. When you wish to wash blankets, have a clean, tight barrel, and a pounder made of a block of wood with holes bored through it and a handle put in, something like a churn-dasher, only heavier. If you have six double blankets to wash, dissolve a pound of borax in a gallon of boiling water with a pound of finely shaved white soap. Put two or three pailfuls of lukewarm water into the barrel, and add enough of the borax and soap solution to make a lather. Put in a part of the blankets, and pound them well, turning them over two or three times; then put them through the wringer, and put in more blankets. After all have been pounded, make a clean suds in a tub, and put the blankets through this, squeezing them and lifting them up and down until they are white and clean. Rinse the blankets in water just lukewarm. Wring them with the wringer, and hang them on the line, pulling them straight as you hang them up.

Blankets should always be washed on a bright day when they will dry quickly. They do not need ironing, but you should fold them evenly and put a weight on them for a few days. Maida McL.

SHORT CUTS IN SEWING.

A busy mother with young children to care for, and all her own sewing to do, has evolved from her fertile brain many time and labor saving methods of sewing, some of which we pass on to the readers of Farm and Fireside.

With four boys to clothe she found that the making of the buttonholes for their pants was no small task, so she tried marking the buttonhole and stitching around it on the machine before cutting. Then she took a narrow strip of firm drilling, folded it with the edges inside, so it was not much wider than a cord, laid it in place around the buttonhole, and stitched it twice with the machine. She can make the entire set for a pair of pants in the same length of time she would be working one; and she finds they wear better, too, than those worked, even though she used linen thread in working them.

When she puts the pretty sailor collars on her boys' waists, instead of sewing them directly to the neck of the waist she sets them upon a half-inch band. Then when their coats are on the collar lays smoothly and neatly over it, not wrinkled and drawn about the neck as is so often the case.

For the use of the little girl she has made what she styles a "sleeved bib," which may be of muslin, gingham or whatever seems most suitable. One width of goods makes it. It is cut out at neck and armholes as the front of a dress would be. The sleeves are made as usual, but only one half is sewed in, the other being hemmed or bound with a tape. When the sleeves are basted in, a piece of the goods cut to fit the neck and armholes is laid on the right side of the bib and stitched all around on the machine, then turned, the edges folded under and stitched. This is not only more easily and quickly done than ordinary facing would be, but it also adds another thickness to the front, making it stronger and more useful. Tapes at the neck and just back of the sleeves fasten it and keep it in place. The little girl wears them at the table, and also about her play in the morning, to protect her dress, and the mother prefers them to aprons, for they are so easily and quickly made. She can cut and make one complete in less than an hour, and a yard of material will be sufficient for a child three years of age.

Pretty every-day aprons may be quickly made for little girls by measuring the length from armhole to bottom of dress. Sew up three straight widths, put a three-inch hem in the bottom, and gather at the top to form an inch-wide heading. Baste it onto a narrow band of proper length, and stitch twice on the machine, and tie over the shoulder with straps a half yard long and two or three inches wide. An apron can be cut and made in much less than an hour's time.

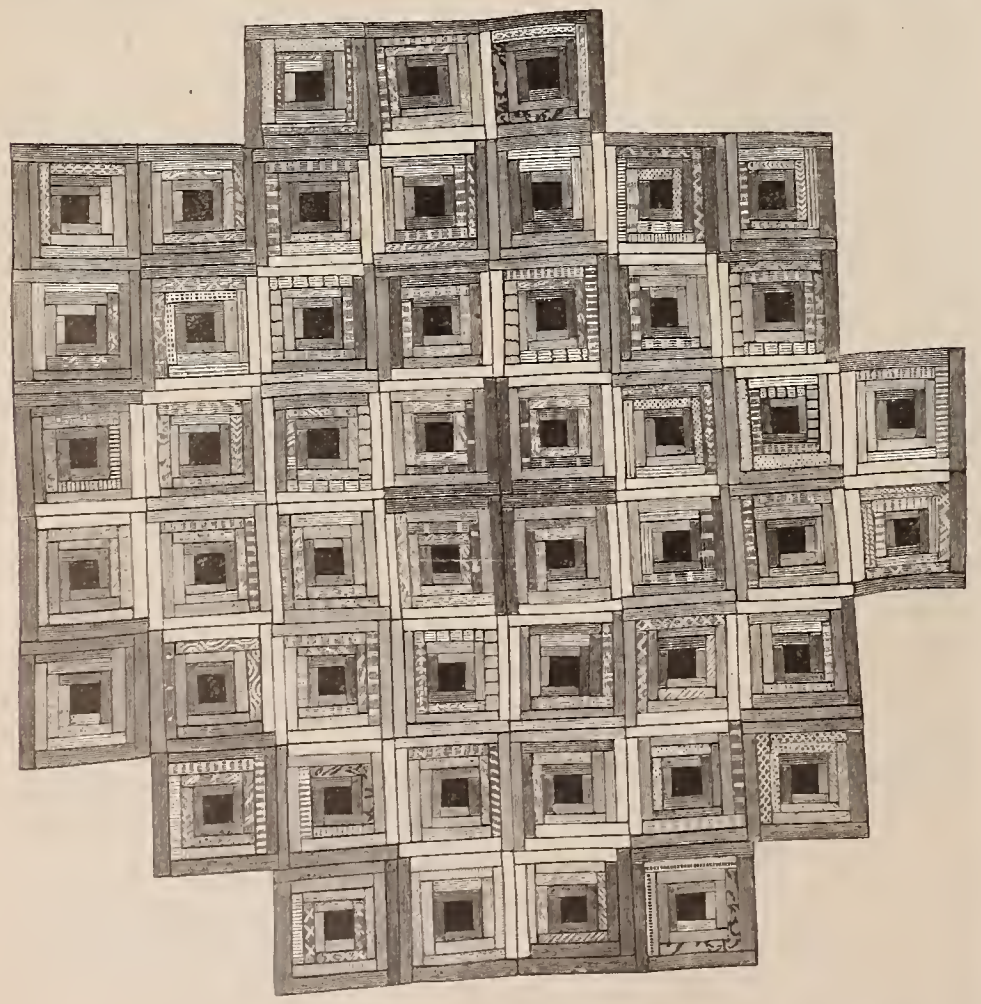
When turning hems on muslin, gingham or such goods, instead of basting, press with a moderately warm iron, which will be just as satisfactory and save much time.

When putting on a facing, press it also in place with an iron to save basting; or if it be soft goods, dampen slightly with weak starch-water, then press with a warm iron, and it will stay in place until it is stitched.

Clara Sensibaugh Everts.

SILK QUILT.

One hundred seven-inch squares, in log-cabin design, are required for this quilt; a two-inch square of velvet (black) forms the center of each patch. Begin by joining four squares, two sides of each being of one color, so that when joined a cross will form the center of the quilt. This is very effective when made of a bright velvet. If a color is to predominate in the surrounding band of squares, which forms a diamond, alternately a dark and a light one, two sides of a sufficient number of patches must correspond in color in order that each band or diamond may be of a different color through the center of the band. M. E. S.



Paint upon window-glass may be easily removed by rubbing with a cloth wet in hot strong vinegar.

Our Sunday Afternoon.

HIS COMING.

Oh, so often we are weary
'Mid the hurry, care and strife,
And our souls are ever longing
For the higher, better life.
Oft we lift our hearts and say,
I am waiting for your coming,
Blessed Jesus, night and day.

For thy glorious returning
With the angels fair and bright;
Oh, our hearts are ever yearning
When our faith will change to sight
Heaven's king and heaven's glory
Coming down to earth once more;
Oh, the sweetness of the story!
Let us read it o'er and o'er.

Like a bridegroom he is coming,
Rescued souls will be his bride;
Are our lamps all trimmed and burning,
That we may with him abide
In the many mansions holy,
Jeweled walls and streets of gold,
Gathered with the meek and lowly,
Safe forever in his fold?

No more going out forever,
No more sorrow, no more tears;
Death and pain can harm us never
Through the glad eternal years.
In the glory of his presence,
Which now lights the jasper sea,
We will meet the long-lost dear ones
Waiting there for you and me.

"YOUR HEAVENLY FATHER KNOWETH."

WHEN the dear Lord, whose precious life is the electric current which stimulates us to great thoughts and noble deeds, looked up he saw the father's face, and not a king's. He slept beneath the guardian watchfulness of angels, and confidently relied on the protecting care of God in all emergencies. There was no hour in that wondrous career when he was not conscious of the support of invisible arms.

Therein lies the great revelation that he made to suffering, toiling, struggling and weary humanity. All his teachings—the demand for an all-pervading unselfishness, for a perfectly quiescent resignation under affliction—are illustrated and emphasized by his assertion that "not a sparrow falls to the ground without your Father." And the motive which he makes the source of nobility and grandeur of action comes from the strictly paternal character of God. He sought heaven in prayer just as a friend seeks counsel from a friend—not with the tremor of uncertainty, not in doubt whether his petition would be received, but with the full knowledge that the Father saw everything, knew everything, and with outstretched hand stood ready to give whatever was needed for the accomplishment of his mission. There you find the miracle of miracles, a revelation of the most marvelous truth that ever dawned on the mind of man; a truth so stupendously glorious that the world finds it almost impossible to accept it.

We have looked at it, pondered it and been grateful for it, but not yet have we put it to practical use. We enshrine our intellectual feebleness in a statement of doctrine, but we realize God's actual presence, his pity and sympathy no more than the partially blind man recognizes the light that passes before his dimmed vision.

If you are God's child, you will learn that you have something to do, and that it is worth your while to do it. That in the dark hours you are not alone, that a father's heart never beats more warmly than for one in distress, nor more pityingly than for one who has gone wrong, and from that knowledge will flow such incentives and such aspirations as will make you calm and strong.

Without God the Father your days are not worth counting, and your years are a shadow. His presence is the only sunlight of the soul, and there is no substitute for it.—George H. Hepworth.

THE PROOF OF LOVE.

The proof of love is in giving. A love that gives nothing, that makes no sacrifice, but asks all, is not love; it is selfishness. Love is large and generous, high and holy, while selfishness is narrow and greedy, low and mean. It is the very essence of sin. He that seeks only his own loves not God or man. And to love only self is to miss the sweetness of life, its hope, its aim, its end, and to starve the soul to death.—Independent.

THE FAULTLESS ONE.

One of the excellent results springing from the frankness of the biblical writers concerning the sins and faults of the people they portray is that the sinlessness of Jesus stands out with wonderful distinctness. We cannot say, "Oh, well, it is their way to say only good of the dead; if we knew all the facts a very different impression would be made." This retort is prevented by the freeness with which they relate their own discreditable squabbles and darker doings. They compel us to trust them by their evident honesty and simplicity. They are truth-telling men, we are forced to exclaim; they hide nothing; they show up the imperfections of the great men of Hebrew and Christian history against a background of purest light. Therefore, when they draw this one perfect picture we cannot do otherwise than fall down and worship. We cry, "Yes, he walked the earth completely upright. Peter might lie and John flee and Moses get angry and Elijah wish to die, but one there was against whom none of these charges can be brought. Him we will hear, him we will follow, him we will adore and love. All glory to his blessed name! We will bring forth the royal diadem and crown him Lord of all, our Savior, our King and our God!"—Zion's Herald.

ALL KNOWN TO HIM.

Once when a boy I stood on Mount Pleasant, at Amherst, and saw a summer thunder-storm enter the valley of the Connecticut from the north. Before it all was bright; centerwise it was black as midnight, and I could see fiery streaks of lightning striking down through it; but behind it again—for I could see the rear—it was bright. In front of me was the mighty storm hurtling through the sky; and before it I saw the sunlight, and behind it I saw the sunlight; but to those that were under the center of it there was no brightness before or behind it. They saw the thundergust and felt the pelting rain, and were enveloped in darkness and heard the rush of mighty winds; but I, that stood afar off, could see that God was watering the earth and washing the leaves and preparing the birds for a new outcome of jubilee, and giving to men refreshment and health. So I conceive that our human life here, with its sorrows and tears, as compared with the eternity that we are going into, is no more than the breath of the summer thunder-storm; and if God sees that our experience in this world is to work out an exceeding great reward in the world to come, there is no mystery in it—to him (Rom. viii. 28).—Henry Ward Beecher.

LAMENTABLE.

According to all accounts there has been a great increase in the drinking habit among women during the last summer at some of the resorts, and at some hotels as many matutinal cocktails have been sent to rooms for demoiselles and dames as for the lords of creation. Curiously enough foreign observers say that the increase in drinking among women is not confined to high life, but is general and extends even to the peasantry in the provinces. What the reason is has not been fathomed, unless it be the higher pressure and tension of the rushing life of the day.

Our Miscellany.

A LION in a jungle will jump twenty-five or thirty feet from a standing start.

LIFE is short—only four letters in it. Three quarters of it is a "lie" and half of it an "if."

THE peach was originally a very poisonous fruit, but by cultivation the poison has disappeared.

WHEN a man says he hasn't made up his mind about a thing, it is a sign he has asked his wife about it.

CONGRESSMAN—"I intend to introduce a bill providing for the coinage of half cents. If it passes my re-election is assured."

Friend—"How do you make that out?"

Congressman—"All the church people in my district will vote for me."

MAMA—"I don't see why you call Daisy Martin selfish. I think she is a very nice little girl."

Ethel—"Oh, mama, but she is selfish. She's always at the head of the class, and she won't let any of the rest of us get ahead of her."—Harper's Bazar.

HENRY MAXIM drives his air-ship by two engines which, in proportion to their weight, are the most powerful ever made. They develop one-horse power for every two pounds of their weight. The boiler is of novel design. It consists of many tiny tubes through which there is a forced circulation of water.

THE German agricultural papers make the remarkable statement that the imports of American apples into the German empire last year were more than twenty times as large as in any previous season, the shipments in 1896 having amounted to no less than six million double centners—the centner being equal to a hundredweight.

WHEN putting down carpets in rooms that are much used, it is a good plan to spread newspapers over the floors, then take clean straw and scatter it evenly over the papers, and then put down your carpet. It will let the dust through onto the paper, and clouds of dust will not follow the broom on sweeping-day. The carpets will last longer with this lining than with any other, and when you take them up again, you will find the dust lodged on the papers; and if carefully removed to the rubbish pile, you will avoid filling your lungs with poisonous dust, as but little will be found on sweeping the floors.

THERE is a perpetual reminder that Delaware was once part of Pennsylvania in the strong Quaker element on the northern border of the little state. This people are for the most part descendants of Quaker immigrants of the seventeenth century, and they, their houses and their lands bear the strong impress of the sect. Men and women still wear the Quaker garb, still preserve the friendly speech. The farm-houses are plain, substantial brick or stone buildings, the barns are ample, the horses and cattle are sleek, the very fields look as though they had been swept. The region that these people inhabit is famous for its picturesque loveliness.

OLEOMARGARINE has found a defender no less important than the Massachusetts state board of health, and, acting on the reports of that body, the commissioner of state institutions has substituted it for butter in the bill of fare on which the inmates of his prisons and almshouses live. As the laws of Massachusetts punish with fine and imprisonment the manufacture or sale of counterfeit butter, this course has excited some comment, but the commissioner boldly says that he has served "oleo" to the unfortunates under his charge, not as a substitute for butter, merely on the ground of economy, but because it is better than butter of any except the very best grades.

VACATION DAYS.

In the Lake Regions of Wisconsin, Northern Michigan, Minnesota, Iowa and South Dakota, along the lines of the Chicago, Milwaukee & St. Paul Railway, are hundreds of charming localities pre-eminently fitted for summer homes, nearly all of which are located on or near lakes which have not been fished out. These resorts range in variety from the "full dress for dinner" to the flannel shirt costume for every meal. Among the list are names familiar to many of our readers as the perfection of Northern summer resorts. Nearly all of the Wisconsin points of interest are within a short distance from Chicago or Milwaukee, and none of them are so far away from the "busy marts of civilization" that they cannot be reached in a few hours of travel, by frequent trains, over the finest road in the Northwest—the Chicago, Milwaukee & St. Paul Railway. Send a two-cent stamp for a copy of "Vacation Days" giving a description of the principal resorts, and a list of summer hotels and boarding-houses, and rates for board, to Geo. H. Heafford, General Passenger Agent, Chicago, Ill.

THE TURNING OF THE WORM.

There are some excellent people who make it a point to submit to annoyances, but when they finally resist some imposition they sometimes make spirited work of it. A mild-mannered man of this class came excitedly to the proprietor of the hotel where he was staying, and said:

"Look here, landlord, I want my bill; I'm going away."

"Why, what's the matter? Don't we treat you well?"

"You treat me all right, but I can't stand that German musician in the next room."

"Why, he plays the clarinet very well, they say."

"Maybe he does. I guess he plays too well. He played so well last night, and so much, that I couldn't get a wink of sleep until after one o'clock. Then I dropped off from sheer weariness; and it seemed as if I hadn't more than got to sleep before I heard a loud pounding on the door.

"'Who's that?' says I.

"'Dot's me, de man vot leef in de nachst room. I play dot clarinet.'

"'Oh, yes, you do!'

"'Und I like dot you schnore, off you blease, all de time on dot same key. You vos sometimes from B to G, und dot dishcort schpiles my moosic!'

"I tell you," said the mild-mannered man, "I can't stand that!"

COPIED THE NAME FROM HIS GRIP.

Mr. Smith, an English traveler, arrived one evening at a hotel in Austria. On the way he had picked up a smart German, and hired him as a servant. In Austria every one staying at a hotel is obliged to register his name and occupation in a book, which is kept for police examination, so Mr. Smith told his servant, Fritz, to bring this book for him to write his name.

"I have already registered, milor," said Fritz, "as an English gentleman of independent means."

"But I've never told you my name, so how do you know what it is?"

"I copied it from milor's portmanteau," answered Fritz.

"Why, it isn't on my portmanteau," cried Mr. Smith; "bring the book and let me see what you have put down."

The book was brought, and Mr. Smith, to his amusement, discovered that his clever servant had described him as:

"Monsieur Warranted Solid Leather!"—The Buyer.

SCIENTIFICALLY CONSIDERED.

"Merely as a new experience, Wendell," said the Boston young woman, blushing faintly and wiping her lips. "I find it not disagreeable, but do not let it happen again. It is utterly illogical, irrelevant, and recent scientific investigation shows that it is fraught with microbes."

It seems the foolhardy young man had kissed her.

HAVE YOU ASTHMA OR HAY-FEVER?

The New African Kola plant is Nature's botanic cure for Asthma and Hay-fever. Mr. A. C. Lewis, editor of the *Farmer's Magazine*, writes that it cured him when he could not lie down at night for fear of choking. Rev. J. L. Coombs, of Martinsburg, West Va., testifies to his entire cure after thirty years' suffering, and many others give similar testimony. Its cures are really wonderful. If you are a sufferer, you should send to the Kola Importing Co., 1164 Broadway, New York, who will send you a Large Case by mail free, to prove its power. It costs you nothing, and you should surely try it.

Queries.

☞READ THIS NOTICE.☜

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

National Flower.—E. O., Farmer's Valley, Pa. The talk of adopting a national flower all ended in talk.

Book on Raising Calves.—E. H. S., Prairie City, Ill. Send twenty-five cents to L. S. Hardin, Louisville, Ky., for "The Dairy Calf: Breeding and Raising."

Book on Caponizing.—J. A. H., Fulton, Kan. Send thirty cents to T. Greiner, La Salle, N. Y., for "Capons for Profit: How to Make and How to Manage Them," a book of plain and full instructions for beginners.

Preparing Horse-radish for Use.—D. H. S., Ionia, Mich., referring to a recent query, writes: "I find that horse-radish is much improved for table use by mixing it with sweet-turnip, or rutabaga, one part of the latter to two parts of the former, and it keeps in cans just as well. Try it. I have used it this way for a number of years."

Buckwheat.—M. M., Pierce, Neb. Buckwheat does best in fertile, sandy loam soil. Prepare the ground as for other small grain, harrowing and rolling until the seed-bed is fine and firm. The best time for sowing in your latitude is about the middle of June. Sow broadcast, one half bushel to the acre. Sow Japanese buckwheat, which you can obtain from seedsmen.

Literary Aspirant.—Rock Island, Ill. We cannot even guess what publishers would be most likely to accept your story. That must depend entirely upon the merit of the story as judged by the publishers themselves after reading it. We have mailed to you the circular of a reliable literary agency, which may be of service to you. It is always advisable, but not essential, to have a manuscript typewritten before submitting it to a publisher.

Cabbage Varieties.—REPLY BY T. GREINER:—F. E. P., Nebraska. Henderson's Early Summer cabbage is surely so very distinct from Surehead and Short-stem Drumhead that there should be a good deal of difference between them if the plants have their normal development. Sometimes, however (especially if plants are set very late and season happens to be very wet), all cabbages make an enormous growth of rather loose leaves, and do not seem to head well. In that case there appears to be less difference in the different varieties. Give more mineral manure and less nitrogen. The Danish Ballhead cabbage has already been spoken of in these columns. No doubt it can be raised successfully.

Sowing Celery—Orris-root.—Mrs. W. A. P., Darlington, S. C., writes: "Please tell me when celery-seed should be planted, what soil is best, how treated, etc.——Also give me some information on preparing orris-root for sale."

REPLY BY T. GREINER:—Am not acquainted with the particular local conditions, but should think that the best plan would be to sow seed in a well-prepared, somewhat shaded seed-bed outdoors in spring, so that you will have good plants to set along in August. This would give you fall and winter celery. For early celery I sow seed in flats in the greenhouse about February 15th, prick the plants out in cold-frames in April, and set them in open ground late in May or early in June. A rich, moist but well-drained loam will be found most serviceable for growing celery. I hope some of our southern friends will tell us how they succeed in raising the crop.——As to orris-root, I have absolutely no experience. Who will tell us something about it?

Manuring the Garden—Pruning Fruit-trees.—P. E. W., Kelsey, Cal., writes: "Which is the best method of using manure in the garden, plowing it under or putting on top and harrowing it in?——What is the best time for pruning fruit-trees?"

REPLY BY T. GREINER:—If the manure is in the least bit coarse or new, I invariably plow it under; if well rotted and fine, or concentrated like hen manure, I frequently apply it after plowing, spreading evenly over the surface, and then work it into the soil, and try to mix it up with the soil thoroughly by harrows or cultivators. It matters little by what means you accomplish the task. What you want is to mix soil and manure well.——As to pruning fruit-trees, most growers do this work just before the sap starts and pushes the buds in spring. At this time we usually have the time to do it, and it is all right. Another good time to prune, especially when severe pruning has to be done, is in the time of bloom or early leaf growth. Wounds made at this time heal over quickly.

VETERINARY.

Conducted by Dr. H. J. Detmers.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

A Tender Spot.—J. V., Pella, Iowa. Will you please describe the peculiarities of the tender spot, and say whether there is abnormal heat and swelling, or a lesion, or nothing of that kind?

Front Teeth Loose.—E. B. P., Westerlo, N. Y. You do not seem to know that the front teeth (incisors) of all cattle are loose in the lower jaw, and altogether wanting in the upper jaw. Maybe your heifer is sick.

Hairless Scar.—G. H. S., Clayton, Iowa. No hair can be reproduced wherever the roots of the hair have been destroyed, and no hair will ever grow in a scar tissue, but such a scar as you describe will in time contract and grow smaller, and then the hairless spot will be less conspicuous.

A Milk-fistula.—G. W. E., Mokelume Hill, Cal. You cannot do anything as long as the cow is in milk, except see to it that the natural opening in the teat remains intact. After the cow is dry you may succeed in effecting a closing of the fistulous opening by cauterizing the same with a stick of lunar caustic.

Chronic Indigestion—Sour Milk.—I. E. M., Barr, Cal. Your older calf suffers from chronic indigestion. It is possible, but not certain, that the same will recover if it can have a good dry pasture productive of sweet grasses during the summer.——As to your young calf, its stomach was much too weak for sour milk, which is very poor and dangerous food for young calves, anyhow. It is not even safe to feed it to yearlings.

Rye and Rye-straw.—H. J. G., Morley, Mich. If rye and rye-straw containing ergot are fed to female animals while with young abortion is apt to be the consequence: and even if the rye contains but very little ergot, or none at all, but rye and rye-straw constitute the exclusive food, and consequently are fed in large quantities, a similar result may be expected, notwithstanding that the poisonous or specific effect of ergot is absent.

A Peculiar Lameness.—W. M., Jasper, Ontario, Canada. The lameness of your horse, according to your description, must be a peculiar one, caused, as you say, by stepping on a stone, and then afterward changing from one leg to another. All that can be learned from your description with any degree of certainty is that your horse is suffering great pain, but it gives no clue whatever concerning the nature and the seat of the lameness.

Bloody Milk.—N. B., Wolsey, N. D. "Bloody milk" may be produced by quite a number of widely different causes; for instance, by a congestive condition of the mammary glands, by rude milking and other injuries, by existing tuberculosis, by certain other infectious diseases, by excessive sexual excitement, in which the congestion of other sexual organs extends to the mammary glands, etc. It may also be a consequence of too much sloppy and relaxing food. Ascertain the cause or causes in your case, and if you find them to be such as can be removed, a removal of the same will constitute the treatment.

Probably Foot-mange.—G. W. C., Harmony, Md. What you describe appears to be a case of foot-mange. Give the affected parts first a thorough wash with soap and warm water, and then with a five-per-cent solution of creolin (Pearson's) in water, and put the horse in a clean stall. This done, thoroughly clean and disinfect the stall that has been occupied by the horse, so that it may be ready for occupancy after the horse has been washed the second time, five days after the first wash. If everything is done in an efficient way, two or three washes will probably be sufficient to effect a cure. If not, more frequent repetitions will be necessary.

Black-leg.—E. B., Rye, Col., writes: "What was the matter with my yearling calf? On the evening of the eighth (April) it was last noticed to be all right. On the morning of the tenth it was ailing, had to be helped up, looked thin, refused to eat and appeared stiff. About noon it limped so much that it could hardly walk. There was soreness in the right hind leg. In the evening the leg was swelled from the knee-joint up to the body. Rubbing the skin produced a crackling sound. He appeared to be in great pain, would lie down and get up, then lie down again and stretch out. That night he died. The right hip from hock up was puffed up full. When opened it was full of blood, frothy-like and of a blue-black color. Bloody froth came from the nostrils. Is it 'black-leg?'"

REPLY:—You give an excellent description of so-called black-leg, or symptomatic anthrax. As to cause and prevention, I have to refer you to the two last numbers of FARM AND FIRESIDE, April 15th and May 1st.

May Be Pyemia.—W. G. D., Myles, Miss. What you describe in the first part of your communication appears to be nothing more nor less than a case of fistulous withers. Whether there was any connection between it and the lameness in both fore legs or not I am unable to decide. The large swelling mentioned further on in your communication, which you say appeared on the inner (median) side of the right thigh at the same time the shoulder began to swell, would indicate that the horse suffers from pyemia (pus infection). If such is the case, it is advisable, unless already too late, to have the animal treated by a competent veterinarian. If none is available, lance every abscess as soon as it shows fluctuation at the lowest possible point, so that the pus may be freely discharged from every part of the abscess, and then dress the latter with a mild antiseptic two or three times a day. Also watch for new swellings and abscesses in other parts of the body.

Probably Swine-plague.—M. D., Hennessee, Oklahoma. What you describe—an ulcerous swelling of the nose of pigs—is a frequent attendant of swine-plague, or so-called hog-cholera; but in that case your pigs are not "otherwise healthy," as you say they seem to be. If it is not swine-plague, it may do some good to wash the swellings three times a day with a five-per-cent solution of creolin in water.

Interfering.—W. F. H., Worcester, Mass. Your horseshoer, provided he understands the mechanism of the horse's foot, can do a great deal. Tell him to cure the interfering on the foot that is interfered with by shoeing the horse in such a way as will remove the place interfered with, or being struck further from the interfering foot. If this is done, if you have the shoes of your horse reset once a month, and if the animal is never driven enough to get very tired, the interfering will soon cease. Of course, that part of the shoe on the foot that does the interfering must be smooth and free from projecting points; but as long as it is attempted to prevent interfering by artificial contrivances applied to the interfering shoe it will never be cured.

A Lame Horse.—S. S. O., Ringgold, Pa. As to the lameness of your horse, you fail to give any description of the same, and thus make it impossible for me to make a diagnosis. All you say is that the horse is a little lame, and that you have unsuccessfully treated the same for spavin. Even if you had complied with everything essential in the treatment of spavin, which evidently you have not, because if you had, and had given the animal the strict rest required, you would not yet know that the treatment has been unsuccessful. The failure of the treatment is no proof that the horse has not spavin, for not every horse affected with spavin will be cured. The first thing necessary before the treatment of any disease is begun with is a correct diagnosis. Concerning the curb of your horse you speak of, it is seldom that it causes lameness, except in the beginning while the swelled parts are yet sore and inflamed. It is different if the bones are affected. If you desire a satisfactory answer to your questions you must give a description of the characteristic symptoms; that is, symptoms which are peculiar to the case, and by which the disease or ailment can be distinguished from others.

Black-leg in Young Calves.—The following communication, sent at my request by W. F. S., Timberlake, Oklahoma, is in so far of scientific interest as it disproves the "ex cathedra" dictum of some European authors, and I give it without abbreviation: "In your answer to my query in paper of April 15, 1897, you request me to state the age of calves. They were of different ages—three, four and five months old. And I might add they were all heifers but one out of a total of twenty-two head lost by black-leg. Is the drying up of food in the small stomach, the first part attacked by the germ, what causes the blood to thicken and the flesh to bloat? Is there any similarity in the symptoms of 'black-leg' and 'dry murrain?' If not, what are the symptoms and the probable cause? Several of your readers here are as much interested in this as I am, and hope you will be kind enough to enlighten us through the columns of your valuable paper."

REPLY:—Black-leg, or symptomatic anthrax, is caused by the bacillus of that disease, as already stated in my answer to you of April 15th. This bacillus enters, as far as is known, through small sores, or lesions, especially in the skin of the extremities, and then, of course, invades the connective tissues, where by its products and by an appropriation of material which cannot be spared by the organism, all the morbid changes, particularly in the connective tissues, and secondarily in the blood, are produced. If this bacillus is directly introduced into the blood, but strictly kept out of the connective tissues, no real sickness and death will be produced, but changes, the nature of which is not yet fully known, will be produced which protect the animal against a future attack of the disease; in other words, produces immunity. Food and keeping of young cattle have no direct influence upon the production of the disease, but may have an indirect influence in so far as they may be productive of a more rapid process of waste and repair (rapid improvement of condition), which is considered as acting as a predisposing cause. Concerning the symptoms, you will find a very good description given by E. B., Rye, Col. Dry murrain is a term applied to different diseases in different countries. It is mostly used as a synonym for impaction of the third stomach.

Garget.—H. R., Ridgeway, Pa. You ask a great many questions about garget, which nearly all cover the same ground. Therefore, to avoid repetitions and to save space, I will answer them together. Garget is a term which is applied to a morbid affection of the mammary glands of milk-producing animals, which manifests its presence first by a coagulation of the milk and more or less swelling of the udder, and then by congestion and inflammation, which may terminate, according to circumstances, rational treatment or neglect, and also according to the kind of micro-organisms that find an entrance, in resolution and recovery, or in induration, suppuration, and even gangrene. The causes are twofold. They consist in predisposing and exciting causes. The former consist in an undue accumulation of milk in the lactiferous canals and milk-cisterns produced by either indifferent and negligent milking or by not milking sufficiently often. The exciting cause consists in an invasion of bacteria, which change the milk-sugar in the accumulated milk into lactic acid, which latter causes a coagulation of the nitrogenous compounds of the milk, casein, etc., by precipitating the same out of their solution. The coagulated substances then not only act as foreign bodies, but also constitute a splendid medium for the propagation of various kinds of bacteria, and thus, unless promptly removed, cause all the further morbid changes—high fever and even death. The only rational treatment, always successful if applied in time, therefore, consists in frequent (once every two hours) and thorough milking, as the only thing that will effectually remove the cause—the coagulated casein and the bacteria. Your other questions concerning the quantity, etc., of food a cow should receive I cannot answer, because the answer has to depend upon the quality of the food, the size, age, condition and productiveness of the cow and the temperature of the atmosphere in which she is kept. Space will not allow to write a chapter on feeding and hygiene. Whether your cow will be milk-producing again after calving depends altogether upon the quantity and quality of the morbid changes existing. Degenerated glandular tissue is lost for milk production, and if there is no degeneration future milk production is not interfered with.

Recent Publications.

BOOK RECEIVED.

SUGAR. A New and Profitable Industry in the United States for Agriculture, Capital and Labor, to Supply the Home Market Yearly with $100,000,000 of Its Product. By Herbert Myrick, editor "American Agriculturist," assisted by Professor W. C. Stubbs, director of the Louisiana experiment station, and by numerous experts in the culture of beets and manufacture of sugar, with illustrations of cultural and factory processes and maps showing the beet and cane sugar belts, location of existing factories and localities that want sugar enterprises. Pages, 168; size of page, 6x9 inches; illustrations, 78. Price 50 cents. Orange Judd Company, publishers, New York, Chicago, and Springfield, Mass.

CATALOGUES RECEIVED.

John Waring, Fyffe, El Dorado county, Cal. Price-list of California seeds, bulbs and plants.

Riverside Poultry Yards, Quincy, Ohio. Illustrated catalogue of eleven leading varieties of thoroughbred poultry.

John Nehel & Son, High Hill, Mo. Illustrated catalogues of beekeepers' supplies.

George W. Campbell, Delaware, Ohio. Descriptive circular of that grand new grape, the Campbell's Early.

W. Atlee Burpee & Co., Philadelphia, Pa. "Our Collies as Bred at Fordhook Kennels," an illustrated pamphlet on the breeding, care and training of Scotch collies.

Northwestern Seed Company, Faribault, Minn. Calendar, garden guide and catalogue of garden and flower seeds.

James J. H. Gregory & Sons. Illustrated catalogue of choice home-grown garden, field and flower seeds.

W. W. Miller, secretary Ohio state board of agriculture, Columbus, Ohio. Premiums and regulations for the forty-seventh Ohio State Fair and Industrial Exposition to be held at Columbus, August 30, 31 and September 1, 2, 3, 1897.

Boomer & Boschert Press Company, Syracuse, N. Y. Illustrated catalogue describing improved wine and cider machinery, including hydraulic, screw and knuckle-joint presses, apple-graters, jelly-evaporators, apple-butter cookers, etc.

J. R. Pierson Company, Tarrytown-on-Hudson, N. Y. A superb catalogue of choice selections in seeds and plants, beautifully and truthfully illustrated.

Geo. H. Houghton, G. P. & T. A. of the Bangor and Aroostook railroad, Bangor, Me. A big-game and fly-fishing guide to northwestern Maine, the sportsmen's paradise of the East. Mailed to any address upon receipt of 2 two-cent stamps to cover postage.

5-A Monthly Magazine, Box 1342, Philadelphia, Pa. Circular describing 5-A halter cow-covers which furnish protection against flies and mosquitoes.

Smiles.

A WANT.

Wanted: a muse content to sit
  Until I have the time;
Who will not, with the shadows, flit
  Away when I would rhyme.
A muse that has her eveuings in
  And has no Sundays out;
And one who is not pale and thin—
  Far better, one who's stout.

Wanted: a muse who can keep house—
  Who's willing and demure;
Who'll run the place the while my spouse
  Is on a lecturing tour.
A muse of inspiration strong,
  Who'll all my weakness hrook.
Aud who'll incite me all day long—
  Likewise, one who can cook.

Wanted: a muse quite versatile;
  Good wages I will pay
Unto the one who fills the hill—
  I want her right away.
Willing to work both day and night,
  Aud double will her pay he
If she can only, while I write,
  Learn how to hush the baby.
—Tom Massou, in Life.

THE PAPER GUN.

GREAT are the improvements that have been made in firearms within the past sixty years. From the invention of the percussion lock down to the latest perfection of breech-loading and repeating arms the art of gun-making has attained such cheapness and excellence that it seems almost impossible to go beyond.

Iron and steel have been worked into all manner of combinations and twisted into all contortions that can give strength and most exquisite figure. Actions and magazines have been perfected until there is nothing left to ask for in ease and celerity of loading and firing, and all at a cost that makes it possible for men of moderate means to own guns of a quality that were once only within the reach of the wealthy. So it has come to pass that every one who cares to own one has a good gun, and if the shooters were equal to their weapons there would be no game left.

But far more effective than any achieved combination of iron, steel and wood is the paper gun, a weapon at the command of every one who can wield a pen; for it is cheaper than the cheapest, though it bears the name of every good maker.

It never misses fire, never its mark. In vain the wiles of the ruffed grouse, in vain the startling upburst of his thundering flight. Of no avail the woodcock's thridding of the alder copse, the snipe's zigzag course over the sedgy lands, the wild fowl's headlong speed before the piping gale—down comes each at the noiseless and smokeless discharge of the paper gun. So falls the bounding deer, the cliff-scaling mountain-sheep; so the charging moose, and the savage grizzly when his hot breath is almost in the face of the intrepid hunter, and so falls the painted Indian at the moment his tomahawk is lifted to strike his victim.

Notwithstanding the improvements that have been made in the iron gun, it is possible that they may be carried still further. Ramrod and hammer have been eliminated, and so perhaps may be lock, stock and barrel, and ideal proverbial rapidity attained. But there is nothing left to be desired in the paper gun; it has reached perfection. It is infallible, and he who fires it is always an unerring marksman.—Forest and Stream.

ONTO HIS JOB.

"Tickets, please, gentlemen," said the conductor, and they were all produced save that of a poor, feeble old gentleman, who searched all his pockets in vain for his, and the fellow-passengers growled exceedingly.

"Train is waiting for you, sir," went on the conductor. "Why, there it is in your mouth, sir, all the time."

And the train moved on.

"Do you suffer much from absence of mind?" asked one of "the boys."

"Absence of mind he hanged!" returned the poor, feeble old gentleman. "I was sucking the date off last week's ticket."—Sample Case.

AN ABNORMAL TASTE.

"Hello, old man! how are you?"

"Wretched! wretched! I've had an attack of the grip, and it's left me so weak I can hardly crawl."

"What do you want to crawl for? Why don't you walk?"

HOW IT WAS LOST.

"Mr. Henpeck," said the doctor, after examination, "I fear your wife's mind is gone."

"That doesn't surprise me," said the poor man. "She has been giving me a piece of it every day for ten years."—Memphis Scimitar.

FROM THE NORTH.

During the flood of five years ago I visited the section below Memphis with a newspaper artist. One afternoon we were perched on the top of a bit of highland viewing the waste of waters when an old negro approached and offered to sell two fine roosters. With great voluhility he explained that the fowls had eaten so much corn that he could not afford to keep them longer, and therefore he had decided to sacrifice them and stop the drain on his corn-crib.

"Where did you get them, uncle?" I asked.

The old man looked at us quizzically for a moment, and then said, with a chuckle:

"Yo' gemmen are from the No'th, ain't yo?"

"Well, yes," I replied: "but what has that to do with it?"

"Becuz, sah," he said, "no Southern gemman evah asks a niggah whah he gits anything."—Chicago Times-Herald.

NATURALLY INDIGNANT.

Mr. M——, a Boston gentleman, has a telephone in his house, and one day he instructed the newly engaged Irish maid-servant how to reply in case there should come a call over the wire during the absence of Mr. M—— and his wife. One day there came such a call, and Norah went to the telephone.

"Well, sor?" said Norah, with her mouth to the speaking-tube.

"Who's that?" came over the wire in a masculine voice.

"It's me, sor."

"And who is me?"

"How the devil should Oi know who yeez are?" retorted Norah, and the laugh that reached her ears over the wire made her so angry that she "broke the connection" without giving "me" a chance to explain.—Harper's Bazar.

HE KNEW.

"What did Noah live on when the flood subsided and his provisions in the ark were exhausted?" asked a Sunday-school teacher of her class.

"I know," squealed a little girl, after the others had given up.

"Well, what?" inquired the teacher.

"Dry land."—Chattanooga Times.

A POSSIBLE ASSISTANCE.

"Willie is a remarkable boy," said the lad's mother to the eminent musician. "He remembers every tune he hears."

"Indeed!"

"Isn't that a valuable faculty?"

"Well—it may enable him to become a successful composer."—Washington Star.

THE VERY MAN.

The Reverend Dr. Thirdly—"And now, children, I wonder if any little boy or girl here knows who was the best man that ever lived. Ah! there's a hand up. Well, Johnny, who was the best man that ever lived?"

Johnny Seconderop—"Please, sir, it was mama's first husband, sir."—Judge.

A GRIEVOUS OFFENSE.

Magistrate—"The charge is interfering with an officer. Roundsman McCarty, you will please state exactly what the defendant did."

Roundsman McCarty—"Oi wor passing his fruit-shtand, yer anner, an' Oi shwoiped a hanana, whin th' Dago troied t' tek it frum me, yer anner."

PERTINENT.

Penelope—"Do horse shows improve the class of horses?"

Tom Barry—"Yes."

Penelope—"And dog shows of dogs?"

Tom Barry—"Yes."

Penelope—"Then why don't they hold man shows?"—Truth.

NO PROOF OF INSANITY.

Flasherly—"They say Dr. Henpeck's mind wandered while conducting his wife's funeral."

Dasherly—"What made 'em think that?"

Flasherly—"Why, at the close of the burial service he said, 'Here endeth the first lesson.'"—Truth.

ONE OF HIS WOES.

"What is the matter, Adam?" anxiously inquired Eve. "You seem troubled."

"Little Cain has just said a bright thing," replied Adam, moodily, "and there is nobody I can go and tell it to."

LOOKING.

Mr. Dyer—"Where is the bargain-counter?"

The floor-walker—"There are several. What are you looking for?"

"I'm looking for my wife."—Life.

Selections.

STORY OF "SHERIDAN'S RIDE."

THE unveiling recently in the Hotel Lafayette of Mulvany's heroic picture of "Sheridan's Ride" naturally brings to miud the famous poem bearing the same title. written by Thomas Buchanan Read, says the Philadelphia "Times."

Yet they were written in three hours and in a fragmentary way. The story of their origin has probably never before been told accurately as received from one whò figured in their first rendition. It is a tale that today can most appropriately be told. Thomas Buchanan Read was a painter as well as a poet, his verses demonstrating the latter quality in his nature, and bis picture of "Sheridan's Ride," which now hangs in the Academy of Fine Arts in this city, giviug proof of his ability to wield the brush. Shortly after Sheridan had achieved his victory at Cedar creek "Harper's Weekly" published on its first page a striking picture of him on his black borse Rienzi dashing "from Winchester down to save the day." A copy of this was exhibited in an art-store iu Cincinnati kept by a man named Wiswell. Read--he was known then among his associates as "Buck" Read—was then a resident of the Queen City of the West, and a very active member of a Bohemian organizatiou kuown as tbe Sketch club, to which belonged many artists, newspaper men and other writers. He had seen the Sheridan picture in Wiswell's window, and with tbe impression that it made upon him fresh in his mind he came to the Sketch club, and picking up a few sheets of paper begau writing the liues beginning, "Up from the south at break of day."

Brain and fingers moved with feverish haste, and when he had finished four stanzas he turned to the men about him, and said. "Boys, are these lines good for anything? They arc about that ride of Sberidan's from Winchester." He read them. His friends shouted an enthusiastic approval.

Among those present at that time was John B. McCormick, known to newspaperdom as the stirring city editor of the Ciucinnati "Enquirer," and since then and until this day as the well-known writer on sporting affairs over the nom de plume of "Macon." He knew Read well. But McCormick, in addition to having been an iron-worker aud a newspaper man, had been an alleged actor, having, in fact, reached the dignity of playing Sir Lucius O'Trigger in "The Rivals." An inspiration seized him. He knew that tbere was then living at Avondaie, a suburb of Cincinnati, James R. Murdock, who, as most of you know, was one of tbe greatest actors of his day, and one of the greatest thespians America ever produced. His loyalty to his country was so fierce that he had registered an oath that he would not pursue his profession until the civil war was ended, aud therefore while that conflict pended he confined his vocal efforts to recitations. And in that line of his art no man could outdo him. On the eveniug of the same day referred to it had beeu arranged that there should be given in Pike's opera-house, in Cincinnati, an entertainment, the proceeds of which should be given to the sanitary commission of that city, which had in cbarge the furnishing of medicines, lint and other comforts to the Union soldiers.

Said McCormick, the newspaper man, to Read, the poet and painter, "Buck, let me take that poem out to James R. Murdock and have him read it to-night at the benefit performance in Pike's opera-house?"

"Go ahead," said "Buck."

McCormick jumped into a carriage and took the incompleted manuscript of the poem toward Avondale, while Read in the Sketch club wrote the concluding stanzas. When Murdock read tbe thrilling lines his face became glorified. He said, "Take me to Read. Will he complete it in time? I will read it to-night." He came to the Sketch club, and when he reached there Read had just written the concluding lines, "From Winchester—twenty miles away!" With the manuscript in his hands Murdock went to the house of his sister, Mrs. Hollingsworth, and there he committed the poem to memory.

That night Pike's opera-house was crowded from stage to door, from parquet to gallery. When the evening's entertainment had spent half its course Murdock, with his long hair rolling over his collar, appeared upon the stage holdiug au American flag in one hand, its beautiful colors folding about his arm. With that marvelously deep aud thrilling voice of his he told his listeners the story of the ride from Winchester in the rhythmic words of Thomas Buchauau Read. As he proceeded in the poetic narrative some one took the flag from his grasp, and tben with both hands outstretched and his figure bent forward as if he were a jockey carrying a Derby winner to victory, his whole body moving as if witb the impulse of the steed's speed, bringing to each auditor a picture of Rienzi dashing down from Winchester, he shouted in stentorian tones, "With Sheridan only ten miles away." The whole audience rose as one, and with a mighty sound brought the recitation to a temporary halt; women witb tears pouring dowu their cheeks waved their handkerchiefs in air; men embraced one another and sobbed hysterically. It was an expression of human feeling such as it has been given to few to look upon. It was with difficulty that order was restored and the completion of the recitatlon was made possible.

That is the story of the birth of a poem that will ever remain a part of the literature of Americe.

PRESIDENT PORFIRIO DIAZ.

"I consider President Porfirio Diaz, of Mexico, one of the greatest men of the present day," remarked Charles Dudley Warner ou arriving from Mexico.

President Diaz has accomplished more during the twenty years of his administration than had been accomplisbed by his predecessors since the republic was instituted. He is in every way a most remarkable man. He seems to possess a will of iron, but iron clothed in silken garmeuts, and with a gentle force that overrides all obstacles in time. He possesses an absolute knowledge of his country and his people that is marvelous. He uever makes au error of judgment in this respect, and it must be owing to his familiarity with tbe most minute details of the habits and thoughts of the Mexicans generally that he has been able to create such an enviable record for enterprise and political sagacity.

"It seems to have been the aim of President Diaz to make his empire—for he is in every sense an emperor—impervious to the attacks of the outer world. This frou a financial standpoint. He bas accomplished this by maintaining the credit of the republic. He has paid all obligations in gold, and by doing this he has made it possible for Mexican securities to obtain excellent values in the markets of Europe, and to attract capital with which to develop the unlimited resources of the great country over which he rules.

"He has pushed education until the common schools are a feature of every community.

"The Mexican government does not establish the value of its coinage when that coinage is silver. It mints the bar metal into coin and receives five per cent profit upon the amount minted. The silver money may be worth anytbing, and is not considered in the grand total of the country's resources. Gold is given to foreign investors, credit is kept up, and manufactures are attracted. President Diaz discourages the importation of goods by a practically prohibitory tariff. The result of tbis has been the establishment of factories throughout the republic, and it is this course which is responsible for the progress which is being made in that country.

"President Diaz is the absolute arbiter of the destinies of his people. His will is law and absolute. He has molded the Congress to his will, has overthrown all opposition, has violated tbe ancient traditions of the Mexicans, and by magnificent innovations has fostered the cause of real industry, and set the wheels moving in localities where but a few years ago all was ignorance and enervation. Diaz is a great man."—New Orleans Times-Democrat.

BEAUTY IN MATURITY.

The physical beauty of women should last, growing more and more mellow until the end. That the beauty of women, like that of men, should be determined from the standpoint of advancing maturity cannot be disputed. It is absurd to claim that the ripe, rich beauty of forty is less attractive than the budding immaturity of sweet sixteen. When women live in harmony with nature's laws each stage of life bas its own charm. The fullness of beauty does not reach its zenith under the age of thirty-five or forty. Helen of Troy comes upon the stage at the age of forty. Aspasia was tbirty-six when married to Pericles, and she was a brilliant figure thirty years thereafter. Cleopatra was past thirty years when she met Antony. Diane de Poictiers was thirty-six when she won the heart of Henry II. The king was half her age, but his devotion never changed. Anne of Austria was tbirty-eigbt when described as the most beautiful woman in Europe. Mme. de Maintenon was forty-three when united to Louis, and Catherine of Russia was thirty-three when she seized the throne she occupied for thirty-five years.

Mlle. Mar was most beautiful at forty-five, and Mme. Recamier between the ages of thirty-five and fifty-five. The most lasting and intense passion is not inspired by two-decade beauties. The old saw about sweet sixteen is exploded by the truer knowledge that the highest beauty does not dwell in immaturity. For beauty does not mean alone the fashion of form and coloring as found in the waxen doll. The dew of youth and a complexion of roses are admirable for that period, but a woman's best and richest years are from thirty-six to forty. It is an arrant error for any woman to regard herself as passe at any age, if she grows old gracefully. —Chicago Chronicle.

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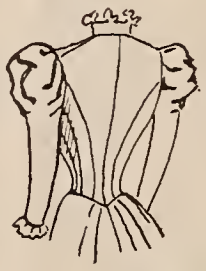

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Sizes, 12, 14 and 16 years.

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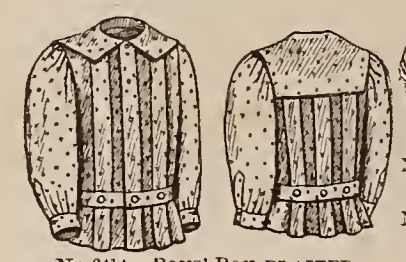
Sizes, 6, 8, 10 and 12 years.



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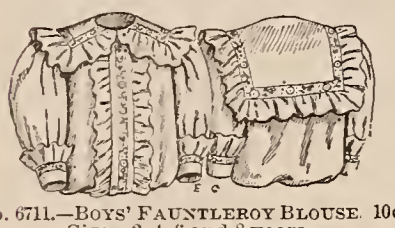

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Sizes, 10, 12, 14 and 16 years.

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Sizes, 32, 34, 36, 38, 40 and 42 inches bust.

No. 7059.—Misses' Waist. 10 cents.
Sizes, 12, 14 and 16 years.
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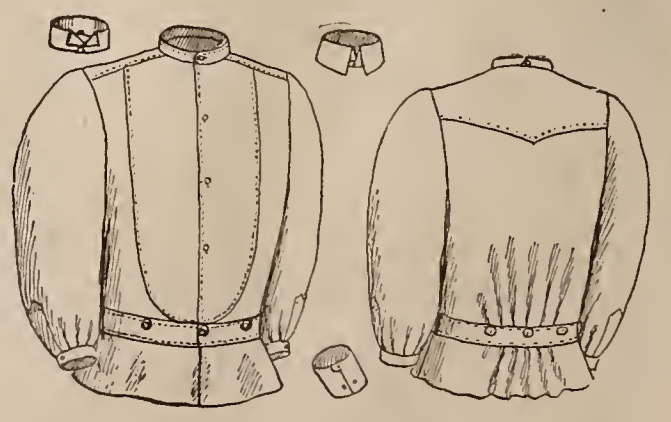

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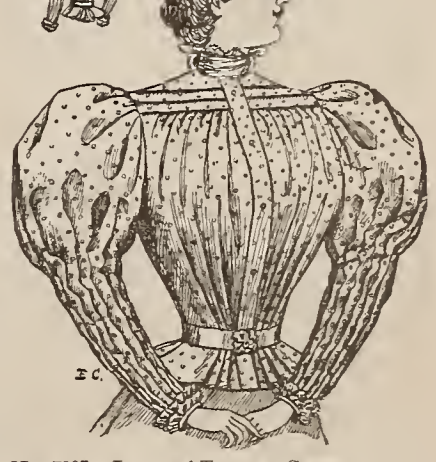

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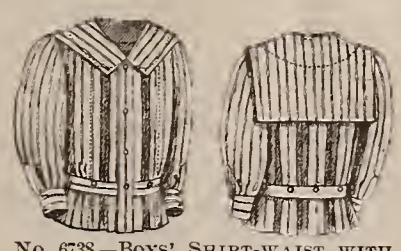

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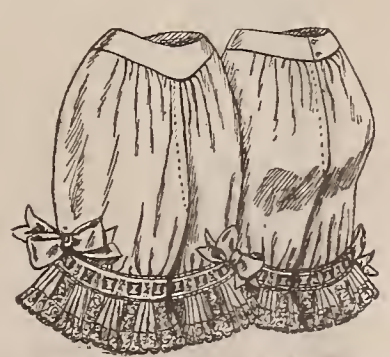

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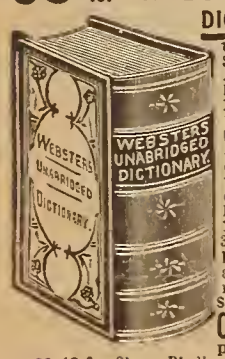

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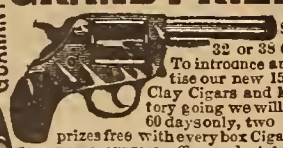

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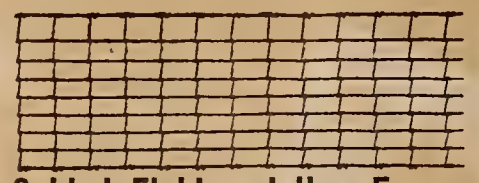

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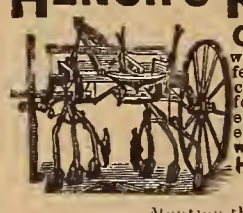

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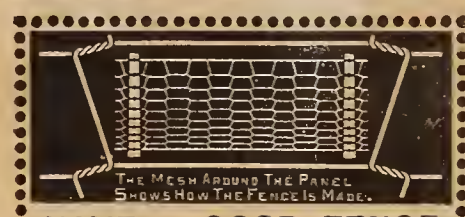

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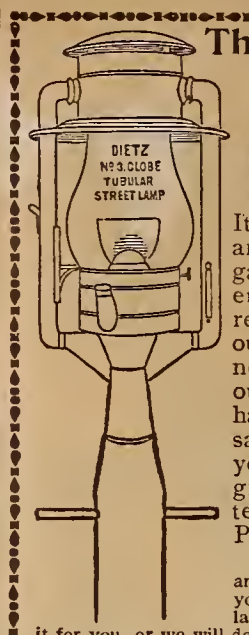

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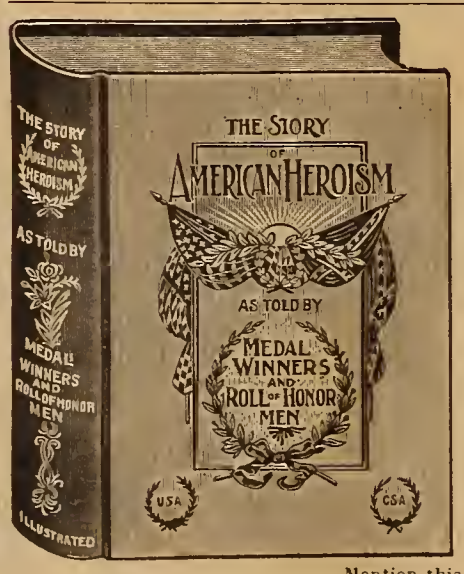

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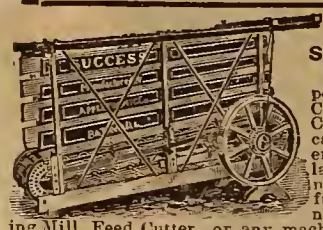

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Entered at the Post-office at Springfield, Ohio, as second-class mail matter.

VOL. XX. NO. 17. JUNE 1, 1897. TERMS { 50 CENTS A YEAR. 24 NUMBERS.

WITH THE VANGUARD

PRESS correspondence from Washington presents some figures from the April summary of finance and commerce issued by the Treasury Department, as follows:

"The March importations of wool in 1897 were 58,085,339 pounds against 17,781,547 pounds in March, 1896, and against only 3,483,415 pounds in the last March of the McKinley law. The importation of rags, nails, etc., in March, 1897, was 5,466,461 pounds against 1,504 pounds in the last March of the McKinley law. These quantities of free wool and shoddy now in stock here are not particularly cheering to the growers of good American wool, for it will be some months before they can be absorbed by the country and a place made for the home product. The world, according to this official report, is being raked over to find wool to be brought to this country before the new tariff law goes into effect.

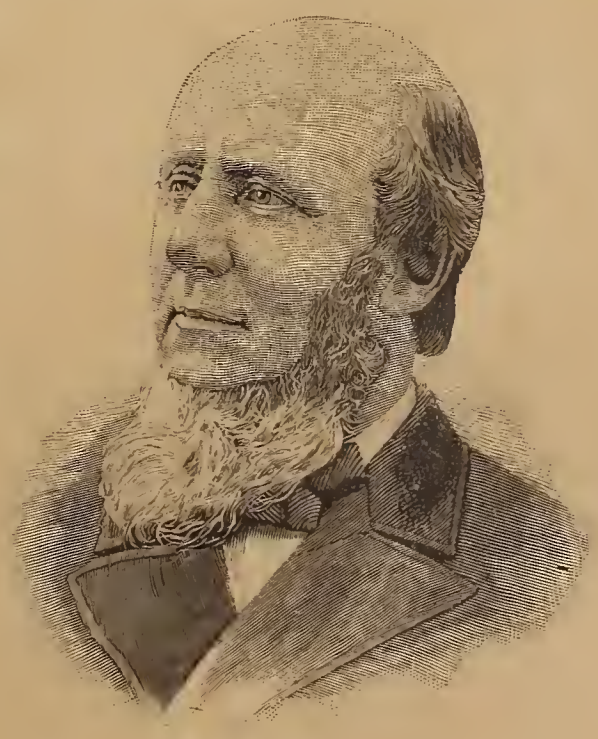
THE Cuban question has again become prominent. Recent reports from the United States consuls in Cuba describe the deplorable condition of the people who have been concentrated from the country into the fortified towns by Weyler's military orders. Acting on the president's message Congress provides for a relief expedition to Cuba to supply the immediate necessities for food and medicines of the American citizens there, and to provide for the transportation of those who desire to return to this country but are without the means to do it.

Prompt relief of starving Americans in Cuba is necessary and right, but it is only the first step that the United States should take.

The next step is to do something for the Cubans. For more than two years the Cuban patriots have fought a great Spanish army to gain their country's freedom, and they will continue the terrible struggles until Cuba is free or completely devastated. The barbarous and starvation methods by which Weyler has endeavored to conquer Cuba gives sufficient ground for intervention by the United States.

The president's message, though very brief and devoted to the single purpose of relief for American citizens, is, in fact, an official recognition of such a state of affairs in Cuba that calls for immediate action by the United States. "Spain having lost control of Cuba, and being unable to protect the property or lives of resident American citizens, or to comply with its treaty obligations," the time is surely at hand when "the government of the United States should actively use its influences and good offices to restore peace and give independence to the island."

DR. JAMES BURRILL ANGELL, the distinguished educator, author and diplomat, recently appointed United States minister to Turkey, was born in Scituate,



DR. JAMES B. ANGELL.

R. I., January 7, 1829. He was graduated at Brown University in 1849. After spending some time studying and traveling in Europe he was, in 1853, appointed professor of modern languages in Brown University. In 1860 he resigned his professorship and became the editor of the Providence "Journal." He filled this position until 1866, when he was called to the presidency of the University of Vermont, where he labored successfully for five years. In 1871 he became president of the University of Michigan. During his administration of over a quarter of a century this institution has been brought into the first rank of American universities.

Three times has Dr. Angell been called from the duties of his office as president of the University of Michigan to the service of his country. Under President Hayes, in 1880-81, he was United States minister to China, and the chairman of the special commission that negotiated a treaty with China on immigration and commercial matters. Under President Cleveland, in 1887-88, he was a member of the international commission of the United States and Great Britain on the fisheries controversies. And now, under President McKinley, this trained diplomat will represent the United States in Turkey at a period which will probably be the most eventful in the modern history of that country.

During his busy life of college executive Dr. Angell has contributed many articles to periodical literature, and distinguished himself as an author.

THE war between Greece and Turkey did not last long. Outnumbered and outgeneraled by the Turks, the Greeks, brave in taking up arms in the righteous cause of the oppressed Cretans, have been driven across Thessaly and forced to sue for peace. Greece has confided her interests to the concert of the six great powers. Hostilities on the battle-field have ceased, and public interest has been transferred to the struggles on the field of diplomacy. The great eastern question seems more involved now than when the war began.

The New York "Sun's" cable dispatch on May 18th described the situation as follows:

"The war is at an end, and the shame, not of Greece, but of Christian Europe, is complete. The final act of the Moslem army was not battle, but a massacre. Two thousand Greeks at Dhomoko, according to the meager accounts received here, were slaughtered by Edhem Pasha's troops after the powers had forbidden their opponents to engage in further hostilities, under a pledge that they would restrain the Turkish forces.

"Even the bloody record in Armenia does not match this crowning disgrace and the defiance flung in the face of united Europe by the grinning creature it maintains on his gory throne at Constantinople. And with splendid insolence, having accomplished his entire purpose, the Sultan sent a message to the representatives of the powers to-day, saying that as an earnest of his amiability and spirit of accommodation he would abstain from further hostilities pending negotiations for peace. The history of mankind, verily, has nothing to compare with this sublime triumph of evil over the forces of righteousness, which federated Europe assumes itself to be.

"The Sultan openly declared that he would not check his army until Dhomoko, on the old frontier, was in his possession. All Thessaly is now his beyond dispute, and he intends to retain it. Possession is much more than nine points of the law in the diplomacy of Europe. Accordingly, all expressions of public opinion during the past few days have been unanimously against him. If mere words would drive him out he would have to go, but few persons believe that these will be of any avail. Nothing but force remains, and Europe is so mortally afraid of her own weapons that she will submit to almost any indignity rather than to use them. Such, at least, is the sentiment that controls the policy of Great Britain, which is the strongest of all the powers."

FARM AND FIRESIDE

PUBLISHED BY

MAST, CROWELL & KIRKPATRICK.

OFFICES:

108 Times Building, New York City. Springfield, Ohio. 1643 Monadnock Block, Chicago, Illinois.

Subscriptions and all business letters may be addressed to "Farm and Fireside," at either one of the above-mentioned offices; letters for the Editor should be marked Editor.

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NOTES ON RURAL AFFAIRS.

Good Roads Again. I had expected that my remarks in last issue of Farm and Fireside about some good points in a "good-roads" bill, then before the legislature of this state, would call out a flood of remoustrance and protest. At least this was iutended that same remark should do. Perhaps these protests have not come because the bill is dead anyway, and that surely is one of its best points. I do not believe that the farmers of this state are ready and willing to pay their road-tax iu money. Most of them would work out their tax if they could get the tax paid off at fifty cents a day. Money is a scarce article with the average farmer just now, and he finds it much easier to work the tax off than to pay it off. Legislators should not compel farmers to pay out money in these close times.

* * *

Cultivation versus Manure. That "tillage is manure" seems a very old observation and a very old saying; but I believe we can easily go too far in its application. As a gardener I use manures very freely, and find it pays. Yet it is also true that we can often secure astonishing results by what many might call an extravagant use of the cultivator. At the last meeting of the Western New York Horticultural Society, at Rochester, Professor I. P. Roberts, of Cornell Uuiversity experiment station, told of a crop of potatoes of three hundred to four hundred bushels to the acre grown on just such soil as neighboring farmers use in the production of their ninety to one hundred bushel crops—his larger yields being simply a result of frequent cultivation. A recount of this is given in Bulletin No. 130. In order to show the thoroughness with which the ground was tilled I quote the following from the report of the 1895 crop: "The potatoes used for seed were large, marketable ones, and were cut to one strong eye to the piece, and planted in rows three and one fourth feet apart, with the pieces fourteen inches apart in the row. They were covered with a hoe to the depth of about four inches. The plantiug was done May 3d and 4th. The first cultivation was ou May 10th, with a Breed's weeder. It may be said that on this gravelly, loose soil such an implemeut did good work, while on soils containiug a large percentage of clay its work was not so satisfactory with us.

* * *

"The second cultivation was given on May 17th, when the spike-tooth harrow was used on all the plats. The importance of this early tillage before the potatoes are up can hardly be too highly estimated. The spring rains form a crust ou the surface which needs to be broken up, innumerable small weeds which are just showing themselves through the soil are killed, a surface earth mulch is established which serves to prevent the loss of moisture by evaporation, and in many ways this harrowing of the ground before the potatoes show themselves is most beneficial to the success of the crop. Again on May 23d, May 29th and June 6th the plats were cultivated with a spring-tooth cultivator. The tillage was continued until the vines so covered the space between the rows that the cultivator could no longer be used without injuring the foliage. The average yield from plats given thirteen cultivations was 337.5 bushels to the acre. The average for nine cultivations was 367.5. As has been mentioned, this year was especially favorable for potatoes, and the average for the state was extra high, being 122 bushels to the acre."

* * *

For the year of 1896 the record was as follows: "The plowing was done as early iu the spring as the condition of the soil would permit, and the land was immediately harrowed and rolled. Before planting the Acme harrow was used to pulverize and loosen the surface soil. Rows were laid off at distances of three aud one fourth feet and opened with a double mold-board plow. The seed (from selected stock) was cut so that two or three eyes were on each piece. More care was taken to have each piece of potato of good size thau to have a certain number of eyes to each piece. Seed was dropped at distances of fourteen inches in the row and covered with a cultivator to the depth of about four inches. All plats were planted May 9th and harvested October 9th. The first tillage was given May 20th, before the potatoes were up, by harrowing with a spike-tooth harrow. The cultivation was coutinued until August 6th, at which time the vines so covered the space between the rows that tillage could no longer be continued without producing serious injury. The average yield to the acre in 1896 was as follows: Plats receiving thirteen cultivations, 335.9 bushels; plats receiviug seven cultivations, 343.1 bushels; plats receiving three cultivations, 275.2 bushels.

* * *

"In addition to the series of plats a measured acre was selected which had been in timothy and clover the previous year. The soil was a clay loam and during the winter of 1895-6 received a light top-dressing of barn manure. In the spring the coarse material was raked off with a horse-rake, and the land was fitted and planted to Rural New-Yorker No. 2 potatoes. This acre received six cultivations, and gave a yield of 314 bushels. . . . From these results we are led to conclude that in potato-raising the matter of tillage is too often neglected. The results obtained two years in succession without any application of fertilizer show that the average yield of New York state is far below what it need be. The soil on which these experiments were conducted was not more rich iu plant-food than the ordinary soils."

* * *

An analysis from the soil of the plats ou which the potatoes were grown shows the followiug amouuts of potential plant-food to the acre to the depth of eight iuches; namely, phosphoric acid, 2,523 pounds; nitrogen, 2,049 pounds; potash, 8,042 pounds. It will thus be seen that with a soil coutaining little more than half the amount of potential plant-food ordinarily contained in soils a yield was secured from three to four times the average yield of the state. The results of the aualysis also showed the following amounts of potential plant-food locked up in the gravel of the surface foot of one acre of the land; uamely, phosphoric acid, 4,008.8 pounds; potash, 11,329.8 pounds, a portion of which should be made available by manipulation (tillage).

Vegetable-cutter.

* * *

Tillage as Moisture Preserver. "Shall the attempt be made," asks Professor Roberts, "not ouly in potato culture, but with all farm crops, to substitute fertilizers for tillage? With potatoes at tweuty-five cents a bushel and fertilizers at twenty-five dollars a ton, is it good policy to purchase plant-food before an earnest effort has been made to utilize that vast store which nature has provided? If the effort has been made, and the soil fails to respond satisfactorily, then it is not only justifiable, but it may be a wise policy to supplement the stores of the soil with additional readily available plant-food. The low average yield of the state is not so much due to lack of plant-food as to deficiency of moisture. . . . The couservatiou of moisture by frequent tillage caunot be too strongly enforced. The liberal application of fertilizers or the presence of large amounts of readily available plant-food will prove of but little value if the moisture supply is deficient. The old notion that tillage must cease as soon as the potatoes blossom is wrong. It should be continued as late in the season as the growth of the vines will permit. As the tops spread out and begin to cover the space between the rows, they partially shade the soil, and thus lessen the loss of moisture by evaporation. The cultivator should be narrowed, and the middle of the open space kept covered with a loose earth mulch. The implement best adapted to this work is one having many small teeth, so that it will leave the soil comparatively level; such, for instance, as shown in the illustration (Fig. 1), and on sale by every dealer in agricultural implements. The practice of cultivating potatoes once or twice and theu finishing with a shovel-plow, ridging the soil or hilliug the potatoes, is most admirably adapted to hasteu evaporation of the moisture, and to produce a meager crop, a large percentage of which is small and unmarketable."

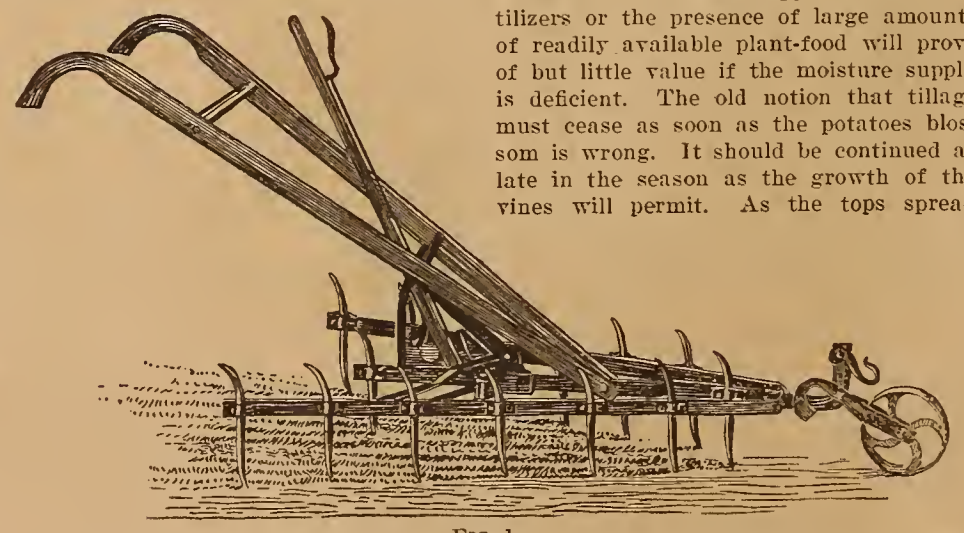

Fig. 1.

* * *

There can be no doubt that farmers might double the average potato crop by cultivating six times instead of twice, as has long been the practice; provided, however, that they keep the foliage healthy aud free from insect injuries. Flea-beetles and potato-bugs are yet given by far too much latitude. The potatoes in Professor Roberts' tests were sprayed four times, once with Bordeaux mixture alone and three times with Bordeaux mixture and Paris green. Every insect bite or puncture means so much less vigor of plant and so much more chance for disease, consequently so much decrease of crop. I am still a believer in the free use of manures; but thorough tillage, and spraying besides, must go with it. Thus we can again raise the old-fashioned three-hundred-bushel crop.

* * *

Feeding Hens for Eggs. The New York experiment station, at Geneva, has made some experiments to determiue whether whole grain or ground feed be the better and more economical egg-producer. I do not see, however, that definite couclusions can be based upon the outcome. In one case, Cochin hens, having a whole-grain ration, laid much better than those having the ground grain; in another, Leghorn hens fed on whole grain only, consumed on the average for two years over twenty per cent more food for the same egg production than did similar hens having half the grain in their ration ground and moistened. The plan I have followed for years with good success is to give to my hens a morning meal of bran moistened with skimmed milk, all they will eat up clean; then let them have pasturage ou free range, and a ration of whole grain (corn in very cold weather, wheat and oats in mild or warm weather) at night. Cut bone is occasionally mixed in with the moistened bran or fed separately.

* * *

Cost of Eggs. Incidentally, the station's poultry manager, Mr. Wm. P. Wheeler, has figured on the cost of producing eggs. It took from five and one fourth to six and one third pounds of water free from food (grain) to produce one pound of eggs. Even at the rather high prices of food used as a basis of calculation by the station there was a fair profit, up to nearly sixty per cent, over the cost of the foods in the most favorable case. At present these feed stuffs can be bought much lower than the prices given by the station, and the profits will be correspondingly higher. It will take about ten pounds of grain or ground feed to produce one dozen eggs, and these ten pounds, at present grain prices, should not cost more thau six or seven cents. The excess over six or seven cents received for our eggs represeuts the profits from the grain, and the reward for the labor, etc. But how far are the poultry writers' aud enthusiasts' usual estimates of the number of eggs laid by a hen in one year from the actual facts! Granted that Mr. Wheeler has not secured the full number of eggs from his flocks that it is possible to secure under perhaps more favorable conditions; but see the numbers representing the yearly output of eggs, an average of 92.94 a hen in one case; of 77.03 in another; of 47.51 in a third; of 63.72 in a fourth. With unlimited range my hens do much better than the average of these figures; but they do not come near the 150 to 200 eggs a year which some poultry enthusiasts talk about. T. Greiner.

VEGETABLE-CUTTER.

In the April 15th number a contributor describes a handy tool for cutting vegetables for poultry. I think the article he suggests would be rather difficult to make at a price that would find a ready sale for it. I have a cutter I made for my own use that answers the purpose very well, and its cost is very small. Take a common hoe, heat and straighten the shank on a line with the blade. Then curve the blade as shown in the accompanying cut. Sharpen the blade, and into the socket put a wood handle of suitable length. C. A. Bales.

Our Farm.

FARM THEORY AND PRACTICE.

CONTROL OF MOISTURE.—There is an abundance of evidence that the most important point to be considered in making land productive is a reasonably practicable control of the amount of moisture in it. We talk about manures and chemicals and plant-food, and they are important considerations, but the fact is not fully appreciated that most soils would be very productive if it were possible to have them supplied with the right amount of water throughout the growing season. We are quick to jump at the conclusion that a soil is deficient in plant-food, while often it is deficient only in ability to get rid of surplus moisture, and especially to retain sufficient moisture for its needs during drought. The crop would get its own needed food from the soil if the water were there to assist it. Look at the yields obtained from thin soils in most seasonable years. Look at the yields obtained by the use of a straw mulch. Neither add any particular fertility, but both save the plants from want of moisture. They do not add to the sum total of soil elements, and yet yields are increased. The needed minerals are usually present, but excess of water or lack of water interfere with plant growth.

* * *

PROFESSOR ROBERTS' VIEW.—In an interesting bulletin upon potato culture, issued by the Cornell station, Professor I. P. Roberts says: "Shall the attempt be made, not only in potato culture, but with all farm crops, to substitute fertilizers for tillage? With potatoes at twenty-five cents a bushel and fertilizers at twenty-five dollars a ton, is it good policy to purchase plant-food before an earnest effort has been made to utilize that vast store which nature has provided? If the effort has been made, and the soil fails to respond satisfactorily, then it is not only justifiable, but it may be a wise policy to supplement the stores of the soil with additional readily available plant-food."

* * *

OUR WET SPRING.—In the great valleys of the Mississippi and Ohio the rainfall has been excessive for months, and the ground is badly compacted. The sponge-like character of the soil is destroyed in great measure, and in careless hands it will be in poor condition to withstand the effects of any drought that may follow this extended period of rainfall. Both packed and cloddy soils lose their store of water rapidly when the air becomes hot and dry, and at this season of the year our dependence for a crop must rest upon thorough tillage. Good underdrainage and an abundance of decaying vegetation in the soil are the best preventives of damage from heavy rains, as they serve to keep the ground in good condition to meet drought; but where these have been neglected sole dependence must be placed upon thorough preparation of the ground for seeding, and then frequent surface tillage. If drought comes—and it is reasonable to expect it before this summer is past—our late-planted crops will give us light yields if we cannot retain the moisture that rises from beneath by keeping the surface well stirred. We should plan for the drought now, regardless of probabilities, and do all that is possible to insure good yields from packed and late-planted fields.

* * *

CULTIVATING POTATOES.—In line with what has been said, and what is held by thorough farmers everywhere, I quote from Professor Roberts' bulletin: "The old notion that tillage must cease as soon as the potatoes blossom is wrong. It should be continued as late in the season as the growth of the vines will permit. As the tops spread out and begin to cover the space between the rows, they partially shade the soil, and thus lessen the loss of moisture by evaporation. The cultivator should be narrowed, and the middle of the open space kept covered with a loose earth mulch. The implement best adapted to this work is one having many small teeth, so that it will leave the soil comparatively level. The practice of cultivating potatoes once or twice and then finishing with a shovel-plow, ridging the soil or hilling the potatoes, is most admirably adapted to hasten evaporation of the moisture, and to produce a meager crop, a large percentage of which is small and unmarketable."

* * *

The reader will observe that the professor's cultivations are for the purpose of conserving moisture; that is the one important thing. With him, as with many practical growers, it is no mere theory. Last year he gave some plats of potatoes three cultivations and some seven cultivations. The yield of the latter was sixty-eight bushels to the acre greater than that of the plats cultivated only three times. Of course, they were surface cultivations. The roots were not pruned: only the surface was stirred. For this purpose I know of nothing better than the weeder when plants are small (though a deep cultivation may also be given at that time), then a two-horse spring-tooth cultivator, and finally a one-horse surface cultivator when the vines are too large for an implement with wheels. With these three implements I can do about all that is possible in the way of retaining moisture in the corn or potato field when drought follows our spring floods.

* * *

EVAPORATION.—In proof of the claim that moisture escapes rapidly from solid ground I wish to refer to an experiment in early plowing made by Professor King, of Wisconsin. Part of a field was plowed late in April, and part was left untouched. Eight days later it was found that the amount of water that had evaporated from the surface four feet of the solid land was so much greater than the amount that had evaporated from the plowed land that the difference was equal to one and three fourths inches of rainfall. Early-plowed land retains moisture, while unstirred, compact land evaporates it rapidly in dry weather. Summer rains firm the ground in cultivated fields, and then evaporation is rapid unless the surface is stirred. Just as the breaking of the ground early in the spring holds the water in the three or four feet of soil beneath the plowing, so does the surface cultivation in corn or potatoes hold the moisture about the plant roots beneath the earth mulch. DAVID.

BEANS ON THE FARM.

The bean is one of the best crops for the general farmer, where intensive soil culture is practised. There is a constant daily increasing demand for all varieties of dry beans, but the supply does not keep pace with the consumers. We import over one million bushels of beans every year, when our farmers are sitting around and growling because the farm does not pay. I have grown sixty bushels of nice, marketable beans an acre, and sold them for two dollars and forty cents a bushel without leaving the house to find a market. Any man who will stop one minute to investigate the cost will agree that growing beans for market is a profitable and easily managed business.

The method of growing beans is easy, and requires but little work. The land is put in good condition and furrowed out, about three and one half feet between the rows. Water is run through the furrows to see that everything is in good condition for future irrigation and to supply enough moisture to germinate the seed and start the plants to growing. I use a corn-planter, and drop two or three beans in a hill, putting the planter not too deep, about twenty inches in the row. When the plants are all up and can be seen along the rows, I use a three-shovel cultivator between the rows, taking care that no soil is thrown against the plants, as that destroys their productiveness. This is followed in the course of ten days by a similar cultivation and weeding between the hills, when the plowing ceases.

The best varieties I have cultivated are the White Navy and Bush Lima. I cannot see where it pays to handle any of the pole-beans, except those that can be planted in the corn. I never irrigate a bean-field until the vines are in blossom, and then only apply the water twice. When the vines are wet with dew or rain I do not even walk through them, because wherever touched by soil when in that condition they will rust, and the blossoms will blight. No cultivation is permitted after the vines begin to blossom. If weeds get too numerous, I go through and pull them when the vines are perfectly dry. These weeds must be carried out of the field, for if thrown upon the vines the yield will be diminished wherever weeds are permitted to remain.

When the pods are ripe I pull the vines and throw them in windrows or small piles, where they are left for two or three days to dry. I use a hay-rack on a wagon for hauling to the stack-yard or threshing-floor. The vines are easily pitched to and from the wagon with a fork, and but few beans are wasted. The best hand method of hulling I ever used consisted of a flail used on the beans in a pen. The pen is made of logs or a wooden frame about six by ten feet. A sheet or wagon-cover is spread beneath, and poles put across about a foot from the ground. This box is filled with the vines, and the flailing process is used vigorously. After the beans are hulled the vines are fed to the cows, and the winnowing is done by throwing the beans in the air during a stiff wind, or by running through a wheat-fanning mill. JOEL SHOMAKER.

INFLUENCE OF THE RANCH.

A few years ago much was said of the effect of the ranch industry on live-stock values. With free and abundant range for grazing large numbers of cattle and sheep it is possible to prepare live stock for the meat markets at a minimum cost in comparison with which the ordinary farmer is not at all a competitor. A few years ago the great numbers of animals in the West seemed to threaten an annihilation of the meat-producing industry within the states east of the Missouri river, except in the case of strictly high-class products. The pure-bred and high-grade stock suitable for furnishing fine meats was so limited in numbers that it has seemed for some time inevitable that the cheap grazing lands of the West should furnish the great bulk of the meat for the use of our own country and a fair share of export products. The ranchmen have wisely endeavored all along to secure good blood in their breeding enterprises, so that they have made, if anything, greater gains in the quality of the products they now have to offer than their somewhat discouraged fellow-meat-producers among the farmers of the Mississippi valley. It is probably true that east of the Mississippi river there is a smaller proportion of high-grade and pure-bred cattle at this time than was to be found ten years ago. This situation is easily accounted for in the fact that the slight margin of profits to the average farmer at the low prices of the last seven years has discouraged effort in the line of improvement. Large numbers of excellent pure-bred males have been castrated during the last seven years from the want of appreciation of their worth by farmers and cattle-breeders generally.

The professional breeders of pure-bred cattle found more profit in converting their output into beef directly than in efforts to sell for breeding purposes on a sluggish market.

The outlook at this time indicates that the ranchman is likely to have a still greater advantage within the next decade over the farmer who must grow grain and do his grazing on high-priced land. Only the limited areas of ranching land within favored latitudes where but little grain will be required will be in favor of the average farmer and feeder in the near future. The ranch under one management, where hundreds of cows are kept, usually employs more effort for improvement than the score or more of small farmers who handle in the aggregate numbers scarcely equal to one average ranch. The average farmer needs to be vigilant to place himself on the highest plane for advancement in cattle-breeding if he would not be crowded out in coming years. Pure-bred sires are being taken west and southwest by the car-load, while in some communities of the Mississippi valley scarcely half a dozen are to be found in a whole township of thickly settled farms. It is a sad comment on the foresight of the average breeder of cattle to observe that he is neglecting to provide the best possible sire in a herd of ten or more cows. The farmers with limited acres and with three or more cows should not fail to co-operate by clubs or partnerships in buying or hiring the service which is so needful for prompt improvement of the young stock of the future. Time passes too swiftly for any farmer to be content with using the common blood or even the three fourths grade blood which is occasionally to be found. One who is not familiar with the principles of breeding may be easily deceived by appearances. Some of the finest-looking cattle and the best feeders have been half blood or three fourths blood grades. The writer has seen thousands of pure-bred fancy cattle and as many more that were high-grades. Once while inspecting some of the best herds of the blue-grass region in Kentucky, a calf from a very plain mountain cow, the get of one of the highest-priced sires ever sold in Kentucky, was seen grazing side by side with the most richly bred mates of the same age. It would have puzzled any one—even an expert—to have distinguished this grade from the royal associates. The amateur in breeding who has not informed himself of proper procedure in cattle-breeding might hope by using such a sire to obtain desirable progeny. It must be remembered, however, that in the veins of such a creature representing one half of the commonest blood, crossed on common and uncertain cows, one would have from nine sixteenths to twelve sixteenths of common blood to counteract the smaller proportion of seven to four parts pure blood. The balance of power is always on the side of deterioration when common or high-grade sires are used. The breeder and feeder on the farm who furnishes first-class beef, mutton or pork must first look to proper blood lines. Every one can improve by a right choice of the sire. Many more can make much further improvement by employing further aid in high-grade and pure-bred females.

When this precaution is first observed, the average farmer has made a fair start in improving his herd or flock. Until the right start is made losses will result, as a rule.

The ranchman in mild climates has the advantage of the farmer in the colder latitudes. His stock may be grown altogether out of doors, which gives more healthful environment than the frequent changes of winter weather on many of the northern farms. The expense of providing warm barns or sheds causes the farmer to endeavor to reduce the total expense in some other way. Too often he neglects in winter to feed sufficient grain to insure proper growth and early maturity in the creatures intended for a profitable market.

With the necessity of feeding grain and provender fully one half of the time the farmer needs to be much more vigilant in his care and management of the stock in winter. The small details of feeding and watering the animals are important. The condition and progress of each animal in growth and its inclination to take its food must be noted each day. Most feeders on the farm must, as a rule, buy a part, perhaps a good share, of their cattle and hogs from fellow-farmers who have bred and brought up the stock to a half-fattened stage. It takes a wise buyer, as a rule, to gather up really good animals in this way, and in the end realize a profit from feeding out to a finish. One who has a liking for live stock, however, may learn, if he tries, many of the important lessons. He may master to a great extent the difficulties if he has pluck to try again, and find success eventually by the lessons of his reverses. To the vigilant farmer who uses his brains and has health and physical strength for his task there is encouragement if he plans for the best possible product in his processes of breeding and feeding, having in view the finishing of high-class meat products.

M. A. R.

Our Farm.

NOTES FROM GARDEN AND FIELD.

Coal Ashes for Plant-bed Soil.—The most valnable new thing that I have come across this season in greenhonse and framework is the use of coal ashes for plant soil. The ashes are snch as we take out of the fnrnace in the cellar and the cook-stove in the kitchen where good hard coal is bnrned. The wood and cobs nsed in kindling the fires, especially toward spring, when the fires are freqnently allowed to go out, add small quantities of wood ashes to the coal ashes, and probably are just the thing needed to snpply the necessary mineral plant-foods. The ashes are sifted, and a small amonnt of dried peat moss (rnbbed through a sieve with one-fourth-inch meshes), with perhaps a little sand, is added to the ashes. The soil thns formed is porons, mellow and yet very retentive of moistnre, and all kinds of seeds seem to start well in it. I am not yet qnite snre in how far I can rely on this soil without adding some nitrogenons matter. Until I see the results of fnrther experiments (now in progress) I shall feel safer to sprinkle a little nitrate of soda (mere "pinches") over the beds or boxes, or water them occasionally with ammonia-water or weak barn-yard liquid. I will say that I have never had finer, healthier, thriftier Prizetaker onion-plants than I grew this year in soil largely composed of snch coal-ash compost. They seem to have the "backbone" necessary to stand any kind of rough treatment in and ont doors. In one of my seed-beds I have rich soil (almost the clear rotted cow manure) in the bottom, say four inches deep, and then one and one half or two inches of this ash-peat mixtnre on top. The seed is all sown into the top soil, which is necessarily free from disease germs and weed-seeds. The conseqnence is that my plants are a wonder of thrift and health: they do not "damp off," and there are no weeds in the bed. Besides this, the ashes hold moistnre so well that when once soaked fnll of water they do not dry out for a long time. In growing onion seedlings I find the point of greatest importance is to snpply them with plenty of drink.

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Potting-soil.—When I want an extra rich and loose potting-soil, either for startiug plants from seed or to set flowering plants or egg-plants, peppers, etc., I now make a mixture of the materials in the bed from which the Prizetaker onions have jnst been taken. The materials are that manure soil in the bottom and the coal ashes, etc., in the top. When thoroughly mixed, I have a most excellent and rich potting-soil, the like of which would not be easy to find. All plant roots take a wonderful hold in this, and the soil itself adheres well to the roots.

* * *

Starting Sweet-corn Plants.—There was a time when I disliked transplanting, and always tried to avoid it, even to the extent of sowing cabbage-seed in hills, where the plants were to remain to head. Now I am more and more going to the other extreme. Settiug plants is not such a bad job, after all, and in a season like the present one, when these frequent rains keep the ground too wet to work nntil along in May, we can just as well have onr crops started under glass and plants ready to go out as soon as the condition of the soil will permit. This year I have even started a lot of early sweet-corn in thnmb-pots, which is nicely started and growiug by the time that other people begin to think of fitting the land for planting the seed. Thumb-pots do not take up much room, and besides may be placed under the benches or in any odd and out-of-the-way corners. If thumb-pots are not at hand, little boxes, berry-baskets and the like may be used. Or the corn may be simply put in moist sand or soil and sprouted, and then planted out. Even this will help the crop along on a good start. In filling the thumb-pots I use the very richest soil, and plant five kernels to the pot.

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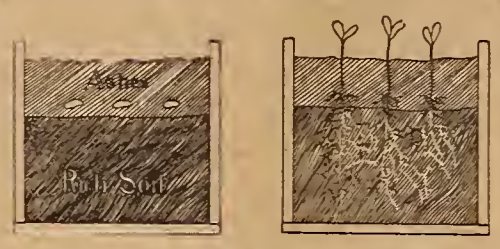
Starting Lima Beans and Other Plants.—A good share of my pole Limas are started in a similar way, only I use the regular size plant-boxes—four-and-one-half-inch cube—as fnrnished by several firms in Michigan, at $2.25 a thousand. Melon and sqnash vines are started in the same way, also. With the latter especially I have to gnard against "damping off," for last year I lost most of the hills thus started by this terrible fnngous disease, which seems to be ever present with ns. For this reason I have used the arrangement shown in accompanying illustration. Rich soil—almost the clear old cow manure—is put into the bottom of the box, and covered with a one-half-inch layer of the coal-ash peat mixtnre. The seeds are placed upon this, and covered with an inch or less of the same material. The damping-off fnngns usnally attacks



How the Plant-boxes are Filled.

the plant within an inch of the snrface. The coal-ash peat mixture is supposed to be free from the fnngons spores, and conseqnently the plant will be reasonably safe.

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Strawberries for All.—Of conrse, the strawberry still stands at the head here as a frnit for profit. Even with the ordinary shiftless culture it brings more money to the grower then they receive from most other crops from the same area. With heavier manuring and more thorough cnltivation strawberries are sure to pay well here. In most cases cnltivation of the patches ceases far too early in the fall. The gronnd should be kept stirred and free from weeds just as long in the fall as the weather and soil conditions will permit. In short, strawberries are one of the crops that I am going to plant more largely than I have for some years. At the prices that good berries have been selling for in this vicinity right along (seven to twelve cents a qnart) only a few families can afford to bny all that they would consnme if they had free access to them in their own gardens. It wonld take no less than fifteen dollars to supply my family with all the strawberries we will and mnst have to eat during the three weeks of the strawberry season and for canning. If you have a piece of land, if only a qnarter of an acre, by all means have at least a bed of strawberries and one of asparagus. Hear what the "Rural World" said recently:

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"From the bottom of our heart we pity the family without strawberries. To be compelled to live year after year without enjoying one of the most delicions fruits God in his goodness has given ns is cruel. To be deprived of it when it is so healthfnl, so delicious, so desirable every way, and when it can be raised so cheaply and so abnndantly, is a shame. If a man is a married man he not only wrongs himself by not having them, but he is cruel to his wife by preventing her from enjoying them. If he is a father and loves his children, he will want them to be happy and healthy by eating all they want of them week after week while they bear. Plant them, plant them, everybody! Let every family rejoice in a patch of strawberries. Let them go to the loaded vines and pluck the aromatic scarlet beauties and eat their fill. Let strawberry shortcakes and strawberries and cream supply the table. Strawberries for everybody is our prayer."

T. Greiner.

FROM A NIAGARA MARKET GARDENER.

A Good Word for Clapp's Favorite Pear.—I had a crop of these on some trees just coming into bearing last season, and as I knew it had a bad fault in getting soft at the core if left to get too ripe on the tree, I accordingly picked the nicest specimens very early, pnt them iuto baskets in a warm room and covered them with a blanket. In this way they ripened in a short time, and were then gone over, carefully packed in eight-pound baskets and covered with pink mosquito-netting. They were beautifully colored, with red cheeks, and were so large and fine that just nineteen to twenty pears filled a basket. They were certainly a very attractive lot of pears with their red cheeks turned up nnder the netting, and I had scarcely nnloaded them at the market when a groceryman asked the price in a hnrried manner, as thongh he was afraid some one else wonld pnt in a bid ahead of him. I had scarcely asked twenty cents a basket when he hastened to say he would take all I had.

There is certainly money in them at this price. They were, besides their beantifnl appearance, very delicious eating. They were nearly a week ahead of Bartletts. I also treated some choice Bartletts in the same way, but these Clapp's Favorite went more readily, and I wish I had planted more of them.

* * *

A Word About Marketing Generally.—The incident of marketing these pears and like cases throughout the season reminds me forcibly of mistakes that many growers make, and of which I have been gnilty myself. I think we can make more money, and do it in a more pleasant and satisfactory way, by dropping many of the commonplace things and growing some special things to perfection and obtain the top price.

If I do not get lettuce and spinach into market extra early by forcing in cold-frames, then I do not want to be fonnd peddling it from house to honse when every one is supplied, but will drop it and grow only a limited snpply for summer and fall trade. Then, if I do not get in some Alaska peas the very first thing, I will wait abont two weeks to sow them; or better sow some Telephones as early as possible. The rush of the extra earlies will be over, and as the Marrowfats, which are still largely grown here, will not have come in yet, the later sowing of Alaska or the earliest sowing of Telephone will nicely fill the niche between them, and almost always at better prices. My melon crop will mostly be started in boxes in a cold-frame, and with a good crop of Emerald Gems thus early, I do not look for any trouble very soon to find ready and remunerative sales for all I can possibly grow. My egg-plants will be pushed along so as to be as strong as possible by June 1st; in fact, nearly in bloom at that time, so as to get the bulk of the crop into market before the nsual drop in prices. My Prizetaker onion-plants are transplanted as early as possible, and as many as possible. I have always succeeded in getting good prices, and even nnder the most adverse conditions have I found them a paying crop. I also want to try to have my main crop of cauliflower to be early enough to catch the trade of the pickling season, or late enough to store away for winter sales. There is always a glut in the market after the pickling season is over and until the crop outside is all marketed, when about the holidays there is again an excellent demand. And this is the plan with all the crops I grow. There is an innumerable host who will not inform themselves, and are always in market with commonplace articles when prices are low, and the articles are peddled from house to house; and I do despise to come into competition with this trade.

My fruit-trees shall be manured, cultivated and pruned better, so I have choicer frnit that always sells readily. I am also planning to subirrigate my strawberries, so that when I encounter another drought I can get my crop into market and obtain a good price, when otherwise they would be a failnre.

* * *

The Bemis Transplanter.—In my article recently on the use of this machine a bad mistake occurred by stating that two thousand plants could be set ont in a day, while it shonld have been twenty thousand. And even forty thousand is within the possible. C. Weckesser.

ORCHARD AND SMALL FRUITS.

CONDUCTED BY SAMUEL B. GREEN.

"Old-man."—D. T., Mandan, N. D. Artemesia abrotanum, commonly called artemisia, or "old-man," is a very hardy Siberian plant that grows to the height of about six feet each year. Like many other artemesias, it generally dies down to the ground in winter. It is valnable only as a low wind-break for very severe prairie locations. In such places it is used to drift the snow and hold it in place over the land, and to prevent the blowing out of the grain during severe storms. In Manitoba the authorities of the Canada experiment stations are taking great pains to introduce it onto the prairie farms of that section. On the prairies a low wind-break is often more valnable than a high one, as it spreads the snow ont for long distances—makes low drifts which melt evenly, while a high wind-break often forms big drifts that do not melt until late in the season, and are in the way of early spring seeding. This plant is propagated by cuttings made np in the antnmn, the same as the white willow. They may be planted either in fall or spring with good results. If planted in the fall, their tops shonld be covered with earth or mnlch during winter. This plant is not pretty, but has fragrant and finely cut foliage.

Blackman Plum.—J. H. B., Salem, N. C. When the Blackman plnm was sent ont the scions were mixed with the non-prodnctive variety, and yon have probably got some trees from the nnproductive lot. It was sent far and wide, and the Blackman plnm is now known as a non-productive variety, and the origiual Blackman plum is now sent out as Charity Clock. Better regraft your tree.

Ashes—Peach-trees Not Fruiting.—F. F., Bishopsville, N. Y., writes: "Are ashes of any valne as a fertilizer, snch as can be obtained at an acid-factory?——Can anything he done to canse peach-trees to frnit? They are very thrifty trees, seven or eight years old, hut have never borne frnit."

Reply:—I do not know what kind of ashes yon refer to. Wood ashes, if unleached, are an excellent source of potash; bnt if they have been leached, they are practically valueless as a fertilizer, bnt might improve the physical qnalities of light, sandy soils. Coal ashes, whether from soft or hard coal, are of no valne as a fertilizer, hnt might be used to improve heavy soils.——I have had tronble in New York and elsewhere to get peach-trees to fruit when they grew on very rich soil, and never fonnd a satisfactory remedy, hnt in snch a case would recommend seeding to timothy, and keeping the orchard in sod to check growth.

Orchards in Sod—Thinning Fruit.—F. D. M., Joliet, Ill. Orchards should never remain in sod for a long time, but should be cultivated frequently. We must look upon the trees as the crop, and not be greedy abont getting any crop from the orchard except the fruit. It is safe to say that it is never a good plan to keep an orchard in sod over two years. On the Pacific coast orchards the trees are the only crop grown on the land, which is kept continually cultivated. In the West onr orchards suffer severely from dronght, and they need very carefnl handling to make the most of the subsoil snpplies of moisture.——It is my opinion that it is best to thin out the frnit all over the trees, bnt I cannot recall any experiment in this line that was conclusive either way. As for the possibilities of secnring frnit every year, by thinning and preventing the overbearing one year and not bearing the next, as so generally happens, I think this would be much modified by the varieties. For instance, the Dnchess of Oldenburgh will often frnit a little very regnlarly for a number of years, after which it may form a large nnmber of frnit-bnds and overbear one year, and then it fails to bear frnit the next year, and so continues alternately bearing and not bearing frnit. Many varieties will bear regularly if never allowed to overbear, but much care is required to prevent overbearing some seasons.

Our Farm.

KEEPING ABREAST OF THE TIMES.

ONE drawback to the highest success on the farm at the present time is failing to adjust plans and methods to present requirements of the markets, economical production and the law of snpply and demand. Diversified farming is the more profitable, I think, as a rule, than growing special crops. There are some qualifications to he admitted, however, along this line. As most farms are carried on, some one or two lines of prodnction take precedence over all others, and in that respect these crops are specialties.

Every good grass-farm, unless circumstances justify selling the hay, will have one or more lines of production in which stock hnsbandry forms the basis of profit from the farm. At the present time dairying takes a foremost place in the calculations of the farmer whose lands are adapted to grazing and hay production. This is so here in Maine, and as a profitable adjunct to the keeping of cows many are giving attention to other lines of stock-raising which of late years have received but little attention. One of these is the growing of good steers to be turned for beef at from two to fonr years of age. When rightly handled there is some profit in snch steers.

When the farmer has wood and lumber to get to market and mill, with other work both snmmer and winter that can be done with ox-labor, the steers can take the place of horses, and with proper usage be kept appreciating in growth. Steers properly fed from calfhood will do a fair amount of work at three years of age and keep in good condition to sell for beef at any time. But here is where we sometimes miss the goal hy inadequate feeding of young stock. We must not starve the young animals on rough fodder the first two years in order to save the better fodder to feed other classes of stock. The fact should be kept in mind that a two-year-old steer that will dress seven hundred pounds is worth as mnch as a fonr-year-old at that weight, and is prodnced at a saving of two years' maintenance. This is wastefnl procrastination. If we are raising a calf to be fit for beef or to make an ox or cow, what reasonable excuse is there for letting a day go by without it making some growth?

Procrastination comes in as a wasteful factor in raising heifer calves indiscriminately from cows that have never proven extra fitness for the butter-dairy. Often when a farmer has raised a heifer calf, and she comes into the dairy, she is retained there against reason and good judgment. Her owner hopes she will make a good cow, and he lets his imagination and his desires cover up unpleasant facts that wonld be very evident if some one else asked him to bny the animal, and he keeps heping she will do better, and so a poor cow is snpported at a loss.

As a matter of experience I may state that cows pay as well as any class of stock in New England at the present time; dairying conducted along lines of rigid economy that takes account of every dollar expended, that it goes where it will do the most good. Farm labor costs higher than in any other department of productive indnstry. It is a necessity in farm economics to grow the largest crops at the least cost; that the cows be of high productive capacity; that the feed factor be adjusted along lines of practical exactness which will give the maximum flow of milk at minimum cost of feed; and all focussed so that a little more than a new dollar may be realized for an old one expended.

The dairy-cow and the stock-cow on the farm are equal in some respects. It will not pay to keep either much over ten years of age. Inferior cows should be displaced as soon as their standing is ascertained. There is no excuse for having an old poor cow in the herd. Nearly every year there are times when there is a special call for cows. At such times it is best to let one or two of the poorest cows of the herd slide, no matter what the age. If you have made up your mind that there is no prospect of their improving, let them go. It is better to put the money received for two such cows, and more with it if need be, into one good producer, and feed her well. It never has been, and never will be, profitable to see how cheaply we can keep our cows. Scarcity of food makes poor stock with less profit. All we can get as pay for food and labor in the care of the cow is the milk she can make from the excess she gets over nature's demands. It requires more than one half a cow can eat to maintain the wastes of the body and to snpply heat to keep the machine in running order. Therefore, the more liberal the feed up to the full capacity of the cow, the more income we get from her. L. F. ABBOTT.

BUTTER FRAUDS.

How true the saying of P. T. Barnum that our American people love to be hnmbugged.

A few years ago I spent some time in ferreting out the black pepsin bntter swindle, which I gave you for publication. And now here comes its twin brother, the electric churn, which originates its own electricity, by the aid of which yon can churn in one minute without regard to the temperature or condition of the cream.

But the greatest saving claimed is in the quantity and quality of the butter. The descriptive circular says "one hundred pounds of milk contains fonrteen pounds of solid matter, consisting of four ponnds of oleo, four pounds of casing, four ponnds of sngar and two ponnds of varied salt production, and by the old process you only save the oleo, or bntter-oil; but the electric churn takes up a portion of the sngar and casing, and combines it with the oleo, thereby increasing the quality and qnantity of the prodnct."

But before we decide on the qnality let us understand what this "casing" is. According to Webster, casing is a covering, or a case. That would seem a hard thing to work into bntter, bnt we cannot tell what this electric chnrn may do. Possibly in trying to be scientific he uses the word in lieu of casein (milk-curd). If so, it must be a great improvement on the quality of the bntter. I knew a man in my boyhood days who discovered the art of making this same kind of butter, but he produced the electricity by dropping a little rennet into the cream just as it began to break for butter, and it fixed it in a minute, so that it turned out a large quantity of what he called extra butter. He sold a quantity of it to a dealer, who had him arrested for fraud, and when he got through and settled up he fonnd it the highest-priced butter he ever sold.

If any one is not satisfied with the above expose, let him invest six dollars and try his hand. MILO BALDWIN.

CONSERVATION OF MOISTURE.

The far Sonthwest has the richest of soil, and in respect for its beautiful appearance it has been designated "the land of the Fair God." Bnt it lacks moisture. The rainfall, even if fairly distributed, would be scarcely enough; but, like all other sections, there is sometimes an excess, and the margin is so small that this leaves a shortage often at a critical time. Then there is much of the time quite an excess of wind, causing very rapid evaporation.

The study and practice of the farmer is to save all moisture possible. The theories as to subsoiling and subsnrface packing are quite taking, and experiments seem hopefnl.

In the meantime the thoughtful farmer is working along the best lines that seem adapted to his particular farm.

If the subsoil is good, as on much of onr land it is of the best for ten feet down, then deep plowing will loosen it practically the same as snbsoiling. I have plowed some of mine jnst as deep as our best riding-plows can go.

A surface mnlch of dry, fine soil is universally admitted to be the best preventive of the escape of moistnre. The best harrows of to-day are just the implements for this work. With the small, closely set teeth, using three sections in width, with three or four horses, fast work is done.

Plow early for any crop, and harrow at least once a week. It is really but a short task with the wide harrows. I planted a young orchard last year, and thongh it was the dryest season of my thirty-five years of farm experience I did not lose a tree. I harrowed it fourteen times. It was always moist two inches nnder the surface. Not a weed had any chance to grow. After first deep breaking np I nsed nothing but surface work. J. M. RICE.

Oklahoma.

EXTRACTS FROM CORRESPONDENCE.

FROM OKLAHOMA.—This is a beautiful farming couutry. Wheat, oats and corn are looking fine uow. Here are a few yields iu the past: Oats as high as 95 bushels an acre; wheat, 40 bnshels; cotton, one hale; and corn, rye, barley and all the other crops in proportion. Kingfisher county is a fine region for farmers or fruit-growers. This is a good cattle country, but it is a good grain and fruit country as well. Land here is worth from $10 to $60 an acre. E. A. P.

Kingfisher, Oklahoma.

FROM SOUTH DAKOTA.—This is a good country, but last winter was the hardest South Dakota has had in sixteen years. Deep snow covered the ground for weeks, and a large number of cattle, sheep and horses died for want of proper food aud shelter. There are quite a number of homesteads still open for settlement here in Buffalo county. With a healthful climate, good water easily obtained, good soil and a great abundance of grass, I think it is easier to make a good living here than in the East. E. H.

Richards, S. D.

FROM IOWA.—Here in eastern Iowa we have a rich, deep soil, and well watered for a prairie conntry. Diversified farming is followed generally, though there are some specialists in all callings. The creameries are well patronized; stock-raising is closely followed; corn and grass are the principal crops; wheat, rye and barley are raised in equal quantities, and oats is the leading crop of small grain. Our laud is getting too high to make money on farming, it being from $50 to $80 an acre. L. C. G.

Oasis, Iowa.

FROM MISSOURI.—Lincoln county is a high rolling prairie, except along the borders of its creeks and rivers, which is timbered and somewhat rocky. There are abundant sigus of minerals, coal and paint-clays. The latter are quite plentiful at the surface, as brilliant in color and as fine in quality as the markets afford, and in a variety of shades from yellow to a dark hrown. Corn, wheat, oats, clover and grasses do well, but the country appears to be better adapted to fruit and poultry raising. Unimproved land sells for from $5 to $10, well-improved farms for from $15 to $30 an acre. A. T.

Trixton, Mo.

FROM CANADA.—Arthur, East and West Luther townships are situated at the northeast corner of Wellington county, Ontario. Years ago it was known as the great Luther swaump, as all this section was one vast swamp covered with cedar, hemlock, tamarack and spruce. Through the industry of the old pioneers that large forest has turned out to be one of the most fertile and rich tracts for all kinds of grain, roots, potatoes and grasses. The soil is a flat bed of muck three to fonr feet deep. Arthur and Grand Valley are the two chief market towns. Like the country around them they are iu a prosperous condition. The swamp and woods of this locality abound in game of all kinds. The Grand river, teeming with fish, is the main outlet of the country. The largest part of the timber in this vicinity was bought by the lumhermeu of Elora, Fergus and Grand Valley, and rafted down the Grand river to their sawmills. There are good homes aud cheap lauds for industrious people, and good railway accomuodations. J. S.

Elora, Canada.

FROM NEBRASKA.—Cook, Neb., is known as the town of flowing wells. It has hetween 300 and 400 inhabitants, and is located on a line of the Missouri Pacific railroad in the most fertile region in Johnson county. The first flowing well in this locality was found in Cook. Since then they have hecome numerous in the town and within a radius of eight or ten miles of the town. Thomas M. Wright, a prosperous farmer, living three miles from the town, has several of these wells on his valuahle farm. One of these, situated on a hill, he utilizes for irrigating his fertile fields, which he devotes to the cultivation of celery on a large scale. These wells are on high lands as well as low lands. The water is in great abundance and of excelleut quality, beiug clear, soft, cold and sparkling, and is found at depths varying from twenty-five feet to one hundred feet. Iu some iustances it is forced to a height of twelve or fifteen feet above the surface of the earth. The south fork of the Little Nemaha, a beautiful stream, which affords ample water supply for flouring-mills and small factories, flows a few rods south of town. One of the greatest natural curiosities in this part of the country is what has been known as the "Bottomless Spring." It is a round hole in the earth, twenty-five or thirty feet across, filled with beautiful clear water, from which a constant streaun of water flows nearly as large as a man's body.

Crab Orchard, Neb. G. W. D.

Our Farm.

THE LIFE OF A HONEY-BEE.

In former years some of the most incorrect views were held regarding the natural history of the honey-bee. Among other things it was believed a worker-bee would live to the age of two or three years. How erroneous! And very many people of to-day do not know how long a bee does live. The beemaster has to explain this very matter oftener than any other one thing. The Italian bee has been the medium by which this and many other mysteries have been solved.

The queen is the only perfect female bee in each colony, and she lays all the eggs from which develop the three different beings found in a colony of normal conditions: that is, drones, or males; queen, or female, and worker-bees, which are females not fully developed. The worker-bees are the most numerous, and are the subject for our consideration. The bee egg requires three days of incubation, after which time it hatches into a tiny little worm in the same manner as a chicken hatches from the egg of a domestic fowl. The worm, correctly speaking "larva," is fed by the nurse-bees for five days. It then has its size. Feeding ceases, and it is capped over. During the next period of twelve days it gradually transforms into a perfect bee, and finally emerges as such from the cell on the twenty-first day.

Should we remove a queen from any colony of black bees and replace her with an Italian, it is plain that no more black bees can possibly hatch after the lapse of twenty-one days, and that now all the further increase will show Italian blood. If we now keep watch of this colony we will see the black bees gradually disappearing, until finally after about forty-two days from the date the last black bee hatched they will have disappeared, if the experiment was made during the working season (June and July in my locality), and Italian bees will have taken their places. The experiment shows that the life of a worker-bee during the height of the season is only six weeks or thereabout. Of course, during the winter bees live longer—possibly they may live nine months at most.

But in making our experiment we might have learned more about the mysteries of the life of the honey-bee. If we had examined our colony on the eighteenth day after all the black bees had hatched, on opening the hive when removing the honey-board, or the quilt, covering the honey-boxes, we would have seen only Italian bees in and about them, although from the working at the entrance we might have been led to believe that the colony before us was a pure black one, showing that it is the bees above seventeen or eighteen days of age that do the field-work, and those below that age doing the housework.

Even up to this day some beekeepers do not seem to realize this matter as they should. Some are still of the opinion that they can assist their bees by providing their hives with a second entrance near the top of the hive, expecting the field-workers when coming home with their loads of honey to take the shorter cut through the upper entrance, and thus have a shorter route to the honey-boxes, enabling them to make more trips and gather more honey.

Another scheme has lately been brought out, also based upon this false theory: "By some contrivance the field-workers are compelled, in order to travel up to the honey-boxes, to do so not by way of brood-chamber, but up the sides of the hive in the bee-spaces between side and first comb. The inventor calculated that as the bees by this road will reach the outside section-boxes first they will also condescend to fill and finish them first." The outside sections are quite often not filled as well as those nearer the center of the supers. But no field-bees enter the sections. The field-bees deposit no honey in the combs, but hand it over to the young bees, or house-bees, which latter use it where it seems best, the former again flitting away as quickly as possible to obtain another load, etc. It is the young bees not yet eighteen days old that, under normal conditions, build the comb and fill the same with honey. They also feed the larvae, the drones, the queen and do all the little jobs that need to be done in their wonderful household.

F. Greiner.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

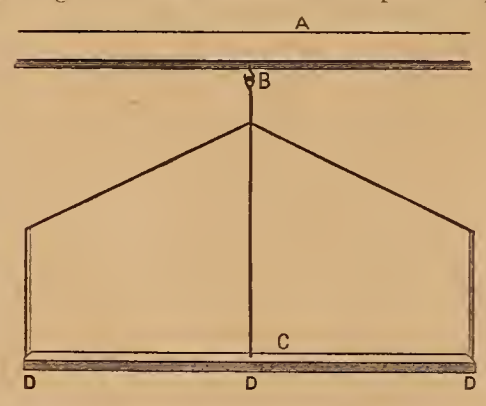
SUMMER EGGS ARE PROFITABLE.

The summer is the best time with the hens, but the majority of farmers are disposed to disregard the facts which are presented, and fail to take advantage of the season. It is true that as the fall approaches the hens begin to molt and cease to lay, but in so doing they are preparing for their winter work—getting ready, as we may say—and there is consequently no loss of time in that direction. The hens that do not lay and do not begin to molt are the most unprofitable, the cause being due to their being overfat or afflicted with lice. There is no remedy but to remove the cause, whatever it may be, and all the condition-powders or egg-food ever introduced will not be of avail. If the hens are too fat, the food must be shut off. If the lice are the cause of the vermin, they must be cleared out. It is natural for the hens to lay, and when they do not produce eggs in the summer or fall the cause should be investigated.

When eggs cease to come in, the farmer sells the molting hens, which is just where he makes his greatest mistake. The ones to dispose of are those that are fat and in high condition. If the poultry on the farm have the attention given them that is received by the cows the farmer would soon learn to know more about his flocks and understand how to correct his mistakes. He quickly discovers the reason when a cow fails to give her quota of milk, because he observes her daily, knows what she needs and the condition under which she is kept. It is not so much the knowledge of cattle as observation of daily occurrences that enables him to keep his cows up to the requirement. The same applies to the fowls—observe them. Learn to know what is necessary to success with poultry, and success will follow as a natural result.

LICE-PROOF SWINGING ROOST.

The design is of a roost that can be made of any size, and which is in use. A is the roof of the poultry-house, and B shows where the roost is suspended from a hook, either with wire or a rod. The roost (C) is of 2x3-inch scantling, the sides being of 1x2-inch material. If preferred,



weights may be suspended at D D D to steady the contrivance. If it does not swing too much, the fowls can easily get off and on the roost. All that is necessary is to keep the rod at the top (B) well oiled, and lice cannot get to the fowls. The roost can be taken down during the day, if desired, or may be swung in any direction to admit the attendant to the floor. The cost is but a nominal sum.

TURN THE FOWLS OUT.

After eggs have been secured for hatching and incubation ceases, the hens can be allowed to run together, as they will entail more work if kept in separate inclosures. It would also be an advantage to dispose of the males, as the hens will lay as many eggs without their presence as with them. Just as soon as the hatching of chicks ceases, then the usefulness of the male ends. It is cheaper and more convenient to allow the hens full liberty than to incur the expense of fences to keep the breeds apart.

KOLA CURES ASTHMA AND HAY-FEVER.

ROOT CROPS FOR POULTRY.

It would not be wise to feed only roots to poultry. Yet if the farmer will use only one fourth the grain he gives daily and substitute cooked roots, he will reduce the expenses materially and get more eggs. The cheapest food is that which will make the hens lay, and the way to make the hens lay is to keep them in good health. It is impossible to have a flock in good laying condition when only grain is given. Such foods as carrots, turnips and potatoes are not rich in egg-producing elements, but they perform a service which renders all of the food more valuable than hay. Let the farmer give his cows nothing but corn—no hay, roots or bulky food of any kind—and his supply of milk would soon be reduced. From a dietary standpoint the use of cooked carrots, turnips and potatoes is recommended, and they will enable the farmer to feed more hens and get more eggs with little or no additional cost.

BEEF AND MILK FOODS.

Beef and milk foods for poultry are valued for their protein (nitrogenous elements) and as there are many who desire to use milk in place of beef, a comparison of their value may be of service. There are about twenty pounds of protein in the neck meat of beef (edible portion), and about three and one half pounds of protein in one hundred pounds of skim-milk. About six pounds of milk may be said, therefore, to equal one pound of beef used for the protein contained. The beef is more concentrated, and also more readily consumed, as the fowls may not be capable of drinking enough milk to supply them. A ration of both milk and beef should be preferred.

DOUBLE-YOLK EGGS.

When double-yolk eggs are found among those collected, it is considered a cause for congratulation, the hens being supposed to have performed extra work. But the fact is that double-yolk eggs indicate that the hens are too fat. The eggs are really abnormal, and it will be but a short time before the hens will cease laying; hence, while a few extra large eggs will be obtained for a short time, the result will be none at all later on. As soon as the hens begin to lay double-yolk eggs shut off the grain and reduce the food so as to bring them into more favorable condition for laying.

THE HOME MARKET THE BEST.

What would a farm be that did not contain a flock of hens? The eggs are considered adjuncts to the farm, and they enter into many of the household dishes. In estimating the profits from poultry the eggs and poultry consumed by the family should be given the same value as though such supplies were purchased. The "family" markets in the United States excel all others, and no farmer should sell his eggs and live on something less desirable, but enjoy the same luxuries as those who are willing to have the best in the cities. Supply the home market first.

DESTROYING LICE.

If you find all other means fail to get rid of lice, clean the poultry-house and turn the fowls outside to roost. Lice will not remain where the hens do not congregate, and in a short time it may be again occupied. The better plan, however, is to attempt to kill all the lice. If the poultry-house is tightly closed (no cracks), and four or five pounds of sulphur burned, it will do the work, and be sure to use plenty of sulphur, as it is cheap, and the more dense the fumes of sulphur the better. Keep the house closed for two hours after burning the sulphur.

DOES IT PAY TO PRESERVE EGGS?

It matters not how eggs may be preserved for future use, they cannot be made to retain that appearance which is so noticeable when eggs are fresh. It is doubtful if it pays to preserve eggs unless at points where prices are extremely low. Those who buy eggs in order to store them away for winter must lock up capital equal to the value of the eggs until they are sold; and there is also a proportion of losses from breakage, bad eggs, etc., to say nothing of the cost of collecting them from time to time, as well as the labor of preserving them. The prices of such eggs are often less than at the time of the storage, as "limed" eggs have a poor reputation, and will not bring high prices, often being not more than half the price of fresh eggs. There is no obstacle in the way of him who sells only fresh eggs, so far as limed eggs are concerned, as fresh eggs are products distinctly separated from all other kinds.

CHOLERA AND INDIGESTION.

As the warm weather comes on there will be cases of chicken-cholera reported. It is safe to say that cholera among fowls is a very rare disease. Persons diagnose cases as cholera when such is not true. When cholera appears it usually takes off the flock in a few days. Should the hens be affected with bowel disease and the difficulty continue for quite awhile, it may be safely concluded that indigestion from overeating, and not cholera, is at fault, the remedy being to shut off all food and compel the hens to work and scratch.

BLOOD AS AN EGG-PRODUCER.

Blood from the slaughter-houses is one of the best egg-producing foods that can be used. Dried blood has been given to poultry with advantage, but the fresh blood is much better. The way to prepare it is to mix one pound of linseed-meal with four pounds of blood, and then add enough corn-meal to thicken to a crumbly dough. Cook in a bag by boiling, and when cold give a pound of the mixture to a dozen hens three times a week. It should not be used too freely, but rather as a change of food from the ordinary ration.

INQUIRIES ANSWERED.

Ducks.—C. W. G., Cannon, Conn., writes: "1. Which are the largest breeds of ducks? 2. How many ducks with one drake?"

Reply:—1. Muscovy, Rouen, Aylesbury and Pekin, in the order named. 2. Five is the usual number.

Scales on Feet.—N. A. H., Lamoni, Iowa, writes: "What is the cause of scales coming on the feet of fowls?"

Reply:—It is known as "scaly-leg," and covers feet and shanks. Anoint twice a week with melted lard, and it will disappear.

Light-color Yolks.—W.B., Sylvania, Ohio, writes: "Why are the yolks of eggs of light color?"

Reply:—It is due to lack of coloring matter in the food. When grass becomes plentiful the color will deepen. Yellow corn also makes the yolks darker.

Feather-eating.—J. E. H., Huntersville, Pa., writes: "What causes hens to pick and eat feathers?"

Reply:—It is an acquired vice, and there is no remedy but to separate the hens or smear them with tar on the heads and breasts. Such hens should be destroyed.

Wyandottes.—E. M. H., Fern Bank, Ohio, writes: "What combination of breeds is supposed to be the foundation of the Wyandotte breed?"

Reply:—They were produced from Silver-spangled Hamburgs and Dark Brahmas, the whites being "sports" from the silver-laced.

Goslings.—Reader writes: "1. What kind of food is best for goslings when raised with a hen? 2. Do they thrive as well with only water enough to drink?"

Reply:—1. Cooked potatoes thickened with bran, chopped clover or grass, and an occasional mess of ground meat in their food is excellent. 2. They require no ponds, only drinking-water.

Taking Cold—Chicks Pecking Another—Linseed-meal.—Mrs. J. K. C., Brookfield, Wash., writes: "My chicks seem to take cold as though they have asthma.——Is there any remedy to prevent them from pecking one another's comb for the blood?——How often should linseed-meal be given, and the quantity?"

Reply:—It is probably due to overhead drafts at night.——Smear the combs with pine-tar.——Three times a week, allowing each fowl a heaping teaspoonful mixed with corn-meal.

Our Fireside.

FIVE-O'CLOCK TEA.

What shall we find when the play is done
  At the sign of the Pekoe Tree?
A cup and a welcome for every one,
  And a corner for you and me.
A glimpse of esthetic daintiness,
An air of bohemian ease, no less,
  And a corner for you and me;
Where one may sip and dream if he will,
And fancy the world is standing still,
  At the sign of the Pekoe Tree!

Fair Phyllis as well, polite, alert,
  We shall find at the Pekoe Tree;
Not overdemure, nor yet too pert,
  As she waits upon you and me.
Prettily gowned and daintily neat,
With deft white hands and a smile discreet,
  As she waits upon you and me.
So please, no excuse. Fagged out or "fit,"
Or merry, or dull, what matters it?
  We can meet at the Pekoe Tree!

—Chambers' Journal.

LOVE'S ANSWER.

Why do I love her? Just because—
  Well, not because her eyes
Are blue as the tender skies
That dreamily bend above her,
  And not that her tresses glow
  With the splendor of gold—oh, no!
Mere trifles these to a lover.
  And why do I love her, then?
  Strange you entreat me again
For answer plain to discover.
  But then, if you will not guess,
  I'll own up and confess
That I love her because—I love her.

—J. Howard Todd.

PETE PARMELEE'S JUG.

BY HATTIE WHITNEY.

BE mighty keerful an' not scatter noue o' that truck, Viney; yer paw's skeered to put his head in that clauset now, hit's so sneezy with all that lot o' sage-dust an' dried arbs an' stuff."

"Hit'll he sneezier than ever now."

Viney Judson held her blue calico apron up to her short nose with one hand, as with the other she carefully emptied the contents of a paper parcel into a saucer, which she set on a shelf in the kitchen closet.

Aunt S'anna Judson cautiously inspected it with sharp eyes and an alert nose. Aunt S'anna was uncommonly sharp and alert by nature, and not to be ruu over, either literally or figuratively, by black ants, red ants or other housekeeping pests, hence the insect-powder—and this story. She wore a little nub of husk-colored hair twisted tight, a short, full brown calico skirt with a big tuck near the top, and a loose, ruffled sack of a bright-flowered pattern. Furthermore, Aunt S'anna was tall and slim and possessed of a warm heart, and a tongue capable on occasions of driving relatives, friends and other victims of its acerbity to the borders of rampant distraction.

Having disposed, for the present, of the powder, Viney shut the door of the closet, never dreaming of the fate that lurked therein, took down from a peg a very enormous and deeply purple calico sunbonuet, and buried her rouud face in its shadowy depths; for this was soap-makiug day, and the bright spring sunshine had a way of kissing innumerable freckles into Viney's clear pink skin; and Viney despised freckles.

A fire was burning on the ground in the back yard not far from the kitchen door, over which, propped up on piles of rock, stood the big iron soap-pot full of lye. The open territory hack of the farm-house was high and level, and outspread in every direetiou were the lower fields, all plowed up in chocolate-hrown billows. From the double log barn, out of whose loft spilled the hay in long fringes, came energetic cackliugs, telling of fresh-laid pluk and wbite eggs in spicy, sweet-suelling nests. Pullets sang, roosters crowed, ducks quacked and the shrill "buck wheat, buck wheat" of guineas rose high over all.

Upon a smooth-cut stump on the sunny side of the ash-hopper Washington Judson sat, a haud on either homespun knee, his shapeless yellow-brown wool hat slipping off the back of his head. He wore a discontented, puckered-up expression of mouth aud features generally, as if he had bitten into a green persimmon or an exceedingly sour gooseberry. One eye, squinted up almost shut, was taking a sight at the adjoining farm which lay just beyond his own acres.

"Best farmin' lan' in the country," he observed, appareutly to a young speckled rooster, who tipped his head responsively on one side, and seemed to ponder the question profoundly.

"An' Pete'll git it whenever'n he marries. But Viuey cain't see a eench 'fore 'er nose."

"Huh?" queried Viney, appearing at his elbow immersed head and ears in the big purple sunbonnet, with an old tin coffee-boiler full of hacon-rinds and other "soap-grease" in her hand. "Whut's 'at, paw?"

Her father nugratefully kicked a chip at his late confidant, the young rooster, who walked away with offended dignity.

"Waru't Parmelee over yere las' night?" asked Viney's "paw," vainly trying to squint into the sunbounet with his screwed-up eye.

"He was so," responded Viney, setting her coffee-boiler upon the ground and casting an egg iuto the lye to test its strength.

"An' Jeff Haskell come atterwards?"

A faint nod from the sunbonnet.

"An' I'll bet a shoat ye didu't keer a rotten speck how soon Pete went when Jeff come."

"Good reason why," came enigmatically from the tunnel.

"Well, sir, I'll swear!"

The old gentlemau clasped his broad hands around his knee and tilted so far back on the stump his hat fell over into the wet ashes iu the hopper.

"Now, I'm goiu' to tell ye somethin', Viuey," he went on, heedless of the accident. "Pete Parmelee'd love to hev ye, 'n' ye know it, Viney."

Viney sileutly fished the egg out of the lye with a piece of claphoard, and emptied the contents of the coffee-boiler therein.

"'Nother thiug, wheu I say ye orto hev him, ye ort—orto pick him right up cheerful, not go makin' faces like as if he was quinine or soue kine o' bad medicine."

"Now, paw," Viney shoved her honnet back in her earnestness, but recollecting the freckles pulled it hastily on again, "I ain't got any use fer Pete Parmelee, an' I don't want him, an' bein' I dou't, you oughtn't want me to hev him au' go off an' live with hiu an' his paw an' that quare kine o' sister of his'u that don't never let nobody hev any peace of their life, an'—an'—aiu't I the only dorter you've got?" finished Viney, pathetically.

"S'posin' ye air; ain't I the only paw you've got?" returned the old gentleman, briskly. "'N' I'm goin' to tell ye somethin', Viuey; whuther ye hev Pete er don't hev him, that there Jeff shain't come ahout the place; I won't hev none o' my folks a-gittin' into the Haskell gang; hit's a cranketty, bigotty gang, an' hit was Jeff's sister, Ann Crocker, 't went an' hlahhed to Mis' Deacon Duup an' yer Aunt S'anna time I tuck a few draps o' cherry bounce over at Grimes' raisin', an' I like to never heered the last of it; wore me plum to skin an' bones a-clackin' at me, tell I was pretty nigh a almanac."

"Which? You shorely don't mean a almanac, paw," commented Viney, pausing a minute to rest on her oar, which consisted of an old hroom-handle, by means of which she was stirring the bubbling contents of the caldron.

"Well, a al-maniac, then," returned her father; "ain't but mighty little diff'rence, I reckon, fur as the name goes. I wouldn't 'a' hed sich a humblybees' nes' roun' my years, not fer no mouey. An' Jeff, he's a-goin' the same way—gittin' so bigotty he wouldn't tetch a flat-lookin' bottle with a forty-foot pole."

"But, paw," protested Viney, "you know Jeff's brother Elb drunk hisself to death, an' Jeff's afeard of it."

"Well, I ain't a-wantin' him to drink none, ner I ain't a drinkin' man myse'f—la, la! yer Aunt S'anna'd git red-headed she'd he so mad ef she seen the cork out'n a ginger-pop bottle roun' yere; an' Mis' Deacon Dump'd fly into flinders. But them Haskells is sech contrived teetopelers an' tattletales a feller dassent look crosswise at a stone jug ef the' weren't nothin' but vinegar in it, ef they knowed it, 'thout they'd hev yer Aunt S'anna an' Mis' Deacon Dump an' all the Good Temperance lodge an' sewin' s'ciety atter ye a-clackin' like a bunch o' ole hens, tell ye wished ye was a mud-turkle way down sixty feet in the mud, so's ye couldn't hyur their tongues allus a-tellin' ye how weekid it was to git drunk an' sleep in a gutter, when ye hedn't drunk nothin' an' didu't 'low to sleep in no gutter. I'm a-goin' to tell ye somethin', Viney; I couldn't nohow stan' them Haskells, an' ef I ketch Jeff on these yere premises I 'low to tell him so, plump an' plain—no Pete, no Jeff. Now you study over that qneshion, an' ef you won't hev Pete yere, mine you don't let me ketch Jeff, uuther. An' now, dorter, drap yer soap 'n' run in 'n' hustle me out two or three more wheat-sacks, an' fetch 'm down to the lane bars, 'cause I gotta go to mill quick es I kin gear up."

Viney dutifully hustled, but the purple bonnet shaded a more melancholy visage than was its wont.

As Washingtou Judson drove his big farm-wagon lumberingly down the lane between the great ehocolate-hrown fields, a gawky young man, with a fuzzy tuft of whiskers on his chin, aud pop eyes, was riding up the laue on a dun mule, and the two men pulled up alongside of one another.

"H'llo, Uncle Wash!"

"Hi, Pete! Goin' to the house?"

"Na-o," grinned Pete; "'lowed I'd meet ye som'ers. Hev you saw anything of a jug sorto hidin' away yonder at yer diggin's?"

"A which?" demanded Washington, apprehensively.

"Jug—a jug," roared Pete, impatiently, "a braown jug with a libel on it 'at sayed 'Ole Oscar Pepper;' Jake Hunkins pasted it on, so's 'twouldn't be mistook fer viuegar an' wasted. I's a-fetchin' it out yis'day, an' I seen Miss S'anna a-streakin' over to Mis' Dump's, an' jes' run up to convarse with Viney a minnte; reckon ye seen me es you was a-comin' up from the fodderin' when I's a-leavin'; I'd sot the jug down back of a saddle a-layin' in the pashage while I's inside talkin' to Viney, an' I was jest goin' to suap it up an' cut sticks when yere come Miss S'anna polin' back an' bouncin' in the yard 'fore I could bat my eyes twicet, an' I up 'n' jobbed the jug hack behine the sorghum-kag, an' hadn't no chance to git 'er out uo more; an' that's whur 'tis now."

"Well, I wisht you'd hush!"

Uncle Washington's breath came short, and his hair almost bristled straight up.

"Hit's ouly a queshiou of time tell S'anna smells it out, ef it stays there."

"Co'se," said Pete; "that's what I know, an' I want you to go an' sneak it out sly 'fore she kin."

"Hush!" protested Washington, aghast. "You'll hev to git it yerself, er let me tell 'er how it come there. I'd jest as leave be shot into fliuders er tromp on a sqnorp'on es hev S'anna ketch me with a jug!"

"Needn't let 'er ketch you," argued Pete. "Sneak it out sly, I tell ye—she'll fine it ef you don't, an' you cain't make 'er bleeve it aiu't yonrn. I'll swear I ain't a-goin' to git it, ner to shoulder it, neither. Miss S'anna don't favor me but mighty little now, an' ef she once seen that an' knowed hit was mine, she'd rare like a wild Iujun an' skeer Viney so's she wouldn't near marry me ef she wanted to. I cain't go nosin' 'round your house pokin' behind kags, an' you could; hut ef you won't, don't. I'll leave it there tell she finds it; an' ef you say hit's mine, I'll swear I ain't saw ner tetched a jug in a year."

"Pete, do you know whut you're a-doin'?" groaned Washington, gloomily reproachful as Pete was huffily wheeling his mule ahout.

"Ya-as," responded Mr. Parmelee, as he started his mule forward, "goin' right back wher' I come from."

"Hold on a half minute, cain't you, Pete?" yelled Washington in a flurry of anxiety. "Ef—ef yon'll come 'long back to the lane bars an' grab 'er the minute I git ther', I'll make a try fer it, hut I'll swear I'd as live grab up a hornet's nest when the hornets was good an' lively."

Pete, mollified, wheeled ahout once more, and followed the wagon as Mr. Judson drove back in despairing haste to the hars, threw the lines over a post, and proceeded warily toward the house.

After watching her father drive down the lane, Viney stood a few miuutes leauing against the hars with a plaintive droop at the corners of her clover-bloom tinted lips. It was still there as she trudged up to the house with her hands rolled up in her brown calico apron, for plump hands like Viney's freckle as easily as do faces, and she had forgotten her yard half-hands.

The purple tunnel was so deep that she could see neither to the right nor to the left, and a hroad ruffle flapped over the opening; so it was not until she had almost reached the soap-kettle that she beheld a young man industriously stirring the contents thereof with the broom-handle. He was a tall, limber-looking youth, with sandy-brown hair that grew in a natural pompadour, a pair of merry yellow-brown eyes and an incongruous dimple iu oue sun-tanned cheek.

"Jeff!"

Viney's voice came faintly and dismayed from the tunnel; but Jeff Haskell failed to catch the mournful undercurrent.

"Yas," he responded, cheerily. "Your soap was about to bile over when I ketched it. I'm a-plowin' yonder 'crost the ridge, an' got dry, so I come over yere fer a drink of water."

"All right, Jeff," said Viney, with a soher little sigh of renunciation. "Come along to the kitchen; an' then—then you mustn't come hack no more after that."

"Who says so?" demanded Jeff, quickly. "Whut's loose, Viuey?"

"Paw says so." Viney's voice was tremulous now, and Jeff dropped the hroom-handle, aud tried to see inside the bonnet, but the flapping ruffle haffled him.

"An'the idy is—Pete Parmelee, hey?"

The purple tuunel nodded.

"Uh-huh," commented Jeff, "I see. Now, Viney, don't ye go a-sighin' an' a-cryin'; no Pete Parmelee, ner twenty-five of 'em, shain't tie no knots in me an' your affairs. Look up yere, honey, an' come out o' that ole purple calico cellar so's I kin see you—hut come on to the kitchen first. I'm dry es powder, 'n' then we'll see."

Grimly pondering, Jeff stalked to the kitchen, followed by Viney and the sunbonnet. The door stood open, and the spring sunshine fell in a yellow block across the freshly scoured floor.

"Now, Viney, honey, looky yere." Jeff, having quenched his thirst and replaced the big gourd on its nail, was ready for argument. But Viney, who had heen standing in the doorway, evidently was not. She turned suddenly with a startled movement, and flopped wide her bonnet cape as if to screen Jeff from some outside danger.

"Jeff, fer the law sake, run, quick!" she cried. "Yere's paw jest a-lopin' to the house hard es he kiu. Bounce into that clauset, quick!"

"Shore now, Viney, whut fer?"

Jeff's calm deliberation of tone and manner nearly rendered Viuey frantic.

"'Cause—'cause," she shrieked, the sunbonnet veering about with its wearer's excitement like a great moth, "he'll be mad enough to bite a tenpenny nail iu two ef he sees you yere after whut he said. He's fergot somethiu' an' won't stay a minute, I 'most know, ef he don't see you, hut he'll raise the roof plum off the house ef he does, an' make more trouble than enough. You hadn't oughtta be yere, but 'long es you air hit ain't no use to git ketched. Jeff, ef you don't bounce quick I'll marry Pete Parmelee, see 'f I don't!"

Viney wrung her hands distractedly over Jeff's immovability; then, in a twinkling, jerking open the closet door and taking Jeff uuawares, and rather dazed by her astounding threat, she gave him an energetic push which propelled hiu into the closet, clapped the door to, slid the little holt beneath the lock, and flew out into the yard just as her father came panting along and halted uear the soap-kettle to reconnoiter.

"Wher's yer Auut S'anna?" he asked, as Viney, blessing the big bonnet for shielding her hurning cheeks, hegan to stir the soap.

"Up-stairs, sortin' over carpet-rags," she replied, promptly, her heart bouncing up and down as her father walked cautiously forward into the kitchen. Auxiously she watched him go through the opposite door into the passage heyond, and then started forward to liherate Jeff before he should return from his supposed confereuce with Miss S'auna.

"Mornin', Viuey."

Impatiently Viney pointed her tunnel toward the direction from which came the voice, and beheld Mrs. Deacon Dump with an exasperatingly amiable smile on her broad face and an unwelcome gift of a basket of goose eggs on her arm.

"Makiu' soap?" she asked, stopping with neighborly interest to inspect the caldron. "Ain't got enough grease in it, hev ye?"

"Reckon not," answered Viney, desperately grasping at a straw of hope. "I'll run an' git some more if you'll stir a miuute."

Swiftly she flitted forward, but stopped suddenly as she beheld her father tiptoeing back across the kitchen, the jug in his hand, as rapidly as was compatible with silence, for behind him came the distinct "spat, spat" of Miss S'anna's broad slippers. But if Scylla was behind Washiugton Judson, Charybdis was surely ahead, as a glimpse out of the open door showed him. Mrs. Deacon Dump's attention was concentrated on the soap-kettle for the present, hut the minute she should raise her eyes from it, that minute would seal his doom. To escape out of the hack door without being seen hy Mrs. Dump was impossible; to retreat and not encounter Miss S'anna was equally so. An instant the victim of circumstances and Mr. Parmelee's jug wavered—heheld Mrs. Dump in the act of turning from the soap toward the house, heard the approachiug flap of Miss S'anua's slippers, and the next, to the utter dismay of Viney, who beheld it all, made a dive at the very closet that held Jeff a prisoner, tugged at it a moment, then slipped hack the bolt and disappeared into its depths, jug aud all, as Mrs. Dump dropped the soap-stick, aud placidly set forward after Viney.

"Hit's all right, I reckon," she observed, complacently. "I'll come along, Viney."

"Good-mornin', Mis' Dump," greeted Miss S'anua from the kitchen doorway. "Come right in. Whut lovely aigs! ain't they, Viney?"

"Beautiful!" returned Viney, whose heart had gone down to her toes. "We'll set ole Buff on 'em right away. I'll take the hasket, an' you walk right in the big room."

"No; I ain't got a minute to stay, skeercely. I'll set right down yere a leetle grain." Mrs. Dump looked beamingly ahout for a congenial seat, which was supplied hy the stont, stuffed rocker Miss S'anna drew forward for her accommodation.

"Oh, granny!" sighed Viney under her bonnet, "whntever'll I do now to git 'em away long enough to git paw an' Jeff ont? Paw's dodged 'em 'count of that jug—whurever he got it—an' 'twon't never do to let 'em find he's there. An' whntever'll happen when he ketches Jeff?"

Meanwhile Viney's paw, feeling ahout him for the best place to deposit the jug, stumbled into the arms of Jeff Haskell, whose prompt but muffled "wh—sh!" checked the exclamation which would have betrayed the two fugitives from justice. Mr. Judson's wrathful amazement escaped in a smothered growl.

"You, Jeff Haskell! Well, I'll swear!"

"Watch ont, Uncle Wash'ntou, don't rare," expostulated Jeff in a whisper. "I hadn't orto be yere, I know, but I got in sorto accidental."

"Accidental!" snorted Uncle Washington. "Ya-as, comin' 'round after Viuey accidental, an' 'cause ye kuowed I wouldn't hev it, a-hidin' in my clauset accidental wheu ye heered me comin'! But I'll yank ye out accidental"—

"Au' get ketched with a jug?" asked Jeff. Uncle Washington's martial spirit fled.

"Contrive Pete Parmelee—hit's bis'n!"

"Au' he'd be drunk es a tinker now ef he'd of hed it—an' you'd let sich a feller hev Viney!"

"I'd let him hev a black eye wbenever'n I'd got out o' yere an' got a holt of him," responded Uncle Washingtou, with ehoked-up rage, "a-gittin' me into sich a darned hole with his ole jug."

"Look yere, Uncle Wash," whispered Jeff, earnestly, "you let me hev Viney an' I'll git you outer the hole."

"How'll yon do it?" demanded Washington, grumpily skeptical. "The' ain't nothin' on the floor to hide it behind; the shelves is all filled np with ole dried rubbage so's ye couldn't set nothin' there; au' them weemin's a-goin' to stay an' gah long es they've got a tongue apiece."

"Well, you say I kin bev Viney an' tben let on you jes' come in yere to hunt sometbin', an' I'll shonlder the jug, an' git out somehow. Viney likes me better'n she does him, anyhow—hey?"

"Contrive it! I do'no; reckon I'll wait an' see ef they go out; I've done tole Pete he could hev—blame it, Jeff! Hope to die ef I ain't natcbelly a-goiu' to sneeze—some sort o' ole truck yere I've jabhed my elhow into, an' hit's jest a-flying up my nose."

"Mine, too," said Jeff. "Say I kin bev 'er, Uncle Wash'nton, an' gimme the jug, quick, 'fore ye git ketched."

"Well, I ain't shore," hesitated Mr. Judson, "ef I knowed—ker-r—yere, take it, quick, Jeff, an' her, too—chee!"

Uncle Washington's long-suppressed sneeze now burst forth with a tremendous report that seemed to rend the roof, and made the women jump almost out of their shoes and stare at one anotber aghast.

"Give 'er yere," responded Jeff, joyfully grasping the jug, "an' hurray fer you, Uncle Wash—ker—choo—o!"

Jeff's sneeze, following closely on Washington's, rivaled the latter in depth of tone and sonorous vigor, and threw the listeners into a panic.

"The clauset's a-bustin' up!" yelled Mrs. Dump. "Less all run."

"Hit's that bug-powder a-goin' off!" shrieked Miss S'anna. "Hit onghtta be poured water on."

"Ker—che—e—e!" came another war-whoop from Mr. Judson.

"Ker—chow!" boomed Jeff, making the kitchen windows rattle.

"Oh! oh! onch!" screamed Mrs. Dump, tumbling over her rocking-chair in her fright. "Hit's robbers an' pirates a-rohbin' an' a-murderin' us right under our noses!"

"Hit's the hug-powder," reiterated Miss S'anna. "Gimme some water, Viney, while I yank open the door 'n' souse it in—quick!"

"Hit's nothin'," responded Viney, who had grown despairingly calm, "only paw an' Jeff in the closet a-sneezin'—look yonder now," as Miss S'anna tore open the door, revealing Jeff holding the jug, his head thrown hack in the agony of a coming sneeze, while Mr. Judson stumhled out with a vehement and far-echoing "ker—che—e—e!"

"Ker—chaw!" reverberated Jeff, following, and setting down the jug to get ready for another one.

"Ker—er—er—chook!" roared Uncle Washington. "Ef I ever set hoof into that clauset ag'in hit'll be when I'm plum al—ker—maniac—chee!"

"Well, paw!" protested Viney, with an unsuspected twinkle in the eyes nnder tbe sunbonnet, "ef you hadn't run pore Jeff in there an' ketched him 'twouldn't 'a' happened!"

"An', Uncle Wash'nton," Jeff followed up the cue, "ef yon did ketch me—ker-ehoo-o-o—hit was 'cause I jes' natchelly couldn't help from comin' arouu' whur Viney was, ef you did say I shouldu't; an' 'pears like you orto do somethin' to pay fer rnnnin' me into that clauset an' makin' me sneeze my neck 'most off; au' ef you'll say I kin hev 'er I won't go dodgin' about in clausets no more."

"Do say so, paw," pleaded Viney, clasping her pink hands about "paw's" bristly wrist.

"Viney," said her father, with some attempt at sternness, "I'm goin' to tell ye somethin'. I've 'most blowed my old nose right off in yonder, an' ef you don't dump ever' grain o' that contrived truck oūt'n the door this yere minute, you an' Jeff shain't never marry."

Joyfully flew Viney for the powder, while Miss S'anna adjusted her spectacles carefully, and transfixed Jeff with a glare.

"Jeff Haskell," said she, "I've allus favored ye es a temp'rance young man, hut now ef ye've tuck to roamin' about with jugs—"

"Miss S'anna," avowed Jeff, emphatically, "I won't do it ag'in. I won't touch, taste ner han'le a jug the longest day I live. This here'n is Pete Parmelee's, anyway, an' I'm a-goin' to give it back an' all 'at's in it, an' jine the temp'rance large next week. Yonder's Pete down by the hars now. Uncle Wash, ef you're a-goin' to town, cain't you take it 'long down to him?"

Uncle Washington allowed tbat he could.

Se Pete Parmelee rode off with shattered hopes, but a jugful of consolation. Washington Judsou drove leisurely down the laue, congratulating himself on having gotten out of a bad scrape at ouly the price of taking Jeff for a son-in-law instead of Pete, who, with his jugs and bad temper, might not have proved an unmitigated blessiug; and Mrs. Deacon Dump and Miss S'anna sat conteutedly in the kitchen discussing the adventures of the day, and speculating as to bow Washington came to chase Jeff into the kitchen closet, and why, after catching him, and withal in company with a jug of Old Oscar Pepper, he should have been wheedled the next minute into letting him have Viney. But this was a problem to which the two worthy ladies possessed no key.

As for Jeff and Viney, they went blithely and finished making the soap.

A LEGAL COURTSHIP.

"Allen G. Dunbar, attorney and counselor at law." Such was the iuformation volunteered by a black and gilt sign at the foot of a flight of stairs on Monroe street, Grand Rapids, and a gilt hand pointing up-stairs intimated to au inquiring public that the person designated might be found by ascendiug to the precincts ahove. An anxious-looking man, in a gray suit and soft hat, having read this sign through three times, and finally having ahsorbed its contents, slowly mounted tbe stairs and knocked at a door on the landing.

The man had been at length admitted hy the clerk. From bis air of lofty condescension the stranger at first mistakes the clerk for the head of the firm, and removing the soft hat, be says, apologetically:

"I have a very important matter, sir, which I wonld like—"

The clerk waves him aside.

"I have nothing to do with that, sir. Mr. Dunhar will attend to your case," and be ushers him throngh the glass door.

The lawyer, becoming aware of another's presence, rises, sbakes hands graciously aud says:

"Glad to see you, sir. Be seated, if you please."

The stranger's timidity has perceptibly increased since the glass door closed upon him. He looks at the inkstand, and begins, hesitatingly:

" I have a brotber, sir—" and pauses.

"Yes," says Mr. Dunbar, encouragingly. "Yes, sir. Well?"

"Well, as I was saying, I have a brother, and he bas got into no end of trouble. Been accused of forging a note."

The lawyer's eyes glistened. A forgery case! He hadn't dared to hope as much. But he assumed an expression of sympathetic grief, and proceeded to draw tbe facts in the case out of the afflicted brother. Tbey talked long and earnestly, and when the man had departed Mr. Dunbar again relapsed into thought, but this time witb a more bopeful couutenance.

Most people would have agreed with his clerk in calling him handsome, and with his tall, lithe figure and dark hair and eyes he was, to say tbe least, good-looking.

Tbe truth is, he is desperately in love with Kittie MacPherson, for such is tbe girl's name, aud it is only because he is so "confoundedly poor," as he puts it, that he is prevented from seeking to win her for his own. For it takes a young lawyer some time to gain the confidence of the public, and Mr. Dunbar, being a stranger in Grand Rapids, has found clients almost as scarce as angels, and has come to regard hoard bills as the natural enemies of mankind.

The sound of the clock striking four aroused him from his reverie. At the same moment the vision of the hlue dress re-entering the phaeton across the street caused him to congratulate himself that it was his dinner hour, and hastily seizing his hat, he descended the stairs. Miss MacPherson received him graciously as he paused to exchange a word of greeting, and said as she happened to he going his way she'd take him home if he'd like a drive.

All too soon they reached Dunhar's destination, and he alighted with outward alacrity, but inward reluctance.

"Now, remember," said Miss MacPherson, leaning from the carriage for a postscript to their talk, "you're to be on hand for the dramatics next week."

"Really, Miss Kittie," he apologized, "you will have to excuse me this once. I am very busy now on an important case. That Will Nevins in at Smith's is up for forgery."

"Yes, I know. Isn't it dreadful? And are you going to convict the poor fellow?"

"No; I'm for the defense, and I shall try hard to clear him. I am very ambitious to win this case. But, of course, you are not interested in my business affairs."

"Yes, indeed I am," declared Kittie, "and I want you to succeed. There is nothing I so much admire in a man as success."

Mr. Dunbar gravely replied:

"Miss Kittie, the world has ever heen of your opinion."

That night until long after midnight the light hurned brightly in the northwest corner, second story, of Mrs. Ranney's hoarding-house, and within Mr. Allen Dunhar, with a flushed and eager face, excitedly paced the floor. Could it be, he asked himself again and again, that this was the opportunity so anxiously longed for that should prove the stepping-stone to his reputation as a lawyer? He quickened his pace at the thought, and with each circuit of his apartments he saw more clearly the resolve that had been formulating itself in his mind. Yes, if it was possihle, he would win the case, and cover himself with glory, and then, perhaps, even Kittie's crusty old father could not pronounce him an ineligihle suitor.

If he won, there was Kittie and success. If he lost—hut he couldn't lose, and he abrnptly closed the argument. Aud shortly thereafter the corner was shrouded in darkness, to the intense relief of his worthy landlady, to whom Mr. Dunbar's prodigal use of gas was a constant thorn in the flesh to such an extent that sbe seriously contemplated revising that sectiou of her advertisemeut which aunounced, "Lodgings, iucluding wood and lights."

The first day of the trial found the young lawyer in the conrt-room witb a face determined, but very pale, and a hand that trembled as be arranged his papers. There were at first but few spectators, hut as the days wore on their numher increased to a large audience of ladies and gentlemen. The client plainly considered bimself a victim of adverse fate, and wore a look of martyr-like resignatiou. The iuterest of the occasion was added to by tbe fact tbat one of the counsel was a woman—youug, stylish and good-looking, and she was watched with great curiosity.

Kittie MacPherson attended regularly witb a small circle of intimate friends, and took au active interest in all that transpired, besides making yards of drawn-work and performing miracles in fancy work with steel beads and blue worsted. These same beads now and then rolled wildly about the floor, and Mr. Dunbar felt his soul stirred with unholy wrath toward the young man wbo picked them up and held them for Kittie during the remainder of the session.

During tbe earlier proceedings Mr. Dunbar kept discreetly "shady," hut he was rapidly growing in favor with the audience, and it was whispered around that he intended to "come out strong" in his plea. Now and then when he did get off a particularly bright tbing it could not he wondered at if he cast a furtive glauce in Miss MacPhersou's direction to note the effect he produced.

But, on the whole, he followed the example of the woman lawyer, Miss Evelyn Bates, wbo gave exclusive atteution to business, and seemed serenely unconscious that any one was observing her.

Mr. Dunhar walked home with her late one afternoon, and carried some heavy law-books for her.

"You look tired," he said, kiudly, as he took the books from her. "Isn't this kiud of life rather hard for you?"

"Yes," was the reply, in Miss Bates' peculiarly musical voice, "it is, but I guess auy kind of life is bard when one bas her own living to earn."

"But do you really like the law? Don't you think something else would be more—" he was going to say suitable, but cbecked himself—"easier for a lady?"

"Well, I don't know about that. I can earn more money in this way than in any other, and I feel thankful that I am able to do it. But I suppose you think it is very strange and iuproper, don't you?"

And tbe dark blue eyes were raised so suddenly to her companion's face that be with difficulty collected hiuself, and stammered out something abont her filling any place well. For the truth was he seriously disapproved of women lawyers, as a rule, hut he was a gentleman, and could not he rude to a lady. So he glaneed down at the slender figure at his side, aud at the long black feathers curling over the shining hrown bair, and thought if they were all like her it wouldn't be so bad, and said:

"It's getting dark and slippery. Perhaps you had better take my arm."

After this little incident he entertained a much more favorahle opinion of his fair legal opponent.

Mr. Dunbar's plea was a brilliant and masterly effort, his own intense earnestness giving a penetrating force to every sentence. And if, carried away hy the enthusiasm of the hour, he allowed his fervid imagination to gild somewhat the character and life of his client, and invest them with a luster not wholly their own, blame him not. He only followed in the footsteps of hosts of illustrious predecessors.

His client's past life, he showed, had been not only blameless, but adorned with all the gentler virtues of mankind. He pictured him the idol of his aged mother, the pride of his family and a favorite of society. Nevins' father, it was well known, had died in the army, and straightway the prisoner was invested with the majesty of tbe stars and stripes. And when the counsel appealed to the patriotism of the jury, and asked with hurning eloquence, "Should he he cast down by the government his father's life-blood had helped to save?" the sensation in the audience showed that it was a telling point. Long before Mr. Dunbar had ceased speaking it was evident that public opinion was growing strong in favor of the prisoner.

The last day of the trial dawned hright and clear, and a crowd of eager spectators filled the court-room at an early hour. Kittie looked more piquant and charming than usual in a new and elahorate suit of an indescribable color and a pattern hat, the climax of millinery. Tbe prisoner was brought in, still wearing that suhmissive, martyr-like expression, and his entrance was the signal of sympathetic "Oh, mys!" aud "Oh, dears!" from the ladies. Mr. Dunbar entered with a wearied step, looking nervous and worried, and his haggard face and restless dark eyes attracted universal attention.

Miss Bates was a trifle paler than usual, hut outwardly composed and dignified, and in her graceful black dress and dainty tie was a most attractive figure. Allen Dunbar took in the picture from where he sat, mechanically twirling a lead-pencil, and a moment later wheu she nodded and smiled in recognition, he crossed over to her and cordially shook her hand, remarking, with a laugh:

"We may both not feel so much like it at the close of the day's work."

But she protested:

"The result will make no difference witb me."

Was it the excitement of business or a deeper emotion that made Mr. Dnnbar's head grow dizzy and his eyes become strangely blurred when, after a brief deliberation, the jury returned, and in response to the usual question, "Do you find the prisoner at the har guilty or not guilty?" amid the silence that could be felt, the foreman uttered tbe impressive words:

"Not guilty."

The excitement of tbe trial had died away, but it had left him greatly exhausted in mind and hody, and so a week had passed, and he had not even called on Kittie yet. He wanted to feel like himself when he went tbere, he said. He had, however, been dreaming hright dreams of the future, in all of wbich a sylphlike being with blue eyes and golden hair figured promiuently.

The door opened, and a small boy entered with a note of dainty cream-tinted paper. It was addressed in Miss MacPherson's graceful handwriting, and he opened it with a smile. But the smile died speedily away. The note was in her usual effusive style, and began:

"My dear Mr. Dunbar:—I couldn't wait till I saw you to tell you, for I know you will he so glad to bear that you have been the means of making two people happy, especially, I hope, when one of them is myself. Perhaps you have not known that Mr. Nevius, whom you so nobly acquitted, for which I shall never cease to he grateful to you, has long been in love with me, hut papa has never liked him. But when he heard yon prove the other day wbat a splendid character he had, and what a noble young man he was, he hadn't a word to say. So we are to married next spring just as soon as I can get ready. Our engagement isn't announced yet, but Will tbougbt we ought to tell you. You have always been so kind to me, almost like a hrother, aud—"

The note fell to the floor, and Mr. Dunbar folded his arms and looked straight before him with an expression of blank despair. He felt utterly helpless; nothing could he done. And this was his triumph, he told himself, bitterly. He called himself a fool for not seeing how tbings were going. But she certainly had giveu him some encouragement.

Then the truth flashed upou him; if he hadn't made such a hero of his client and whitewashed him until his own friends wouldn't have recognized him, she never would have had him in the world.

The months that followed allowed Mr. Dunhar little time for grieving over his lost love. His first hright success was rapidly followed hy others, and he found himself entering upou au active professional career. His clients were no longer dim phantoms of his dreams, but living realities.

In time he exchanged his boarding-place for one more pretentious and elegant, and was pleased to discover that bis fair legal opponent, Miss Evelyn Bates, was an inmate of his new home. His thoughts had often reverted to her since that memorable trial, but he had not seen her until they met in the long dining-hall at dinner. Her manner in private was distinguished hy that same dignity and eloquence that had impressed him so during the trial. He hastened to renew the acquaintance, and wondered that he had never noticed before how superior she was to his other women friends.

The winter passed swiftly by, and Mr. Dunhar had made good progress in his friendship with Miss Bates. Few evenings passed now that he did not seek her society. One lovely evening he took her for a moonlight drive, a thing he had frequently done of late. Quite naturally they drifted into retrospect, and

their thoughts went hack to the trial in which they first met.

"I remember I was terribly anxious over my first case in Graud Rapids," mused Miss Bates.

"And I, too," said he, "for I felt, somehow, all along that it was a crisis in my life, and that all my future happiness depended on it."

"And, indeed, it did do wonders for you in your profession," she assented, "and a prosperous business man has a right to he happy."

"Oh, yes; I am not ungrateful; but I have learned that wealth and station can never make me happy without—"

"Without what?" innocently inquired Miss Bates.

"Without you."

And almost before he knew it, Mr. Dunbar found himself launched into one of the most eloquent and earnest pleas he ever made in his life, and in this instauce, as in the former, he won his case.

THE BOY WHO WON THE $100 PRIZE.

A hoy fifteen years of age won the $100 cash prize in our electoral-vote coutest. His name is John Fisher, Jr., and he lives near Blanco City, Texas. By turning to the map in People's Atlas it will he seen that Blanco is the county-seat of Blanco county, which lies in the central part of the state, and ahout fifty miles west of Austin, the capital of the great Lone Star State. Young Fisher's parents are of German descent. His father is one of our old subscribers, so the hoy has been raised, so to speak, on the FARM AND FIRESIDE, which, of course, partially accounts for John's good fortuue. In his letter to us he stated that he attends school at Blanco, and during vacation-time helps his father on the farm. It was on a hot day in the early part of last July, while looking through the FARM AND FIRESIDE, which had just been brought from the post-office, that he noticed our hig cash prize offer. He did not let much grass grow under his feet until he liad mailed his guess. It was, "McKinley, 272," and was received by us July 11, 1896, at seven o'clock in the moruing. If he had delayed a single day he would not have received the one-hundred-dollar prize, which proves the importance of not putting off until to-morrow what can he done to-day. The receipt of the one hundred dollars which we sent hiu was a great day in the life of John Fisher, Jr., and we hope he has invested the money wisely, which in time will make him a rich man, with such honesty and charity as will cause him to he a hlessiug to his fellow-men.

The portrait here shown was made hy our engravers from a photograph which he had taken especially for us. If any FARM AND FIRESIDE hoys happen to he visiting anywhere near Blanco City, Blanco county, Texas, they will no douht receive a cordial reception from John Fisher, Jr., the winner of our $100 prize.

NOTE TO FARM AND FIRESIDE BOYS.—You have just read of the hoy who got $100, and all because he tried. Now you—all of you—can have a valuahle prize from us if you will only try. We won't give you $100, hut we will give you a guaranteed nickel-silver watch for a club of fifteen subscribers to FARM AND FIRESIDE. Instead of pleading with your parents to huy you the watch, why not hustle and get up the club, when we will send it to you free. You can, if you will try. Will you?

TRY, TRY AGAIN.

"'Tis a lesson you should heed,
Try, try again;
If at first you don't succeed,
Try, try again;
Then your courage should appear,
For, if you will persevere,
You will conquer, never fear;
Try, try again.

Once or twice though you should fail,
Try, try again;
If you would at last prevail,
Try, try again;
If we strive, 'tis no disgrace,
Though we do not win the race;
What should you do in the case?
Try, try again.

If you find your task is hard,
Try, try again;
Time will bring you your reward,
Try, try again;
All that other folks can do,
Why, with patience, should not you?
Only keep this rule in view:
TRY, TRY AGAIN."

Read our $100-bicycle offer on page 19. There is another great chance for hright hoys and girls.

A BRIDE-ELECT'S CONCLUSION.

"In selecting bridesmaids," wisely expounds a young woman engaged in that interesting occupatiou, "it is uot heauty that counts so much as style and carriage. In particular you want girls who walk well. The slow march down the aisle is the hest test of gait I know of. I've watched hridal processions often, and I've seen girls radiantly pretty lose all the effect of their good looks hy their hohhling walk. Try to move the feet forward very slowly, and see how easily it hecomes a limping hitch. It should he a glide, then the slowuess is stately. The bride herself is helped hy her long train, her drooping head and the leaning on her father's arm before and her hnshand's after the ceremony, hut the hridesmaid wears a short gown, must look on a level, walks up and down at the side of another girl, and so has her own grace alone on which to depend. A girl who walks well, whose head is well set on her shoulders and whose hair arranges well, makes a good appearance as a hridesmaid, even if she lacks extraordiuary heauty of face."

DR. PARKHURST ON MANLY RESOLUTION.

A good many young men excuse themselves from ever hecoming anything or doing anything hy the fact that they always live where it is low tide. Perhaps that is hecause it is always low tide where they live. At any rate, the more I learn of the history of the men who have succeeded the more apparent it becomes that if they were horn in low water they patched up their tattered circumstances aud heat out to sea on a tide of their own making. Dr. Roswell D. Hitchcock once wrote: "How many mute, inglorious Miltons die in their mothers' arms nohody knows; hut the grown-up Miltons all get heard from." I have watched a great many hrooding hens, hut I never saw one facilitate the hatching process hy pecking the shell. The chick on the inside will get out if he is worth it. Circumstances are only remotely related to the marrow of the matter. Success means, all the way through to the finish, a victory over difficulties, and if the young aspirant lacks the grit to face and down the difficulty that happens to confront him at the start, there is little reason to expect that his valor will show to any better advantage in his encounter with enemies that get in his way later. Thirty years ago if a young man made up his mind to go to college the first question he asked himself was, "How can I earn the money?" The first question he is likely to ask himself today is, "Whom can I look to to give me the money?" Removing difficulties is often nothing more nor less than putting a premium on incompetency. More men are injured hy having things made easy for them than hy having their path heset with difficulties, for it encourages them to stay themselves on circumstances, whereas their supreme reliance needs to he on their own personal stuff. We therefore expect that the son of a successful man will he himself a success. Ahraham's son was nothing hut Isaac, hardly more than a hypheu to connect Ahraham with Jacoh. It is a hig mistake to have too great a father. —From Talks to Young Men.

QUEEN VICTORIA'S FAMILY NAME.

The question has frequently heen asked, "What is Queen Victoria's surname?" A correspondeut of the New York "Star" thus answers the conundrum: A friend the other day asked me if I knew Queen Victoria's family name. I thought a moment and answered, "Why, 'Guelph,' of course." "Oh, no," answered my friend, "not at all. While the members of Queen Victoria's family are Guelphs by descent, her marriage with Prince Albert would give her his surnaue, as is usual in such cases. And what was the family name of the prince consort?" I had to confess that I did not know. "Well," said my friend, "you are excusable for not knowing, I suppose, since only a short time ago the same question was asked at a dinner party in London, attended hy a number of persons of rank, some of whom were very near royalty, and not a soul of them could answer it except the propounder of the question. The name in question is 'Wettin,' and the dominion of Saxony came to this family in 1420. Therefore, without her crown and kingdom, Queen Victoria would be simply 'Mrs. Wettin.'"—Independent Christian.

A WOMAN'S EXPERIENCE IN MAKING MONEY.

Every man dislikes to see a woman (especially his wife) with coarse, red hands. But as every family cannot afford a servant, the housewife or her daughters are compelled to wash dishes at least three times a day, and then it is impossible to keep the hands nice and white. This unpleasantness has at last been overcome hy a concern in Pennsylvania, who are manufacturing a patent dish washer which is meeting with ready sale. It is a tip top housebold article and every woman that sees it work immediately orders one. I am the wife of a farmer and have been selling dish washers for this firm for some time. I find no trouhle in making $25 a week and at the same time attend to my house work. I am inexperienced in selling goods, but think that anyone with experience can make at least $150 a month. If you want to go to work write Dep't H 6 of the Iron City Dish Washer Co., Sta. A, Pittsburg, Pa., and they will send full particulars.

A FARMER'S WIFE.

Recent Publications.

BOOKS RECEIVED.

HISTORY OF PAINTS, PIGMENTS AND COLORS, FROM REMOTE AGES. By John McGovern. In this unique little volume is compiled a multitude of facts which go to make up present knowledge of paints and colors. To he obtained free hy writing to Heath & Milligan Manufacturing Company, 170-172 Randolph street, Chicago, Ill.

NUTS FOR PROFIT. "A Treatise on the Propagation and Cultivation of Nut-hearing Trees." By John R. Parry, Parry, N. J. A useful pamphlet for those interested in the cultivation of edible nuts for commercial purposes.

CATALOGUES RECEIVED.

A. T. Goldsborough, Wesley Heights, Washington, D. C. Descriptive circular of choice strawherries. Specialty—the "Louis Ganthier," the new twice-bearing French strawberry, a novelty of great merit.

Wernich Seed Company, Milwankee, Wis., will send on receipt of 5 cents one half pound of improved sugar-beet seed from a recent importation from Europe.

$200 IN PRIZES

TO FARM AND FIRESIDE SUBSCRIBERS.

The publishers of FARM AND FIRESIDE request each and every reader to turn to page 19 and read the particulars of their word contest, which **closes June 30, 1897.** It is very important that all those who are going to enter the contest begin on their list of words immediately, and send them in at an early date. Those who put it off will find the month of June soon gone and their chance to get the bicycle, gold watch, etc., past. Parents will do well to encourage their boys and girls to enter the contest. It is easy, yet instructive, and they may win one of the twenty-five prizes. See page 19.

What is the matter with Peerless Atlas and Woman's Home Companion (or Farm and Fireside) one year for a dollar? It is as good paying an agency as I ever worked, hard times or not. I inclose twelve additional orders.—H. H. Rice, Shenandoah, Iowa.

Our Household.

THE LOCUST-BLOOM.

We were under the locusts together,
And the feathery, waving trees
Caressed us again with their fragrance
With every caressing breeze;
But fair as they were, and fragrant,
The flowers were not half so fair
As the snow-white wreaths from the tree-tops
That lay on your golden hair.

My fear and my love were striving,
When, suddenly bending low,
I kissed with a passionate longing
The clusters of scented snow;
And well—how well!—I remember
The wonder and sweet surprise
That was born with your rosy blushes
And glowed in your tender eyes.

And then with my love triumphant
In ever impassioned tone,
I asked for the pearly blossoms
And the setting of gold for my own.
And the dream of my life came to me
In that crowning of snow and shine,
When your beautiful face was lifted
And your eyes and your lips met mine.

—Mildred McNeal, in Ohio Farmer.

FRUIT DESSERTS—STRAWBERRIES.

There is hardly a fruit so generally popular as strawberries, and generally delicious whether large or small. Even the tiny wild strawberry is not to be despised, as far as taste is concerned, though the task of picking and stemming is not to be craved.

In preparing strawberries, to be eaten plain (or otherwise, for that matter), care should be taken to cleanse them free from every particle of grit, as one gritty strawberry will go far toward spoiling the success of the whole dish. It is better, however, not to wash the berries any more than is actually necessary, and care should be taken to keep them as solid and perfect as possible. Gently stirring the berries in clear, cold water with the hands will tend to remove the grit, sometimes it being necessary to use even three of four waters.

After cleaning (of course, the stemming process has already been accomplished before the washing), place them in your dessert-dish, not neglecting to sugar them well, and set away in the refrigerator or other cool place before serving. If the berries are more than ordinarily sour, the proportion of sugar will have to be very generous indeed. Serve only when perfectly cold.

Strawberries, with Sugar or Cream.—If the fruit is particularly large and perfect, and you wish something extra in the line of a dainty way of serving, leave the stems on. Such berries have little or no grit, and require scarcely any cleaning. When serving in this manner, at each plate should be placed a tiny individual dish containing either powdered sugar or cream (or two for both), into which the berries can be dipped by the stem, and thus eaten. The cream should be whipped

to a stiff snow, sweetened with powdered or confectionery sugar, and flavored with a little vanilla extract. This is a very nice way to serve berries at luncheons.

Strawberry Gelatin.—In one pint of cold water soak a package of gelatin for one half hour, after which add one and one half pints of hot water, and stir until dissolved. Sweeten to taste with granulated sugar, and flavor with a few drops of almond flavoring. Have your strawberries (about a quart box, or perhaps a few more) already stemmed and cleaned, and add them to the above gelatin. Place away on ice or in a cool spot to harden. This is better if made the day previous to serving. It is not absolutely necessary to add the almond flavoring, as the gelatin itself has an acid taste quite pleasant and decided enough, together with the flavor of the berries, to suit most people. This dessert, though very agreeable when served plain as above, can also be served with sugar and cream.

Phosphated Strawberry Jelly.—One quart of strawberries will be required. After stemming and cleaning, cover them with water, and boil them, after which they should be mashed and rubbed through a sieve, and enough water added to make up a quart. Sweeten to taste with powdered sugar (preferably), though other kinds will do, and boil up once. Soak a package of gelatin in a pint of cold water for one half hour. To this must be added the quart of hot mixed juice and fruit, the entire mixture to be stirred until the gelatin is dissolved. Add more sugar if necessary (according to taste), and place in the refrigerator or other cool place to harden. This can also be served with whipped cream.

Strawberry Cream.—This is a very dainty dessert when served in individual molds or small glasses. Mash one quart of strawberries, rub through a fine sieve, and mix with same three pints of rich

cream; sweeten to taste with sugar; whip to a froth, and add one half ounce of dissolved gelatin. Wet your glasses or molds to prevent cream from adhering, fill same with the cream, and set away in a cool place.

Strawberry Dumplings.—Mix a quart of flour with a teaspoonful of salt and a teacupful of thick cream. (In place of the cream a cupful of butter thoroughly rubbed into the flour will do.) Then add four eggs separately and thoroughly beaten, with milk enough to make it the right consistency to roll out thin. Line your cups with the crust thinly rolled out, and fill with strawberries, adding sugar, and covering with more crust. Place these cups in a shallow stewpan large enough to contain them, with boiling water to reach half way up the cups. Steam forty-five minutes. Turn out on a dish, sift powdered sugar over them, and serve plain or with sauce. As every housewife has a favorite sauce of her own, directions are unnecessary.

Strawberry Short-cake.—Take one quart of flour, one tablespoonful of soda, two teaspoonfuls of cream of tartar, butter the size of an egg; mix with milk until very soft, roll out, and bake quickly. Split into two parts, butter one of them, and sprinkle with sugar, then put on a layer of strawberries and sugar; lay on the other part, butter, and sprinkle with sugar, adding a more carefully arranged layer of the most perfect strawberries, with powdered sugar generously sprinkled over them. Serve in shallow individual dishes with milk or cream. The cream can be either plain or whipped, the latter being very delicious when sweetened with powdered sugar and flavoring extract.

These recipes have been carefully selected, and some at least will doubtless be new to many. The housewife can tell from the quantity of ingredients called for whether the desserts will be too large for her family, in which case she can diminish them accordingly.

Emma Louise Hauck.

PRETTY LINGERIE AND ACCESSORIES.

There is no reason why a young girl's lingerie should not always be pretty, and not only when she is a bride.

Years ago that part of a girl's wardrobe was her pride; but with the adoption of knit underwear much of the pretty muslin wear was dropped, as much to save laundry bills as anything else.

The umbrella drawers are particularly comfortable for summer, and can be so elaborately trimmed as to answer for underskirts.

Dainty underbodies must be provided to wear with sheer lawn dresses.

A pair of stocking-supporters can be made, using blue satin for the belt portion, which should be cut to fit the person. The rubber at the sides can be incased in satin puffings, and trimmed with satin ribbons.

Sleeveless chemises should be provided for dress occasions, and confined at the shoulders with ribbon ties.

Bolero fronts to wear with white dresses

come ready made in the stores, and are in pique trimmed with embroidery or all-over embroidery and lace. They can be pinned on over a plain waist, and give a very dressy effect to an otherwise plain costume. They range in price from $1.25 to $1.75.

We give also two very pretty neck-trimmings.

Baby-caps are very dainty and sweet this season. For the tiny one that cannot yet sit up the close-fitting styles are the best. These come in white and dark ecru batiste trimmed with lace. The dark ones are 85 cents, the white ones $1.25, and the one of more elaborate style for a child that walks is $1.50. These articles take such careful needlework to make them that it is best to buy them ready made.

Christie Irving.

DON'T PLAN TOO MUCH.

The great temptation of a farmer's wife as the bright days herald the spring is to lay out more work than she can accomplish. Don't do it. Have the garden just large enough to supply the table plentifully. Have it laid off in rows so a horse and double-shovel plow can do most of the work. For the chicks have a yard inclosed with fine-meshed wire fence to confine them until the dew is off mornings or on rainy days. The coops should be ranged around it, and the chicks should always be fed inside the inclosure. Then they are easily called in if a rain is coming, saving one a wetting and many drowned chicks; you have them under control, and save half the labor in caring for them. A board placed porchlike over the coop doors protects them from dashing rains.

Press the men in on house-cleaning days or hire a strong woman to help. Remember, your health is of more value than anything else, for a weakly mother cannot do justice to her family. We need patience and forbearance and gentleness to deal with the sensitive souls that are

developing under our care. A wearied, overworked woman cannot meet the requirements of motherhood, and many a life is marred because the mother was fretful, cross and unkind through over-

work. When will we realize the greater importance of true living, and not exist to labor every day beyond our strength?

Bring your work close together. I know women who cook quite a distance from the house, and carry everything into the dining-room, making miles of weary, useless travel during the summer. One woman has a small shed dining-room attached to her summer kitchen on the north side. Her refrigerator is in one end of it. Door and window are screened, and the useless travel avoided. Her table sets spread all the time. Old chairs are used that need not be carried out. Benches would do. For company use dining-room extension table and best dishes and silver.

Every kitchen should have a dumb-waiter if the cellar is below, saving so many steps. If you cannot have a meal, flour and shelf arrangement, get two good-sized barrels, have a frame made of 2x4 pieces with short legs at each corner. Into these fasten rollers, and you can move the barrels to sweep or mop, and they are raised above the damp floor.

A set of shelves over a strong, square table can be used to keep all the things needed in baking. Hang the rolling-pin and cake-cutters on nails driven into the ends of shelves. In tin cans or glass jars can be kept soda, baking-powders, spices, and in a drawer in the table the pie-tins, bread-cloths, etc.

Paint the floors that are not carpeted. I got a good recipe from "Woman's Work" some years since that is very satisfactory and cheap. Into a quart of warm water put ten cents' worth of glue; set in a warm place over night; add one quart of warm water in the morning; stir until the glue is all melted, then stir in yellow ocher until thick as cream. Paint the floor with this, and when dry, go over it with linseed-oil. It is better to keep it warm while using. It makes a dark brown color, preserves the wood, is easily wiped up, and is cheap.

S. NAOMI WOLCOTT.

CARPET-STRETCHERS, CARPETS, ETC.

Mrs. E. M. S., one of the Household readers of FARM AND FIRESIDE, requests

of the editor that I tell for her benefit, and for the benefit of others also, where a carpet-stretcher can be bought for fifty or seventy-five cents, as stated in an article of mine in April 1st issue.

I cannot say definitely, but should presume that one could be found at any hardware-store of any size, or at least in any city hardware-store. The one in use at our home has been one of the house-cleaning implements in this family for eighteen years. I have looked in vain for the name of the carpet-stretcher, for, contrary to usual manufacturer usages, it is not engraved upon the article in question. The best I can now do is to describe it as accurately as possible, and to make further explanations concerning prices.

It consists of three pieces: First, a strip of hard wood eighteen inches in length, through which were driven nine steel nails two inches long, and upon passing through the wood are bent into the shape of steel teeth and sharpened. These teeth, as will be readily understood, take hold upon the meshes of the carpet when it comes to stretching the same. The second piece consists also of a piece of hard wood fifteen inches in length. At the end of this piece is a small iron hammer, very sharp at one point (the point that is driven into the floor near the base-board), while at the other end of the ham-

mer it is flat. This for the purpose of taking the blow from a large hammer (any common hammer), which drives it into the floor near the base-board, as described. This small hammer is furnished with a flat iron handle about three inches long, by which it is fastened to a hard-wood piece. Upon the upper side of this hard-wood strip there is an iron strip securely fastened, some twelve inches in length, and this strip is deep-notched its entire length. The third piece is simply a small iron tack-hammer, with tack-hammer attachment at one end of the same, and at the other end a hook. This hook catches into a V-shaped piece of steel found upon the first-described piece, and by this purchase the carpet is drawn tight, while another V-shaped piece catches upon the deep-notched places as the stretching process progresses, holding the carpet taut until tacked in place.

This description will tell you something of the style of article to be looking for when making inquiry for a carpet-stretcher, though not so definite a description as I would be pleased to give, did not language of description further fail me.

As to prices, this is the history: When a girl, an agent appeared at my mother's home at a very opportune time—for him at least. Mother was struggling with a new ingrain carpet when she heard the gate-latch click. Looking up from her low-down position she said, "Another agent! I'll soon dispose of him. I'm in no humor to tolerate a word from him!" But that agent doffed his hat, smiled pleasantly, and said, "Allow me to aid you, madame. I've an article here that is just what you are needing to-day." Kneeling upon the floor, he adjusted the carpet-stretcher, gathered up the surplus folds and wrinkles, folded under and tacked down, while the much-molified housewife looked on in astonishment. For it looked "just as easy!" And it was. "What's the price?" she asked. "Two dollars and a half," came the man's reply. She was again astonished. But there were more carpets to put down. She did not feel strong or a bit good-natured, and she was very soon the possessor of the carpet-stretcher, and the agent undoubtedly of a good $1.50 profit. A few years later, when beginning housekeeping myself, just such a carpet-stretcher was purchased for eighty-five cents. It is evidently as good as ever, except in appearances. Since then I have known housewives to purchase for seventy-five cents the very same make of stretcher. But the name I am not able to give of that carpet-stretcher.

And now a few words of warning and caution. Having secured such a stretcher, or any other kind of sharp-toothed stretcher, attend personally to the putting down of carpets. If placed in the hands of incompetent, don't-care hired help, from the work of that same stretcher you will reap disappointment and loss. When writing the article for April 1st issue of this paper carpets put down the spring before were just being taken up. Not able to attend to even the supervision of the putting down of them at that time, and only able to show the "girl" how to use the carpet-stretcher, irreparable damage was done to my carpets, as found upon looking them over this spring preparatory to laying them again. The sharp teeth had been caught irregularly into the carpet, too great strain brought in the stretching, and warp and filling threads broken. Great places are torn from six to ten inches from the edges of carpet all around.

In the hands of a careful operator carpet-stretchers are a veritable boon to the housewife. In the hands of the incompetent and indifferent they may prove worse than a delusion and a snare.

This spring, again unable to attend to the putting down of carpets myself, and having had sufficient of experience with incompetent operators of carpet-stretchers, the one we own was laid upon the shelf, a strong man hired to put them all down, and the stretching was all done by hand. First tacking down two sides of the carpet, he then by main hand force gathered every particle of slack, and about a foot from the base-boards put in tacks to hold it securely. Turning around, he then turned under, tacked down, and then removed those tacks that held the extra folds in place while he was working. The work was quickly and satisfactorily done. But a man's strength is required for such work instead of a woman's. At least the strength of the average housewife. Being able to put down the carpets yourself, you will find the carpet-stretcher described a

great aid. It simplifies matters exceedingly. I would not be without one. They are quite common, and you will surely find them by persistent inquiry.

ELLA HOUGHTON.

SEASIDE WORK-BASKET.

In planning for articles to take away with one on a summer trip one often misses the home conveniences. A work-basket is almost indispensable, so we give our readers one that can be folded flat.

For the bottom take a six-inch square of cardboard, cover with any pretty material, cover the sloping sides and sew only on the edge that is attached to the bottom, leaving the sides free. These are then tied at the corners with ribbon or braid, which is also quilled around the

edges as an ornamentation. Pockets are put on two opposite sides, and a cushion and needle-book on the other two. The handle is also detachable and tied on. When it is necessary to pack up, this can all be untied and packed flat.

It is nice at home also, as it can be readily dusted and cleaned.

BELLE KING.

FOUR CHOICE LEMON RECIPES.

LEMON SYRUP.—Into the juice of twelve lemons grate the rind of six, and let it stand over night. Make a thick syrup of six pounds of white sugar; when cold, strain the juice into it, and squeeze as much oil from the rinds as will suit the taste. Bottle, and keep in a cool place. A tablespoonful to a goblet of water makes a fine lemonade.

LEMON SANDWICHES.—Into a teacupful of slightly softened butter beat the raw yolk of an egg and a teaspoonful of French mustard. Rub smooth the yolks of two eggs that have been boiled for three quarters of an hour, and cooled; and into them rub one fourth of the butter, a teaspoonful of lemon-juice and a scant half teaspoonful of salt; add another one fourth of the butter, rubbing all well together, another teaspoonful of lemon-juice, and so on until all the butter and two tablespoonfuls of lemon-juice are used, rubbing all thoroughly. Spread evenly on very thin slices of bread, lay two together, cut into triangles, and serve with cold tongue or boiled ham.

LEMON-SNAPS.—One heaping cupful of sugar, two thirds of a cupful of butter, half a teaspoonful of soda dissolved in two teaspoonfuls of hot water, flour enough to roll thin; flavor with lemon. Cut into small fancy shapes, and bake in a quick oven.

LEMON PIE.—Moisten a spoonful of corn-starch and add to a cupful of boiling water, stirring until it boils clear; pour it over a cupful of sugar and a small lump of butter. When cool, add juice and grated rind of a large lemon and a well-beaten egg; stir thoroughly, and bake with one crust, adding a meringue when done.

CLARA S. EVERTS.

RECIPE FOR CANNING CUCUMBERS.

I have been a reader of FARM AND FIRESIDE for many years, and have received a great deal of information and many nice recipes, and as one good turn deserves another, I will send a nice recipe for canning cucumbers, as I have never seen it in print:

Peal and slice your cucumbers, and salt a little heavier than for present use; let them stand two hours, drain off the water, put them into a kettle, season well with pepper and vinegar, let them come to a boil; put into cans, and seal up tightly. They keep well, and are very nice to use through the winter and spring. S. F. V.

Our Household.

CONSTANCY.

If we no more should meet,
  And some day, weary of the noise and strife,
You'd let your tired feet
  Lead back to haunts where in the morn of life
We strayed, would summer roses seem as fair
  As on that other glorious bygone day,
When side by side we paused a moment there
  And dreamed that life would be an endless May?

If you should once more stand
  Beneath the tree where we were wont to rest,
Where once you clasped my hand
  And told me you would always love me best
Of all the world, would tender memories throng
  From out the years and make your heart beat fast?
Would the faint echoes of life's early song
  Speak to your soul of me and of the past?

If, as you stood, the light
  From the young moon should silver vale and hill,
As on another night,
  When we together heard the whippoorwill
Call to his mate, would the low plaintive strain
  Bring back a thought of her who, like the bird,
At twilight seeks the moonlit vale again
  And thrills her love-notes, though perchance unheard?

If from some shadowed place
  A shape should glide, and in the softened glow
You fancied you could trace
  The form of her you loved so long ago,
Would you shrink back from arms held out to you,
  Or would you clasp your old love to your breast,
Knowing through every change she had been true—
  In life, in death, she loved you first and best?
—Lottie Elgin, in New Orleans Picayune.

HOME TOPICS.

RHUBARB AND ORANGE MARMALADE.—Wash the rhubarb without peeling it, cut it into inch lengths, and weigh it; then to every pound of rhubarb add the pulp and juice of one orange, and for every three pounds add the thin yellow peel of one orange. Put the rhubarb and oranges into a stone jar or an agate kettle, add a tablespoonful of water for every pound of the rhubarb; set it in the oven, covered tightly, and bake until it is very tender; then rub it through a sieve, put the pulp into a preserving-kettle, with a pound of sugar for every pound of the rhubarb before it was cooked. Let boil twenty minutes, stirring it all the time with a silver or wooden spoon. Pour it into small pots or glasses, and cover as you would jelly.

PINEAPPLE CAKE.—Use any good layer-cake recipe, and for filling beat a teacupful of thick sweet cream until it is stiff, then add one half cupful of finely chopped pineapple, and powdered sugar to sweeten. A strawberry filling may be made by adding crushed strawberries to the cream instead of the chopped pineapple. This cake must be eaten soon after putting in the filling. The cake may be made the day before it is required, and then put together with the filling, and the top iced a few hours before it is to be served.

TO REMOVE STAINS.—The season of fresh fruit is also the season of stained

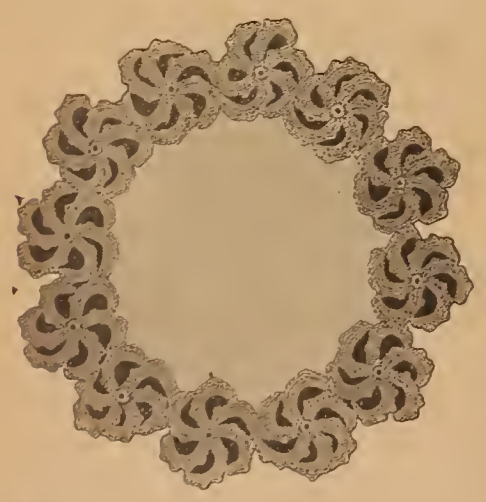


table-linen. I have found that nearly all fruit stains, as well as those of tea or coffee, may be removed by pouring boiling water through the stain. If you dissolve a little borax in the water it is still better.

Salt and lemon-juice will take out fresh iron rust if it is put on the spots, and then exposed to the direct rays of the sun. A friend tells me that a mixture of powdered borax and benzene in equal quantities will remove the worst cases of iron rust.

THE HOME-MAKER.—The time when the extra work will all be done, and they will have leisure to rest, is the will-o'-the-wisp of most housekeepers. Every season brings its extra cares and duties, and if rest is ever taken, it must be sandwiched in as we go along.

But let not the tired home-maker be discouraged and think she is wearing out her life in simple drudgery. No work for loved ones can be that. If she succeeds in making a home where husband and children love to stay, a home filled with peace and quiet happiness, she will have done a good work. The duty which lies nearest our hands is the one God wishes us to do first; if it costs us a sacrifice, so much the more is it acceptable to Him who gave his son for us. We are all of us apt to feel discouraged at times, and think we are doing no work in life's field;

"Yet where our duty's task is wrought
In unison with God's great thought,
* * * * * * * * *
Comes day by day the recompense."

MAIDA McL.

TWO PRETTY LINEN PIECES.

The first, which can be used for bureau-mats, is made of heavy white linen, with wheels for the edge made of No. 40 white cotton. As we have given the directions

before for crocheting them it is not necessary to repeat them. It takes twelve wheels to trim one.

The linen photograph-frame is made in arabesque and rococo work in white and gold, with the flowers in delicate pink.

BELLE KING.

TIMELY HINTS.

SAVING PATTERNS.—I went visiting the other day, and a friend showed a sampler of crochet and knitting patterns she had just finished, leaving room for others to come. It was pretty, neat and convenient, but enough work was there to trim a suit of underclothing; it must have taken hours and hours to have followed out some of the elaborate designs that might never be used, after all.

I went home and prepared a sampler, but on a different plan, and I think just as convenient. There was an old book, the covers of which were good, but the contents of no further value; every other leaf was cut an inch from the binding.

All the patterns in crochet, knitting or tatting that could be cut out of old papers were pasted into this book—each kind by itself. Yes, it was nothing but a scrap-book, quickly made, easy of reference. There are many patterns in papers for which we care nothing beyond present reading, and it takes but a short time to collect quite a boxful preparatory to pasting in the book. If something is desired from a nice magazine, copy the directions upon a white paper, and paste within your book. It takes infinitely less time than to work out designs with thread.

TO PREVENT BOILING MEAT FROM STICKING.—In boiling meat it often happens that it will stick to the bottom of the kettle and burn, even while there is plenty of water. Especially is this true of pork upon which there is left any portion of the skin that may come in contact with the iron. An old-fashioned wire teapot-stand dropped into the kettle, and the meat laid thereon, is a sure preventive of trouble. If one has no wire tray or stand of this description, it will cost but a few cents to procure one, and the expense will be saved in a few times of boiling the meat, where often a good big piece has to be thrown away because burned.

WHITE CARPET-RAGS.—What shall we do with so many white rags when there is no carpet to make? I saw such a pretty stand-spread the other evening made from finely cut white rags and woven like a rug (that is, a space left between every three or four threads of warp). Across each end were mixed in irregular stripes of blue for a border, the ends finished with a knotted fringe of warp.

What a nice pad such a spread of all white would make for the dining-room table to use under the table-cloth. Have it woven four inches wider than the table, so as to come over each edge, and thus save the wear on the table-cloth over the edge of the table. Do you not notice that there is where the linen always wears out first? A pad not only helps this trouble, but makes even a thin table-cloth look heavy; and if one has a very nice dining-table, there can be no question of the economy in providing a covering that shall protect the varnish from the hot dishes to be used. How one does dread to see a nicely polished table all covered with white spots! GYPSY.

THE BUFFALO-MOTH.

From all parts of the country comes the cry from the housekeeper, "What is this new pest that is upon us?" In our own home we had rather prided ourselves on our freedom from all pests and of our ability to handle even moths, the old-fashioned kind, that is; but one day last year when we thought we would clean a bedroom little used, the cry came from up-stairs, "Oh, mama, come quick!" I flew to answer the summons, and was greeted by, "What kind of bugs are these?" All along the edge of one side of the room were little black bugs covered with what seemed black hair. For a moment I was nonplussed, then I exclaimed, "I just believe those are the buffalo-moth!" I found later they were.

Now, this fiendish pest, instead of confining its ravages to woolen material, like the other moths, simply destroys everything—paper, linen, wood, wools—and, so far as I can learn, the only way to deal with it is just to keep constantly at it—eternal vigilance. Many of my neighbors last summer were obliged to loosen their carpets and lay them back from the base-boards, and keep watch for them. They seem to abound in furnace-heated houses.

The beetle that lays the egg is very small, being a day flyer, and can pass through a wire screen. The egg is laid, and then they go out again. The larvae develop rapidly, and remain alive an indefinite time, molting frequently and feeding upon their cast-off skins. These they cast about six times, and through the

North there are not more than two annual generations. They are supposed to have been brought over from Europe in insect collections.

When they attack carpets they eat irregular holes, and sometimes follow the cracks of the floors, cutting long slits in the carpets. Where the large rug is used, which does not come quite to the base-board, less trouble is experienced.

We give a magnified illustration of their appearance, *a* being the larva and *b* the adult. They are about three sixteenths of an inch long, black in color, but covered with minute scales that give them a mottled appearance.

Spraying with benzene is recommended, but rooms must be well aired after it, as it is very inflammable.

CHRISTIE IRVING.

Our Sunday Afternoon.

GO OR GIVE.

Who will go among the heathen,
  Wondrous words of life to teach,
That the Savior's love so precious
  May be known and shared by each
Who in darkness now is sitting
  Far beyond our power to reach?

Who will give to send the gospel
  To the dwellers o'er the sea?
Though from home we may not wander,
  By our offerings glad and free,
In the world's song of redemption
  Ours a glorious part may be.

WHY THEY DON'T GO.

BURDETTE hits many a nail on the head. How like human excuses are the following:

"So you are not going to church this morning, my son?

"Ah, yes! I see. 'The music is not good,' that's a pity. That's what you go to church for, to hear the music we demand.

"'And the pews are not comfortable.' That's too bad—the Sabbath is the day of rest, and we go to church for repose. The less we do through the week the more rest we clamor for on the Sabbath.

"'The church is so far away; it is too far to walk, and I detest riding in a street-car, and they're always crowded on the Sabbath.' This is indeed distressing. Sometimes when I think how much farther away the kingdom is than the church, and that there are no conveyances on the road of any description, I wonder how some of us are going to get there.

"'And the sermon is so long always.' All these things are indeed to be regretted. I would regret them more sincerely, my boy, did I not know that you will often squeeze into a stuffed street-car, with a hundred other men, breathing an incense of whisky, beer and tobacco, hang on a strap by your eyelids for two miles, and then pay fifty cents for the privilege of sitting on a rough plank in the hot sun for two hours longer, while in the intervals of the game a scratch band will blow discordant thunder out of a dozen misfit horns right into your ears, and come home to talk the rest of the family into a state of aural paralysis about the 'daudiest game you ever saw played on that ground.'

"Ah, my boy! you see what staying away from church does. It develops a habit of lying. There isn't one man in a hundred who could go on the witness-stand and give, under oath, the same reasons for not going to church that he gives to his family every Sunday morning. My son, if you didn't think you ought to go you wouldn't make any excuses for not going. No man apologizes for doing right."—Religious Herald.

THE PHOTOGRAPHER'S "DARK-ROOM."

We must all go in the shadow sometimes. The glare of the daylight is too brilliant; our eyes become injured and unable to discern the delicate shades of color or appreciate neutral tints—the shadowed chamber of sickness, the shadowed house of mourning, the shadowed life from which the sunlight has gone. But fear not; it is the shadow of God's hand. He is leading thee. There are lessons which can be learned only there. The photograph of his face can be fixed only in the dark chamber. But do not suppose that he has cast thee aside. Thou art still in his quiver; he has not flung thee away as a worthless thing. He is only keeping thee close until the moment comes when he can send thee most swiftly and surely on some errand in which he will be glorified. Oh, shadowed solitary one! remember how closely the quiver is bound to the warrior, within easy reach of the hand, and guarded jealously.—Rev. F. B. Meyer.

A GREAT MAN'S MOTTO.

It is said of the great Swedish botanist and scientist, Linnaeus, that he had placed over his door the motto, "Live inuocently; God is present."

Linnaeus was a busy man, and during his life classified and named all the known plants and animals of the earth, besides writing a great many books on plants, natural history and science; but he knew where to look for success, and believed that the only useful life was a Christian life. Beginning in poverty, he was lifted above want by his marked success in his profession, and he often told his friends that he was grateful to God only for the great success he had attained, counting his own work nothing compared with the assistance God had given him.

If God helped Linnaeus for being a Christian in his profession, he will help us, at home, in the office and in whatever we undertake, to succeed.

If we keep before us the motto, "Live innocently; God is present," it may save us many a regret when another year closes. It is a constant check-rein, guiding us to the right.—W. M. Smith.

SLANDER.

The most cowardly thing a person can do is to attempt to crush out the very life of another by hints and low insinuations. There are those who cannot see a good deed done without attributing to it a bad motive. Wrapping themselves up in a mantle of self-righteousness, they sit in judgment on their fellow-mortals and dig and probe, no matter how much it may hurt. No matter if they inflict a sting that may crush a life—how they gloat in almost fiendish delight when "they say" brings a whispered tale a shade darker than before.

Slander is envy's favorite child. It knows no honor.

'Twas but one whisper. One
That uttered low, for very shame,
The thing the slanderer dare not name,
  And yet its work was done.

'Twas but a venom'd word
That struck its coward, poisoned blow,
In craven whispers, hushed and low,
  And yet the wide world heard.

A hint! So slight, so low,
And yet so potent in its power,
A human soul in one short hour
  Was crushed beneath its blow.
—Bugle Call.

"HAVE YE RECEIVED?"

What? "The Holy Ghost." When? "Since ye believed." Acts xix. 2. A stirring question. There are many "believers" who, if this sharp, trenchant inquiry were made, would pause, hang the head, and, if honest, confess themselves lacking. This celestial vitalizer seems to be unknown to the great mass of believers. We who look for the Lord are altogether too destitute of the power of the Spirit. The fact is confessed and deplored. Does sin separate the loving, calming, comforting, reviving presence of the Spirit from our flocks and preachers? Will humility and confession make us a better and more efficient people? We ought to be the holiest, happiest, lovingest Christians on earth. Our faith demands consecration, otherwise we are in peril of the stigma "Ichabod." For one I yearn to "walk in" and be "led by the Spirit." Brethren, we may pride ourselves upon possessing soundness in doctrinal views, but how about this leading question? Now suppose we reinvestigate the Scripture teaching concerning the Holy Ghost in the church. And let preachers preach on the above text to their flocks. Try it, and speaker and hearer will be refreshed.—D. H. Taylor.

CHRIST'S LIFE.

"All the perplexity and painful distress, the dark difficulties that may dominate one's whole existence, would disappear if we would only learn that in Christ Jesus our eating and drinking, our sleeping and clothing of the body, are as much spiritual matters as falling upon our knees in prayer, or reading in God's holy word, or partaking of the holy communion at the table of the Lord. In Christ Jesus life is one, and there ought to be no division between things secular and things spiritual, things bodily and things heavenly; there must be one, absolutely one."—Union Gospel News.

POLITENESS AT HOME.

In family life do not let familiarity swallow up all courtesy. Many of us have a habit of saying to those with whom we live such things as we say about strangers behind their backs. There is no place, however, where real politeness is of more value than where we mostly think it would be superfluous. You may say more truth, or rather speak more plainly to your associates, but you ought not to do it less courteously than you would speak to strangers.

Our Miscellany.

Alas for Dives, whom every reformer wants to reform, whom every Socialist wants to strip, whom every Populist wants to loot, whom every demagogne wants to fatten on, and every promoter and philanthropist and college president and trustee of school or hospital or museum to "interest." Alas for him! There was an Attila who was a Scourge, and a Charles who was a Hammer. Our Dives is neither, hnt a far milder thing—a pocket. Every rascal tries to dip into him; good men warn him that he shonld relax his strings; bad men threaten to rip him np; and in the intervals between assaults his own conscience warns him that he has far more than his proper share of this world's goods. He is not happier in this world than most of us, and for the world to come the Scriptnre gives him only slight encouragement to hope for better times. What shall we say to him? Not much—there is no need: he talks to himself. But what we do say, let us say to him directly, and let it he comforting—if possihle. Let him try to he honest. That is all.—Edward S. Martin, in Scribner's.

FIRE-PROOF PAINTS.

Fire-proofing paints of effective quality are now prepared in different ways, of conrse no oily or greasy snbstance entering into their composition, the hlending agent heing simply water. One of the standard paints of this class is described in the Boston "Journal of Commerce" as consisting of forty pounds of powdered ashestos, ten pounds of aluminate of soda, ten pounds of lime and thirty pounds of silicate of soda, with the addition of any non-resinous coloring matter desired, the whole thoroughly mixed with water; that is, enough of the latter for prodncing a perfect hlend and rendering an easy application. Two or more coats of this is the rule in applying it to any wood surface, inside or outside a hnilding. Another formula involves the nse of forty pounds of finely ground glass, a like amonnt of ground porcelain, and similarly of china-clay or the same quantity of powdered asbestos, and twenty pounds of quicklime. These materials are ground very fine, and then mixed in sixty ponnds of liquid silicate of soda with water, as in the preceding formula: two or more coats, if necessary, are given. Each of these paints is applied with a hrush in the ordinary way, the drying being accomplished in a few hours: and if coloring matter is desired, the ahove proportions are varied accordingly. Further, if nsed one after the other, the following solntions are effectively fire-resisting: namely, a solntion of silicate of soda in water, and then a mixture of qnicklime, asbestos and some white lead.

SUCCESSFUL SUCCESS.

The wonderful success of the "Success One Horse Tread Power" made by Appleton Mfg. Co., Batavia, Ill., is hecanse of its construction being simple and strong, its operation easy and effective, and its speed effectively regulated and controlled hy the excellent governor accompanying each machine. Their two and three horse tread powers are equal in every respect to the one-horse Success.

You should send for their free catalogue of 150 pages describing their ontpnt of Ensilage Cntters, Feed Mills, Wind Mills, Sweep Powers, Corn Shellers, Wood Saws, etc.

HOW TO WRITE A CIRCULAR.

The constrnction of a paying circnlar requires care. For those who are interested in the prohlem we make the following snggestions:

Don't try to he funny: a pnn or racy headline is apt to be resented as facetions, or at best flippantly regarded.

Never quote goods below cost. Every one regards with suspicion an article of diet advertised helow cost.

Let your circulars be dignified and attractive. Remember that a circular is rarely kept for reference, and unless you present an idea worthy of repetition or comment in the head-line the fine print is apt to be overlooked.

Talk about quality, promptness, good measure and full weight. Never send out a trashy-looking circular; better send half as many well-printed ones. Convey the impression that you are well stocked and that your goods are the hest and your prices moderate.—Grocery World.

EXCURSION TO CHILLICOTHE.

Agents of the C. H. & D. Ry. in Ohio will sell tickets to Chillicothe and return on account of the Annual Encampment G. A. R. Department of Ohio, good going Jnne 14th, 15th and 16th, good returning nntil Jnne 19th, at one cent per mile for the round trip, short-line distance.

THE CANAL OF JOSEPH.

How many of the engineering works of the nineteenth century will there he in existence in the year 6000? Very few, we fear, and still less those that will continne in that far-off age to serve a useful purpose. Yet there is at least one great nndertaking conceived and executed hy an engineer which dnring the space of four thonsand years has never ceased its office, on which the life of a fertile province absolutely depends to-day. We refer to the Bahr Joussnf—the canal of Joseph—hnilt, according to tradition, by the son of Jacob, and which constitntes not the least of the many hlessings he conferred on Egypt dnring the years of his prosperous rule. This canal took its rise from the Nile at Asiut, and ran almost parallel with it for nearly two hundred and fifty miles, creeping along nnder the western cliffs of the Nile valley, with many a hend and winding, nntil at length it gained an eminence, as compared with the river-hed, which enabled it to rnn westward throngh a narrow pass and enter a district which was otherwise shut off from the fertilizing floods on wbicb all vegetation in Egypt depends. The northern end stood seventeen feet above low Nile, while at the southern end it was at an equal elevation with the river. Through this cut ran a pereunial stream, which watered a province named the Fayonm, endowing it with fertility and supporting a large population. In the time of the annnal flood a great part of the canal was under water, and then the river's current wonld rnsh in a more direct course into the pass, carryiug with it the rich silt which takes the place of manure and keeps the soil in a constant state of productiveness. All this, with the exception of the tradition that Joseph hnilt it, can he verified to-day, and it is not mere supposition or rumor. Until eight years ago it was firmly believed that the design has always been limited to an irrigation scheme, larger, no doubt, than that now in operation, as shown hy the traces of abandoned canals, and hy the slow aggregation of waste water which had accnmulated in the Birket el Querum, but still essentially the same in character. Many accounts have been written by Greek and Roman historians, snch as Herodotus, Straho, Mnrianus and Pliny, and repeated in monkish legends or portrayed in the maps of the middle ages, which agreed with the folklore of the district. These tales explained that the canal dng hy the ancient Israelite served to carry the surplus waters of the Nile into an extensive lake lying sonth of the Fayonm, and so large that it not only modified the climate, tempering the arid winds of the desert and converting them into the balmy airs which nourished the vines and the olives into a fullness and fragrance unknown in any part of the country, hut also added to the food supply of the land snch immense quantities of fish that the royal prerogative of the right of piscary at the great weir was valned at £250,000 annually. This lake was said to he 450 miles round, and to be navigated hy a fleet of vessels, and the whole circnmference was the scene of industry and prosperity.—Engineering.

WHEN TO THINK TWICE.

There are occasions when we must decide promptly, and without time for sober second thought, says an exchange. But they come to us rarely, and there is little danger of our mistaking them when they do come. Most of our decisions need to he made with deliberation. Thinking well over the matter often puts a different face npon the snbject. Especially is this trne when the mind is heated by temper. One who strikes while the iron is hot in this ease is very sure to regret it, and very likely to be mnch ashamed of it also.

A yonng man imagines his employer does not treat him with becoming respect. He reproves him for something he has done wrong, throws a badly written envelop into the waste-hasket, and directs him to write another, or something equally trifling, and the yonng man resents such oppressions. He replies that if he does not give satisfaction he prefers to leave, and the employer, to his astonishment, promptly accepts his resignation. Sober second thought comes pretty quick in such a ease, but it comes too late, and it is apt to he very sober. Ont of a place, with no very high commendation from the last situation, is a dull prospect for any yonng man to look out upon in the morning, especially with hoard-hill running on the same as ever. It is an additional aggravation, too, that the employer fills his place at once, and goes right on selling and making money, despite all his prophecies that he was on the "eve of hankruptcy."

A LARGE CORPORATION.

In a recent number of "Current Literature" an English writer asserts that "the greatest corporation on earth is the London and Northwestern Railway Company, of England, with its capital of $595,000,000, a revenue of $6,500 an hour, 2,300 engines and 60,000 employees, and repairs that cost $130,000 a month."

"Everything is made by the company," says this writer, "bridges, engines, rails, carriages, wagons and innumerable lots of other things, even the coal-scuttles, and the wooden limbs for the injured of the staff."

The Northwestern Railway Company is no doubt a gigantic corporation for a little country like England, and worth bragging about, hnt we have got a bigger one here in the United States that might absorb it very easily. The Pennsylvania railroad, for example, has a capital of $857,075,600 and 15,430 miles of track, which traverses thirteen states. It has 3,756 locomotives, which consume 10,000 tons of coal a day, and make runs equal to the distance aronnd the globe every two hours. It has 3,935 passenger-cars, 154,000 freight-cars, 350 Pullman cars and 241 other cars for construction and other purposes, making a total of 158,524 cars, which make a journey equal to the circumference of the earth in every eight minntes. These locomotives and cars, if placed npon a single track, would reach from New York to Chicago, or ten times the distance between Philadelphia and New York. The rails of the Pennsylvania railroad, if laid end to end, would encircle the globe and overlap about 4,000 miles. The total annual revenue of the road is $135,000,000—eqnal to $372,506 a day, and $15,525 every hour of the day and night—which is two and one half times as much as that of the Northwestern of England.

A LIBERAL HUSBAND.

"You have a charming home, sir, and if you will permit me to say so, you have a most amiable wife."

"You're right, my friend: I refuse my wife nothing, and she will tell you so herself. Come, open your month, Mary, and show the new set of teeth that I bought for you yesterday."—Europeau Exchange.

THE SUNSHINE STATE

Is the title of a generously illustrated pamphlet of sixteen pages in reference to Sonth Dakota, the reading matter in wbich was written by an enthusiastic Sonth Dakota lady—Mrs. Stella Hosmer Arnold—who has been a resident of the Sunshine State for over ten years. A copy will he mailed to the address of any farmer or farmer's wife, if sent at once to Robt. C. Jones, Traveling Passenger Agent, Chicago, Milwaukee & St. Paul railway, 40 Carew Building, Cincinnati, Ohio.

FRENCH TERMS USED IN COOKERY.

Consomme de hoeuf clair—Amber or clear soup.

Potage a la fansse tortue—Mock turtle soup.

Soupe a l'oignon—Onion soup.

Saumon, sauce homard—Salmon, with lobster sauce.

Truite saumonee—Salmon trout.

Macquereau frais a la maitre d'hotel—Fresh mackerel, with maitre d'hotel butter.

Sance a la hechamel—White sauce made with stock.

Sauce au persil—Parsley sauce.

Sance anx champiguons—Mushroom sauce.

Filet de hoeuf roti—Roast fillet of heef.

Selle de mouton rotie—Roast saddle of mutton.

Ragout de monton—Mntton stew.

Pouding an riz—Rice pudding.

Beignets de peches—Peach fritters.

Bouchees anx fraises—Strawberry patties.

WHY McCORMICK CHANGED FROM THE LEFT TO THE RIGHT HAND BINDER.

When binding was done hy hand the left-hand cut harvester was a necessity. The grain fell on the platform of the harvester and was delivered into the receiver with its heads toward the rear of the machine. The men stood in the receiver facing the grain. With the left-hand machine the heads of the grain are at the left hand of the man doing the hinding, so in taking ont the hundle with the hand aronnd it, he kept his position toward the hundle itself—that is, with the heads toward his left hand; hence, in making the tnck he shoved the ends under the hand toward the heads. Grain is handled by the shocker by grasping into the heads, and the tnck shonld therefore be toward the heads, so that it will not pull out. Before the time of hand-hinding harvesters all grain-cuttiug machines were made right-handed, and they were changed only to keep the tuck of the band toward the heads. But this change made the machine more unhandy for the team and driver. The hand-hinding harvester with men to do the hinding is out of date, and so is the left-hand machine, which has been snperseded hy the McCormick Right Hand Open Elevator, the success of which makes it seem highly probable that there will he no progressive mannfacturer hnilding left-hand machines in three years. The form of roller hearings used hy McCormick Harvesting Machine Company was patented in 1882, and is now to he found in all McCormick machines. The especially valuable feature of the McCormick roller bearing is seen in the form—or cage, as it is called—which holds the rollers from running together, and if for any cause the cage is taken from the shaft the rollers will not fall out and get lost.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query. In order that we may answer by mail if necessary. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Cucumber-beetle Remedy.—H. L. D., New Hampton, Iowa, writes: "Calomel (a white powder), one part, mixed with flour, two parts, put into an old pepper-box and sprinkled over young cucumber, melon and squash vines, will prevent the striped bug from destroying them."

Keeping Celery in Winter.—L. K., Burns, Iowa, writes: "How can you keep celery nice and fresh after it has come to maturity and the ground freezes up?"

REPLY BY T. GREINER:—The plants, full-grown, but not yet blanched, are taken up before heavy freezing, and set upright—rather close together—in trenches or in a regular root-house or root-cellar, where they are safe from freezing, and kept in the dark, with roots moist and tops dry.

Hay-caps.—J. H. S., White Bear Lake, Minn., writes: "Are hay-caps practicable? How should they be made? I cut clover only after the dew is off, rake it up the same day, and generally cock it up also, and then let it cure in the cock; but if during this time a rain sets in the clover is liable to get ruined. How can I prevent this?"

REPLY:—Hay-caps are very useful, particularly for clover hay. Make them out of common, heavy sheeting sixty inches wide, Tear the sheeting into squares. Hem the edges all around over a stout cord, leaving a loop of cord at each corner in which to place a wooden pin or large wire nail. Give the caps a good coating of linseed-oil.

Coal Ashes for Asparagus.—E. J. B., Harriman, Tenn., writes: "Would you advise using coal ashes as top-dressing for asparagus?"

REPLY BY T. GREINER:—Pure coal ashes have next to no direct fertilizing value unless they contain some wood ashes also, as is often the case where the fires are frequently kindled with wood, cobs, etc. Then these ashes are good plant-food, and I would not hesitate to use them as top-dressing for asparagus or any other crop; but in case of asparagus I would sift them to remove all coarse and sharp pieces. Even the clear coal ashes, carefully sifted, may serve a good purpose in improving the texture of heavy and sticky soils. But heavy applications of manure should go with it.

Millet Hay.—M. F. W., Advance, Texas, writes: "Is millet a good feed crop for horses, mules and cattle? If so, what is the best time to cut it? I have raised two crops of millet, each of which I cut when the first heads commenced to ripen. I fed the hay to my stock without any bad result, or rather, they fattened and did well; but some of my neighbors say that it will kill horses and mules, while others say it will stiffen them up so that they will never be of any account."

REPLY:—When cut early, millet makes very good hay. The important thing is to cut it in bloom or before any seed ripens. The troubles referred to in your letter come from feeding overripe hay. The sharp, stiff awns on the heads of ripe millet and Hungarian grass are injurious to stock, horses especially. You have experienced no bad results because you cut it in good time.

VETERINARY.

Conducted by Dr. H. J. Detmers.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

Wants Books.—L. L. S., Herington, Kan. Please send to a book-seller or publisher for a catalogue, and then select what you desire.

Numerous Small Warts.—M. B., Jeffersonville, Ill. It will be best to leave the numerous small warts of your heifer alone, and to wait with a little patience until they disappear.

Working a Brood-mare.—J. L., Negaunee, Mich. A brood-mare can do a great deal of slow work on a farm, and if good judgment is exercised, may be thus worked to within a few days before foaling, but it is not advisable to use her on the road for speed, hard pulling or under the saddle.

Diseased Tooth.—C. S., Bismarck, Ill. Your horse, it seems, has a diseased molar. Have the same examined, and the exact condition ascertained by a competent veterinarian, who after a careful examination will know what to do and how to treat the case.

A Broken Back.—H. E. T., Goode, Va. If, as you say, your pig has a broken back (the spinal column broken), you will have before this been saved the trouble of keeping the same. You ought to have butchered the pig as soon as the diagnosis was made.

Heaves.—A. E., Walsburg, Kan. Your horse is affected with what is usually denominated "heaves;" in other words, a chronic, feverless and incurable difficulty of breathing, frequently attended with coughing and discharges from the nostrils. Please consult answers headed "Heaves" in recent issues of this paper.

Repeated Attacks of Garget.—B. G. B., Dalton, Ky. Your cow, it seems, suffers from repeated mild attacks of garget, and all she needs is regular, more frequent and thorough milking. She receives good food, and probably is a great milker, and if such is the case, milking her twice a day is not often enough, as she is "in full milk."

Produces More Milk from One Teat than from Another.—A. P. D., Nottaway Court House, Va. If your cow produces more milk from one teat than from another, the cause either consists in a diseased condition or in an unequal development of the mammary glands. In either case it will be impossible to remove the cause, hence no remedy.

Ringbone.—D. O., Highgate Center, Vt. Any attempt to remove the lameness caused by ringbone and spavin during the summer months is very seldom of any avail. Therefore, if you did not take FARM AND FIRESIDE last December, I advise you to wait until next fall, when, probably in November, another article on the treatment of these diseases will be published.

Lampass.—G. Z., Waring, Texas. As there is no such disease as "lampass" it is not very well possible to prescribe for it. Maybe the food of your horse contains some acrid substances or is contaminated with fungous spores, insects, hairy caterpillars, etc. Ascertain the cause and remove the same, and if your horse is otherwise healthy, the foaming and slavering will cease.

Small "Lumps" in the Teats of a Cow.—M. C. D., Lexington, Kan. If the small "lumps" you complain of are, as you say, movable and can be milked out, by all means milk them out and be done with them, and then after they have thus been disposed of, see to it that the cow is regularly, sufficiently often and thoroughly milked, and thus avoid the formation of future coagulations.

Bloody Milk.—P. R. McC., Thurlock, Cal. Please consult FARM AND FIRESIDE of May 15th. In your special case I would advise you to feed six weeks before and four weeks after calving not so much heavy food or food so very rich in nitrogenous compounds, but to keep your cow on a decidedly lighter diet, and you probably will have no trouble. Your other cows not affected in the same way are probably less greedy or possess a more robust constitution.

Wood-ticks.—A. B. L., Ellenton, Fla. The best way of keeping your horse free from wood-ticks, of course, is to keep her away from the places where the wood-ticks are. Besides this a little grease or oil will make it uncomfortable for them; but as it is not advisable, and even dangerous, to grease the whole animal, an application of oil is either not sufficiently effective or more injurious than the ticks themselves. Single ticks, however, can be effectively removed by applying to each a drop of oil.

Probably Spavin.—W. H., Plainview, Neb. If you apply the term "hind knee" to the hock-joint, as some people erroneously do, your description would indicate that your horse has spavin. For particulars please consult FARM AND FIRESIDE of December 1st; or as the treatment of spavin is exceedingly seldom of any avail during the summer, wait until next fall, when you will find another article on spavin and ringbone in the columns of the FARM AND FIRESIDE, probably on November 15th.

Probably a Tumor.—J. S., Adams, Neb. What you call "a lump" in your horse's shoulder is probably a tumor, which can be removed by a surgical operation without any damage to the animal, provided a surgeon is available, competent not only to perform the operation, but also to bring the wound produced to healing by "first intention" or without any suppuration and tearing out of stitches. If such a surgeon is not available, I cannot advise you except to work the horse with a breast-collar that does not come in contact with the tumor.

Saddle-gall.—M. S. C., Harrington, Wash. Your saddle seems to be too low in the chamber. Have it changed, or if that is not possible, get a new one which fits and is high enough in the chamber so that it does not come in contact with the horse's spine; use felt blanket under the saddle, and see to it that the girts are always tight enough to prevent any slipping of the saddle, and you will have no further trouble, provided you sit straight in the saddle and do not shift your weight from one side to the other. If the bruised parts are yet sore, apply three or four times a day a mixture of olive-oil and lime-water, equal parts.

Stiff All Over.—J. M. L., Keuka, Fla. Your horse, it seems, has been overworked, perhaps in hot weather, and is stiff and lame in consequence of a degeneration of the muscular fibers of those muscles which have been the most severely damaged. Possibly some improvement may result if the animal can be exempted from work and be kept in a good pasture, but perfect recovery is out of the question. Your conditiou-powder, containing sixteen different ingredients, I suppose, is intended for a "cure-all" on the principle that if one ingredient fails there are fifteen more to do the work desired, and vice versa. I have no use for such "mixta composita."

Habitual Colic.—J. L., Forest Home, Ala. Horses that suffer from habitual colic, and, like yours, have an attack once a week, will sooner or later succumb, and nothing beyond very regular and careful feeding can be done, because the organic changes which constitute the predisposing cause—an extensive aneurism and an obliteration of several intestinal arteries—cannot be removed. If you wish to save the animal as long as you possibly can, then, besides regular feeding with perfectly clean and sound food, give the horse no water except from a good well or from a spring, and none possibly contaminated with worm-brood.

So-called "Grub in the Head."—F. G. B., Georgetown, Prince Edward Island. The best prevention consists in keeping the sheep away from pastures and fields adjoining timber and brush or surrounded by hedges at the time the fly (Oestrus ovis) is swarming. Tarring the nostrils of the sheep is resorted to by some shepherds, but it is doubtful whether it will do very much good, and I do not know of any "smear" that will be preferable.

Weakness.—B. G., Milan, Mich. The symptoms—trembling, excessive perspiration, foaming, etc.—shown by your mare when doing hard or moderately hard work are caused by weakness, probably, or possibly resulting from existing anomalies or defects in the organs of circulation or respiration (heart or lungs). At any rate, the animal appears to be unable to perform the work which the same is asked to do. It may be that the mare is altogether unaccustomed to hard work, and that if the same is gradually trained to it, the work in the course of time will be performed with more ease; but it is also possible that the mechanical proportions of the mare are so defective that not much improvement can be expected. Time and space will not permit to discuss your peculiar theories in regard to "overheating."

A Horny Scar.—J. M. H., Irvington, Ky. What you call a "lump" on your horse's foot appears to be a horny scar, such a one as is left behind by any wound below the horny wart, or so-called "chestnut," on a horse's leg if not brought to healing without suppuration. Such a horny scar is permanent and cannot be removed except in some cases by excision, which, however, unless the healing can be and is effected without any suppuration, or by "first intention," will leave behind just such a scar or possibly one that is still worse. All that I can advise you to do, unless you want to employ an expert surgeon to cut out the scar and to superintend the healing, is to endeavor to keep the scar as clean as possible, especially in wet weather, and then in the course of time it will somewhat decrease in size. You cannot accomplish anything by medicines.

Probably Vertigo.—D. C. D., Macomb, Ill. What you describe appear to be attacks of vertigo or possibly of epilepsy. The principal difference, as far the symptoms are concerned, consists in the presence of spasms in epileptic fits, and the absence of the same in vertigo; therefore, as you do not mention their presence I must conclude that the attacks are vertigo. Both diseases are incurable, and both render a horse dangerous, at least on the road, and therefore practically worthless. Still, attacks of vertigo can often be prevented if it is seen to it that the harness is perfectly fitting and that the horse is never hitched up immediately after a heavy meal, but is given a reasonable time for digestion. Further, the falling down of the animal during an attack of vertigo can often be prevented if immediately, as soon as the first symptoms make their appearance, the horse is blindfolded by covering his eyes with a cloth, a blanket or anything suitable that may be handy.

Weak in the Pastern-joints.—C. S. M., Kensington, Ohio. Perhaps your big horse is a loose-jointed and coarse-boned animal, which is not near as strong as his great size may induce one to suppose, and which in consequence, while yet a mere colt, undeveloped and without endurance, has been compelled to do much more hard work than he was able to perform. In such a case blemishes like the one described in your inquiry are often the unavoidable consequence. Its direct cause is a morbid relaxation of certain tendons and ligaments produced by overexertion while yet lacking firmness and solidity. The condition you describe is also known as unsteadiness in the joints and knuckling over in the pasterns. Time, good care and an exemption from at least all kinds of hard work will effect improvement unless the case is too old or too inveterate, and a little may also be accomplished by a proper distribution of the weight of the animal upon its feet by judicious shoeing and paring of the hoofs.

Raising a Colt by the Bottle.—W. M. F., West Union, S. C. A motherless colt can be successfully raised by the bottle, provided it is done with great care and no mistakes are made. During the first two or three weeks the young animal should receive sweet and fresh cow-milk diluted with an equal amount of warm water of a temperature that will give the mixture a temperature of ninety-seven or ninety-eight degrees. To this diluted milk should be added a little of the best white sugar—just enough to give it the sweetness of mare's milk. Until the young animal has learned to drink, the milk is best given with a bottle with a good, strong rubber nipple (like one used for babies). That bottle and nipple must be kept scrupulously clean and sweet is self-evident. After about two or three weeks the fresh and sweet cow-milk may gradually be less and less diluted in such a way that when the colt is twelve weeks old the milk is given unadulterated or without any addition of water. Meanwhile it will be well to have a paddock, or a piece of pasture, with good, sweet grass, and close to the house, at the colt's disposal, where the same will soon learn to nibble a little grass. At an age of three months the colt may be taught to eat oats, and then the daily quantity of cow's milk may be gradually decreased by again diluting it, so that it is all, or nearly all, water by the time the colt is six months old. Still, if there is plenty of milk, a longer continuance of the milk diet will do no harm to the colt.

Pig-eating Sows.—T. W. B., Mississippi. You want too much for nothing, otherwise you would not ask for an immediate reply for a two-cent stamp. If sows eat their pigs, the cause consists in a vitiated appetite produced by an improper diet and a want of animal food and sufficient exercise. If a sow has once done it, it is always best to exclude that animal from breeding, and to prepare her for the butcher, to be converted into pork. It can be prevented only if the sow is closely watched for a day or two after pigging, and, to some extent, after the pigs have become active enough, by putting fenders in the pig-pen.

Chronic Urticaria.—C. E. S., Hollywood, Ala., and N. W. S., Casselman, Pa. What you describe seems to be chronic urticaria. It is a disease in which the prognosis, on the whole, is not very favorable. Professor Dieckerhoff recommends to give to a full-grown horse daily for several weeks in succession from ten to fifteen grains of arsenious acid mixed with the food or with a pinch of salt, or else either three drams of iodide or bromide of potash in the water for drinking. The itching sensation may be reduced by washing the swelling with either a three to five per cent solution of carbolic acid or of creolin (Pearson) in water.

$200 IN PRIZES

TO FARM AND FIRESIDE SUBSCRIBERS.

The publishers of FARM AND FIRESIDE request each and every reader to turn to page 19 and read the particulars of their word contest, which closes **June 30, 1897.** It is very important that all those who are going to enter the contest begin on their list of words immediately, and send them in at an early date. Those who put it off will find the month of June soon gone and their chance to get the bicycle, gold watch, etc., past. Parents will do well to encourage their boys and girls to enter the contest. It is easy, yet instructive, and they may win one of the twenty-five prizes. See page 19.

Smiles.

HER COURTSHIP.

A man of modern science wooed
A maiden of accepting mood.
Who, dreading lest contagion might
Do mischief to her chosen wight,
With sol. hichlorid washed her hair
And likewise all her featnres fair.

She rinsed her month with Listeriue,
And held her snow-white teeth hetween
A pad of antiseptic gauze,
Covering her nose, as well as jaws,
Which formed a sort of respirator
Between them and her osculator.

But this reminds: I should have told
That these were things he'd taught of old,
With others which I may not tell, in
Regard to spots that germs iught dwell in.
She was a wise professor's daughter,
And practised all which had heen taught
her.

So this good medicine-man, with pride
Clasping his antiseptic bride,
In disinfected murmur low
Asked why she loved her doctor so.
And softly nestliug down, she sighed,
"You're snch a dear old germicide."
—Boston Medical and Surgical Journal.

HE PLAYED THE DRUM.

"Your talk ahout determining people's occupations hy their faces sounds to me a good deal like tommyrot," said the man in golf stockings to the smart physiognomist, who had heen trying to impress a street-car audience with the extent and accuracy of his attainments; "there is a good deal more to he learned from their general physique, the set of the shoulders, condition of their various mnscles, etc."

"I'll bet you five," replied the physiognomist, "that you can't come within forty rods of judging the occupation of the man sitting next to you."

"I'll take that bet! Getting money as easily as that beats working for it all hollow this weather."

The man in the golf stockings studied his subject carefully from all the points of view. Then, having ohtained permission, he felt of his arm. It was hard as iron.

As he did this a smile of triumph spread over the features of the man in the golf stockings.

"You are a hardware dealer!" he exclaimed, triumphantly, to the suhject. "Is that not so?"

"Nein," the man replied; "I blay der bass drnm in der Wagner orchestra."—Buffalo Express.

REVISION NEEDED.

Wilkins—"Such idioms as 'Between the devil and the deep sea,' though very expressive, are not exactly up-to-date."

Simpson—"They're not? Well, how would you improve on the one you quoted, for instance?"

Wilkins—"Well, I think a more modern plan would be to say 'Between the trolley-car and the schorcher.'"

EXPLAINED.

The new boarder—"Why does the landlady persist in burning the sausages black every morning?"

The old-timer—"Don't you know? She's in mourning for her dog."—Cleveland Plain Dealer.

SKEPTICAL.

General Philip Sheridan, according to the Spokane "Review," once visited the Spokane Indians and had some interesting experiences.

One day Sheridan related to the Indians, through an interpreter, the wonders of the railroad, and then waited to see what effect the revelation would have upon them.

"What do they say?" he asked the interpreter.

"They say they don't believe it," was the answer.

Sheridan then described the steamboat, and the interpreter repeated this.

"What do they say to that?" the general asked again, seeing the Indian faces all passive.

"They say they don't helieve that, either."

Then the general gave an account of the telephone, and told how a man heard at the other end of it. The interpreter remained silent.

"Well," said the general, "why don't you interpret that to them?"

"Because I do not helieve that story myself," answered the interpreter. He was a conscientious man, and could not assume the moral responsihility of repeating such an incredihle tale.

SOMETHING ABOUT SLEEPERS.

Here is an amusing play upon the word sleeper, showing great ingenuity of construction and illustrating the curiosities of language. It will puzzle the careless reader.

A sleeper is one who sleeps. A sleeper is that in which the sleeper sleeps. A sleeper is that on which the sleeper which carries the sleeper while he sleeps runs. Therefore, while the sleeper sleeps in the sleeper, the sleeper carries the sleeper over the sleeper under the sleeper until the sleeper which carries the sleeper jumps off the sleeper and wakes the sleeper in the sleeper hy striking the sleeper under the sleeper, and there is no longer any sleeper sleeping in the sleeper on the sleeper.

GOOD ADVICE.

"My son," said the graybeard, "you are ahout to go forth to do hattle with the world."

"Yes, father," answered the young man.

"One of the first things you should learn, my boy," the old man continued, "is to learn to say no.'"

"I think I understand."

"I dunno whether you do or not. The point I am trying to get at is that the habit of saying 'naw' and 'nit' was all right while you were in college, but it ain't the correct thing for a business man."—Cincinnati Enquirer.

RIGHT TO THE POINT.

"Where do all the pins go to?" said a Harlem girl to her hest heau when the talk ahout hicycles had lapsed into ohnoxoius disquietude.

"I'm pretty sure I know where a million of them go," he answered.

"Indeed? Why, where?" she asked, with a start of surprise that made him withdraw his arm hastily from around her belt.

Gazing ruefully at the brand-new scratches on his wrist, he pointedly replied, "They go to waist."

The next time he called she wore her hrother's ulster.—Judge.

BICYCLE AILMENTS.

"Brother Jim has the hicycle face, Joe has the hicycle hack and sister Sue has the bicycle leg."

"Any other hicycle ailments in your family?"

"Well, papa says he has the hicycle pocket-book, and it's hadly punctured."

TITBITS.

Lawyer—"Did you kill your cousin only, and no other member of the family?"

Prisoner—"Yes, only my cousin."

Lawyer—"What a pity! Had you murdered the whole family, I might have got you off on a plea of emotional insanity."—Fliegende Blaetter.

"I beg your pardon," said the passenger in the long linen duster, leaning over the back of the seat in front of him, "but would you mind tellin' me how your nose got knocked all over to one side, the way it is?"

"Not at all," cheerfully responded the passenger on the seat in front; "it was done one time when I poked it into other people's husiness."—Chicago Tribune.

The minister entered the cottage of one of his parishioners, whence proceeded sounds of woe. Within a man sat sobbing over the fire.

"What's the matter, Donald?" asked the sympathetic clergyman.

"Oh, sir" (amid sobs), "Duncan McTavish's wife's dead!"

"Well, but I didn't know she was any relation of yours, Donald."

"No, she's no" (more sobs); "she's no, but it just seems as if everybody was gettin' a chance but me!"—Answers.

40 Cent Patterns for 10 Cents

Any TWO Patterns, and Farm and Fireside One Year, 35 Cents.

These patterns retail in fashion bazaars and stores for twenty-five to forty cents each, but in order to increase the demand for our paper among strangers, and to make it more valuable than ever to our old friends, we offer them to the lady readers of our paper for the remarkably low price of only **10 Cents Each.**

Full descriptions and directions—as the number of yards of material required, the number and names of the different pieces in the pattern, how to cut and fit and put the garment together—are sent with each pattern, *with a picture of the garment to go by.* These patterns are complete in every particular, there being a *separate* pattern for *every single piece* of the dress. Your order will be filled the same day it is received.

For ladies, give BUST measure in inches. For SKIRT pattern, give WAIST measure in inches. For misses, boys, girls or children, give both BREAST measure in inches and age in years. Order patterns by their numbers.

Satisfaction guaranteed or money refunded.

To get BUST and BREAST measure, put the tape measure ALL of the way around the body, over the dress close under the arms.

Special price of each pattern, 10 cents.

Postage one cent EXTRA on skirt, tea-gown and other heavy patterns.

No. 7033.—BOYS' COSTUME. 10 cents.
Sizes, 2, 4 and 6 years.

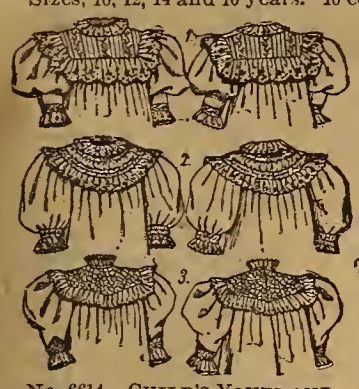
No. 7011.—MISSES' SHIRT-WAIST. 10c.
Sizes, 10, 12, 14 and 16 years.

No. 7044.—LADIES' JACKET, CLOSED WITH A FLY. 10 cents.
Sizes, 32, 34, 36, 38 and 40 inches bust.

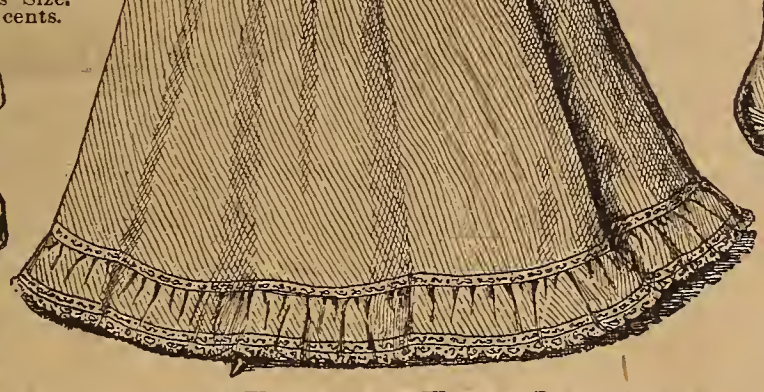
No. 7005.—LADIES' TUCKED SHIRT-WAIST.
Sizes, 32, 34, 36, 38 and 40 in. bust. 10c.
No. 7006.—Same Pattern—Misses' Size.
Sizes, 10, 12, 14 and 16 years. 10 cents.

No. 7049.—LADIES' BLAZER. 10c.
Sizes, 32, 34, 36, 38, 40, 42 in. bust.

No. 7009.—LADIES' SHIRT-WAIST. 10c.
Sizes, 32, 34, 36, 38, 40 and 42 inches bust.
No. 7010.—Same Pattern—Misses' Size.
Sizes, 10, 12, 14 and 16 years. 10 cents.



No. 6614.—CHILD'S YOKES AND SLEEVES. All three for 10 cents.
Sizes, 1 and 2 years.



No. 7043.—LADIES' WRAPPER, WITH WATTEAU PLAIT. 11 cents.
Sizes, 32, 34, 36, 38, 40 and 42 inches bust.

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Sizes, 4, 6, 8, 10 and 12 years.

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"The Arts of Beauty" has heretofore been sold entirely by agents, and never for less than a dollar and a half a copy. We purchased the right to print an edition of this splendid book, and in order to procure thousands of trial subscribers, we offer it at the marvelously low price named below. This premium edition is exactly like the agents' edition in every particular except that it is not expensively bound. It contains every word found in the agents' edition, which sells for $1.50 a copy. It has 256 pages. Satisfaction guaranteed or money refunded.

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This book will be given free as a premium for a club of two subscribers to Farm and Fireside.

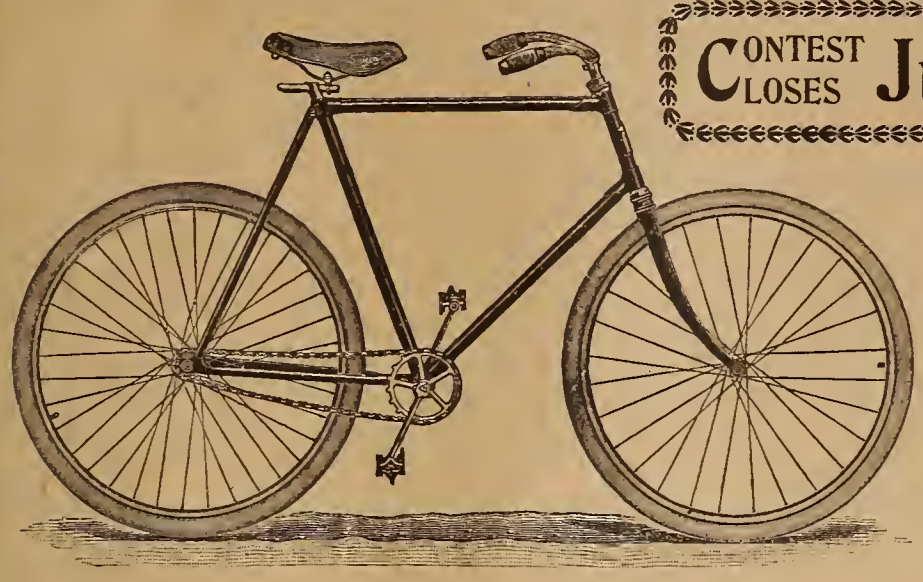
(The subscribers may accept any of our premium offers in this issue, and may enter the word contest, which closes June 30th. See page 19.)

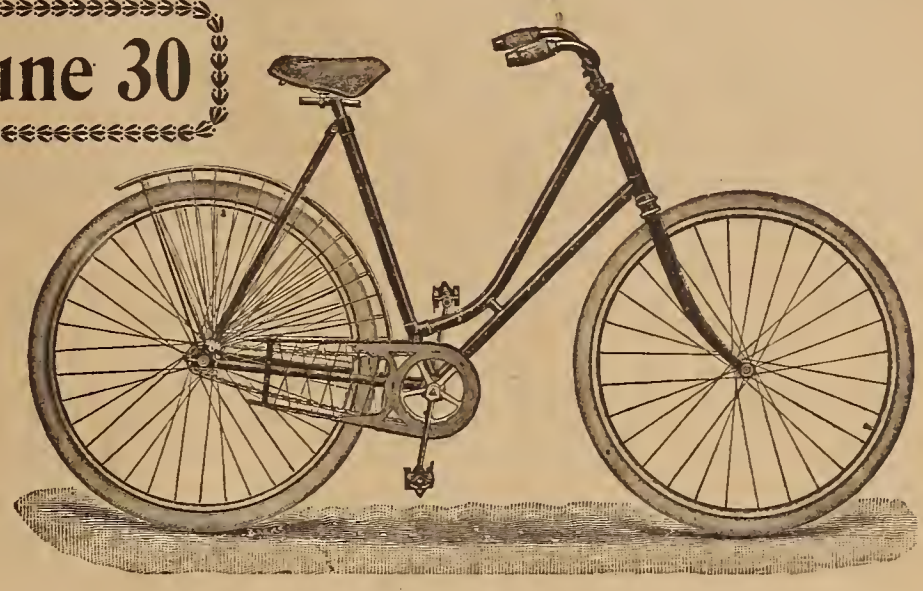
Postage paid by us in each case.

Address FARM AND FIRESIDE, Springfield, Ohio.

$100 Bicycle Free to Winner of First Prize

CONTEST CLOSES **June 30**





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We offer valuable prizes for the largest number of words which can be spelled with the letters found in the three words "FARM AND FIRESIDE." Work it out as follows: A, add, are, arms, far, farm, farmed, farms, fee, fife, etc. Each letter may be used as desired, but not more times than it appears in the words "Farm and Fireside." Words spelled exactly alike, but having different meanings, count as ONE word only. DO NOT use proper nouns, as names of persons and geographical words, or obsolete and foreign words, for they will not be counted; all other words, including plurals, will be allowed. Any dictionary of the English language in common use may be consulted. ☛Contest closes June 30, 1897.☚ (See subscription offers on page 14.)

1st Prize,	For the largest list of words sent us,	One Bicycle (ladies' or gents'),	$100.00
2d Prize,	For the second largest list,	One Sewing-machine,	50.00
3d Prize,	For the third largest list,	One Gold Filled Watch,	20.00
4th Prize,	For the fourth largest list,	One Silver Watch,	6.00
5th Prize,	For the fifth largest list,	One Silver Watch,	4.00
Twenty other prizes for the twenty next best, valued at $1 each,			20.00
	Total value of prizes,		$200.00

Conditions In order to be entitled to enter this contest, the contestant must accept some one of our subscription offers made in this or previous issues of Farm and Fireside. The list and the order for the subscription must come in the SAME envelop. The list of words must be written on a separate piece of paper and signed with the sender's name and address. Write the words in columns and number each word, beginning with **1.** Words beginning with the same letter must be written in the same column. This contest is for one month only; that is, it will close June 30, 1897. Present subscribers entering the contest will have their time extended.

In case of a tie, the sender of the largest list of words first received by us will get the first prize, and the sender of the largest list next received by us will get the second prize, and so on. Farm and Fireside is mailed so as to reach all subscribers on about the same day. We will stamp each list with the date and hour it is received in our office. Persons living in Springfield, Ohio, and Clark county, Ohio, will not be allowed to enter the contest.

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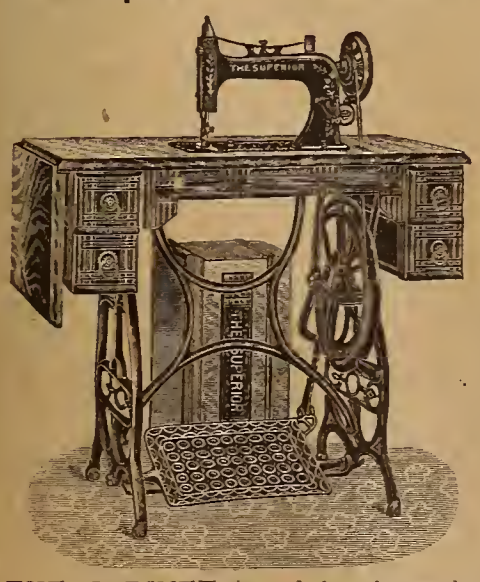

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☛Contest Closes June 30, 1897.☚ **Address FARM AND FIRESIDE, Springfield, Ohio.**

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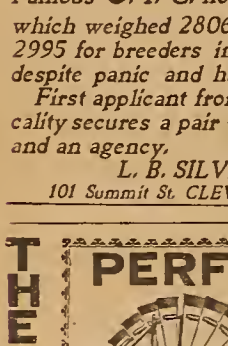

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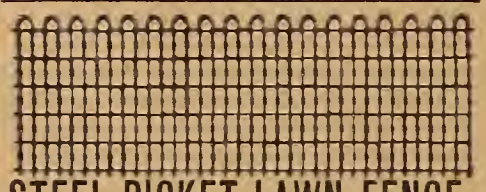

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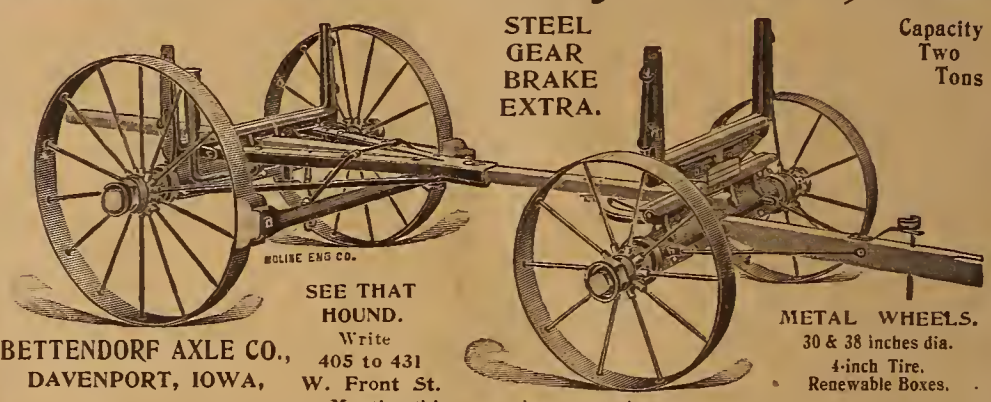

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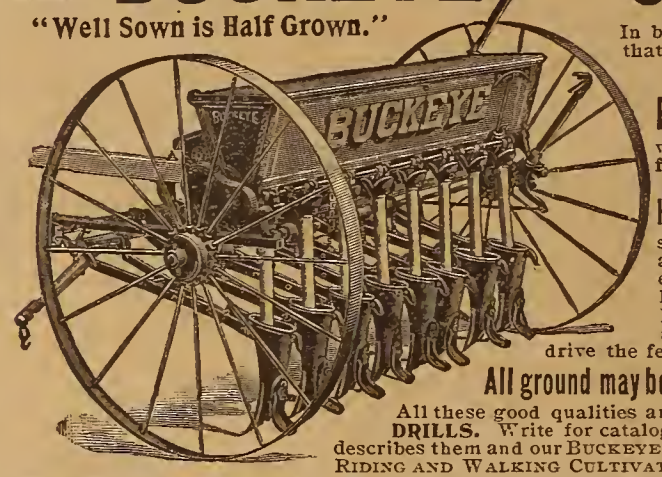

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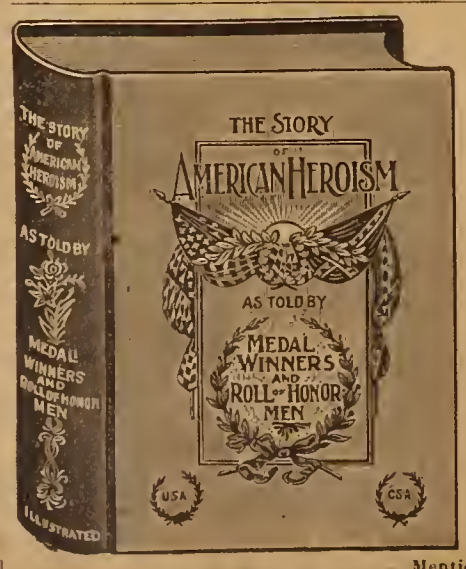

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EASTERN EDITION.

Entered at the Post-office at Springfield, Ohio, as second-class mail matter.

VOL. XX. NO. 18. JUNE 15, 1897. TERMS { 50 CENTS A YEAR. 24 NUMBERS.

WITH THE VANGUARD

GEORGE EDWIN MACLEAN was born August 31, 1850, in Rockville, Conn. His preparation for college was made in Westfield Academy and Williston Seminary. He was graduated from Williams College in 1871, and completed the theological course at Yale in 1874. He married a student from Mount Holyoke Seminary, and was settled in two successful pastorates. Between the years 1881 and 1884 Mr. and Mrs. MacLean were in Europe. He matriculated in the University of Leipsic, and devoted himself to philological and historical study, in biblical exegesis and criticism in English, particularly in the field of Old English. He spent the winter term of 1882-83 in the University of Berlin. The following spring a visit was made to England to study Old English manuscripts at Cambridge, Oxford and the British Museum. In the summer of 1883 he took the degree of Ph.D. at Leipsic. During these years of study he traveled extensively upon the Continent and in Great Britain.

In February, 1884, Dr. MacLean was invited to occupy the chair of English in the University of Minnesota, and later was elected to this chair. At the expiration of seven years of service the regents gave him a year's leave of absence, which was spent abroad in study and travel. He returned to his duties in December, 1892. In 1895 Williams College conferred on him the degree of LL.D.

In 1895 Dr. MacLean was elected chancellor of the Nebraska State University, which office he still occupies. He spent the summer of 1896 in England, Holland and Germany, studying the work in the agricultural experiment stations. He is a member of the London and American philological societies, and the author of several works on English language and literature. Dr. MacLean is a deep scholar and an enthusiastic worker.

DOS PASSOS' proposition to form an "American Credit Foncier" is receiving considerable attention. The ostensible purpose of the scheme is to assist the farmer to obtain loans on easy terms, but the charter he is endeavoring to secure from Congress covers a great variety of objects. The scheme in its present form will not stand the searchlight of investigation. "Bradstreet's" speaks of the proposition as follows:

"The discussion of a lack of banking facilities in some portions of the country, and the desire of American agriculturists for better opportunities to borrow money on real-estate security, have directed attention anew to 'mortgage banks.' The depression in business of the past three or four years has borne hard upon the farmer, as well as upon the merchant, manufacturer and wage-earner, as shown by the record of losses or disaster to loan and investment companies, no less than to savings banks and banks of discount, hence the proposition to establish a Credit Foncier here, an institution with large capital to make loans on farm property, may well be cousidered with mature deliberation.

"Heretofore western farm loans by mortgage loan or other investment companies have been rendered possible by reason of the high rates of interest paid. Capital would ordinarily have sought security for which there was a readier sale, as money lent at not more than five or six per cent on approved marketable securities, while farm loans paid, with interest and 'commissions,' ten, and even twelve per cent. But the evil days came, and the farmer found he could not pay that rate of interest, even if he ever could. In some instances the lenders have had to carry the loans, and in others they have suffered even greater loss. The proposition to form a gigantic American farm-mortgage bank with a French name will be welcome to holders of farm lands, but the suggestion has two sides to it, neither of which should be ignored.

"In England private investors, insurance companies and other wealthy lenders have been glad to lend money 'on easy terms' on real property, and the mortgage bank has not flourished there. Elsewhere the record is almost uniform, that while the demand for money on this class

GEORGE E. MACLEAN, LL.D.

of security is large, capitalists are less disposed or can less afford to invest their money on such non-marketable security. The outcome, as explained by the London 'Financial News,' has been the formation of mortgage banks 'which lend on the mortgage of real property up to a certain perceutage of the tax value, and issue bonds to procure the requisite funds.' Even a brief examination of the results of this form of financiering shows that, as in the United States, the principle has been abused in new countries where the value of the land varies widely. Unless the transactions of such banks are under the control of trustworthy experts, or where too much latitude is given those in charge, the consequences have been and are likely to be disastrous, illustrations of which are found in the cedulas of the Provincial Bank of Buenos Ayres and the loans at inflated values of real estate by the Banca Romana."

THE discussion on this subject has renewed interest in the idea of establishing postal savings banks in the United States. In a recent letter to the Philadelphia "Inquirer" Hon. Robert P. Porter says:

"It is time this question was taken up seriously. The establishment of such a system would be of incalculable benefit to the government, and its influence in counteracting the anarchistical tendency of the times would be great. The last available report shows in the United Kingdom 5,748,239 open post-office savings accounts; this means that five or six millions of people have direct financial dealings with the government. The effect of such an army of thrifty men, women and children dealing with their own government must be beneficial."

Nearly twenty years ago Mr. Porter, at the request of an official in the Post-office Department, made a special study of this question, and he gives the provisions of a carefully drawn bill for the establishment of postal savings banks that was introduced into Congress in 1878.

"If this bill had become a law," he says, "we should have had several million depositors, and there are strong probabilities that it would have ended all the wild financial notions that have brought so much disaster to the people of the country. It would have also saved hundreds of millions of dollars of the people's savings, much of which has been lost in speculation and in investments that were certain to come to grief."

After referring to the system established in England by Mr. Gladstone, Mr. Porter continues as follows:

"The growth of this popular system of saving in England has been steady and remarkable. Instead of injuring private savings banks, they have gone on increasing in their deposits, the post-office savings banks apparently gathering up the fragments which before their establishment were squandered and wasted or lost in foolish and unreliable investments. Beginning in 1861 with deposits of $8,473,620, we find a steady increase year by year, until in 1876 there were 3,166,137 deposits, and a balance on hand of $140,557,825. These figures were the latest data in the address referred to above. Since then these depositories of the people's savings have trebled their business, and the balance on hand, exclusive of investments in government stocks, now exceeds $400,000,000. The last report at hand shows the annual amount received to be $135,000,000; paid out, $110,000,000, and the capital over $402,000,000.

"It would seem to me the success attending the establishment of this system, not only in England, but on the Continent, would commend it to the people of the United States. The country will recognize at once the universal boon of a bank thus maintained at the public expense, secured by public responsibility, with the assets of the republic for its capital, with a branch in every town and village, and numerous branches in every city, open at almost all hours, and paying a fair amount of interest. Surely, here we have a subject for the monetary commission to consider, should the bill appointing one pass at the extra session. The establishment of these banks would, in my opinion, do much in ultimately winning over the vast masses of the industrial classes of the United States—the loyal citizens, not the capitalists—to those habits of forethought and self-denial which bring enduring reward to the individual and materially add to the safety of the state."

FARM AND FIRESIDE

PUBLISHED BY

MAST, CROWELL & KIRKPATRICK.

OFFICES:

108 Times Building, New York City. Springfield, Ohio. 1643 Monadnock Block, Chicago, Illinois.

Subscriptions and all business letters may be addressed to "Farm and Fireside," at either one of the above-mentioned offices; letters for the Editor should be marked Editor.

TERMS OF SUBSCRIPTION:

One Year - (24 Numbers) - 50 Cents.
Six Months - (12 Numbers) - 30 Cents.

The above rates include the payment of postage by us. All subscriptions commence with the issue on press when order is received.

Subscribers receive this paper twice a month, which is twice as often as most other farm and family journals are issued.

Payment, when sent by mail, should be made in Express or Post-office Money-orders, Bank Checks or Drafts. WHEN NEITHER OF THESE CAN BE PROCURED, send the money in a registered letter. All postmasters are required to register letters whenever requested to do so. DO NOT SEND CHECKS ON BANKS IN SMALL TOWNS.

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NOTES ON RURAL AFFAIRS.

What To Do with the Commission Man.

Against the losses that farmers everywhere suffer from their dealings with dishonest or fakir commission dealers the taxes which they pay directly or indirectly to the towns, counties or state or into the national treasury pale into insignificance. One single Chicago firm last fall robbed a dozen of the apple-growers in this town of about fifty car-loads of apples. Where is the farmer who, making regular shipments of eggs, butter, poultry, calves or other country produce to city commission-houses, could say that he had never been cheated? Friends of mine who ship honey to the different larger cities of the East always count on some loss through defaulting or failing commission men every year. Who could tell the sum total of all these losses to the farmers of the United States? Undoubtedly it would run into many, many millions of dollars.

* * *

The "Chicago Produce," in a recent article, bewails the fact that so many fakirs and scoundrels infest the city commission trade, and considers the problem a difficult one to deal with. The "New York Farmer," commenting on this, thinks "that there is ample ground for complaint. Nevertheless there are in all large cities high-toned, honorable men in the commission trade, and they can be found if produce-shippers will take the little necessary trouble. There is one trait among shippers—a most unfortunate one, which makes the business of the fakir commission man so profitable—that of being misled by promises of high prices, prices above the market, into shipping produce to them. In most cases a small consignment is first made, which is generally paid for. This is followed by a larger one, when the trouble begins, and it is never heard from.

"When a farmer finds a commission man who deals fairly with him he should stick to him until he has good reason for cutting loose. He will best care for his interests in this way."

Within the past six or eight months a Buffalo commission man got into the meshes of the law. Possibly he was honest enough when, years ago, he started in the business. But the temptations which be found in lack of control were too strong for him, and he got to cheating shippers right and left, and simply neglected to make returns. Judge King, of the city police court, in one case fined him fifty dollars, when the man should have been given an additional six months.

* * *

It may be true that we have laws enough to make commission men come to terms, but the machinery of law is a rather unwieldy one for farmers to handle, and expensive besides. The remedy suggested by the "New York Farmer," namely, to stick to the old-established, long-tried and not-found-wanting commission man, is good so far as it goes. But we have occasionally lost money even in strictly adhering to this rule. My plan is to ship produce to near cities in preference to those at a greater distance, and then follow up the produce, and watch the commission man until the money is in my pocket. But the majority of shippers are not in the situation to do this. They have to trust the commission man, and wait until he is pleased to make his returns. The only thing they can do, in many cases, is to keep at their man with letters urging reports and remittances.

* * *

Putting Commission Men Under Control.

Various schemes have been proposed to control the commission trade and drive dishonest dealers out of business. The California scheme puts the commission man under a bond of ten thousand dollars. It seems that in one sense a commission merchant might be considered a public officer, and I can see no objection to putting him under the control of the state, or even national government. No commonwealth, no corporation, no bank or other large concern will put an employee in a responsible position without requiring adequate surety. Yet here is a man (the commission merchant) handling thousands of other people's dollars who gives no bond, is under no control whatever, and therefore finds himself surrounded by the strongest temptations. No wonder the business is a popular one with sharpers of all sorts. No wonder that even those who start in with honest intentions and honest inclinations soon learn to be tricky and dishonest. Opportunity makes thieves. The commission trade is one of the best training-schools to turn out rascals. No man should be allowed to receive consignments on commission without being under proper bonds; and if the state cannot take control of this matter, a "farmers' protective association" might do this by binding its members to ship only to commission men who have voluntarily put themselves under bonds to the association "for good behavior." Such a move would be in the interest of the honest dealer just as much as in that of the shipper. The former suffers much from the competition of the fakir in the trade, and from the bad reputation into which the fakirs have brought the whole commission business.

* * *

One of the Michigan local horticultural societies (South Haven and Casco) is trying to fight fraudulent commission merchants in a similar way. It has resolved that "every member of the society who has good reason to think any firm with which he has had dealings is unreliable or dishonest shall report the same to the secretary, with a written complaint and a brief statement of the evidence. This shall be delivered to the executive committee, who shall carefully examine the same and give the complainant a chance to be heard, also notify the person or firm of such complaint, and if a majority shall be satisfied that a case has been made against the offender, the complaint, a brief of the evidence and the finding of the committee shall be filed with the secretary, and the name of the person or firm shall be entered on a list kept by the secretary for the use of the members in good standing of this society. The secretary has been instructed to send a copy of the resolution to all other societies in the peach belt, suggesting similar action. When any society shall prepare a like list and forward to the secretary of this society, with a copy of the resolutions or rules by which the names on their list are obtained and are to be given out, the same shall be submitted to the executive committee of this society, and if satisfactory to a majority, they shall authorize the secretary to arrange for a mutual exchange of said lists, and a prompt report of names subsequently added."

* * *

Another plan for the control of the commission trade, proposed by the Ottawa County Fruit-growers' Association, aims at the enactment of a law by Congress regulating the produce commission business in the United States. Federal inspectors, appointed for states or districts, shall look into and examine the farm produce commission business with the same care and object in view that bank commissioners have in their respective districts. It is time that the question be agitated and brought to some practical issue. Something will have to be done. Let farmers agree on some plan. It is perhaps one of the most important questions now before the farmer of the United States. We shall be glad to hear from many of our readers on the subject.

T. Greiner.

SALIENT FARM NOTES.

Thousands of acres of half-prepared land have been planted to corn this season. The soil was full of water and turned off the plow slick and shiny, and instead of falling crumbled into the furrow it clung together in lumps. The harrow broke these up somewhat, but still it remained in that soggy, lumpy condition which every experienced farmer well knows will not produce a full crop of good corn. The problem confronting the farmer is how shall be best cultivate this soil. Because of the hard clods he cannot get very near the hills of corn with his cultivator, and the harrow will do more harm than good by dragging these clods on the hills. I have asked several leading and skilful corn-growers how they would proceed this season, and all declared their intention of keeping the cultivators going from the time the corn is up two inches until it is too tall to work.

Said one who is an experienced corn-grower:

"I shall go through my corn-rows with the cultivators as soon as the plants are two inches in height. The shovels are narrow, and they will be set to run deep, and six to eight inches from the corn-plants. This will loosen up the middle of the rows, and expose these little hard clods to the action of the sun, rain and air, and when I run through again, with shovels running shallow and near the hills, these clods will not bother me much, as most of them will crumble."

Said another who has grown corn for nearly forty years:

"I soon saw that the soil was not going to work well, and made preparations accordingly. A heavy harrow followed the plows closely, and after that came a plank drag or clod-crusher, then a smoothing-harrow. I kept two plows going all the time, after the soil would turn fairly well, and one team did all the harrowing and crushing, and the soil was fairly well pulverized. After the corn was planted I kept one harrow going over the field steadily. The plants are now up an inch, and the surface of the field looks smooth and well pulverized, but I find that just under this fine surface the soil is rather hard, soggy, I might term it, and so the cultivators, with narrow shovels running about four inches deep, were started to-day. Corn will not make a good growth in damp, soggy, run-together soil, and we must loosen and aerate it as quickly as possible. The hot sun and a few showers will soon mellow a soil that is being constantly stirred. There will be a good crop of corn this season only on land that is thoroughly worked."

Owing to the lateness of the season thousands of farmers have rushed their corn in without giving the land the preparation it should have. The thing for them to do now is to keep the cultivators going steadily until the plants are too high for the horse to straddle, then they will shade the ground and prevent it from packing and drying out.

* * *

Since the publication of my article on garden-cultivators, or wheel-hoes, in the Farm and Fireside of April 15th, I have been fairly deluged with letters and postals asking where such an implement as I described can be procured.

Let me say that in the article referred to I described an ideal wheel garden-cultivator; one I have been looking for for many years; one that not I alone, but thousands of gardeners all over the United States are anxiously waiting for—a hand-cultivator that is made to do fine work in the best manner; one with hoes, shovels and scrapers made of the best spoe steel, thin like a hoe and polished in the best manner; with rakes having teeth not less than three inches in length, and smooth and polished like the tines of a hay-fork; with two high steel wheels with steel-wire spokes and narrow tire; with a light, rigid steel frame to which all attachments can be fastened securely, or removed from, in a moment.

Gardeners are in need of not only a cultivator like this, but also of a garden-rake—a hand-rake—with fine, polished teeth that will not clog twenty times a minute. The things for sale in implement-stores are said to be "improved," but in what way is not discernible. The teeth are square, rough and stubby, and if there is a particle of trash in the soil it will have to be removed from these teeth by hand.

* * *

The hoe has been improved until it is now a light, thoroughly well-made and effective tool, but manufacturers seem to think garden-rakes and garden-cultivators are of so little importance that no improvement is needed. We are about to begin the growing of sugar-beets in this country—about to begin growing our own sugar (which should have been done years ago), instead of buying it abroad, and a well-constructed and thoroughly efficient hand wheel-hoe will be in demand. Thousands want such an implement now for garden-work, and thousands more will call for them when beet cultivation begins on a large scale. Our manufacturers beat the world in the production of first-class farming tools. Now let some of them turn his attention to the inventing and constructing of hand-tools that shall rival the bicycle in lightness, strength and fine finish, and millions of dollars will flow into their coffers from the thousands of workers who have learned to appreciate and are willing to pay for a thoroughly good tool. If any one doubts that there is a great demand for first-class or high-class garden-tools, the letters that have come to me from East, West, North and South would soon convince him otherwise.

Fred Grundy.

SEED-TESTING.

The following circular letter is being sent out to correspondents of the Department of Agriculture:

Washington, D. C., May 20, 1897.

Dear Sir:—Numerous requests have been received from seedsmen, seed-growers and farmers for information concerning the purity (freedom from weed-seeds and other foreign matter) and germination of samples of agricultural seeds. The fact that there is a great deal of poor seed imported and sold in this country, and a lack of information and facilities for testing the same among the users of seed, make it very desirable that such persons may have the seed they intend to purchase or use tested in a reliable manner.

In order to secure and diffuse information concerning the various farm and garden seeds upon the value of which depends to such a large extent the success of agricultural operations, the Department of Agriculture has established a seed-testing laboratory in connection with the division of botany. This laboratory is thoroughly equipped for testing seeds, the work being furthered by the use of a greenhouse where soil tests are conducted.

At present, so far as the force and means at our disposal will admit, the department will test, free of charge, samples of farm and garden seeds which are sent in by its correspondents, particularly those which are suspected of adulteration with inferior or dead seed, or which contain a large amount of weed-seed. The inclosed blank should be properly filled out and sent with the seed which is to be tested to the Seed Laboratory, Division of Botany, Department of Agriculture, Washington, D. C. Additional blanks will be furnished upon application.

Respectfully, James Wilson,
Secretary of Agriculture.

Our Farm.

FARM THEORY AND PRACTICE.

WHEAT PROSPECTS.—The advantage of sticking to one's established rotation of staple crops is realized by those who have a good wheat crop this year. Prices have been deadened for several years by the presence of a great surplus in the world's markets. It is presumed by statisticians that something like one hundred millions of bushels of wheat are required by the world as a sort of floating capital for the transaction of business. This represents the grain in transit to market, that stored in elevators for immediate use, farmers' home supplies and all that is converted into flour and ready for use. So much must be carried over from one midsummer to another. The trouble has been that this supply increased rapidly a few years ago, and a large amount of unneeded grain was necessarily carried over. The effect of such a surplus was so depressing upon prices that some growers were discouraged, but for three years the surplus has been decreasing, according to official statistics, and the estimate now is that it will be practically exhausted this midsummer; or, in other words, that the world will not "carry over" more than the needed one hundred millions of bushels.

* * *

PRICES SHOULD BE GOOD.—This is an off year with several leading wheat-producing countries, and this fact, coupled with that of the exhaustion of the surplus, should insure us fair prices during the coming year. The old fifty-cent price for wheat from the thresher, east of the Mississippi, is necessarily wiped out for the present, and the probability is that two or three years will be required to pile up another surplus that will send prices low. Of course, millers may "bear" prices temporarily at threshing-time in order to stock up at favorable figures when so many growers must sell, but we may rest morally certain that prices will not rule low throughout the year. On account of the increased foreign demand it is to be regretted that wheat is a nearly total failure on many farms, especially in the north-central states; but in half of Ohio and in the states farther east there has never been a finer prospect, the only serious danger arising from the rankness of the growth of straw and the disposition to lodge.

* * *

TIME OF CUTTING.—There is a popular prejudice against letting wheat get fully ripe before harvesting, and I can see no sufficient ground for it. Its origin lay in the danger of loss when hand labor was required and when the straw was used for binding. Hay is cut early, and corn may be cut early to prevent the storing of all the nutriment possible in the grain, or seed, the stalk being used for feed. In the case of wheat the bulk of the straw is never fed, and there is evidence that the yield of grain is greatest when left uncut until mature. With self-binders the work of harvesting is more easily done when the straw is ripe, and it is a rare occurrence that loss is sustained by delaying harvest until the grain is fully ready. It is very little worse to have a storm upon a ripe field of grain than upon one freshly harvested while the straw is yet full of sap. In case of fair weather, wheat that is fully ripe when cut may be rushed into the mow or threshed from the field in a very few days. I certainly am not defending any negligence in this matter, but do urge that arguments in favor of early harvesting of hay and corn do not apply to wheat.

THRESHING FROM SHOCK.—The practice of threshing wheat direct from the shock has increased greatly in late years, but it has serious drawbacks. One objection is the danger of tough wheat, and of added expense due to unexpected rain. Moreover, it is rarely safe to store unsweated grain in tight granaries, and one is compelled to accept the price at the time of threshing. There often are advantages that overbalance these offsets, but in one particular this mode of threshing deserves condemnation—the straw is piled up in fields all over this country, and farmers are thus led to sell it for a trifle, losing its manurial value when their fields need it so much. Some assert that this value is small, but long experience convinces me that when it is rightly managed the value is not small. It is not solely a question of the number of pounds of plant-food contained in it, but also the humus that is furnished by the rotted mass. After an abundance has been used to prevent all loss in the stables, and the best portion has been culled out by stock for feed, if desired, the remainder should be rotted in a small stock-lot. The ground should be scooped out sufficiently to hold all the water that falls upon it, and the straw should be scattered over the lot from the stack just as often as is required to keep the entire lot clean for stock.

* * *

SHRINKAGE IN STORING.—It may not be profitable to store one's crop of wheat. Selling it as soon as ready for market may be best. One cannot tell, but usually a grower should make a rule and adhere to it. Then he will not miss the best price all the time. Wheat does not shrink in storage as much as some farmers suppose. The amount depends upon the dryness at threshing-time. Wheat has been stored at one of our experiment stations when very dry, and taken out during a very wet season of the year, and an actual gain in weight obtained. When wheat is dry enough to store in tight bins, it is safe to estimate the shrinkage at less than three per cent, and the loss may not be two per cent. This estimate does not include loss by vermin, of course. That may be considerable. When weevil are present, nothing is better than bisulphid of carbon to destroy them. This material must be handled with some care, but probably is no more dangerous than gasolene in this respect. The gas is highly combustible, and no one should have a light around when using the insecticide. It evaporates rapidly, and the fumes pass through the grain and kill all insect life in it. If its value were better understood by farmers the loss from this pest in stored grain would be greatly reduced. DAVID.

ANGORA GOATS.

I send you a photograph showing a few of my Angora goats. We shear these goats twice a year—in the spring and in the fall. We commence shearing in the spring, when they begin shedding, caused by the first warm days; and in the fall we shear in September or October, so that the fine, long hair has time to grow out long enough to protect the goats against cold weather in winter.

The mohair grows to the length of nine or ten inches in twelve months; but if sheared twice a year, it grows to about seven inches each time, making fourteen inches in twelve months. The price of mohair is at present from thirty to forty cents a pound, but goat-raisers expect to get forty-five to fifty-five cents again as soon as we get a reasonable tariff on foreign mohair and wool. We had a good deal of very warm weather, which caused our Angoras to commence shedding earlier than usual, and we had to shear in February. In March my flock increased from 444 to 650, as I got 206 kids in about fifteen days' time. I keep the kids separate from the grown goats in daytime. If you let them follow the flock before they are six or eight weeks old, they are apt to get lost, because they want to play a great deal, and forget all about following the flock; and when the sun shines very warm—about noon—they love to lie down in the shade under a green live-oak tree, and go to sleep, and a wolf in many cases gets hold of a kid before it awakes. During the last five or six years we have had good luck in killing wolves and in catching them in steel traps. We put out a good many steel traps where they have caught and killed a goat, and at those places where the wolves scratch through under the lowest wire of a ten-barbed-wire fence. We generally fasten three traps together, and let the wolf drag them off, and early the next morning my boys go there with dogs trained for this purpose, and trail up the wolves, and while the dogs bay them the boys shoot the wolves with their Marlin rifles. H. T. FUCHS.

ANGORA RANCH OF H. T. FUCHS, TEXAS.

SUMMER FEEDING.

The average view of food for live stock in summer regards grazing as entirely sufficient. The business man who prides himself in his economy regards any feeding of grain as a wasteful policy. As a rule the expert handler of meat-producing animals is alone able to see economy in grain-feeding along with grazing. The first consideration that favors the use of grain is the fact that the quality of meat is much enhanced and rendered more firm by the more condensed food. The expert butcher will distinguish the difference between meat produced wholly from a grazing diet and that in which a regular daily ration of dry grain is furnished. Occasionally a stockman makes the experiment of a ration of ear-corn to cattle while grazing. He is disappointed on the start that the creatures are unwilling to eat a good quantity of it. One must experiment more or less to find in what form the grain is most attractive to the stock while grazing. At times very hard corn is too severe on the tender teeth of animals that are fairly satisfied with grazing. The experiment of shelling and steaming corn into a condition of well-cooked hominy is one that is indorsed by a good number of successful operators. Where one has fifty or more head of cattle grazing and fattening for a finish, within the next six months there should be profit in steaming corn when it is not worth more than twenty cents in Illinois, and less than this amount west of the Mississippi river. One pound of gain a day for the next two hundred days on each two-year-old animal in excess of the ordinary gain from grass means considerable in the hastened maturity and finish of a bullock. If, for instance, the creature at twenty-four months of age weighs one thousand two hundred pounds, the ordinary gain from grazing alone within two hundred days would be about three hundred and fifty pounds. With judicious feeding of steamed corn to the extent of forty bushels within two hundred days, the animal grazing on rich grass, with good blue-grass for a finish in November and December, should make an additional gain that would give a total weight at the age of thirty months of one thousand seven hundred and fifty pounds. The use of corn would probably enhance the value of the entire carcass not less than fifty cents a hundred pounds, which is equal to eight dollars and seventy-five cents on this account. This alone would pay for the corn at twenty cents a bushel. The two hundred pounds additional weight to the credit of the corn, along with the droppings of the hogs, should yield twelve dollars more a head, which may be counted, after the expense of extra labor in steaming has been deducted, as a full profit of ten dollars a head to the credit of grain-feeding. Another point to be observed is the fact that feeding the grain has hastened the finish of the animal during mild weather, so that it has gone to market as choice beef before the severe winter has interfered seriously with its growth and gain in flesh and fat. Shelled corn and oats mixed, fed dry or steamed in boxes, furnishes a better ration for yearling calves during the four hot summer months than the corn alone. An equal proportion of the oats by weight with the corn tends to neutralize any bad effects from grazing. Cheap oats are, as a rule, valuable in such cases. They make a more perfect ration as an addition to corn in all cases.

The other side of the question of double feeding in summer has very good arguments in its favor. During the warm summer months, when the outcome of the growing crop is uncertain, it is certainly a conservative course to hold one's grain in store when marketing facilities are convenient. One who may deliver his grain to the railway station located within one mile of his granaries or cribs may have an opportunity in the autumn to sell the grain, in view of short crops in the current year, for a very satisfactory price. If this opportunity does not come to one, it may be that the demand for Christmas beeves will not be great, and that the grain reserved from a summer ration would help to give a stronger winter ration and a finish in midwinter, which would enable the marketing of the beef at a time when the markets were not overstocked.

It would seem that the use of grain for extra feeding during the summer would better be limited, as a rule, to pure-bred and high-grade cattle that are under eighteen months of age at the beginning of the grazing season. If, as suggested above, oats and corn in equal parts be used, there is a growth of frame and muscle which permits the feeding to be extended well into the winter and over into the following year, if the condition of markets should not warrant disposing of the stock in early winter. A strong advantage from feeding grain and keeping the quality of the flesh and fat in firm condition is found in the fact that from early autumn onward the stock is in condition for the market whenever the price is right. As a rule, the time of the feeder for extra work in steaming the grain adds but little to the expense. The attention to the steaming process can be given at the hour when teams are feeding and without interference with field-work.

M. A. R.

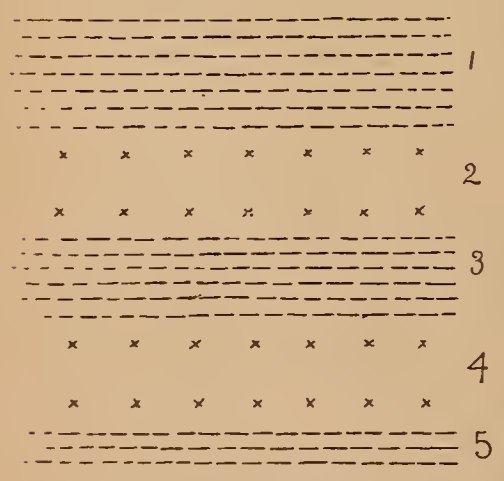
Our Farm.

NOTES FROM GARDEN AND FIELD.

Making the Most of It.—Notwithstanding all the drawbacks of the past two seasons, the low prices that have as a rule been obtained for all garden and farm products, and of all other unfavorable conditions, I have at present a larger stock of genuine enthusiasm on hand, and am planting on a more extended scale, in certain lines, than ever before. If the tide should turn, and the markets show an improved condition, I desire to be ready to take advantage of it. But even if this does not yet happen for the crops now planted or to be planted this spring, I feel that I must make the most of my opportunities, and work the soil for all it is worth. My chief aim this spring has been and still is to use every foot of land to the best advantage in double and even treble cropping. One of my favorite early crops is peas of the first early kinds. These ripen along in June. I sow two rows—two and one half feet apart—then leave a row vacant, and sow two more, and so forth. This is done just as early in spring as the ground can be got in proper order. These peas are very hardy, and even if snow or frost comes afterward, they will come on all right. I have the Alaska nearly in bloom at this writing, while most other people around me have their first planting only just coming up. The vacant rows are planted to Early Ohio potatoes, two or three hills alternating with a vacant spot of about two and one half feet. In the center of this vacant spot I plant later on (say June 1st) a hill of cucumbers, melons or squashes. The peas and potatoes come off in time to make room for the running vines when they need the room, and along in August I have the ground on which the peas and potatoes were grown covered with thrifty vines, and another money crop ready for the beginning of the harvest.

* * *

Another favorite plan of mine is illustrated in the accompanying diagram. I find pleasure and profit in growing Hubbard squashes. The plants or hills require very little space until hot weather sets in. Indeed, it is only when we get well along toward August that the vines make a business of spreading out—and then they want a lot of room, from eight to twelve feet in every direction being not too much for the two plants in each hill on very rich ground. By covering some of the joints or portions of runners with fresh, moist soil to induce them to strike root at these points, we can cover an almost incredible amount of space with a very few plants. It is to be supposed that the piece of ground we wish to plant is rich and well prepared. Beginning at



No. 1.—Medium sweet corn or early potatoes, three feet apart.
No. 2.—Hubbard squash, two rows, eight feet apart.
No. 3.—Early sweet corn and early potatoes, six rows, two and three quarters feet apart.
No. 4.—Hubbard squash, two rows, eight feet apart.
No. 5.—Early sweet corn, three rows, two and one half feet apart.

one side (A), I plant three rows of earliest sweet corn, such as Cory, First of All, Early Fordhook or others of that class. The rows may be made two and three fourths or even two and one half feet apart. In place of the corn we might also plant early string-beans or early peas, or any other crop that can be harvested in June or July. Next I have two rows of Hubbard squashes, one row to be planted as close to the last row of corn as will be permissible for a proper use of the cultivator. The second row may be eight feet from the first, and the hills eight or ten feet apart in the rows. Between these two rows of Hubbards I may again have a row or two of early sweet corn, early peas, early potatoes or the like. Next I plant six more rows of early sweet corn, early potatoes, etc., the rows being two and three fourths or three feet apart. Next come another two rows of Hubbards (watermelons, cucumbers or whatever I wish to plant, making the distances between the hills of proportionate width). Next to these again I plant early potatoes, medium sweet corn, and so forth, winding up with the later and latest varieties of sweet corn. Thus I give up little room to the squash-plants at the start: yet this is all the room they require then, and by midsummer I have the whole ground covered with squash-vines, and a fair prospect for a big crop.

* * *

Corn and Pumpkins.—It is a general farm practice to plant pumpkins all through the corn-fields. In more southern sections watermelons have also been grown in corn-fields, and I am told often with just as good success as we have here in thus growing the pumpkins. Last year I grew quite a lot of Hubbard squashes among the standing corn. I believe, however, that it would be much better to leave occasional narrow strips through the corn-field, to be given up entirely to pumpkin or squash hills, somewhat on the plan as suggested in the diagram. The vines will get a much better start, can be better protected from bugs, etc., and have the full benefit of the unobstructed sun-rays. Later on they can run at will among the standing corn at both sides, and yield abundantly.

* * *

Hilling Onions.—Two or three years ago I was told by an extensive grower of onions in Illinois that his practice is to hill the young onion seedlings in the row just as soon as they are large enough to stand this treatment. By his plan the weeds just starting among the onion-plants are choked out. Later on the onions are cultivated in the usual way with the hand wheel-hoe, whereby the most of the soil hanked up to the rows is again somewhat thrown away from the rows. I can see no objection to this practice. The bulb has the tendency to form near the surface of the ground, but otherwise the plant will thrive whether standing one or three inches deep. The old teaching was that the soil should always be dug away from the rows. Does anybody among our readers practise hilling onions while young, and if so, will you tell us with what success?

* * *

Pulverizing-harrows.—Continued wet weather and frequent rains have made us lots of work this spring. Sometimes we thought we had the soil just right for planting when rains set in, again packing the surface too hard for convenient work. Then again some pieces were plowed, but broke up badly, and all in lumps and chunks. It is not profitable to plant in lumpy soil. The latter has to be made fine "as an ash heap," no matter what the cost, if we desire to secure best results. So we have had more use for harrows than in average seasons. I have the spike-tooth harrow, the disk or pulverizing harrow, the spring-tooth, the Acme, Clark's cutaway smoother and leveler and the Meeker, selecting just the one which I think will do the best work on each particular piece of ground, and under present circumstances. Each one of these harrows seems to fill a particular place where it can be used to better advantage than any one of the others. In some cases, when the soil is once plowed with the Tornado cutaway, and remaining lumpy, I have used this same implement as a pulverizer, replowing the piece rather shallow, thus cutting the larger lumps, and following with the ordinary "drag" and the Meeker harrow. From all this my friends will see what great pains I take to have the soil broken up and fined; and this, indeed, cannot be done too thoroughly. The whole outcome depends on it.

T. Greiner.

ORCHARD AND SMALL FRUITS.

CONDUCTED BY SAMUEL B. GREEN.

INQUIRIES ANSWERED.

Twig-borer.—J. J. B., Britt, Iowa. The insect which you refer to is known as the two-horned twig-borer. It does not feed on or breed in the burrows which it makes, but uses them for winter protection. It is doing some injury, but I do not anticipate serious trouble from it, except as it bores into and injures grape-vines; but when abundant in grape-vines, late fall and early spring or winter pruning, when the insects are in their burrows, and then immediate burning of the trimmings, should destroy them.

Gooseberry Not Fruiting.—M. F. H., Lathrop, Mo. Some varieties of the gooseberries are very unreliable bearers, and consequently of very little value. If it will not fruit when given good cultivation, there is not much hope for it, and I should throw it away and plant some better kind.

Thrips.—A. S., Afton, Minn., writes: "What are the insects which I send? There are very many of them on my strawberry-bed, and I am afraid they will ruin it. What can I do to get rid of them?"

Reply:—The insects you send are thrips. They are supposed to be beneficial rather than injurious, in that they aid in the pollenization of the flowers.

Fruits for Sandy Soil.—E. S., Berwinsdale, Pa., writes: "I have a high, dry, sandy loam farm. What kind of small fruit would you advise me to plant for market? What kind would be adapted to this kind of ground, or would it be profitable to plant any? Apples do well."

Reply:—Such land as yours is apt to suffer badly in dry weather, but most all the small fruits will do fairly well on such land if thoroughly cultivated. Peaches ought to do well, and strawberries, raspberries and blackberries should be a success there.

Pine-louse.—C. A. A., Kilbourn, Iowa, writes: "There is some kind of bug or louse on the pine-trees in my lawn. The limbs and body of the trees are covered with them. I cannot see that they have injured the trees in any way yet. I mail you some with this letter. What are they, and how can I rid the trees of them?"

Reply:—The insect referred to is the large pine-louse (Lachnus spec.). It is seldom sufficiently abundant to be very injurious. The remedies for it are kerosene emulsion and tobacco-water and strong whale-oil soap.

Fruit Twigs for Examination.—J. N. R., Long Island. The twigs received contained no scale on them whatever. There is on them, however, what at first sight might be taken for scales, but they are natural spots, or excrescences, of the bark, which are probably characteristic of the variety from which they were taken. The San Jose scale is a very bad pest, and the more it is known the less likely it appears that any satisfactory remedy will be found for it. The best entomologists think the only satisfactory way to destroy this scale is by burning the infested plants.

Book Wanted.—J. K. W., Sylvester, Ga., writes: "Where can I get a book that treats on the philosophy of fruit-tree growth? I want to know what influence causes trees to produce fruit-buds. The names of several reliable, up-to-date works on this subject will be appreciated."

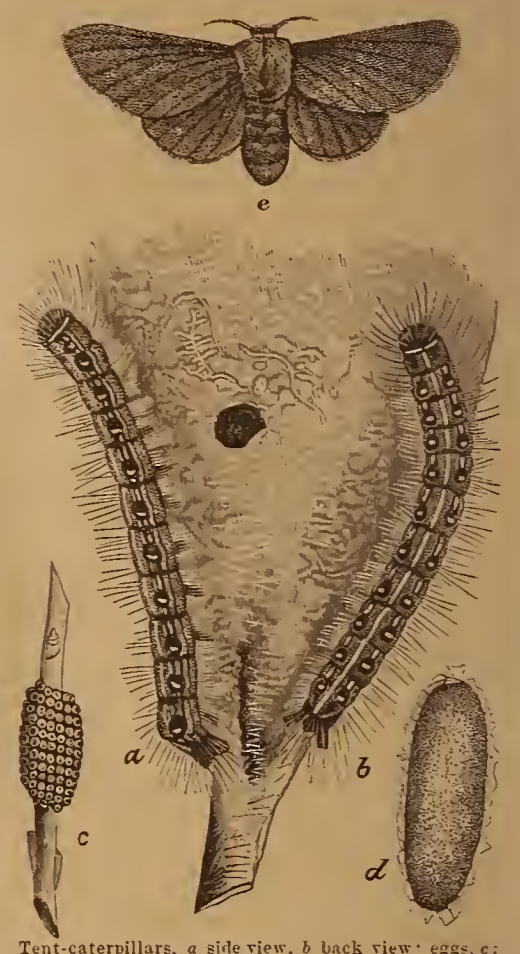
Reply:—It seems to me that you would get the most information on the points in which you are most interested from Thomas' "American Fruit Culturist" and from Lindley's "Theory of Horticulture." Bailey's "Plant Breeding" is also of much value in giving one an idea of the origin of varieties.

Borers—Gano and Salome Apples.—J. W. W., Iowa. The best way to keep out borers is to coat the trunks and larger branches with soap of the consistency of paint. This is repulsive to the beetles. The putting of a piece of soap in the crotches of the trees, so that rains will dissolve and wash some of it down the trees, is a good thing to do.——The Gano apple has been cultivated but a few years. It is very large, beautifully colored, and ripens in Michigan about the middle of September. It will probably become a market variety if it is sufficiently productive. The Salome is a comparatively new valuable western apple. It is a long keeper, with subacid and very tender flesh. It has not been sufficiently tried to prove its value, but is undoubtedly worth trying where the older varieties are doing well. The Minnesota State Horticultural Society condemns it as being too tender for Minnesota.

Mildew.—C. A. W., Mulberry Grove, Ill., writes: "What is the matter with my gooseberry-bushes? The under leaves are turning yellow and the berries are moldy. I can see no cause for it. If you know of any remedy, please let me know."

Reply:—The cause is undoubtedly the gooseberry-mildew. You should spray the plants with liver of sulphur as often as once in eighteen or twenty days, except in times of heavy rains, when it should be done oftener. Use one half ounce of liver of sulphur to a gallon of water. This material dissolves readily in hot water, and costs about twenty cents a pound. It has been found a very efficient protection against the common gooseberry-mildew. Gooseberry-bushes should not be crowded together, nor be shut in closely in any way, but the air should have a good chance to circulate among them. They should also be grown in rich soil. With these precautions taken, our native sorts will seldom be seriously injured by mildew in good locations; but there is a great difference in the liability of different varieties to disease, and it is a good plan to spray with liver of sulphur a few times almost any of the kinds that are cultivated.

Tent-caterpillar.—S. J. M., Livermore, Pa. The cluster of insect eggs sticking to the branch which you send are tent-caterpillar eggs. (The illustration shows their appearance.) There are from two hundred to three hundred eggs in each cluster. The young caterpillars are hatched out by this time, and you will find them on the branches of your trees. These eggs hatch out about as soon as the leaves commence to unfold, and



Tent-caterpillars, *a* side view, *b* back view; eggs, *c*; cocoon, *d*; moth, *e*.

the young caterpillars form a tent or nest, where they remain at night and during stormy weather, but which they leave during the day, in order to feed. The best remedies are to cut off and destroy the egg clusters before the eggs hatch, and to destroy the nests with the caterpillars in them when yet very young. When the insects are on trees that are not injured by Paris green, spraying the foliage with this poison at the rate of one pound to two hundred gallons of water is a good remedy, but Paris green is very liable to burn the leaves of peach and plum trees.

Nitrate of Soda in Gardening.—L. A. P., San Quentin, Cal. Nitrate of soda should be used only in small quantities, and not over one pound should be applied to the square rod at any one time. It should be applied as soon as the plants start in the spring, and again after an interval of two weeks. In applying it to strawberries or other crop, sow it when the leaves are perfectly dry, or else during a rain. If the leaves are just moist when it is applied, it may burn them. It acts wonderfully in increasing the leaf growth. It is expensive, and should be used only when a very quick-acting manure is needed. At other times a cheaper form of nitrogen may be used, in the form of tankage, guano, etc. Nitrate of soda is seldom needed for fruit, but for such early vegetables as spinach, cabbage, lettuce and other leaf crops it is very good. When fruit-plants are making a fairly good growth I should never apply nitrate of soda, but would prefer potash.

Pear-blight.—O. W. E., Chester, Ark., writes: "I have lived in this country for ten years. Never until last year have my Le Conte and Kieffer pears been troubled with any disease. Last year, however, they were attacked with blight. A number died, others were badly injured. Please give cause, prevention and cure of blight."

Reply:—Both the Le Conte and Kieffer pear-trees are known to occasionally blight, although they are much freer from it than the pears of the old list. The cause of blight is a very small parasitic plant that destroys the plants on which it lives. It enters into cracks in the bark and through the flowers. There is no cure. The best treatment is to cut off and burn the affected parts as soon as it is seen to be diseased; give good cultivation, but do not use much stable manure, and remove anything that prevents a good circulation of air among the trees. In cutting off the diseased wood, cut several inches below where the wood is discolored, and do not use the same implements on other trees without scalding them or holding them over a flame for a short time.

Our Farm.

MUSHROOMS.

MUSHROOMS are easy to grow, and beginners are often as successful with them as are those having an extensive experience. Success depends upon general conditions, good materials, interest in the business, intelligent management and persistent application. However, all these conditions are just as necessary in the successful and profitable raising of sheep, poultry, fruit, grain or garden truck as they are in the mushroom industry. Aside from preparing the manure and making up the beds, it is a clean crop to handle and occupies little space, and so far as the general routine attention required by the beds and the gathering, sorting, packing and marketing of the mushrooms is concerned, the women of the household can do the work as well as the men.

There is a widespread impression that there is some secret in the cultivation of mushrooms, that the whole procedure is shrouded in mystery, and that the mushrooms have even to be grown in midnight darkness; but this is a mistaken idea. True, many mushroom-growers do much to foster this impression by carefully withholding all information as to their methods of growing the crop, and persistently refusing to open their doors to any one.

The dark-colored powder produced in great quantity, and diffused from the gills of the mature mushroom, is what is called spores. These are in a way equivalent to the seeds of higher plants. But raising mushrooms from spores, or seed, is nature's business. In artificial cultivation they are never grown in this way, but instead are propagated from pieces of living spawn.

SPAWN.

As the underground stems of the blackberry and raspberry are cut into pieces, and these planted to raise young plants: as the farmer chops up Bermuda-grass "roots," and sows them to raise sod, or as the roots of the pestiferous bindweed are broken up into small pieces and scattered on the ground, and every piece grows a plant, so if a lump of spawn is broken into several pieces, and these pieces planted, each will, under favorable conditions, start into new life, spread, and eventually produce mushrooms.

Only two kinds of spawn are in general use by our mushroom-growers; namely, English brick and French flake, both of which are imported. One of our largest market growers, however, uses natural spawn, but as yet there is no good home-made marketable spawn. The English brick spawn is put up in bricks of dry dust manure. The bricks measure about 8¾ by 5⅝ by 1⅝ inches, and weigh 1 pound 4¼ ounces. The manure in the brick has no virtue of itself, but is simply the host for the white spawn, hence the more spawn in the brick, the better and more potent it is. The bricks are not planted whole, but each one is first broken into about twelve or fifteen pieces. The French flake-spawn is imported in flakes of dry, strawy horse manure, either loose in bulk, or more commonly in three-pound boxes. As a rule, the flakes consist of a mass of white mycelium, and show far more spawn than is seen in the bricks. The flakes are broken into pieces about two or three inches square, and are planted in the same way as the lumps of brick-spawn. Many growers have from time to time tried to make their own spawn, and with more or less success, but at no time has an article been made which for good appearance and evenness was equal to the imported bricks. So far as known to the writer, the home manufacture of spawn has been entirely discontinued.

Spawn is kept in stock by all prominent seed-stores, and is advertised in seed catalogues. The price of brick-spawn varies from ten cents to twelve cents a pound in small lots, or seven dollars to eight dollars a hundred pounds, according to the quantity purchased. French, or flake, spawn costs about thirty to thirty-five cents a pound in bulk and thirty-five to forty cents a pound in boxes. About 320,000 pounds of brick-spawn are now annually imported by our seedsmen. Six years ago the import amounted to only 64,000 pounds. This shows that mushroom-growing has increased five fold since 1890.

WHERE TO GROW MUSHROOMS.

Mushrooms can be grown almost anywhere outdoors, and also indoors where there is a dry bottom on which to set the beds, where a uniform and moderate temperature can be maintained, and where the beds can be protected from wet overhead and from winds, drought and direct sunshine. To grow mushrooms for profit, they should be cultivated only under the most favorable circumstances. Where the conditions or materials are in the least unfavorable the crop should be let alone. Among the most desirable places in which to grow mushrooms are barns, cellars, closed tunnels, sheds, pits, greenhouses and regular mushroom-houses. Total darkness is not imperative, for mushrooms grow well in open light if shaded from sunshine. The temperature and moisture are more apt to be equable in dark places than in open, light ones, and it is largely for this reason that mushroom-houses are kept dark.—From Farmers' Bulletin No. 53.

PASTURING ALFALFA.

Alfalfa is the forage plant of irrigation, producing from two to six crops of hay in one season, and yielding good returns in seed. The clover comes from the high, sandy plains of South America, and is peculiarly adapted to arid land. Its power of resisting drought is remarkable, and the great depth to which the roots go in search of moisture is astonishing. Many evidences of alfalfa roots reaching twenty to thirty feet are recorded; and when once fully set a field of the plants cannot be destroyed by drought, cold or other means without a long, stubborn fight. This makes the plant an excellent soil-binder, first-class permanent pasture, and the best fertilizer that is obtainable in the green manure.

In many sections of the West the public domain is used for summer pasture, and the value of alfalfa is known only to the feeders of the dry hay. If the semi-domesticated animals of the range are permitted to graze on the young plants while wet or frosted, bloat generally follows, and the stock dies. Because of this negligent method many cows are killed when fed on green alfalfa, and some people consider it poison. A few years ago I sent some seed to a farmer in southern Illinois, and gave him explicit instructions about keeping the cows away while the grass was frosted in early spring. He forgot the warning, and lost his cattle, which caused him to write me not to send any more Mormon grass-seed.

Alfalfa pastures are numerous throughout the western states, and their number is increasing every year. In California, where land is valuable and the mountains of eminent domain are far from the farms, all kinds of stock are kept in the alfalfa-fields. The best dairy-cows roam about the plants of imaginary poison day and night all the year round, and produce over one hundred dollars' worth of milk and butter in twelve months. In the San Joaquin valley the most successful dairymen say that an acre of permanent alfalfa pasture furnishes enough feed for three cows, three horses, twenty hogs, twenty sheep and a good flock of poultry. Utah farmers turn their hogs into the alfalfa-fields, and feed nothing until fattening-time. If turned to a stack of alfalfa hay, the hogs will burrow through, and keep in good condition during the winter on alfalfa-leaves.

The largest hog-ranch in the West contains one thousand acres planted to alfalfa. This big swine-pen is in the Salt River valley of Arizona, and is surrounded by a hog-tight wire fence. The swine are fed nothing but alfalfa, and are brought up from pigs to feeders weighing 150 to 200 pounds before marketing. There is no danger of the roots being devoured by the swine, as the plant furnishes more food than they consume. If some rooting is done, it merely cultivates the plants, and makes them more thrifty. Hogs that are inclined to uproot everything before them should have rings put in their snouts, as they will not produce flesh while so industriously engaged in seeking the ends of alfalfa roots. The alfalfa is not injured by hogs, nor are the swine affected in the least from eating the grass, either green or dry.

There is nothing in the constituents of alfalfa to cause stock to bloat or die from the effects of hoove. The only danger in pasturing is putting stock on the green grass early in the spring or when other green feed is scarce. Evidently the quantity taken on an empty stomach is more than the stock can endure. The accumulated gas, caused from the excessive moisture and failure in digestion, may be the one thing which results in death to the animals. In cases of bloat a tablespoonful of soda or rowel in the mouth usually saves the animal. When all other expedients have failed, a trocar is inserted in the back to tap the stomach and allow the gas to escape. But stock grown on a permanent pasture never requires any assistance, as the alfalfa is perfectly harmless when properly used. Alfalfa hay is supposed to be forty-five per cent better than clover and sixty per cent better than timothy. If the hay is superior, the grass must be equally better than clover or timothy. JOEL SHOMAKER.

BROOM-MAKING BY THE PRODUCER.

Brooms are usually made on a large scale, the economy of the business is reduced to a minimum, and the little man isn't in it. Hundreds of towns and villages in the United States get their brooms outside of their limits. Broom-corn will thrive anywhere that ordinary field-corn will grow. In fact, broom-corn matures earlier than ordinary corn, and has quite as wide an adaptability to soils. The producer, by converting his broom-corn into brooms, though he could not make them so economically as the big manufacturer, would have the advantage of his own labor, of freight charges and of several commissions.

The cultivation of broom-corn is easy and simple, requiring no more labor than the average farm crop. Sow thick enough to insure a stand, and when up and well started, thin to the desired quantity. The stalks should stand thick enough to give brush of medium length and good quality; not so thin as to be coarse and heavy nor so thick as to make corn of an inferior grade. Experience is necessary to regulate this, much depending upon climate, season, cultivation and the fertility of the soil. Ordinarily broom-corn should be planted in drills three or three and one half feet apart, and in hills from six to twelve inches apart, with four to six stalks in the hill. Cultivate sufficiently to keep the soil loose and free from weeds and grass.

A very important and particular part of cultivation is harvesting. Cut the brush when green, just as the seeds are turning red, allow to sun one or two days, seed it, and cure it in the shade, care being used not to allow it rained upon, yellowed in the sun or heated in bulk. Table the corn for cutting, which is done by breaking the stalks diagonally across each other. Place the brush upon the table thus formed. This saves tiptoeing and back-bending.

Any fast-revolving cylinder set with teeth makes a good seeder. The teeth should not stand too close.

The seed makes good food, and is relished by nearly all domestic fowls and animals.

The corn should be baled or bundled when sufficiently seasoned. If to be shipped, it should be baled. Never allow broom-corn to lie loose after it is dry. Exposure yellows it.

From five hundred to eight hundred pounds to the acre is the yield of broom-corn. An average cost a pound for raising it is about two cents.

The outfit for making brooms should not exceed fifty dollars. It consists of a machine for tying, another for sewing and a third for trimming. The small items are cuffs, needle, knife and pounder. The cost of materials, other than corn, for making a broom range from two to three cents each, and the cost of making from three to five cents.

Nearly every one can sew a broom, but some experience and skill is necessary to tie a broom, and properly grade and prepare the straw for tying.

The producer might find broom-making profitable, not only on a small scale, but also on a large scale. By using ability in making and good judgment in selling, no competition should stand in the way of the producer. JOHN C. BRIDGWATER.

ENGLISH SPARROWS.

I don't propose to prove that the English sparrow has positively no good qualities, but I do propose to show that his good qualities are far outnumbered by his bad ones.

For instance, I have built bird-boxes to house the bluebird and martin ever since I was old enough to handle a hammer and saw; furthermore, our barn doors always have been open for the swallows to nest among the rafters during the summer months, and we have kept the most diligent watch over the house-cat during breeding-time, that the other birds in the trees might rear their young in peace and safety. Until a few years ago our shade-trees were filled with sweet bird-songs from dawn until dark; but now that pugnacious sparrow fills the day with his ugly chirp, which is the only song he has, challenging some one to a fight. Last summer I saw him literally peck the brains out of a robin that was peacefully perched in an elm in front of our house.

Look at the havoc he makes in our cities. In Boston he builds thousands of nests in the vines covering private residences and churches. The old and historic King's Chapel burying-ground is nothing more to-day than a guano-field. The names on the slabs and tombstones are so filled with bird manure that to read them one needs a hammer and chisel. The Granary burying-ground is much the same, and grows worse daily. How could any one begrudge the golden robin and the common robin a few cherries or some other fruit? His melodious song is ever heard. He calls us in the morning, and sings to us in the cool of the day after our labor is ended. Don't he earn them? Then think of the gay plumage of our other birds; their clean habits and merry twittering among the branches. Compare them to that miserable English sparrow groveling in the dust. We can't afford to part with our other birds and their bright plumage and merry songs, even if the dusky, pilfering, destructive English sparrow has some few redeeming qualities.

J. E. MARSHALL.

EXTRACTS FROM CORRESPONDENCE.

FROM MARYLAND.—Kent county has a very fine summer resort known as Tolchester Beach, which is visited by throngs of people from Baltimore, Philadelphia and many other cities. The soil is generally good, and agriculture is more advanced than in the south end of the eastern shore. I know of no section where farmers are more favored with a mellow, productive soil, a climate suited to a great range of products, and with cheap transportation of products to the market. Land sells for from $20 to $50 an acre, according to improvements and location. Our summers are pleasant. Our people generally have good health. The drinking-water in most parts of our country is excellent, our hills and valleys abounding with numerous springs. Our public roads are kept in good condition. Farms range from one hundred and twenty to two hundred acres. There are a few small farms. I think the time will come when large farms will be cut up into small ones, when they can be managed to better advantage. W. S. M.

Chestertown, Md.

FROM GEORGIA.—We are in a section yet sparsely settled, but on the great Plant railway system. Our lands are very cheap and level. We grow corn, cotton, oats, rye, buckwheat, upland rice, sugar-cane and all kinds of fruits and vegetables. We have good schools and churches. Our people are very hospitable, and will welcome all good people. There are no saloons within sixty miles.

G. W. S.

Elwood Park, Ware county, Ga.

Our Farm.

HOW TO SECURE SURPLUS HONEY.

The fact that bees are in the right condition to swarm and do swarm when they are in prime condition to work in boxes, has for the last decade or two induced beekeepers to study up and invent some means by which this annoying feature of swarming might be prevented. In this they have been only partially successful. The different means which are employed by our leading apiarists to accomplish this object have many drawbacks. I think the majority have come to the conclusion that to let the bees swarm naturally, but restrict them to one swarm from each hive, is the most profitable.

I am greatly in favor of and practise the natural swarming method, for the reason that no management, according to my experience, will inspire bees with the energy and zeal that a young, natural swarm displays after being hived.

The way I have managed my bees of late years to some extent I can recommend to the farmer beekeeper as perfectly practicable. It is very simple, and reduces the chance of being stung, the horror of most people, to an exception. While it prevents second and third swarming almost entirely, it also insures a fair crop of surplus honey.

As soon as the young swarm has left its hive remove the latter to a location five or six feet back of the old stand, and turn it one quarter way around; place the new hive on the old stand, and after the young swarm has clustered, hive it in the usual way. While the young swarm is clustering all the flying bees which were at the time of swarming in the field are gathering at the new hive, and are added to the young swarm when hived. All the field-workers which were at the time of removal in the old hive depositing their gathered stores will leave this when going on their next trip and return also to the old stand, and join the newly hived young swarm. In this way all the working forces of the old hive are drawn from the same and added to the new. The object in turning the old hive one quarter way around is to give the returning field-bees as little chance as possible to find their old home. After two or three days, when all the bees have again accustomed themselves to the new home, the old hive is gradually moved and turned back toward the old stand, until about the fifth or sixth day it stands side and side with the new hive. By this time many young bees have been hatched, and older ones have become field-bees, so that a strong force is again flying at the old hive. These, with some of the younger ones, would, if left to their own inclination, form the second swarm, and would issue about the ninth day after the first swarming. To prevent this, the old hive is moved on the morning of the eighth day to a new location. The effect is the same as was caused by the first removal; every flying bee is again added to the new swarm. The latter has in the meantime filled its hive, or nearly so, and with this new reinforcement is in good condition to work in their super. Boxes, or supers, must be given according to the honey flow. If bees swarm before the flow begins, we need not be in any hurry, but if during the flow, supers should be supplied a day or two after hiving.

We cannot expect a great deal of surplus from the old swarm thus treated. If it swarmed early enough to get its laying queen by the time the honey flow begins, it may then work some in its super.

My first five or six young swarms last year I managed as here described. They did so well in the line of surplus honey that I am more than ever in favor of this plan.

Another sure way of getting surplus honey is to hive two or three swarms together. The object is to crowd the hive with bees. They are more apt to work in boxes and make more honey proportionately than they would if hived in two or three separate hives. Most all non-professional beekeepers are impressed with the idea that the more swarms they have the more honey they are likely to get, consequently they hive everything that comes along in separate hives. This is a mistake unless increase is desired; it takes more appliances, makes more work and turns out less honey.

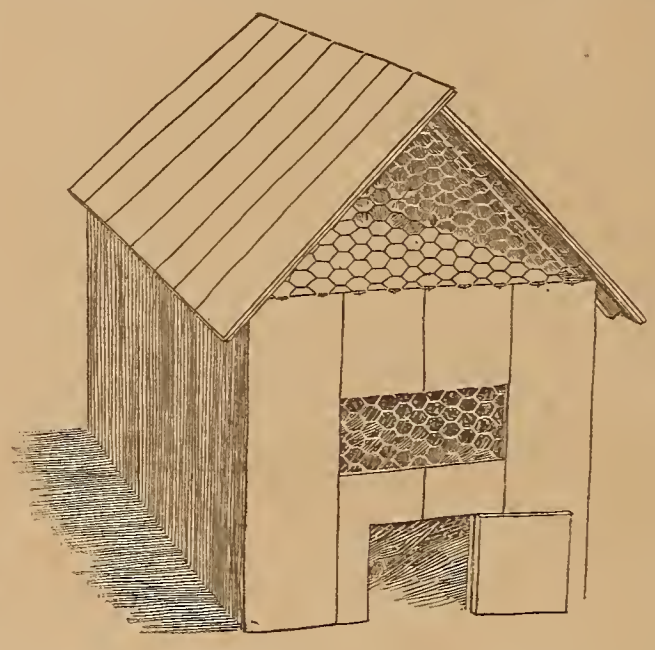
But this second plan of managing young swarms has a drawback. Where only a few swarms are kept, they hardly ever swarm at the same time or even within a day or two of one another. It is not safe to hive one to-day and then try to add another after days have elapsed. Many bees, if not all, will be killed. They must be hived together to have them unite on peaceable terms. Under these circumstances the first method is preferable. But if quite a number are kept, so that one or more swarms issue daily or within a day of one another, they can be easily hived together. The first one of every two that are to be united has to be hived temporarily in a box, nail-keg or most any receptacle, and retained there until the next swarm has issued and is being hived, when the first can be dumped right onto the second. G. C. Greiner.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

SUMMER HOUSE FOR BANTAMS.

To make a cheap summer house for a small flock of bantams, take a dry-goods box, and put a tight roof over it, so as to shed water, and wire the space front and rear at the ends of the roof, in order to admit the air, which will keep the box cool. Do not remove the top of the box, but use the box entire. Ventilation may be provided by having a small ventilator in the top of the box, at the center, which will be under the roof. It will be noticed that the box really has two roofs, or covers



—the top of the box and the slanting roof. The floor may be movable, so as to clean out the box by simply turning it over. It will accommodate a dozen bantams, and can be made to do service in winter by papering the sides with tarred paper.

DIETING FOR EGGS.

The hens will always take a rest from laying in summer, and this occurs from various causes. If they are molting they seldom lay, and the instinct of incubation is also prompting to rest. But it happens also that some of the most promising hens will refuse to lay, and will not begin under any kind of treatment known to the farmer. In such cases it should be the rule to give no food at all if the hens are on a range, and if they do not then begin to lay let them have a ration, once a day, of lean meat or cooked liver. Such a feeding usually gives good results. It may be, however, that a dietary system will induce laying. This may be done by allowing a gill of linseed-meal to six hens, once every other day, and meat in the same manner, the linseed-meal to be mixed with mashed potatoes. When blood is cooked and thickened with meal it nearly always promoted laying.

THE VICE OF EGG-EATING.

At this period of the year some of the hens will be guilty of eating their eggs, and it is one of the most annoying vices that can exist in a flock. It is a habit that is acquired, one hen becoming addicted to it and teaching the others. Hens will never eat their eggs, however, unless induced to do so from some cause. If fresh shells of eggs are given them or an egg becomes broken, they learn that they have a source of food, and take advantage of their opportunity. The vice cannot be cured; that is, if the hens once begin to eat eggs they will always do so if they can. The best remedy, however, is to get rid of them and begin with a new flock. By arranging the nests egg-eating may be sometimes prevented, but does not destroy the desire. Get a soap-box with a top, and compel the hens to go into the box for a nest at the end, so as to compel her to walk in. The box should be just large enough for her to sit in, and not stand up comfortably. Fix the nest ten inches from the floor, or so she cannot stand on the floor and eat the egg out of the box. If she cannot stand in the box she will not attempt to eat the egg when on the nest.

FEEDING FOR EGGS IN SUMMER.

In the summer season a ration of lean meat once a day for twenty hens will prove more economical than corn, for the reason that a ration of corn every day may prevent laying altogether. It is not difficult for a flock of hens to secure all the food they require when they are on a range, and this fact is not given due consideration. The fowls are allowed corn or wheat when such foods are just what they should not have. When the hens do not lay they are given more food, because the supposition is that it is a lack of food for supplying eggs that is at the bottom of the difficulty, but it is usually lice, and not lack of food, that prevents laying. During the warm days of summer the multiplication of lice is so rapid that a clean poultry-house will be swarming with them in three or four days after examination. The most annoyance to fowls is at night, they being exhausted from inability to rest.

When meat is given it serves to supply the albumen of the eggs. The carbonaceous matter is easily procured by the fowls from the abundance of seeds and other pickings on the range. No feeding of the hens should be done unless it is known that they require it. Something depends on the range also. If insects are abundant and the grass is green and plentiful, there will be more than a sufficiency; the exercise of seeking food also increasing the appetite and enabling the hens to consume more food than when in confinement, as well as preventing them from becoming too fat. It is a simple matter to know when the fowls require assistance in food. Observation several times during the day will show that the crops contain food, and at night the hens will come up with a full supply. It is then a waste of food to give them more. They will eat it, of course, but more from habit than from actual necessity. Should it be deemed proper to allow food, let it be given at night. Never feed in the morning, for if so the hens will not readily seek food. The meat given should contain no fat, and a small quantity is sufficient. It should be chopped fine and scattered, so as to give all the hens an opportunity to secure a share. There need be no fear of their overlooking any of it, as they have sharp eyes and carefully search every square foot of the space occupied.

RESULTS OF OVERFEEDING.

During the extremely warm days it is not unusual to find a hen dead under the roost from no apparent cause. It is seldom that this happens to pullets or growing chicks, but mostly with hens. It is caused by high feeding, and especially when grain is allowed in summer. It cannot be prevented after the fowls are fat except by shutting off the food and allowing plenty of fresh water, a cool, shady location being also provided. It is sometimes the case that the healthiest hens are the ones that die suddenly, as apoplexy does its work quickly and without warning. Overfeeding is mostly done with soft food. It is placed in a trough, and the fowls are allowed to help themselves, the consequences being that some get more than their share while others get much less, the fortunate ones becoming fat and lazy, and all of them reaching the same condition later. Soft food should not be considered as a meal, but only a part thereof, hence the fowls should never be given more than one half the quantity they would eat.

SHEDS IN THE WARM SEASON.

The cheapest and best arrangement for fowls in summer is an open shed; that is, a shed with a good roof and closed at the back and sides, the front being entirely open and protected by wire. Such a building will cost but little, will be well ventilated and can be cleaned with but little labor. The back and sides should be tight, however, for while the fowls can endure the open air from the entire front of the house, they are easily affected by a small stream of air from a crack. There will occasionally be northeast storms, and it is then that roup is more liable to prevail than at other times, hence drafts are injurious.

LET THE HENS HAVE LIBERTY.

No damage will be done to the garden at this season if the hens are turned loose. It is only on ground that has recently been plowed or spaded that the hens are induced to scratch. If the crops are under growth and well advanced, the hens will busy themselves with insects and the seeds of grass and weeds. There are no better insect destroyers than poultry if they are allowed to do service in that direction, and they will prove beneficial if they are not fed with grain and are compelled to work and seek their food.

INQUIRIES ANSWERED.

Hens Laying Small Eggs.—A. R., Wamego, Kan., writes: "Why do my hens lay small eggs, ranging from a marble to a pigeon egg in size?"

Reply:—Pullets when first beginning to lay sometimes produce small eggs, as do also hens that have been laying steadily, and which are about to sit; but the difficulty also prevails when hens are very fat.

When Pullets Should Lay.—R. G. S., Parsons, Kan., writes: "How soon will a Leghorn pullet lay after she is hatched; also pullet of the Light Brahma breed?"

Reply:—Leghorn pullets have been known to lay when five months old, and even sooner, but six months is about the correct age; Brahma pullets beginning when about ten months old.

Kerosene Emulsion.—Mrs. G. W. B., Laurens, Iowa, writes: "How is kerosene emulsion prepared?"

Reply:—For lice in poultry-house dissolve a pound of hard soap in a gallon of boiling water, then add a gallon of kerosene and a pint of crude carbolic acid. Agitate briskly with a sprayer until a cream results, then add ten gallons of cold water, and spray the house.

Leghorns.—M. E. K., Oxford, N. C., writes: "Is there any advantage in the several varieties of Leghorns in laying, and also in regard to the single-comb and rose-comb varieties?"

Reply:—The Brown, White, Buff and Black Leghorns are more widely distributed than some breeds, and they differ only in color, each variety having its advocates. The same may be stated of the single-comb and rose-comb varieties.

Hens or Incubators.—A. A. J., Fairmount, W. Va., writes: "Which is better in summer, to hatch chicks with hens or incubators?"

Reply:—As hens have favorable weather at this season, and can brood the chicks, it will be less work to allow the hens to sit and raise the broods; but in winter the incubator and brooder should be preferred. The hens will be more generally serviceable if allowed to raise broods.

Our Fireside.

THE DUEL.

The gingham dog and the calico cat
Side by side on the table sat;
'Twas half-past twelve, and what do you think!
Neither of them had slept a wink,
  And the old Dutch clock and the Chinese plate
  Seemed to know, as sure as fate,
There was going to be an awful spat.

  (I wasn't there—I simply state
  What was told to me by the Chinese plate.)

And the gingham dog went "bow-wow-wow!"
And the calico cat replied "me-ow!"
And the air was streaked for an hour or so
With fragments of gingham and calico,
  While the old Dutch clock in the chimney-place
  Up with its hands before its face,
For it always dreaded a family row!

  (Now mind, I'm simply telling you
  What the old Dutch clock declares is true.)

The Chinese plate looked very blue,
And wailed, "Oh, dear! what shall we do?"
But the gingham dog and the calico cat
Wallowed this way and tumbled that,
  And utilized every tooth and claw
  In the awfullest way you ever saw—
And oh, how the gingham and calico flew!

  (Don't think that I exaggerate—
  I got this from the Chinese plate.)

Next morning where the two had sat
They found no trace of the dog or cat;
And some folks think unto this day
That burglars stole that pair away;
  But the truth about that cat and pup
  Is that they ate each other up—
Now, what do you really think of that?

  (The old Dutch clock it told me so,
  And that is how I came to know.)

—Eugene Field.

THE NATURALIST NEXT DOOR

"Now, Mary, I have spoken!" Mr. Peel threw himself back in his chair as if that settled the matter once for all.

"I heard you, dear," sweetly responded Mrs. Peel; "and now listen to me. I have accepted Herr Shmidt's offer, and he will enter the adjoining house as tenant to-morrow."

"Not if I know it, madam!" shouted Phineas, jumping from his chair and bringing his fist down on the table. "Do you think I am going to have Rhyd cottage turned into a menagerie, and my garden into a howling wilderness? The house may remain tenantless forever, but Herr Shmidt and his moustrosities shall not enter there."

"Herr Shmidt, my dear, is merely a naturalist."

"I know it!" stormed Phineas. "I've heard of these plaguey naturalists before. I've no desire to come down-stairs some fine morning to find a ring-tailed monkey sitting on the window-sill, acting as referee while the kangaroos and crocodiles play leap-frog over the flower-beds. No, madam! No naturalists for Phineas Peel!"

Pretty Mrs. Peel never allowed her temper to get the better of her. She laughed softly at her husband's fears, and did not alter her determination in the least.

"Has it slipped your memory, Phineas," she asked, "that Rhyd cottage is a portion of my property? If I choose to let it to a naturalist—even though he be a foreigner—I am perfectly justified in doing so."

This was true enough, and Phineas calmed down.

"Herr Shmidt's collection of 'monstrosities,' as you call it," went on Mrs. Peel, "probably contains nothing more dangerous than a death's-head moth in a bottle. Anyhow, I have closed with his offer, and have no intention to disappoint him."

"But I—"

"You will treat him with the respect due from one gentleman to another, Phineas," broke in Mrs. Peel. "And now, dear, we'll dismiss the subject."

Phineas Peel was—though at times he doubted it—a lucky fellow. He had carried off a young and handsome woman from a host of suitors.

Why Mary Marsden had chosen to bestow her hand and fortune on such a plain, every-day sort of fellow as the diminutive Phineas Peel was always a mystery to her acquaintances. The wedding was an accomplished fact before her relatives had recovered from the shock caused by the announcement of her engagement.

Mary appeared to be happy enough, too. Phineas, taken as a whole, was not a bad sort of fellow. He was jealous, that was true, but his wife came to regard that as an extra proof of his devotion.

Had the proposed tenant of Rhyd cottage been an aged, decrepit, broken-down old man, Phineas would have stretched out the right hand of fellowship. But alas! Herr Shmidt was young and handsome—far too handsome, Phineas thought.

"Very well, Mary," said Phineas, taking his hat from the peg and making for the door. "You have overruled me as usual, and must be prepared for the consequences. In less than a week we shall have the house and garden overrun with every conceivable variety of reptile, from the beastly lizard to the boa-constrictor."

And Phineas stalked indignantly forth, with the merry laughter of his wife ringing in his ears.

II.

A month or more had passed, and so far the fears of Phineas had proved to be groundless. Herr Shmidt's "monstrosities" had been kept well within bounds, and as yet Mr. Peel had not seen so much as a strange caterpillar in his garden, which never looked better.

However, he was not happy. He had taken an aversion to the new tenant from the first, and would never be satisfied until he had got rid of him.

"Confound the fellow!" muttered Phineas one evening, as he sat on an upturned bucket behind the pea-sticks, "he's prowling about on the other side of the hedge again. Hope he won't catch sight of me, for I'm about tired of his oily tongue and eternal smile. Hullo! what the dence is the meaning of this?"

Down the garden path tripped Mrs. Peel. The naturalist was evidently expecting her, and greeted her with a smile that almost brought tears into the eyes of the furious Phineas.

"Good-efening," he said. "You vos joost a leetle late!"

It was soon evident that this was not the first chat indulged in over the boundary hedge. Though Phineas strained his ears, he could not catch the drift of the conversation. Like a flash he remembered that Mary had often of late taken a stroll in the garden at dusk. Was this the explanation?

Phineas had been glaring at the couple from behind the pea-sticks for ten minutes or so, when he saw his wife take a rosebud from his favorite tree and hand it over the hedge with a charming smile to the delighted Herr Shmidt. Then, with a pleasant "Good-night," Mrs. Peel tripped lightly into the house.

"You villain!" hissed Phineas, savagely, jumping from his seat and shaking his fist after the retreating figure in the next garden. "I'll pay you out for this."

The rage of Mr. Peel was something to be remembered. Nothing but blood, he vowed, would obliterate his wrongs. But he would be cautious. He would smile and smile, and murder while he smiled. Seizing a pea-stick he tragically hurled it in the heart of an inoffending cabbage, and played havoc with a stately row of sunflowers.

Half an hour later Mary saw him take down a huge old-fashioned duck-gun from the hook in the hall.

"There's a German vulture in the neighborhood," he volunteered, impressively, "and I'm going to bag him at the first opportunity."

However, as nothing short of an earthquake would have induced the old gun to go off in any circumstances—and Phineas had made assurances doubly sure by dropping in the shot first and powder afterward—the "vulture" in question was not likely to be seriously damaged, and Mary contented herself with expressing a hope that her husband would not hurt himself.

On the following evening Phineas took up his old position in the garden, with murder in his heart. Herr Shmidt, however, did not put in an appearance. After waiting some time, Phineas re-entered the house, and reared his duck-gun up in the hall in a conspicuous position.

He had almost decided to run up to town and consult his brother John, the detective, with a view to having the movements of Herr Shmidt watched, when he was startled by the click of the letter-box.

A scrap of paper lay on the mat. Picking it up, Phineas glanced at it, turned deadly pale, then crumbling the missive in his hand, hurried into the garden. Scribbled in lead-pencil on dirty paper was the following:

"Peel has discovered everything. We have not a moment to lose, and must clear out to-night. The front door is unsafe. Will meet you at the back—10:30 sharp."

There was no signature.

"Good gracious!" ejaculated Phineas, after reading the note for the third time. "I'd no idea matters had gone so far. Oh, yes, Mr. Shmidt," he added, grimly, "I'll meet you at 10:30 sharp."

III.

It was about 10:45, and raining heavily. Phineas Peel, seated on a wall overlooking the back of Rhyd cottage, with his duck-gun laid across his knees, was beginning to feel uncomfortable.

"The note said 10:30," he muttered. "It must be after that time now. What's that?"

Phineas had caught the sound of heavy feet moving cautiously over the gravel. He grasped his gun and peered into the gloom, but could distinguish nothing.

Suddenly he heard voices, evidently at the front of the house. He was about to quit his position under the impression that Herr Shmidt was leaving by the front door, after all, when one of the back windows was cautiously raised, and the lithe form of the naturalist dropped lightly to the ground.

Creeping along the side of the wall on which Phineas lay, he presented an excellent mark. Mr. Peel, however, could not bring himself to shoot a man down in cold blood. He would give him a chance.

"Stop, you scoundrel!" he shouted.

The effect of the challenge was scarcely what Phineas had anticipated. Herr Shmidt darted forward and seized the barrel of the gun.

He was much the stronger of the two, and Phineas was pulled from the wall in a twinkling. Lying on the broad of his back on the gravel in a half-dazed condition, he saw the tall form of Shmidt standing over him with the gun raised.

"Keep your tongue still, you fool," he hissed, "or I'll brain you! Now, quick, help me over the wall!"

Phineas hesitated, but the threatened attitude of the other induced him to rise. However, he had no intention of giving in.

Obeying his instructions, he caught hold of Shmidt's foot to give him "aleg up." Before the naturalist could grip the top of the wall, however, Phineas saw his opportunity. Bracing himself for the effort, he exerted all his strength and pulled Shmidt bodily from the wall. He fell flat on his face, and before he could recover himself Phineas jumped on his back and seized him around the throat, emitting a yell that would have done infinite credit to a Sioux Indian.

The next moment Phineas was dragged off from behind, and found himself in the clutches of a burly member of the local police force.

Four or five others seized Shmidt, who struggled in vain to free himself.

"What am I arrested for?" gasped Phineas. "There's your man!"

Phineas would no doubt have been led off with the other prisoner but for the timely arrival on the scene of the last person in the world he had expected to see—his brother John!

"Here, what on earth is the meaning of all this?" he demanded when, as the result of John Peel's interference, he found himself free.

John stayed behind a minute or two to explain that Herr Shmidt, the "naturalist," and Edward Harper, the notorious forger, who had defied New Scotland Yard for the past six weeks, were one and the same.

"It was a smart dodge of Harper's," said John Peel, "and he might have got clear away but for that clever wife of yours, Phineas. Mary suspected the man from the first, and supplied me from time to time with valuable information. It is to her entirely that the credit of the capture is due. Tell her I'll call around and thank her myself to-morrow. By-the-by, the gang of which he was the head got wind of our intentions, and a man was dispatched with a warning. Harper doesn't appear to have received it.

Then Phineas began to understand things a little more clearly.

"I suppose this will be it," he remarked, producing the note, and handing it to his brother. "You see, the messenger left it at the wrong door, and I—er—thought I might as well see the fun."

For some little time after Phineas was of the opinion that he had made a fool of himself. Lately, however, he has taken a different view of the matter, and is never tired of relating how he literally "dropped on" Harper, the forger, alias Shmidt, the naturalist, next door.—Cassell's Saturday Journal.

VALUE OF BURDOCK.

American farmers are wont to look upon burdock as a useless weed and a general nuisance, but it appears that the Japanese regard it as a valuable food, boiling the tender shoots with beans, using the roots for soup and the young leaves for greens. The annual value of the burdock crop to Japan is $400,000. Here is a pointer for the American farmer.—Forest and Stream.

WON BY WHISTLING.

Hartley, or rather his wife, had been giving a musical "at home," and a performance of sifflеurs had proved the hit of the evening's entertainment.

An hour or so later, the "crowd" having dispersed, "Birdy" Jackson, Hartley and I were idly discussing the events of the affair in the smoking-room. Jackson and I were stopping over night with our host, being old chums of his, and living some distance out of town.

"No idea you could give us such a ripping performance, Birdy," remarked Hartley; "and when your wife joined in I was perfectly astounded."

Jackson laughed softly. "No, she doesn't do it at all badly," he admitted. "You know, Dick, there's a bit of romance attached to that whistle of hers; in fact, it was the means of bringing our matrimonial desires to an abrupt point at an extremely critical period in our courtship."

Hartley gave me a gentle kick. "Then your union had a piece of romance about it?" he said.

"Rather! Unique in the annals of love-making, I should say. But folks are so confoundedly incredulous nowadays, I've never attempted to tell the yarn but once, and then I swore I'd never do it again."

But he had to on this occasion, and soon began to interest us as follows:

"First of all you must know, Mr. King," addressing me, "I'm called Birdy on account of having practised from earliest infancy a cheap and, to some people, nasty form of musical recreation. Though cuffed as a boy, severely reprimanded for warbling in slack business hours, and soundly execrated by the neighbors, I nevertheless persevered.

"A year this last summer I came in for a sum of money, which rendered me a practically wealthy and independent man, and to celebrate my good fortune I threw up my business berth and went into Yorkshire to spend a few weeks with a professional bachelor friend, and to idle generally.

"Whilst there I was introduced to a Colonel Alton and his daughter Evelyn, aged twenty-two, who lived in the Chase, and were intimate friends of my chum. Nice girl was she; plenty of 'go' without being the least bit 'fast.' In less than a fortnight I was over head and ears in love with her. The subsequent afternoons at the Chase were too hot for tennis. Colonel Alton spent them snoozing in his study. Evelyn's elderly companion and her father's housekeeper—for Mrs. Alton had been some years dead—nodded in the shade of her favorite elm, and my friend invariably had to leave for an important case before the tea came out. Very nice of him, I thought.

"Thus thrown together, Evelyn and I monopolized the arbor, and I used to amuse her by trilling selections from the operas, latest airs (comic and serious), and she would occasionally join in as a kind of a fillip to my performances. Though a woman in every respect, she could whistle. In most of the well-known tunes, up-to-date or pathetically aged, she excelled, owing to the fact that during the winter months for some years past she had always officiated at the piano for the village popular concerts, when the vocal and instrumental items were naturally of an amusing and light order—at times scarcely high-class, perhaps.

"Then came the time when the colonel had to be approached. The old man gave me a prompt and curt refusal. He had other views for his child. I tried remonstrance, then dogged persistently, but with no avail. Evelyn stood out like a brick. This burst of independence resulted in her immediate banishment to regions unknown to me, under the surveillance of a relative of mature age and experience, and all communication between us strenuously denied and forestalled. All chances of elopement even were reduced to nil.

"A few days later I left my friend's for Bournemouth, there to recruit my shattered health and hopes, and think things over quietly. I was crushed for the time being. As I alighted from my cab at the entrance to the North Cliff, were I had taken rooms, an elderly lady came down the steps. Her face seemed somewhat familiar to me, though I could not at the time recall to mind when and where I had seen it before. When she started as she saw me, and somewhat hurriedly re-entered the hotel, I was further mystified. A thought struck me as I was signing my name in the hotel register of visitors some time later. Two pages back I found an entry: 'Miss Alton and Miss E. Alton, 45-46.' I tumbled to it in a second then. The elderly lady I had encountered was undoubtedly Colonel Alton's sister, who had been staying at the Chase and left two days after my arrival in the village, and before I knew anything of Evelyn. I had once passed her walking with the colonel, and she must have recognized me again.

"I remarked on the entry to the clerk, in a casual way, and he volunteered the information that Miss Alton had but a few minutes previously given notice of their intention to vacate their apartments the next

morning. The news staggered me. Then Miss Alton certainly did know all and had decided on flight as the only safe remedy under the circumstances.

"Not a glimpse could I catch of Evelyn. After dinner, from a search on the pier I returned to the North Cliff, and sat disconsolately smoking out on the balcony of my room in the growing dusk. Almost unconsciously I lapsed into melody, and appropriately commenced to warble, softly, 'Alice, where art thou?' A slight movement on the balcony above mine, and one window to the left, caused me to glance up. A figure in white met my gaze, with one of its hands, as if demanding silence, pointed warningly to the window behind her. Yes, it was Evelyn, but her attendant dragon of an aunt was evidently close at hand. Verbal communication, as well as writing, was out of the question. It was already too dark for the deaf and dumb manipulation, even provided she knew its working. An idea suddenly flashed upon me. Why not try? No sooner thought of than done. Softly I whistled the last lines of 'Whisper and I shall hear' refrain. A slight shake of the hand, and then a rendering of 'Good-by, Sweetheart, Good-by,' floated down. Then they were really going away.

"'Evelyn, I don't think it's quite proper for you to be standing there,' came a voice from within, and which, by straining my ears, I could just overhear. My heart beat wildly, and the girl turned to address her aunt without leaving the balcony.

"'It's almost dark now, and I can't stay cooped up indoors all the evening—our last one, too. What does papa want us back in such a hurry for?'

"'Because he wishes it, my dear; that's all the reason I can give you. You really must help me to finish the packing in a few minutes.'

"Then her aunt had revealed nothing, and believed her yet to be in ignorance of my presence at the hotel. Lucky, but the case was a desperate one. Evelyn returned to her former position and leaned over again.

"'Where Are You Going To, My Pretty Maid?' I began. There was a momentary pause, and then the answer came in a line of 'Home, Sweet Home,' from my darling's lips.

"'I do wish you would drop that vulgar habit of whistling,' again came the voice inside the window.

"'But, auntie, there's no piano to sing to,' was the somewhat lame excuse. 'I must do something, and I can't possibly shock any one up here.' Then there was silence once more.

"Back to Yorkshire again. No chance there. Anyhow, she still cared for me, and I must put her affections to a severe test. It was our only chance of securing happiness. 'Oh, Nannie, Wilt Thou Gang Wi' Me?' I piped.

"'Where Are You Going To?' was again utilized in reply.

"I was stumped for the minute, but a bar or two of 'Big Ben,' a favorite song of mine, came as a hazardous rescue. She understood, bless her! but a lengthy pause intervened before her answer. Love and duty had a hard struggle. Then 'No, sir; no, sir; no, sir; no!' was repeated four times in succession. She refused, then! But why so emphatically? What a silly idiot I was! The fourth time the girl in the song said 'No' she meant 'Yes.' I breathed again.

"But about our departure. The morning York train via Bath left at 9:45. The earliest Waterloo was 7:45, and we should be easily tracked, and our intentions frustrated in consequence, if we left it until then. I consulted my watch. It was 9:15. The night train up left at 10:20. 'Oh, Why Should We Wait Till To-morrow?' went up without delay. 'All's Well' from above soon settled that question satisfactorily, but was followed immediately by a few bars of 'Bradshaws' Guide' ditty. I knew what she wanted, so, after a slight hesitation, I warbled 'Come Into the Garden, Maud,' and chirped ten times. 'Hope on, dear loved one, we shall meet again,' from 'Dream Faces,' proved that I was clearly understood, and then she turned to address Miss Alton in louder tones than before.

"'I declare, you're nearly asleep again, auntie. I'm tired, and I have a headache, too. We've a long journey before us, so I think I'll go to my room now. Don't disturb me, there's a dear. The packing won't take long in the morning. You'd better do the same.'

"The proposal evidently suited Miss Alton down to the ground, for she left her chair inside, and came a little way out on the balcony. 'A good idea, Evy, so we will,' she answered. I crept back, and a minute or two later good-nights were exchanged; and the subsequent slam of a door notified that Evelyn had left for her apartment.

"By a quarter to ten I had settled up and left instructions that my heavy baggage, fortunately not unpacked, would be called or sent for in the course of a week or less, dangling an old telegram form in my hand as I did so, to give color to my hasty departure. At ten prompt I picked up Evelyn under the pines in the hotel gardens, and, with a dressing-bag and a small Gladstone between us, we walked it to the station, and eventually reached London safely early in the morning. I put her in one hotel where I knew she would be safe, with strict injunctions not to venture out until I had fixed everything up for the ceremony, and went myself to another. The long and short of it was that before we were anything like tracked the deed had been done by special license, and the colonel defeated for once in his life.

"Come round, did he? Yes, when he afterward discovered that the man he intended for his daughter had already been engaged for two years, and got married shortly after we did. Even I could have told the old fellow that, had he been more communicative and explicit in the first instance, for my rival turned out to be none other than the friend I was visiting. He actually admits now he couldn't have wished her a better match, but, anyhow, he—"

And Birdy broke off into "Can't Change It."

He rose quietly from his seat, and gently opened the smoking-room door.

"Listen," he said; "if you can't quite swallow the yarn, you will at least not fail to take this in."

Then he went through "Oh, My Lady Fair," from the "Gaiety Girl" song. Scarcely had he concluded than away from another quarter of the house came the answering chorus of "I'm comin'," from the negro melody "Poor Old Joe." Half a minute later in strolled Mrs. Jackson and Hartley's wife.

Birdy winked knowingly at us. "I've just been telling them how you were practically wooed and won by whistling, my dear," he remarked to his wife, "and they want another tune before we turn in."

Evelyn blushed. "No, sir," etc., she warbled three times.

Then Jackson took up his candle and marched up-stairs with the strains of the national anthem on his lips.—London Tit-Bits.

OLD GLASS.

"The glazier of fifty years ago," said a Maine man of experience in the business, "worked differently from what we do to-day. Glass was very costly then compared with the present prices, and much of it was so warped and crooked it would be a curiosity in these times. Owing to the cost we had to be very careful in setting it, and the glazier of that day had to be a wood-carver as well as a man of putty. The warped panels had to be laid into their sash and their shape 'scribed on the wood underneath. This was then cut away so as to make the glass fit into place. Nowadays the glass is tolerably true, and besides it is so cheap that we never stand for a fit. It is sprung into place, and if it breaks it is thrown aside. The old crooked glass was, some of it, of superior quality. It was known as Boston crown glass or Berkshire crystal. It was clearer and more brilliant than most modern glass. Only the better quality of houses had this kind, but there are still many old residences throughout Maine in which it may be found."—Lewiston Journal.

TEMPERATURE FOR BATHS.

It is possible that the expressions cold, temperate, tepid, warm and hot may fail to convey to many a sufficient idea of the different ranges of temperature to which these terms are properly applied. To do away with any vagueness or uncertainty which may attend their use, and to prevent any mistake with regard to the requisite temperature of each and all of these baths when ordered or required, it will be useful to give the lowest and highest degree of heat within which each of them is comprehended. The right temperature, then, of different baths is as follows:

Cold	50	degs.	to 60	degs.	Fahr.
Temperate	75	"	" 85	"	"
Tepid	85	"	" 96	"	"
Warm	96	"	" 98	"	"
Hot	98	"	" 110	"	"

HAVE YOU ASTHMA OR HAY-FEVER?

Medical science at last reports a positive cure for Asthma and Hay-fever in the wonderful Kola Plant, a new botanical discovery found on the Congo River, West Africa. Its cures are really marvelous. Rev. J. L. Combs, of Martinsburg, W. Va., writes that it cured him of Asthma of thirty years' standing, and Hon. L. G. Clute, of Greeley, Iowa, testifies that for three years he had to sleep propped up in a chair in Hay-fever season, being unable to lie down night or day. The Kola Plant cured him at once. Mr. Alfred C. Lewis, editor of the *Farmer's Magazine*, was also cured when he could not lie down for fear of choking, being always worse in Hay-fever season. Others give similar testimony, proving it truly a wonderful remedy. If you suffer from Asthma or Hay-fever you should send your address to the Kola Importing Co., 1164 Broadway, New York, who to prove its power will send a Large Case by mail free to all who need it. All they ask in return is that when cured yourself you will tell your neighbors about it. It costs you nothing and you should surely try it.

AS IT IS IN SPAIN.

Our ideas of life in Spain are as imaginary as the gold-embroidered tissues woven through an Alhambra fairy tale, and our views of Spaniards are about as much like real Spaniards as the proverbial castles in Spain are like houses of brick and mortar.

We figure in romance the Spaniard as a tall man with swarthy complexion, gleaming black eyes and fierce mustache, who saunters out in a mantle draped gracefully over his shoulder, guitar under his arm, and with a knife in his belt. Upon arriving in Spain we find the first Spaniard we meet, likely as not, a man of blonde complexion, with fair hair and blue eyes. He is costumed in European dress, and is so gentle and courteous in manner that we feel he owes us an apology for appearing so much like an American.

After living in Spain some little time we find this difference between a Spaniard and an American: Our American, while waiting for his cup of coffee, reads of a dozen murders in the morning paper without so much as lifting his eyebrows, while a Spaniard, if he hears of one murder in his province, does not recover from the horror in weeks.

We are justly shocked at the brutality of Spanish bull-fights, and one kind-hearted lady proposed that our American evangelists in Spain should reform this national pastime. The evangelist quietly replied that the reform would be rather difficult while the Americans themselves, visiting Spain, attend the bull-fights faithfully, and without hesitation go on Sunday.

We have discovered that in Spain the people are given over to Mariolatry, and the Spaniards for their part have discovered that here in America we are given over to the worship of the almighty dollar. We call Spain "The Land of the Castanet," and the Spaniard retorts that he might as well call the United States "The Land of the Pig," because some of our merchants in Chicago deal in pork. The truth is that all Spaniards are not alike any more than are all Americans.

In thirty-five Spanish provinces the people differ in dress, in temperament, in language. In the north of Spain we find the Gothic Spaniard with blue eyes, fair hair and grave, gentle dignity; in the south of Spain the Moorish Spaniard, with black eyes and fiery, poetic temperament. The guttural tongue of the Basque is entirely different from the soft, musical speech of Andalusia, and the two provinces cannot understand each other. One reason to-day why the people in Spain cannot throw off the oppression of a bad government is because they have no common mother tongue; they are not bound together with daily newspapers, railroads and telegraphic communications; they are not a united people.

A party of Americans delayed for a night in a country village in Spain were entertained in one of the rude adobe houses, where they received the kindest hospitality.

A fire was kindled on a platform in the center of the room, and there being no chimney, the smoke made its way out as best it could. Twenty farmers' wives in the neighborhood came with twenty kettles of different broths and stews to furnish their entertainment. The dusky room, the red flames, the twenty wives in their picturesque costumes, each stirring her own kettle with a wooden spoon, formed a scene that brought vividly to mind the witches of Macbeth.

Each wife handed about a spoonful from her kettle, insisting that the honored guests should partake of her stew, and so with outward smiles and inward qualms and misgivings the travelers tasted every one of the twenty stews. They were naturally very ill the next day, but they will never forget the sincere kindliness and hospitality of these country people in Spain.

Among the higher classes of the Spaniards a man's home is his castle, and strangers are not invited to share his domestic life. Only a near relative or dear friend is ever invited to sit at his table and break bread with him. The rich live in beautiful villas furnished in extravagances of French style. The poor are huddled together in want and poverty, with a limited supply of food, and no fire in winter to protect them from the icy winds. In cities flat houses are the rule, where you will find the well-to-do occupying apartments on the first, second and third floors, while families miserably poor occupy the basement and attic, forming literally an upper and under crust. Everywhere you miss the great thrifty middle class which makes the prosperity of our own country.

American girls would feel justly indignant if a chaperon were to follow at their heels whenever they went out, but Spanish girls never think of going anywhere without a duenna. The duenna may be an old woman or she may be a little girl, but she must always accompany her mistress.

"Jacinta," says the duenna, "we will tighten up the corset and go out for a promenade."

On the promenade Jacinta's lover, if she have one, will follow her, and make love to her by playing the guitar at a discreet distance, or turning to meet her with a melting glance as they pass each other. If he is an ardent suitor he will also come to look at her window by day, and serenade her by night. Perhaps the coquettish little Jacinta will encourage him by throwing a rose or bunch of wild flowers she has worn in her hair, but not until a few weeks before the wedding is this suitor admitted to the house. With so slight an acquaintance the consequence is often an ill-assorted marriage, but husband and wife see so little of each other that, on the whole, they live tolerably pleasantly together. The mother accompanies her children in a walk on the promenade, the father takes his coffee at the club, and in the evening every family of any respectability goes to the theater. Here they meet their friends, relatives, neighbors, and their social life is carried on with zest and good-humor.

The heroine of Spanish romance is usually a dark-eyed Andalusian, with a lace mantilla, dainty shoe and trim basquino, who wears a rose in her hair, and who accompanies ravishing little ballads with a silver lute. The real heroine in Spain to-day is the old woman, with a voice like a crow, who lives on the top floor of a tenement, enduring poverty, hunger, loneliness, with the pride and dignity inherent in her race.

A lady visiting such a neighbor asked her what she had to eat. She replied that she lived on bread, and that the greatest luxury her family had ever known was occasionally a raw onion to rub over the bread, and give it an agreeable flavor.

"I have had sixteen children," exclaimed this heroic woman, triumphantly, "and I brought them all up as straight as tablelegs. Now," she added, sadly, "they are all gone, and I am left as lonely as an asparagus."

A solemn spectacle is the last mass held for the soldiers before they are sent to the battle-field. It is on the sea-wall, where the waves roll in over the level sand, that an altar is erected with an image of the virgin canopied over and hung about with flags. On either side are stacked the insignia of war—bayonets, sabers and cannon, with wreaths, flags and palms. Before them stand the guard of honor, at a little distance the company of officers with the regiments of soldiers. It is a gray day, and the sea comes in with a pitiful moaning—thousands of brave men it has carried away who will never return to Spanish soil.

Gray clouds hang low over the distant hills; the wind is chilling, but all along the promenade, gay with flowers, shaven lawns and ornamental trees, is gathered a mass of people who have come to watch this grave spectacle; mothers, sisters and wives, little children, trembling gray-haired men, the politician whose craft is urging on the war, the rich man's son who has paid the "blood-money," and is exempt from draft, and the true-hearted patriot, all are here with uncovered heads. More than one face crimsons with indignation as the soldiers draw up in line. Young country lads, under age many of them are, who still turn in their toes as if they were walking the furrows of their fathers' fields. Dragged from innocent and peaceful pursuits against their will, they are sent across the sea to meet an ignominious death—death from dynamite, death from black plague, death from ambushed foes. Is it not shameful?

At a signal given from the trumpeter the sacred host is elevated, and in reverence whole regiments prostrate themselves before God. Kneeling on the sand they offer their lives on the altar of their country, and ask for the blessing of heaven. It is all they know how to do. There is a hush, broken only by the sobbing of women and by the monotonous breaking of the waves, then comes the march to the long train of cars prepared for them.

The night comes on with icy coldness, but the soldiers are thinly clad in suits of gray holland, because that material is best suited to the warm climate of Cuba. Even the officers, many of them young cadets fresh from military school, all wear the same holland, with only the difference of gilt straps. The men are packed in the train like cattle; the bands strike up some gay martial air to drown the cries of the women and little children, the train moves slowly away. At such a moment, what thoughts of bitterness, of despair, of revolution, surge through the heart. Frances Bennett Callaway.

HOW EVERY READER OF THIS PAPER CAN MAKE MONEY.

For several months I have noticed advertisements in different religious papers describing an improved Dish Washer. As I had grown so tired of washing the dishes the old way, I sent for information to Dept. 33 of the Iron City Dish Washer Co., Sta. A, Pittsburg, Pa., regarding their Washer. They sent me one and I have found it to do just as they said it would. It washes and dries the dishes in less than one half of the time it usually takes, and I never have to put my hands in the greasy dish water. My little girl, aged 8 years, thinks it lots of fun to wash the dishes and she can do it as well as myself. Several of my neighbors came in to see it work and they all wanted one. I wrote the company and they allowed me a commission. They also wrote and told me how to become their agent. I am now making $40 a week and still attend to my housework. The Dish Washer sells everywhere. I show it and that makes the work easy. I understand they still want a few good agents, and any one desiring to make money easy should write them.

HUSBANDS AND WIVES.

It lies very much with the wives, Rev. F. B. Meyer says, to make it easy for their husbands to show them tenderness. A woman should have a clean face to start with. A little extra scrubbing with soap and water before the husband comes home at night would not be amiss in some cases that I have observed, and might bring some roses to the cheeks. A bow in the hair, a clean frill around the neck, perhaps a flower in the dress, has an attractive effect. I tell the women that men's affections will sometimes wander because their wives are untidy and slatternly, their hair unkempt, their appearance unattractive. All women are not equally pretty, but is is not prettiness that holds a man's affection, but sweetness, neatness, nattiness, and these are possible to all women. A woman makes a profound mistake who frets and pouts and puts herself into a bad temper that she may be petted into a good one. It is a bad policy. A man will be tempted to coax her back once or twice, but he loses his respect for her each time. It really alienates him in his deepest nature, and brings division between them. She is no longer his equal, one with him in spirit, heart and life, but his toy and plaything. After awhile he will live in perpetual fear that one of these fits of caprice may be coming on, will hide anything likely to induce them, and so begins a course of insincerity which is the grave of love.

No, when a woman perceives the expression of tenderness waning, let her keep her secret. Like Enid, she must possess herself in patience. Never altering her own behavior, never less, but more sensitive to every spoken and unspoken wish; light, gentle, sympathetic, patient; expressing her tenderness by those little arts that women learn without going to school, and the love will emerge from its winter, and sow the soil again with flowerets.

But let men be more thoughtful and tender. When they feel most put out and irritated, either with or without cause, it would be well to force themselves to bridge the yawning chasm by a caress. Kiss and be friends, they used to say when we were children. Let us be careful to maintain the outward forms, and the inner spirit will not be far away. We should not be less courteous to our wives than to our friends. A wife's feelings are more susceptible. To leave the house for our daily work or to return to it after hours of absence without some recognition is a mistake, and worse. Let us not forget the fret and worry, the perpetual burden of the children at home, the scheming and planning, the daily provision of dinner, the letting out of frocks for growing children, the darning and patching of boys' clothes, the tidying and cleaning and washing; and if there are servants, the even greater anxiety involved in managing these. No woman would do for pay what thousands are doing for love. They ask no other wage than tenderness, which is the expression of a true and honest affection. And a woman can tell in an instant if it is that or a mere subterfuge for fidelity.—The Watchman.

THE ONLY PEARL-FARM IN THE WORLD.

There is said to be only one pearl-farm in the world, but that pays its proprietor handsomely. This farm is in the Torres strait, at the northern extremity of Australia, and belongs to Jas. Clark, of Queensland. Mr. Clark, who is known as "the king of the pearl-fishers," originally stocked it with 150,000 pearl oysters. Now 1,500 men—200 of whom are divers—and 250 vessels are employed in harvesting the crop. "I have been fifteen years engaged in pearl-fishing," Mr. Clark told a correspondent of the Melbourne "Age." "My experience has led me to the belief that with proper intelligence in the selection of a place one can raise pearls and pearl-shells as easily as one can raise oysters. I started my farm three years ago, and have stocked it with shells which I obtained in many instances far out at sea. My pearl-shell farm covers five hundred square miles. Over most of it the water is shallow. In shallow water shells attain the largest size. I ship my pearls to London in my own vessels. The catch each year runs, roughly speaking, from £40,000 worth up to almost five times that amount."—Rochester Times.

WOMEN IN HORTICULTURE.

According to the census of 1890 there were three hundred and twelve commercial greenhouses, or about one in fifteen, owned and managed by women. We have a personal acquaintance with several women who are successful retail florists. Other women, to our knowledge, are making a success of raising carnations and other flowers for the wholesale trade. These people soon learn that the business of raising and selling flowers is beset by much care and labor that does not come under the head of poetry. And yet nearly all women florists that we have met were led into the business because they first of all loved flowers. It adds to the delight and success of any occupation if one has a love therefor. There is no question that as a rule women have a greater fondness than men for flowers; why, therefore, should they not engage in growing and handling them for profit? The rougher work about flower-raising, such as the care of greenhouse furnaces, the handling of soil and manure and the like, can easily be done by men who work for moderate wages. If women are successful as florists, they are equally so as raisers of vegetables and small fruits, especially strawberries; they direct the rougher work, help to prepare the produce for customers, and perhaps take in hand the selling, thus keeping closely in touch with the state of the market. Generally speaking, we think that the raising of strawberries near our best markets is farther from being overdone than that of almost any other kind of produce. The consumption is enormous, and fresh fruit brought quickly from the fields, without a long distance intervening, always will sell considerably higher than fruit long from the vines that has been shipped. Much of the work of picking and handling small fruits is well suited to be done by women.—Vicks' Magazine.

EXCURSION TO CHILLICOTHE.

Agents of the C. H. & D. Ry. in Ohio will sell tickets to Chillicothe and return on account of the Annual Encampment G. A. R. Department of Ohio, good going June 14th, 15th and 16th, good returning until June 19th, at one cent per mile for the round trip, short-line distance.

VEILS AND VISIONS.

Dr. Casey A. Wood, an American specialist, says that it is within the experience of every ophthalmologist that the wearing of veils produces weak eyesight, headaches and sometimes vertigo and nausea. Not only are these effects produced by the eye-strain consequent upon the increased efforts made by one or both eyes to see through or around an obstruction, but the irregular figuring on the veil itself is in some instances an annoyance to the wearer. Dr. Wood had a dozen typical specimens of veils selected for him, and made a number of experiments with them to determine the extent to which veils of various kinds affected the eyesight. He sums up his results as follows: 1. Every description of veil affects more or less the ability to see distinctly, both at a distance and near at hand. 2. The most objectionable kind is the dotted veil, although the influence for evil of this variety is more marked in some samples than in others. 3. Other things being equal, in undotted and non-figured veils vision is interfered with in direct proportion to the number of meshes to the square inch. 4. The texture of the veil plays an important part in the amount and kind of eye-strain produced by the veil. When the sides of the mesh are single compact threads, the eye is embarrassed very much less in its efforts to distinguish objects than when double threads are employed. 5. The least objectionable veil is that without dots, sprays or other figures, but with large, regular meshes made with single compact threads.

THREE GREAT CONVENTIONS.

THE YOUNG PEOPLE'S SOCIETY OF CHRISTIAN ENDEAVOR MEETS AT SAN FRANCISCO, CAL., JULY 7TH-12TH.

NATIONAL EDUCATIONAL ASSOCIATION AT MILWAUKEE, WIS., JULY 6TH-9TH.

BENEVOLENT AND PROTECTIVE ORDER OF ELKS AT MINNEAPOLIS, MINN., JULY 6TH-9TH.

These are all National conventions, and delegates and others interested should bear in mind that the best route to each convention city from Chicago is via the Chicago, Milwaukee & St. Paul railway. Two trains daily via Omaha to San Francisco; seven through trains daily via four different routes Chicago to Minneapolis; six daily trains Chicago to Milwaukee. Choice of routes to California, going via Omaha or Kansas City, returning via St. Paul and Minneapolis. Through trains vestibuled and electric lighted. All trains run on Absolute Block System. Low excursion rates to each convention. Ticket agents everywhere sell tickets over the Chicago, Milwaukee & St. Paul Railway, or address Robt. C. Jones, Traveling Passenger Agent Chicago, Milwaukee & St. Paul railway, 40 Carew Building, Cincinnati, Ohio.

Recent Publications.

BOOKS RECEIVED.

THE FERTILITY OF THE LAND. A Summary Sketch of the Relationship of Farm Practice to the Maintaining and Increasing of the Productivity of the Soil. By I. P. Roberts, director of the College of Agriculture, Cornell University. Fully illustrated. Price $1.25. Published by The Macmillan Company, New York.

This book is the result of a long life of teaching, experimenting and farming, and treats the subject from the standpoint of the actual farmer. It is one of the Rural Science series of books which state the underlying principles of agriculture in such language that they may be read at the home fireside, in the office, at the club or grange, or used as text-books.

WONDERLAND, 1897. A beautifully illustrated story of the Northwest in which is given some account of its history, forests, mountains, fishing, parks, general scenery, mining, agriculture, grazing and cities along the Northern Pacific Railway. Price 6 cents, in stamps. Distributed by Chas. S. Fee, St. Paul, Minn.

Report of the Kansas State Board of Agriculture for the quarter ending March 31, 1897.

Part I. Farm Poultry: Its Rearing, Management and Marketing, especially as applicable to Kansas conditions and by Kansas people.

Part II. Addresses, papers and discussions at the twenty-sixth annual meeting of the board, January, 13-15, 1897. Distributed by F. D. COBURN, Secretary, Topeka, Kan.

CIRCULAR RECEIVED.

Lemon Grove Poultry Company, Lemon Grove, Cal. Circular of thoroughbred poultry and Belgian hares. Specialty—S. C. Black Minorcas.

$200 IN PRIZES FREE

TO WINNERS IN

Farm and Fireside Word Contest

On page 19 will be found the full particulars of our word contest. Who can make the most words by using only the letters found in the three words "Farm and Fireside?" Try it. You have a chance to get a valuable prize. There are 25 prizes. For a full description of the $100 bicycle write to **The Thomas Mfg. Co., Springfield, Ohio,** and ask for their catalogue, which will be sent free.

Each contestant must accept some of our subscription offers in either this or previous issues of Farm and Fireside. The list of words *must* be sent in the same envelop with the order for the subscription. Below are some very liberal offers.

SUBSCRIPTION BARGAINS.....

For 25 CENTS we will send this paper for the REMAINDER of this year and any ONE of these six premiums:

Prem. No. 801. ROBINSON CRUSOE
Prem. No. 802. PILGRIM'S PROGRESS
Prem. No. 17. STANDARD COOK BOOK
Prem. No. 820. HORSE BOOK
Prem. No. 27. HISTORY AND MAP OF CUBA.
Prem. No. 816. POULTRY BOOK

For 30 CENTS we will send this paper for the REMAINDER of this year and any ONE of these five premiums:

Prem. No. 411. FIVE GERANIUMS
Prem. No. 410. SIX TEA-ROSES
Prem. No. 640. CRIMSON RAMBLER ROSE
Prem. No. 63. THE ARTS OF BEAUTY
Prem. No. 26. GEMS FROM THE POETS

For 35 CENTS we will send this paper for the REMAINDER of this year and any ONE of these five premiums:

Prem. No. 7. LIFE OF WASHINGTON
Prem. No. 15. LIFE OF LINCOLN
Prem. No. 100. CHRIST BEFORE PILATE
Prem. No. 30. BEAUTIES AND WONDERS OF LAND AND SEA
Prem. No. 11. THE PEOPLE'S ATLAS

For 40 CENTS we will send this paper for the REMAINDER of this year and either ONE of the following premiums:

Prem. No. 180. BERRY-SPOON
Prem. No. 34. SAMANTHA AT SARATOGA

Each and every premium guaranteed to give entire satisfaction or money refunded. **Postage paid by us in each case.**

Address FARM AND FIRESIDE, Springfield, Ohio.

Our Household.

IN JUNE.

I live in the glow of a perfect light,
I breathe the beauty of June,
Hearing the melody, day and night,
Of wild birds singing in tune.
Hearing the hum of a myriad life,
Burden the air with harmonious strife—
Bum of the beetle and buzz of the bee,
Gush of the oriole, glad and free,
And owlet under the moon.

Bound in the spell of a summery charm,
Distilled from the op'niug bloom,
Stirring the linden, languid and warm
Sunlight dropping in gloom.
Gathering ripples of sound from the brooks,
Where they gurgle loudest in shady nooks;
Laughter of childhood merry at play,
Wafting all sounds by night or by day,
To wander into my room.

—Kate Dooris Sharp.

HOME TOPICS.

To Utilize Cold Fish.—Cold boiled or baked fish can be made into a nice dish, as follows: Pick the fish clear of bones. Make a dressing with a pint of milk, one tablespoonful of butter and two tablespoonfuls of flour; heat the milk and butter together, and thicken it with the flour mixed smooth with a part of the cold milk. When it is cold, add two beaten eggs, a little finely cut parsley and salt and pepper; put it into a pudding-dish, then a layer of fish, then one of sauce, and so on until all is used. Sprinkle the top with fine bread or cracker crumbs, and bake it, covered, one half hour; then remove the cover and let it brown slightly.

Summer Care of House-plants.—I used to set my plants in the ground in the summer, and although they made a vigorous growth in the ground, the fall repotting put them back more than they gained in the summer. A veranda opening to the south or west is not a good place to keep plants during the summer; I have tried it. But last summer I set my plants on a veranda facing north, and they grew finely, kept healthy all summer, and went right on growing and blooming after they were brought into the house in the fall. Plants need much more water in summer than in winter. Every evening is not too often to water them if you have been careful to have the drainage of the pots good.

Feeding Babies.—A celebrated physician has said that of the many children who die in infancy the vast majority perish from diseases affecting the digestive organs. At agricultural colleges, experiment stations and among thinking farmers much attention is being given to the proper food for animals, that they may be healthy and thrive in the best way. Should we not give as much attention to the proper feeding of our children?

Nature intended that the food of a child should consist of its mother's milk until its teeth were cut, but for various reasons this supply sometimes fails. When this is the case we should experiment carefully with what seems to be the best substitute, but on no account give starchy or solid food of any kind. There are several kinds of prepared infants' food, but what agrees with one child may not with another. A friend of mine lost her second baby because she persisted in feeding it what had agreed perfectly with the first one, and did not know until too late that anything was wrong. The next baby had the same symptoms as the second, but

the food was changed, and from that time he began to thrive.

I have known mothers who carried their babies to the table when not more than three or four months old, and commenced feeding them potatoes and gravy, bread and butter, pie—in fact, a little of everything on the table, not even excepting pickles.

Was it any wonder that only two out of seven children lived to grow to manhood? It seemed to me more strange that all did not die in infancy.

Study this question carefully, mothers, and do not experiment to see how many kinds of food the baby can eat. If you can nurse your baby, do not give it any other food as long as your milk is sufficient, or until it has cut the most of its teeth. Even then go cautiously, and make baby's diet as plain as possible. If it does not taste cake and pie it will not want them.

Maida McL.

THOSE WORN-OUT TOOLS.

Economy is a good thing in its place, but often the money saved by using old and worn-out tools on the farm is a very poor form of the article. A boy needs a good deal of encouragement to keep him from a perfect hatred of farm-work, gardening, etc., at any time; but a few dollars invested in bright, new tools to work with seems to put new strength into his muscles, and he will take a wonderful pride in seeing how much he can accomplish.

Tools that are new are worth taking care of and of being kept in their proper places. This will do more to teach a boy careful habits than anything else in the world. When told to put the old tools in their place, his reply most likely will be, "Oh, they are not worth putting away; rain won't hurt them." But see how carefully the dirt is cleaned from the new hoe, the dampness wiped from the saw, then rubbed with a rag dipped into oil, and hung up out of the way of harm; all show that good tools are an advantage in every way.

I know a family whose garden tools are a sight to behold—two old worn-out hoes, a rake that is fastened to the handle with a piece of wire taken from the clothesline, and which wobbles on the handle in a most provoking manner. The handsaw is minus a handle, and although still used, must be very hard on both patience and hands. A hammer is an unknown article, and when carpets need tacking down or a nail is needed anywhere, an old hatchet is hunted up from some place where it was last used, covered with mud and ready to part company with the handle at about the second stroke; and the work must be done somehow, often with a great deal of trouble and no small loss of temper.

The need of a wheelbarrow or a handcart is another thing that troubles the boys a good deal. They are so useful in carrying loads of dirt or bringing wood from the wood-pile, or in filling the woodhouse in the fall, hauling vegetables from the garden to the cellar and apples from the orchard, and in a great many ways they save steps, and time, too. So many fathers are inclined to think a boy never gets tired, and that their time is of no consequence, which is very wrong. A growing boy tires very easily, and needs frequent rests, and when a task is over his time should be his own; but if his time is all taken up puttering along without the necessary things to work with, and with the memory of the words, "Oh, well, he has nothing else to do but work away until he does get it done," still ringing in his ears, he is not to be blamed if work loses its attraction.

Farmers are always lamenting because their boys leave the farm, when in a great many cases the old worn-out hoes, axes, saws, etc., making work extra hard, have just disgusted them with everything on the place. Every farm should have a place where tools can be kept, and then a supply of them provided, and if lost or broken, replaced. It is cheaper in the long run. One farmer had a good way of keeping tools in their proper places by outlining the shape of the tool against the wall with chalk, and thus it was easy to see where each tool belonged, and when one was missing it could be told at a glance, and thus was quite a reminder to

the boys to keep things in their places. Try this plan, for the sake of the boys.

A. M. M.

GRADUATING OR PARTY DRESSES FOR MISSES.

These dresses can be made of any of the lovely summer materials. Mousseline-de-soie lends itself to very graceful effects both in knife or accordion plaitings. Ruffles are used so much that organdie can be employed with very good results. Dotted crape over silk needs very little trimming upon the skirt, but the waist and sleeves of all are elaborately trimmed with lace and ribbon.

SOME LINEN DESIGNS.

DESIGNS BY IDA. D. BENNETT.

There seems no abatement in the making of pretty linen adornments, and as I wandered through my friend's house after we had put it in holiday attire for an evening entertainment, I could not help but think how nice it was to have plenty of them. Of course, the next day they would all be carefully put away again, but it is nice to have them in reserve for gala occasions just as we keep the best china, silver and table-linen. One pincushion was particularly lovely. It was a soft pillow of cotton, rather flat, covered with pink China silk, with a double silk ruffle all around it, with a beautiful square of sheer linen embroidered in roses and scattered

rose-leaves just to lay on top of the square unfastened; the edge being embroidered in large scallops. The design we give in violets would carry out just as effectively laid over lavender or pale green silk. The introduction of lace braid and lace stitches make it very lacy and sheer in effect. An edge of scallops can finish it.

We also show a round cover for the center of a small table, in overlapping circles of lace braid, lace stitches and long-and-short stitches around the edges. The spray of violets is small and easily worked.

A pretty cover for a handkerchief-box is worked in a similar manner, altogether making a very dainty set.

Christie Irving.

PLANTS FOR WINTER BLOOMING.

It would seem rather early to talk of plants for winter, but there is some work that can be done most successfully at present.

The geraniums are thrifty, stocky and full of good slips. Take some of them off, and root in crocks of good garden-soil. They will be in good shape to commence blooming early. Slips taken in August under the most favorable conditions for growth did not blossom until February. Begin earlier. Young plants of the heliotrope bloom more freely than old ones after they get a good start. Slip them now.

If you wish to try roses, order now; place in good-sized crocks, and they will have time to get a good healthy start, and be more liable to give satisfactory results. Any plant taken from a greenhouse to an ordinary window in a living-room requires a month or two to become adapted to a change in temperature, climate and dust, usually, so that if you wish the best winter results in flowers, begin thus early in summer to collect any desirable varieties, and you will feel amply repaid when a profusion of bloom indoors makes the bleak winter months less dreary.

Gypsy.

RYE BREAD.

This is not the regulation rye bread that our grandmothers used to make, but real good nevertheless, and very easy to make.

Take a quart of bread-sponge (I use salt-rising, but think yeast would do as well), two tablespoonfuls of sugar and what rye-flour is necessary to mix into a

loaf. Mix soft, as rye-flour seems to thicken more then wheat. Let rise, and bake one hour in a moderately heated oven.

Gypsy.

HOW POCAHONTAS SAVED MY LIFE.

It was one Saturday afternoon, I remember very well, and we were playing jackstones on the sitting-room carpet because it was raining so hard we couldn't go out on the door-step.

"Jack be nimble,
Jack be quick,"

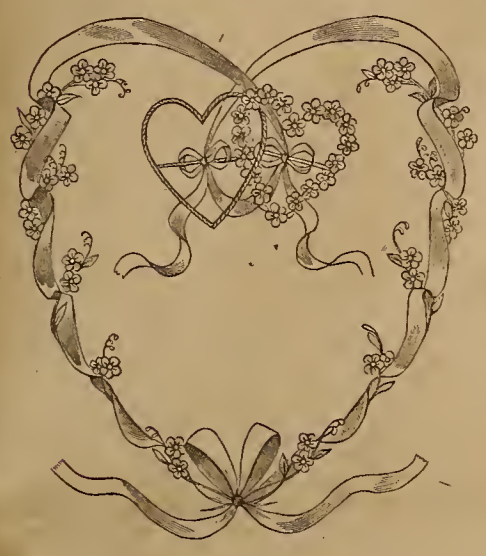
our neighbor's little daughter, Pocahontas, was saying in her slow, drawling way. Pocahontas was named after her grandmother, who was a lineal descendant of the Indian princess; but our Pocahontas didn't remind any one of an Indian, or a princess, either, with her blue eyes, sunburned cheeks and sandy hair, which she wore braided in two little tails down her back. A more heedless, awkward little girl I never did see. She was always stubbing her toe or tearing her frock or losing her primer, but such things never worried Pokey. We called her Pokey to tease her because she was so slow—slow and good-natured—but nothing ever teased Pokey.

"Jack be nimble,
Jack be quick,"

Pokey was saying again, moderately.

"It's full as good as a circus to hear Pokey say 'Jack be quick!'" chuckled Bob, mocking her funny drawl.

"Oh, do hurry up, Pokey!" snapped Ann, fidgeting nervously. "Bounce harder!"



"I'll begin over again," said Pokey, placidly, and with deliberation she began squaring the jack-stones to her mind.

The door was open into the study, and we could hear father reading his Sunday sermon to mother as she sat in her little rocker by the fire darning the family's stockings. Through a crack in the kitchen door came bobolink voices of merriment as the youngsters busied themselves cracking nuts and stirring molasses candy. I can remember just how Pokey balanced the marble in her fat little hand; it was a pretty glass alley with red and blue threads twisted around a yellow center. The pattern of the carpet comes back to me, too—great whorls of red and green on a yellow ground. It always worried mother to have us play jack-stones on that best carpet.

The clock was just striking three when Pokey tossed up the marble, saying with her sober-minded quaintness:

"Jack be nimble,
Jack be quick,
Jack jump over
The candlestick!"

She ended with a great bounce which sent the marble spinning clear around the circle and out of sight. Pokey made a wild grab for it with both hands, and, of course, tumbled over. Bob joined Ann in the scramble, but I slid my hand between them, and with a long reach had caught the marble, and quicker than a wink popped it into my mouth.

"No fooling here, Tom William! You give up that marble!" and Bob gave me a whack so unexpectedly on the shoulder that the marble flew down my throat and stuck there.

For a minute everything was still—the tinkling of spoons came now with a little spash of laughter from the kitchen, and in the study my father was reading eloquently:

"And this brings us to a consideration of the expansion and application—"

A spasm of agony must have crossed my face, for Ann cried out, sharply:

"Father! Mother! Tom has swallowed a marble!"

"Well, be thankful he hasn't swallowed his shoes!" replied my father, testily. I was always up to some deviltry. Ann was always crying out about something, and father was vexed for being interrupted at the most eloquent point in his sermon.

"Thomas William is a-choking himself to death!" called Pokey, and I can remember to this day how her slow, pitiful voice sent the cold chills running down my back.

Father upset a whole bottle of ink over his sermon, and mother threw the stocking she was mending into the fire as both rushed to my assistance. Bob, like a flash, had already gone for the doctor.

At the end of an hour the good old doctor put down the instruments with which he had been torturing me cruelly, and turning to my father, said in undertone, briefly:

"It is of no use. I can do nothing. If you have any last words to say, you had better say them now."

The family all began to cry at this, and the doctor, a kind-hearted man, took out a large red silk handkerchief and wiped his spectacles carefully.

The agony in my throat by this time was so great that I did not mind about dying—that would be a relief—but I began to feel sorry about a number of other things. I felt sorry I had been so cross to Ann when she asked me to help her fill the wood-box that noon. Suppose it was Bob's work, and suppose Bob had sneaked off and left it for somebody else! Ann was a slender little girl—it was a shame to let her fill the wood-box, and I felt a pain under my ribs where my heart ought to be. Besides, I remembered with penitence how I had yanked the cow's tail that morning, yelling like a wild Indian while I galloped her all the way to the pasture. I felt awfully sorry, too, when I remembered how I had rushed into the house that rainy afternoon without ever so much as looking at mother's door-mat. But judgment had overtaken me, and here I was stretched out on mother's best moreen sofa to die, with muddy shoes on my feet. There are more things a scapegrace of a boy feels sorry for than he ever tells of or anybody ever knows of—that has always been my experience.

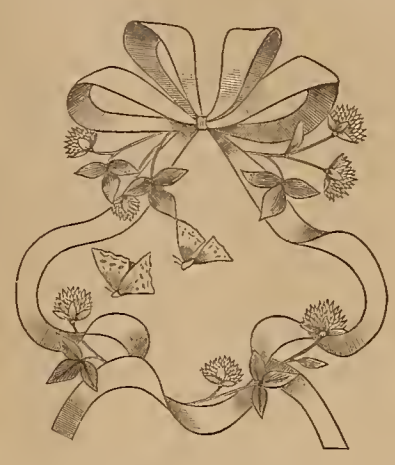
My brothers and sisters, trembling and awe-stricken, now came one by one to bid me good-by, and I shall never forget those distressed little faces, all besmeared with molasses and tears, how they bent over me to give the last pitiful kiss. I began to grow faint and weak—strange benumbing pains crept over my whole body. I felt I could not last but a few moments longer. My mother was wringing her hands and moaning with grief, Ann was crying hysterically, and father was down on his knees in prayer.

It was at this last sorrowful moment that Pocahontas, always slow and behindhand in her motions, approached to give me her farewell. Her little pink-check apron was thrown over her face; she was sobbing and crying as if her heart would break. Not looking where she was going, the poor girl naturally stumbled over a cricket which stood providentially in the

way, and down Pokey went headlong on the floor. The clock was just striking five.

I knew I was dying—I knew I should never hear that clock strike again—but somehow, as I looked over at Bob and saw what an awful spasm worked his red, tear-swollen face while he tried not to smile—somehow I couldn't help it—and I burst into an uncontrollable fit of laughter. Instantly the marble flew out of my mouth—my life was saved.

Jumping to my feet, I found to my great surprise and delight that I was just as strong and well and hearty as ever. Catching Ann up, I waltzed that astonished girl all around the room, while Bob yelled so that the neighbors came running in to see if the house was on fire. My mother, who had picked up Pocahontas, now hugged her nearly to pieces, while my father, entirely out of his senses,



invited the neighbors, the doctor, everybody, to stay and eat a thanksgiving supper with us.

"Thomas William, my son!" said my mother that night, drying her eyes for the twentieth time, "if I ever catch you coming in with such muddy shoes and playing jack-stones on my sitting-room carpet again, I certainly will—" but here poor mother's voice choked up, and she never finished the sentence.

"Children," said father, looking around upon us with a new tenderness in his eyes after our thanksgiving prayer and thanksgiving hymn, "I shall not preach the sermon I had prepared for the Sabbath. It is covered with ink, and probably wasn't worth preaching. I shall speak from a full heart, and my text shall be, 'For this my son was dead and is alive again.' His life has been spared to us miraculously—it is a gift—he can make the application for himself."

I did make the application for myself, and tried to be a soberer, steadier boy. I gave up yanking the cow's tail, and didn't tease Ann more than half as much, and I remembered about my shoes. That was over forty years ago, and I never come into the house to-day in any kind of weather without wiping my feet scrupulously on the door-mat.

You asked about Pocahontas? Yes, she grew up to be the finest woman I ever knew. Here comes her little daughter now. Pokey, will you tell your mother a friend of mine wishes to see her?

FRANCES BENNETT CALLAWAY.

A NOBLE BOOK.

Although the present is an age of wonderful literary activity the number of great books remains small. It is a pleasure, therefore, in looking over one's library to take from the shelves a volume and say, "This is truly a book worth reading, not only once, but again and again."

Such a eulogy may be pronounced on "Corinne." It is ninety years since this book was published in Paris, and won instantly European applause. The author was a woman forty-one years old, who by nature and fortune was richly endowed. Her father was France's minister of finance, and possessed of an immense private fortune. Her mother was cultured, refined and pious. Every social advantage was available in this family. When the daughter married her dowry was five hundred thousand dollars. When quite young she gained personal fame by her brilliant authorship. She became the mother of two children. Certainly it is interesting to know this much concerning the personal condition of one whose book we are preparing to read.

We have not gone far in this story until we find that love is the theme—first the love of a son for his father. This is almost morbid, or seems so by the undue prominence given it by sad circumstances which control the characters, and at last causes the sorrowful conclusion. But what other emotion could be so noble even in excess? The love which seems opposed by paternal affection is the love between Corinne and Oswald, and this is treated with all the delicacy possible. A critic of literary productions has said that the test of a book's purity is whether it is fit to be read by children and young people. We all remember that "Corinne" was one of the text-books in the course of the French language during our school-days. It is indeed worthy. The end of the story is sad, because the lovers do not marry, as we wish they would; but the one who was apparently wronged and deserted utters only noble sentiments of resignation, and dies with what consolation she can derive from religion after having done all she could to insure the happiness of her beloved in the ties he had formed.

When we consider the intellectual as well as the sentimental nature of the book, again we admire its nobility. The scenes are mostly in Italy, a country which affords scope for lofty thoughts in all branches of activity possible to mankind. Read a volume of "Corinne," and mark all the fine passages. You will find when you are through that by turning the pages you will discover gems of utterance on the subjects of art, history, religion, music, poetry, philosophy and life. Often we become weary with the dust of this work-a-day world, and faint for an uplift. It was such a mood that caused a noted man to exclaim, "Refresh me with a great thought!" If you feel such a mental need, let me commend to your attention the noble romance called "Corinne." If you have read it years ago, test the renewed pleasure it will give you; and if you have never read it, hasten to correct that omission.

K. K.

BEATEN BISCUIT.

One quart of flour, one teaspoonful of salt, one tablespoonful of lard, one tablespoonful of butter, one half pint of milk and water mixed in equal portions. Put the salt in the flour and sift onto a marble slab, then with a spoon thoroughly mix in the lard and butter; slowly pour on the milk and water and begin to work, alternately kneading the dough and beating it with an ax or large potato-masher. Twenty or thirty minutes will make the dough soft and light, with little blisters rising over it. Roll out about three quarters of an inch thick, and prick with a fork.

"About twenty minutes are required to bake them. And above all things," the speaker added, solemnly, "cut them with a very small cutter. Large beaten biscuit are not the genuine thing—at least not the Kentucky article. I have had a cutter made by a tinsmith to suit my ideas, but the top of a ten-cent can of baking-powder will answer all purposes."

PITCHER PURSE, CROCHETED.

One ball of best knitting-silk and steel crochet-needle.

Knit a neck three inches long, making the diameter large enough to admit a silver dollar freely. Just plain stitch, throwing thread once and into every stitch. The bowl part is two and one half inches long and three inches wide in the center, narrowing to four stitches at the bottom and neck at the top. Turn on wrong side, and fasten. For handle take same stitch as neck, and make three and one fourth inches long. Fasten one end of the handle, and place on it two small band rings five eighths of an inch in diameter; then fasten the other end. The rings are to slip over the neck, and secure the contents of the purse. Finish the top with a neat scallop. The bowl part is ordinary checker-stitch.

BELLE KING.

COVERS FOR INFANTS' CARRIAGE-ROBE.

DESIGNS BY IDA. D. BENNETT.

As daintiness is the attempt of everything now prepared for the infants' wardrobe, the accompanying designs, which are to be worked on very sheer handkerchief linen in the daintiest possible manner, finished with a hemstitched border edged with lace, to be laid over a pad made of pale blue silk with a half layer of cotton in between, are just the thing. The forget-me-nots are to be worked in pale blues and the ribbons in white silk.

Our Household.

WHICH ROAD?

If you could go back to the forks of the road—
Back the long miles you have carried the load;
Back to the place you had to decide
By this way or that through your life to abide;
Back of the sorrow and back of the care;
Back to the place where the future was fair—
If you were there now a decision to make,
Oh, pilgrim of sorrow! which road would you take?

Then after you'd trodden the other long track,
Suppose that again to the forks you went back,
After you found that its promises fair
Were but a delusion that led to a snare—
That the road you first traveled with sighs and unrest,
Tho' dreary and rough, was most graciously blest
With balm for each bruise and a charm for each ache—
Oh, pilgrim of sorrow! which road would you take?

—Chicago Herald.

POINTS IN SEWING.

Gored Skirts.—The home dressmaker always has more or less trouble in getting a gored skirt to hang properly. If it is all right, seemingly, when new, there is a tendency to sag at the bias seam in the center of the back, which spoils the round, smooth outline at the bottom of the skirt demanded by the present fashion.

A dressmaker gave me the remedy for this trouble, which comes with the five, seven or nine gored skirt, as there is no avoiding the coming together of two bias edges at the back.

When the pattern of the back gore is laid on the lining, the straight edge of the latter is laid even on the bias center seam of the pattern, and that cuts the lining bias on the straight edge of the pattern. The outside is cut with the straight edges on their respective proper sides as usual, and when the back breadth is basted on the lining, its straight edge holds in place the bias edge of the lining, and the latter's straight edge holds in place the bias edge of the outside goods. See? Be careful not to change sides with the back breadths; simply lay the pattern on the lining so that it will cut opposite what the outside will be, and the skirt will hang true until worn out or taken to pieces.

Cuffs, Collars and Revers are quite essential to the finish of a waist at present. They must be as stiff as a board and the covering as smooth as satin to be proper.

Cover one side of the buckram or canvas lining with old crinoline from which the stiffness has been worn (old sleeve-linings are plentiful now), and trim the edges evenly after they have been stitched together on the machine. Baste the goods (which might also be lined with the crinoline if thin) to the uncovered side of the canvas with the edges projecting on all sides about one half inch; these are folded over the edge of the foundation, and can be easily caught down securely to the crinoline lining, drawing the outside as smooth and even as the most fastidious could desire.

The inner lining of the goods or silk is to be turned in and hemmed down to the folded overedge of the outside goods, and should be a little smaller, so that the hemming or edge of the lining may not show from the outside. Pricked fingers and broken needles all testify to the difficulty of catching the edges of the collar to the buckram lining, hence the lining of old crinoline, which makes it a very easy task, and adds nothing materially to thickness or weight.

Gypsy.

CANNED CABBAGE.

"And who ever heard of canned cabbage before?" question our friends whenever they sit down to dinner with us when we chance to have that article upon the table. For with cabbage upon the table out of season the question is sure to arise concerning the "where" we could have obtained cabbage in so perfect condition in early spring, even into May.

Never very successful in keeping cabbage through the winter in head form, we long ago conceived the happy idea of canning it. It was, of course, a success from the start. For acids will always keep when canned, and our canned cabbage is slightly pickled. It is first cooked until tender, then salted and sufficient vinegar put in to insure its keeping. It is put up boiling hot, as in fruit canning. When prepared for the table, it is heated through and more vinegar added if desired. It is always tender, and so much relished by all who are cabbage lovers.

Cabbage is often ruined by overcooking. It is from our English friends we learn that cabbage cooked not longer than twenty minutes is much nicer than when boiled until so tender that it falls all to pieces. Try it. And use cabbage largely in soups. Sauer-kraut could be canned also for summer use by cooking it thoroughly and sealing while hot, using only glass jars.

Nedella.

FRUIT DESSERTS—CURRANTS.

1. Currants (plain).
2. Dipped Currants.
3. Fruited Jelly.
4. Green-currant pie.
5. Ripe-currant pie.
6. Currant Pudding.
7. Currant Cake.

Like all other fruit, currants make a very delicious dish when served plain with sugar. They should first be carefully picked over, so that they are perfectly free from stems or dirt of any sort. It is very seldom that it is necessary to wash them, but occasionally such is the case, when they should be washed lightly and carefully in clear, cold water and drained well. After the cleaning process, whatever that may be, they should be placed in the dish in which you intend to serve them—first a layer of currants and then a generous sprinkling of powdered sugar, and so on. They should be kept in a refrigerator or other cool place for some little time before serving.

Dipped Currants, or, as they are sometimes called, "iced" or "crystallized" currants, make a very pretty dish as well as a very palatable one. Pick over your currants carefully, and wash them if necessary, being careful to keep them on the stems in as perfect bunches as possible. If you have been obliged to wash them, they should be allowed to drain well through a sieve before using. Beat the whites of two or three eggs to a stiff froth, and then dip the bunches of currants into the same, after which place them on a sieve to drain. The egg which drains off can be whipped up and used again. After they have drained sufficiently, dip them, bunch by bunch, into a pan of powdered or confectionery sugar; put a sheet of fine paper over the bottom of a shallow pan, and carefully place your bunches of currants on same. Put the pan into an oven that is cooling, if possible, or the equivalent in heat if not possible, and remove when the icing on the currants has become firm. Now place the bunches carefully in the dessert-dish in which you intend to serve the currants, and put the same into a refrigerator or other cool place before serving.

Fruited Jelly.—Jelly of this sort, while always agreeable, will be found specially appetizing to invalids or those indisposed. Pick over a quart of ripe currants, put the same into a saucepan, cover with water, boil them, and then mash and rub through a sieve; now add enough hot water to make up a quart, after which sweeten the mixture to taste with granulated sugar, and let it boil up once. Soak one package of gelatin in one pint of cold water for one half hour or more; then add the quart of hot mashed currant mixture, and stir until the gelatin is dissolved. Sweeten to taste again. Wet your mold or molds with water (to prevent sticking), and pour the mixture into the same. Place in a refrigerator or other cool place to harden. As usual with gelatin desserts, this is better if made a day previous to serving. Pretty individual jelly-molds or small glasses (wet first with water) make the dessert perhaps more attractive than if one large mold is used.

Green-currant Pie.—Stew one quart of green currants, mashing same well, and using as little water as possible, only enough to keep them from burning; sweeten to taste with sugar, and also add one soda-cracker rolled fine. This mixture is baked between two crusts, and makes a pleasant diversion from the ripe-currant pie. As every housewife has her own individual pie-crust recipe, it is needless to add one.

Ripe-currant Pie.—Mash one cupful of ripe currants, to which add one cupful of sugar and two tablespoonfuls of water; beat the yolks of two eggs together, with one tablespoonful of flour, and add to the above. This pie is baked in one crust only, after which it is finished off with the following: Beat the whites of two eggs, together with two tablespoonfuls of powdered or confectionery sugar, to a stiff froth, and place on the top of the already cooked pie, which is then placed in the oven for a further browning.

Currant Pudding.—The ingredients required are one cupful of finely chopped suet, one cupful of dry currants, one third of a cupful of molasses, two thirds of a cupful of milk (water will do in a pinch), one teaspoonful of allspice, cloves and cinnamon mixed, and three cupfuls of flour; mix the above ingredients well in the usual order, and steam for three hours, as in the case of brown bread or suet pudding. This is very nice served with sauce.

Currant Cake.—Cream together three quarters of a cupful of butter and one cupful of sugar. Beat well four eggs, and add to the butter and sugar; also add two cupfuls of flour with which has been previously sifted two teaspoonfuls of baking-powder. Now prepare your currants by picking them over carefully and washing them well; then dry and flour them, and add to the above mixture. Flavor with one teaspoonful of lemon flavoring extract.

While one or two of the above recipes would hardly be practicable for "city folks," who would have some little difficulty, perhaps, in procuring green currants or currants in fine, perfect bunches, they are specially adapted to the needs and opportunities of the housewives of this paper, and have been selected with this in view.

Emma Louise Hauck.

DRESSING-SACK.

One of the greatest and most comfort-giving luxuries of the housewife or the business woman is a dressing-sack.

When one is through with the day's work, whatever it may be, it is a relief to slip into something comfortable and yet presentable, and the dressing-sack answers the requirements to a T.

A very pretty dressing-sack of cutting or French flannel is made with a tight-fitting back to the waist-line, and a loose front extending from a small yoke, this front to be belted in loosely with either ribbon or strips of the same material. The collar is preferably a large turn-down of several points, so much in use at present; the sleeve a small bishop finished with lace or a ruffle at the hand.

When made of material medium in color, not too light, this sack can be worn on many more occasions than when made of very light-colored material.

A dressing-sack of lawn or organdie can be made up very prettily in a similar manner.

A dressing-sack is not only a very comfortable addition to one's wardrobe for the home, but also when traveling or visiting, and as the expense for same is very slight, it is easily attainable by the woman with the average purse.

The pattern in Farm and Fireside, No. 6,591, will be found a very easy one to work up in all kinds of materials.

E. L. H.

SOUVENIR COOK-BOOKS.

A pretty conceit for a birthday or other anniversary gift for one's housekeeper friends is a souvenir cook-book in which is transcribed one's favorite recipes. Several small booklets, each devoted to one subject, are daintier than one large one. For instance, one might contain a dozen or so different recipes for using lemons, another choice ways of cooking chicken, one for eggs, another for potatoes, etc.

These booklets should have small square or oblong leaves cut from parchment paper, or even that used for typewriting, and folded. The covers may be of heavy cardboard ornamented with a suggestive design.

For the lemon booklet the cover might be of brown linen, to slip over the cardboards, embroidered in Asiatic filoselle, with a spray of leaves, blossoms and ripe lemons in natural shades, which will make a pleasing contrast.

For the one with recipes for eggs might be a nest of eggs in the green grass. For the chicken-recipe book what could be prettier than three or four fluffy yellow and white chicks embroidered on dark linen with Roman floss? If necessary, these covers could be removed and laundered without in the least affecting their beauty. Narrow ribbons or silk cords passed through holes made for that purpose, and tied in the back, will hold the leaves in place.

Clara Sensibaugh Everts.

CRIPPLE CREEK INVESTMENTS.

Big fortunes have been made by a small investment in Cripple Creek stocks, and the way many have suddenly acquired wealth would make interesting reading. We can not here go into details, but if you will write us we will suggest a plan that will materially improve your pecuniary condition. We have something special to offer, and it will cost you nothing to send us your name and get on our list for Cripple Creek literature. Our facilities in the stock business are unexcelled. Address The Mechem Investment Company, Colorado Springs, Colorado.

See our great prize offer on page 19 of this issue.

Our Sunday Afternoon.

OUR COMING LORD.

Jesus our Lord will come again,
The earth takes up the glad acclaim;
His kingdom now, by God's decree,
Shall be proclaimed from sea to sea.

The work of Christ is now approved,
The curse will surely be removed,
And earth in pristine beauty stand,
Retouched by God's almighty hand.

The reign of sin, which has debased
All human souls, shall be effaced:
War's dreadful scourge shall wholly cease,
And all mankind shall be at peace.

This brotherhood of human souls
By ancient prophets was foretold,
Who walked with Him in faith and love,
Inspired by wisdom from above.

Let us rejoice, the time is near
When Christ in glory shall appear;
The coming day now seen to loom
Is pledge again of Eden's bloom.

—World's Crisis.

NO CHRISTIANITY WITHOUT SELF-SACRIFICE.

THIS life is only a probationary existence, a period not measurable with the eternity for which it is preparatory, and whose happiness or misery is determined here. "For our light affliction, which is but for a moment, worketh for us a far more exceeding and eternal weight of glory: while we look not at the things which are seen, but at the things which are not seen; for the things which are seen are temporal, but the things which are not seen are eternal."

That is the basis of the Christian faith; without it there is no Christianity; and having it, the early Christians and multitudes of their successors submitted to persecutions and tortures, with the confidence that their earthly trials would work out for them an "eternal weight of glory" in the life to come. They were trivial incidents and accidents, of importance only as tests of the faith of those who endured them, and in educating them for the reward of the everlasting life. Hence, the gospel of Christ constantly makes poverty and suffering the avenue of approach to the heavenly gates, and riches a bar to admission through them.

What matters it how men suffer and are denied here so long as they win the reward of the life to come? Nor does it require religious faith to recognize the profound philosophic truth in this view of life. This life exists, and forever has existed, with reference to the life succeeding it. One man sows, another man reapeth. One generation makes way for another, struggling to prepare for its coming; and thus the ages roll on and the world goes on: self-sacrifice, self-effacement always.—New York Sun.

LEAVING QUESTIONS WITH GOD.

In one of his letters touching a very important event in his life, George Fox wrote: "Wherefore I let the thing rest, and went on in the work and service of the Lord." There is a deep and vital truth of practical living suggested by this fragment of a sentence—a truth which, received and acted upon, goes far to make the mind calm, the heart peaceful and the hands effective. There are a great many conscientious but anxious people who find themselves continually tempted to postpone work until all questions can be settled; who attempt, in a word, to anticipate the education of life by grasping at the beginning of those results which come only at the end. For there are a great many perplexing problems which can never be thought out; they must be worked out. The man or woman who wants to settle them in advance will fail alike of the settlement of the question and the doing of the task. It is through the active putting forth of one's power that light continually streams in on the questions which concern what one ought to do. In any education the understanding of the ultimate uses of things must be postponed; those uses are revealed only when the educational process nears its close. This is pre-eminently true of the supreme educational process which we call life. There are thousands of questions weighing upon every sincere and conscientious mind which cannot be settled by any amount of thinking, but which in a way settle themselves as one slowly but faithfully does the duty which lies next. This comes very near being the whole philosophy of life, which is in no sense a settlement of ultimate questions, but which is always primarily the doing of the thing that presses to be done. He who is able to do faithfully and heartily that which lies in his hand is on the road to the settlement of all the final questions. He is working his way through the experience which is to be, from the spiritual side, one of the great sources of personal illumination. To learn to leave things with God, and to do one's work as if God could be trusted, is to gain repose and full-heartedness which permit one to pour out his whole strength without anxiety, worry or distraction.—The Outlook.

THE PRICE OF A MAN.

Greece legalized piracy and made captives slaves. Rome edified emperors and degraded the people. In classic Athens, when Demosthenes was pronouncing his eloquent orations, you could buy a man for thirty dollars, half the price of an ordinary horse. Plato was exposed for sale in the slave-market. Esop, whose fables you read and study, was a slave. In Rome, when Christianity dawned upon the earth, a slave was worth about ninety dollars. That was the price that Rome, with all her wealth, splendor, palaces, strength and victories, put upon a man. You cannot buy a man in Rome for that price now. What has raised the price of humanity? "Oh," says one, "it is the progress of the ages that has made the difference." Very well. A friend of mine was in the Fiji islands about 1845. They have had just as much time to progress there as any one since they started from the monkeys, as some of our skeptical friends claim to have done. What was a man worth there eighteen hundred years this side of Rome? You could buy a man for a musket, or for seven dollars. Put ordinary infidels on sale in the Fiji mark fifty years ago and they would have brought seven dollars apiece. But you cannot buy a man there now for seven dollars, nor for seven million dollars. Why not? Twelve hundred Christian chapels tell why not. They have read that book which says, "Ye were not redeemed with corruptible things as silver and gold, but with the precious blood of Christ."

Now, I judge that a book which raises the price of humanity in that way is worth keeping for the good it has done. "Progress" has not raised the value of humanity. They have had eighteen hundred years to progress in, and from Rome, at ninety dollars, have come down in Fiji to seven dollars. What has changed things in Fiji was not "progress;" it was salvation. It was not improvement, it was regeneration. It was not the gradual changing of apes into infidels, but it was the sudden changing of sinners into saints. There are men to-day preaching the gospel of Christ who fifty years ago sat at cannibal feasts. They have been changed, and all the "progress" of ten million ages would not work such a change as that. It is done by the gospel, which is "the power of God unto salvation to every one that believeth."—H. L. Hastings.

WORTH THINKING OF.

What can be done in a minute? Think about it, dear young people. It takes no more than a minute to speak a few kind words to somebody who will be made much happier by hearing them. It takes no more than a minute to give a sweet smile to some poor, forlorn child who is carrying a burden too heavy for its tender heart. It takes no more than a minute to make up a quarrel between little brothers and sisters.

THE THINNEST LINE.

The line between the professional expert and the genuine crank is often thinner than the partition of which the poet speaks between genius and insanity.

Lombroso, a celebrated Italian physician, passes that line, and it is impossible for any one with a sound mind, exercising common sense, not to see how his classifications are frequently supported by the most infinitesimal points of resemblance.

A recent illustration of it has attracted attention throughout Europe and been cabled across the Atlantic. The brain of Tiburzi, the infamous Italian brigand, was given to Lombroso for examination. The professor admits that it is perfectly normal, as are all the criminal's other organs. This is fatal to his theory that the brains of criminals are malformed. How does he save his theory? By calling him a criminaloid. This means that his natural qualities are not bad, and he becomes an outlaw only technically.

It is by such dodgings in every department of investigation that the expert shows when he is hypnotized by his theory.—Christian Advocate.

A HUMAN GIFT.

Nothing on earth can smile but the race of man. Gems may flash reflected light, but what is a diamond flash compared with an eye flash. Flowers cannot smile. This is a charm which even they cannot claim. Birds cannot smile, nor any living thing. It is just the prerogative of man. It is the light in the window of the face by which the heart signals to father that a friend is at home waiting. A face that cannot smile is like a bud that cannot blossom, and dies upon the stalk. Laughter is day, and sobriety is night; and a smile is the twilight that hovers between both, and is more bewitching than either.

PURITY.

Let men learn the old, old truth that a gentleman is always a pure-minded and pure-hearted man. Let our maidens learn that of all culture and of all adornment the loveliest and best is heart culture in holiness. Show me a woman who has this hope indeed, and I will show you a madonna soul, on which the beatific and beautifying light has shone and is still shining.—Samuel Smith Harris.

Our Miscellany.

"Barrin' me landlady and me washwoman," said Mr. Horrighan, with honest pride, "Oi owe no man a cint."—Indianapolis Jonrnal.

"You will he sorry for the way yon have neglected me when I am silent in the tomh," said Mrs. Peck. "Think of that."

"My dear," said Mr. Peck, as innocently as he conld, "I cannot imagine such a thing."—Indianapolis Journal.

For the enrrant-worm no remedy is safer or more easily applied than white hellehore. Dissolve an onnce of the powder in two gallons of water, and apply with fine sprinkler or hrush-hroom. The worm first appears on the lower branches ahont the time fruit is formed.—Thayer's Bulletin.

He—"Tell me, Carrie, were you ever in love before?"

She—"To he frank with yon, Harry, my heart never went ont from me bnt once, and that was to my hicycle; hnt, Harry, I like you as well as it is possihle for me to like a man."—Boston Transcript.

He (tremblingly)—"I have one last wi-wish to ask yon before we part in an-anger forever."

She (sohhingly)—"Wha-what is it, Geo-George?"

He—"Wi-will yon me-meet me next Th-Thnrsday, as nsnal?"

She—"I wi-will, George."—Tit-Bits.

WHEN HOGS ARE RIPE.

Governor Rnsk happened to drive over the state line once into Wisconsin, looking at the farms. He was particnlarly strnck with one farm, on which he found everything in first-class order, and riding np to the honse inqnired the name of the owner, when a tall German came ont and gave his name as Theodore Lonis.

"What do you regard as the greatest wealth-prodncing agency in agricultnre?" the governor asked him.

"The hog," was the sententious reply.

"Upon what do you base this statement?"

"He lifts more mortgages than anything else."

The conversation which ensned developed the fact that Lonis had once been what is called an all-wheat farmer, and kept constantly sinking into debt. He decided that something had to he done quickly or there would he very little left for Louis, so he decided to try the hog. The first year he made a little money, the second year he made more, and then he became thoroughly interested. The resnlt was that he hecame recognized as a great anthority on hogs. His neighbors took np his example, and mortgages began to be lifted, until finally there was not one on record against the commnnity.

"How long would yon keep a hog?" asked Governor Rusk.

"I would not keep him—I would kill him."

"When?"

"When he is ripe."

"When is he ripe?"

"When he is fat."

"Wouldn't it pay to keep the hog for two or three years?"

"I tried that once," said Lonis. "I took a hog in the fall aud weighed him, and I took my corn and weighed it. When spring came the corn was all gone and the hog weighed ahont what he did in the fall. That made me say next year that I would kill my hogs in the fall and save corn."

"How mnch does it cost to keep a hog through the winter?"

"Three dollars."

"How many hogs winter in Minnesota?"

"One million. I have just looked at the auditor's report."

"Do you mean to say that we lose $3,000,000 a year in wintering our hogs?"

"Yes, that's what you do. If you kill them all in the fall you will have left in your cribs $3,000,000 worth of corn to sell."—Atlanta Constitution.

THE WEIGHT OF THE EARTH.

According to the most accurate calculations the earth weighs 6,069,000,000,000,000,000,000 tons or 12,138,000,000,000,000,000,000,000 pounds. The weight of the earth is eqnal to seventy-eight moons. The weight of the earth is eqnal to 1.625 times the weight of Great Britain and Ireland, countIng that they extend down to the center of the earth; fifty-two and one half times Europe, eleven and one half times Asia, thirteen and one third times North and South America and seventeen and one half times Africa. If the earth should fall into the sun, the sun would hardly feel the impact, bnt it would take the earth sixty-five days to get there after it started.—Strand Magazine.

SUGGESTIONS FROM THE PULPIT.

"Brethren," said a well-known bishop the other day in the course of a sermon, "I beg you to take hold of your own heart and look it straight in the face."—Tit-Bits.

VISITING-CARDS $1 EACH.

J. Fount Tillman, of Tennessee, register of the treasnry, does not use the conventional bits of pastehoard for visiting-cards.

"I nse these," Mr. Tillman tells his friends, flonrishing a roll of paper money.

All notes issned hy the government hear the indorsement of the register of the treasnry, and everyhody is familiar with the finely written, somewhat effeminate signature of Mr. Tillman. Like that of Grover Cleveland, who conferred pnhlic office on the Tennesseean, Mr. Tillman's handwriting snggests a man entirely different in personal appearance from his real self. He is tall, hroad-shouldered and inclined to rotnndity. His linen is always immacnlate. A waistcoat cut U-shaped and extremely low allows a broad expanse of shirt-bosom, emhellished hy a magnificent diamond stud, to he seen. His diamond, his shirt-front and his stalwart hnild have made Mr. Tillman a noticeahle fignre in Washington.

Jnst how Mr. Tillman began the practice of sending a dollar bill or a hill of any other denomination to a person whom he wished to see is not definitely known, hnt the friends of the register tell this story ahont it: Mr. Tillman went visiting one evening. When he opened his card-case in response to the presentation of a silver plate hy a servant he found it empty.

"I haven't a card with me," he explained, and was ahont to send np his name hy word of month when a happy thonght came. "This will serve as well," he said, fishing out a dollar note and placing it on the salver. "That's not for yon, mind," added the Tennesseean, detecting a look of cnpidity in the servant's face. "Give it to Mr. ——; he'll nnderstand."

But Mr. —— did not nnderstand. He sent hack the money, with a reqnest for an explanation.

"Well, well," said Mr. Tillman. "How odd. There's my name, plain as daylight, in the lower left-hand corner."

The register was received at once.—New York Snn.

THE COBBLER'S DOZEN.

We often hear of a haker's dozen, and most of ns know that it means thirteen. There is also a cobbler's dozen, and that, too, is thirteen. There is a tradition that there was a law which compelled cohblers to pnt twelve nails in the heel of each shoe, and that when the nails grew cheap the cobhler drove the thirteenth nail in the center of the heel for good luck, and that from this came the legend of the cobhler's dozen, nnmbering thirteen.

THE CUSTOMARY BOAST.

"There is a great deal of animosity in the harem jnst now," said one of the gossips of the Turkish conrt.

"Are the snltan's wives quarreling?" inquired another.

"Yes. Every one of them claims indivdnal credit for having made her hnshand the snccessfnl man that he is to-day."—Washington Star.

SEA-SHORE EXCURSIONS

VIA PENNSYLVANIA LINES THIS SUMMER—LOW RATES FOR VACATION TRIPS AND OUTINGS ALONG THE OCEAN.

General excursions to the sea-shore at exceptionally low rates will be inaugnrated by the Pennsylvania Lines this snmmer, offering grand opportunity for delightful ontings at the most popular ocean resorts on the continent. This annonncement will be good news to persons who may desire to enjoy their vacation at the seaside. They may visit Atlantic City, Cape May, Avalon, Sea Isle City, Anglesea, Ocean City, Holly Beach or Wildwood at very low fare, round-trip tickets to either resort being obtainable at the same rate.

The first excnrsion will be run Thursday, July 15th, followed by a second four weeks later, Thnrsday, Augnst 12th. Round-trip rates to either Atlantic City, Cape May, Avalon, Sea Isle City, Anglesea, Ocean City, Wildwood or Holly Beach, New Jersey, from principal stations from which excnrsion tickets will be sold are given below.

From.	Round Trip.	From.	Round Trip.
Fort Wayne	$12.50	Logansport	$13 00
Lima	12.00	Marion	13.00
Crestline	12.00	Ridgeville	12.00
Toledo	12.50	Elwood	13.00
Tiffin	12.00	Anderson	12.50
Mansfield	12.00	New Castle, Ind.	12.50
Orrville	11.50	Louisville	13.00
Massillon	11.50	Seymour	13.00
Canton	11.50	Columbus, Ind.	13.00
Cleveland	11.50	Indianapolis	13.00
Alliance	11.00	Cambridge City	12.50
Salem	11.00	Richmond	12.00
Niles	11.50	Greenville	12.00
Girard	11.50	Piqua	11.50
Youngstown	11.50	Urbana	11.50
New Castle, Pa.	11.50	Columbus, O.	11.00
Cincinnati	12.00	Newark	11.00
Dayton	11.50	Zanesville	10.50
Springfield	11.50	New Comerstown	10.50
Xenia	11.50	Dennison	10.50
London	11.50		

The return limit will cover twelve days including the date of sale, which will be ample for customary ten days' vacation. For further desired information apply to nearest Pennsylvania Line Ticket Agent, or address F. Van Dusen, Chief Assistant General Passenger Agent, Pittsburgh, Pa., for particnlars. Illustrated descriptions of resorts to which excnrsion tickets will be sold, with list of hotels and boarding-houses at each, will be furnished npon application.

WONDERFUL CHANGES.

In geography the changes of hnt a single generation of men have been as wonderful as in art or science. But a few years ago the map of Africa presented a narrow coast fringe that was known to the world, while the great inland continent was marked "unexplored." Japan was so hedged about that it was considered as a sealed world. Across the channel lay the great empire of China; within its border-line no white man was welcome to set his foot, and his effort to gain information was regarded as impertinence. Even on this American continent there had grown np nations, from Mexico to Patagonia, with whose people the ontside world had hnt little acqnaintance. The geography of a few years ago has changed. The map of Africa is fignred up in colors, like that of the United States, showing growing colonies with flonrishing cities and railroad lines, under protectorates of England, France, Germany, Beigium and Portugal. Life is not only possihle, hnt pleasant, and there are zoues within which the climate is as agreeable as it is anywhere else in the world. Japan has hecome Europeanized, and revels in rapid transit, electric lights and every other advance that may be found in Europe or America. The gates of China are ajar, and in a few years the Pullman car will take personally condncted excursions right into Peking, which will he welcomed hy the emperor himself. Mexico and Spanish America have gone to work in earnest, and regnlar trains run from the shadow of the White House to the snnlight that falls upon the summits of Chapultepec. Trnly the world has been opened up, and the divers peoples who live npon it are discovering the brotherhood that exists among them.

POPULIST STAMPEDE TO TEXAS.

General Paul Vanderwoort, the well-known Populist leader, has a scheme to remove thonsands of Populists to Texas and colonize them on land in different parts of the state. General Vanderwoort is now at Chesterville, Colorado county.

"The movement is now only in its incipiency," he said to the "Snn" correspondent. "Already the Northwest is on fire. In states where high taxes, interest, hig fuel and clothing bills and high rates of transportation keep the farmers' noses to the grindstone, they are heginning to tnrn their eyes toward Texas, where lands are cheap, taxes low, where fuel costs practically nothing and clothing little in comparison, and where the farmer is close to tide-water, where he can get his surplns prodnct into market without giving all away to railroad companies.

"This is no slight movement, without aim or organization, hnt is to be on a grand scale. It means that Texas is to he popnlated, and in short order, and with a class of citizens of which she will have reason to he prond. Already Governor Waite, of Colorado, is here making arrangements for a large nnmher that he will bring with him. Mr. Debs is in Chicago arranging to start the movement there. Dehs will never go into another strike, hut will work to give people a chance to get ont from under the yoke of oppression of debt, which year hy year is growing heavier and heavier npon them, by giving them an opportunity to make homes for themselves in the glorions coast country. If the big landowners of Texas wonld throw open their holdings and join with ns in this movement to colonize this state, in five years' time there shonld he at least 2,000,000 more people inside our border.

"We are going to colonize Texas with Populists, and I am now engaged in a systematic effort to refnte the lies that have been nttered and scattered hroadcast over the land against the good name and fame of the great state of Texas. No state in the Union has heen so misrepresented and none so little understood; hnt the tide of sentiment has turned Texasward, and the West and Northwest are beginning to feel alarmed at the extent of the threatened exodus. I conld name prominent newspapers in those regions which have refused to print a word ahont Texas dnring the present year, fearing to add fuel to the flame which is already firing the hearts of northwestern farmers."

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Book on Silo Wanted.—D. W. S., Lake Linden, Mich. Request the Secretary of Agriculture, Washington, D. C., to send you Farmers' Bulletin No. 32—"Silos and Silage."

Ginseng Culture.—H. A. A., Los Gatos, Cal., and others. Send five cents to Superintendent of Documents, Union Building, Washington, D. C., for Farmers' Bulletin No. 16—"American Ginseng."

Vine-borers.—N. W., Evans, N. Y., writes: "What will prevent the cucumber-borer from destroying the vines when they are in full bearing?"

REPLY:—These borers tunnel through the main stock near the surface of the soil. Dig them out with the point of a sharp knife.

Whitewash.—W. T., Grass Valley, Cal., writes: "I send a recipe for whitewash that will not peel or rub off. Slake one bushel of fresh lime with hot water. While slaking add one pound of glue previously dissolved in warm water, and stir continually. Before applying add sufficient blueing to give the tint desired. This whitewash is good for both inside and outside work.

Silo.—T. E. L., Wellsburg, N. Y., writes: "Will it pay me to build a silo on a small farm where I can keep five cows? It seems as if the expense of getting a cutter and power to fill the silo would take all of the profit."

REPLY:—Others have found it profitable to build silos and feed ensilage on small farms. You can easily keep two or three times as many cows on the same land. The expense of a cutter is not great, and you can hire a power. If you are an expert dairyman you will find that it will pay you to build a silo.

Mushrooms.—B. B. K., Hagerstown, Md., writes: "I would like to know how to tell mushrooms from poisonous toadstools. In this neighborhood only one kind seems to be recognized—those which grow in shape something like a corn-cob. Are the other kinds distinguished by the color underneath, or how?"

REPLY:—Request the Secretary of Agriculture, Washington, D. C., to send you the recently published bulletins on mushrooms. One of these describes the edible kinds, and you may be surprised to find that some kinds which you have considered unfit for food are the choicest.

Bugs in Peas.—D. A., Birdsboro, Pa., writes: "How can peas be kept over winter without the bugs getting at them and eating them?"

REPLY:—The eggs of the pea-weevil are deposited on the young peas. From these larvae (or worms) hatch, which live inside the pea, and finally change into the bug you find in the peas in the following spring. We know of no way to prevent the eggs from being deposited. But the larvae can be destroyed without injuring the peas. After they are harvested and dried, put them into a tight box, with a small quantity of bisulphid of carbon, and cover closely. The fumes from this volatile liquid will kill every "bug" that may be in the peas.

Rescue-grass.—H. T. F., Tiger Mill, Texas, writes: "With this letter I mail you a plant of rescue-grass. This is one of our most valuable grasses. It comes up after the first rain in the fall, and grows all winter. All kinds of stock are very fond of it. I have never seen it killed in winter, although we have ice sometimes here in Texas several inches thick. In the springtime it grows very rapidly to two or three feet in height, and goes to seed. Every farmer should sow some of this grass every fall for winter pasture."

REPLY:—The plant received is a specimen of very luxuriant growth. The testimony of Mr. F. in favor of rescue-grass of the South corresponds to that of many other southern farmers.

VETERINARY.

Conducted by Dr. H. J. Detmers.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

Heaves.—M. E. R., Beaverdam, Wis. What you describe is a plain case of so-called heaves. Please consult recent numbers of this paper, and you cannot fail to find the information you are after.

A Yearling Heifer.—A. S. D., Sedan, Ohio. If your heifer is only one year old it is a little premature to call her barren, or sterile, unless it be that you know that her sexual organs are defective. Wait until she is older, an then have her served again, and if then you find that she does not conceive, prepare her for the butcher.

Tender Mouth.—G. R. B., Maple Valley, N. Y. If the mouth of your young mare is very tender and easily gets sore, you will have to use a much thicker and easier bit, and keep that scrupulously clean. You have also to see to it that the head-stall of the bridle is neither too short nor too long. In some cases also a more gentle driver is necessary.

Stiffened.—S. E. B., Deshler, Ohio. Your horse is stiffened or crippled in consequence of a partial degeneration of the muscles of the fore legs as a result from overexertion or overwork. A long run at pasture and exemption from all kinds of work for a long time may possibly effect some improvement, but a perfect restoration to soundness is out of the question.

Opaque Cornea.—G. G., Rosario, Wash. The opaqueness of the cornea of your horse, originally produced by an oat-chaff that was lodged on the cornea beneath the eyelids three months ago, would have more or less, and perhaps entirely, disappeared if you had not constantly irritated the cornea with your powdered burnt alum. By all means stop that irritating treatment, and all opaqueness that is not milk-white or cream-colored may disappear yet if you only leave the eye alone or limit your treatment to washing the eye with clean and warm water and a clean and soft rag.

Itching.—W. M., Frenna, Mo. If your horse has an itching cutaneous eruption, wash the same thoroughly first with soap and warm water, and then before he is perfectly dry with a five-per-cent solution of creolin (Pearson's) in warm water. Repeat the latter wash once every three or four days, and after each wash thoroughly clean the stable, or, at any rate, put the horse in a stall; continue this treatment for at least two weeks. Also keep the chickens out of the stable where you keep your horse. Do not neglect to disinfect brush and currycomb and all other utensils, etc., that come in contact with the animal.

Possibly Tuberculosis.—J. H. T., Kent, Wash. It is true all that proceeds from your inquiry is that both your Jersey bull and cow have an obstruction in the respiratory passages, probably close to the larynx; but as bovine tuberculosis frequently announces its presence in the very way you describe, and as both animals, or at least one of them, are Jerseys, a breed of cattle which for obvious reasons suffers more from tuberculosis than any other, the best advice I can give you is to have both animals subjected to the tuberculin test. If you do not know how to have it done and where to obtain reliable tuberculin, apply to the state veterinarian of your state.

Death of Two Brood-sows.—J. K. R., Walton, Ky. It does not appear from your description that the weaning of the pigs or the "taking of the male" nine days before the sows took sick and died had anything to do with their disease and death. The rapid death of both animals, nearly at the same time, and the few symptoms you have given, make it much more probable that the sows, which took sick soon after feeding—one in two hours and the other a little later—consumed with their food or picked up somewhere else something poisonous. Some of the symptoms you have given would indicate strychnine or nux vomica, although the whole combination of symptoms produced by strychnine poisoning has not been given.

Rabies.—J. L. McC., Richmond, Ohio. There is no doubt that your eighteen and your neighbor's thirty-eight sheep died of rabies. There is no remedy. All the sheep that have been bitten by the rabid dog should at once be killed, and all others in the same flock should be kept strictly separated, and be closely watched until it becomes evident that no more cases will occur. The same dog that bit your and your neighbor's sheep has undoubtedly bitten some more live stock, and probably also human beings. One dog affected with the raging form of rabies can in a very short time do an immense amount of damage, because such an animal, while roaming aimlessly about, often travels many miles in a comparatively short time.

Edematous Swelling.—G. W., Kearney, Mo. The edematous swelling of your mare, situated on the lower surface of the abdomen and extending from the udder to the lower surface of the chest, is either a symptom of general dropsy, which is the more probable, as you say the mare has been running out without shelter, has a very long coat of hair, and seems to be stupid, or else it is of an erysipelatous nature. If the latter is the case, you will find small sores or lesions, through which the bacteria found an entrance. In this case you will have no difficulty in effecting a cure, provided, of course, the mare is not otherwise ailing, if you make, once or twice a day, to all the small sores a liberal application of a mixture of liquid subacetate of lead, one part, and olive-oil, three parts.

A "Wen or Something Similar."—D. C., Centralia, Wash. If you will give a description of "the wen or something similar" growing on the lower jaw of your Jersey cow, I may be able to answer your question, but without any description whatever I cannot. For all I know the wen or something else may be a very malignant tumor—possibly actinomycosis—or a very innocent swelling.

Agalactia.—G. W., Gaylord, Mich. Agalactia, or lack of milk production, can have various causes. The two most frequent ones are extreme poverty and the reverse—a too good, very fleshy condition. As you say that your cow is in a good condition, and that her "bag is growing, but it is all flesh," it is possible that the last-named cause exists in your case. Therefore, it appears to be advisable to feed your cow nothing but green and juicy food, such as green grass and clover, and to excite the mammary glands to greater activity by frequent milking.

Lame in the Foot.—J. W. B., Levant, N. Y. All that proceeds from your letter is that your mare is lame in the left fore foot, but as you give no description of the peculiarities of the lameness beyond saying that the same seems to be sometimes worse and sometimes better, there are yet too many possibilities to admit a definite diagnosis. As such I will mention corns, contracted hoofs, navicular disease and even ringbone. Have the animal first examined by a good horseshoer, and if he finds neither corns nor a contracted hoof, consult a competent veterinarian.

A Complicated Case.—A. R. A., Atoka, I. T. The numerous lesions, the long-continued suppuration of the withers, but particularly of the injured leg, combined with the coughing and the evident affection of the lungs, make it more than probable and almost certain that an absorption of pus-producing bacteria has taken place, that abscesses have developed in the lungs, and that pyemia has been produced, which, of course, settles the fate of the animal. But even if the worst should not have taken place, the case, according to your very good description, is such that no recovery can be expected unless a very good and watchful veterinarian constantly superintends the treatment. This means that if no pyemia and no abscesses in the lungs have developed, the animal might have a chance if treated in a good veterinary hospital, but not otherwise.

Attends to the Milking Herself.—C. E. C., Morley, Mich. If your cow acts as her own milkmaid, you can easily make that occupation an unpleasant one to her and induce her to quit in utter disgust, if you get her a good leathern halter with two rows of sharp-pointed nails in the nose-band, one row slightly pointing upward and the other (lower) slightly pointing downward, for then every time she attempts to suck herself, she will prick her own hide with the sharp nails, and will soon "go on a strike." First, however, make sure that she does the sucking herself, and is not sucked by some other animal. If the latter should be found to be the case, put the halter on the one that does the sucking, and then that one will not be permitted to suck a second time. But no matter which animal does the sucking, I advise you not to remove the halter too soon, for if you do, the "strike" may soon come to an end.

Dead Cow.—O. T. B., Tell, Wis. You desire to know what killed your cow, but do not give any symptoms of her sickness, nor any description of the morbid changes found after death. You only say that your cow took sick twenty hours after calving, and died in four hours; and as to the morbid changes, you dwell on the size of the gall-bladder and say that the kidneys seemed to be inflamed, consequently make statements which, as far as a diagnosis is concerned, really do amount to nothing. There are quite a number of diseases which are very acute (terminate in a very short time). The size of the gall-bladder, as given by you, is nothing extraordinary, and only shows that the peristaltic motion of the intestines was not lively for several hours before death, and what you say about the kidneys is of no diagnostic value whatever, for what looked to you like inflammation may have been nothing but a post-mortem change. It is possible that your cow died of puerpural paralysis (so-called calving-fever), but further I cannot answer your question.

Probably a Melano-sarcoma.—D. H. W., Baird Furnace, Ohio. The bleeding tumor on your horse's sheath is probably what is known as a melano-sarcoma, a tumor particularly frequent in gray horses. The tumor in question, not being much larger than a hulled walnut, can probably be successfully removed by a surgical operation if performed by a skilled surgeon; but the trouble is, if there is one such tumor on the surface of the body, there are usually several of them in interior parts where the surgical knife cannot reach them. Further, if such a melanotic tumor is not thoroughly and completely removed, the remnant that is left will soon show a very vigorous growth, and will in a short time be larger than the whole ever has been. On the other hand, if such a melanotic tumor is severely left alone and not in the least irritated, its growth, as a rule, is slow, and not much damage will be done in a long time. Of course, where the seat of the tumor is such as to make irritation unavoidable, or where the growth of the same is a rapid one, an extirpation, notwithstanding the doubtful prognosis, is indicated.

Similar to Stringhalt.—A. L. L., Solon Springs, Wis. What you describe must be something similar to stringhalt and be caused by a defect, either natural or acquired, in some of the muscles which draw the hind legs backward, or push the body forward if the leg is advanced. If acquired, as is most likely the case, this defect or abnormal weakness very likely has been caused by overexertion and a subsequent degeneration of some or many of the muscular fibers of the affected muscles. It is also possible that by overexertion some of the muscular fibers of the muscles in question have been ruptured, or that a partial separation of these muscles from their point of attachment or point of insertion has taken place, and it is likewise possible that important branches of the ischiadic nerves have undergone degeneration and ceased to perform their functions. Either supposition will explain the peculiar motions which you describe. If the last-named is the correct one, the case would be genuine stringhalt in both hind legs. Practically it is immaterial which one of the possible causes named is the true one, because none of them will yield to the treatment.

Chronic Luxation of the Patella.—F. M. C., Tiverton, Ohio. What you describe appears to be nothing more nor less than a chronic, or rather habitual, luxation (slipping out of its place) of the patella in both hind legs. As the mare, now five years old, was thus affected since a colt, it is exceedingly doubtful whether any permanent recovery can be effected. The patella in such cases usually slips out when the animal lies down or gets up or is making an awkward movement, but also easily resumes its natural position or slips back in its proper place, and then the stiffness and limping at once disappear. If you find the mare standing stiff in the stable in the morning, you can cause a slipping back of the patella in its place by suddenly pushing the mare sideways, or if she does not react quick enough, by giving her a smart cut with the lash of a whip, and thus cause her to make a sudden movement from one side to the other. If you do not wish to use the whip, you can procure the same effect by suddenly throwing some cold water on the animal.

Bad Sores.—J. G. V., Doe Bay, Wash. Ordinary sores in the mouth of a horse usually heal without much ado. As those which you describe, and which are situated on the inside of the lower lip of your mare, do not, it must be concluded that the same, very likely, are of a malignant nature, and probably will have to be removed by a surgical operation, because it will not do to apply strong caustics to the inside of a horse's mouth. If where you live no competent veterinarian is available, I advise you to have the sores examined by your family physician, who will probably be able to determine the nature of the sores and tell you what to do. If he finds them to be malignant, but does not wish to perform the operation, and no veterinarian is available, you may succeed in removing and destroying the morbid tissues yourself if you throw the mare, put a speculum into her mouth, have the lower lip firmly held by an assistant, and then by means of a small surgeon's sponge fastened to a stick burn the sores out with pure nitric acid. Doing this, of course, great care must be taken to bring the nitric in contact with nothing but the sores and the morbid tissue, and then, before the animal is allowed to get up, the inside of the lip must be washed out with water, so as to remove every particle of acid that has not combined with the tissue.

Several Questions.—W. H. R., Ambler, Ohio. Your horse, which shows accelerated breathing when at work, probably has so-called "heaves," an ailment which may be defined as a chronic, feverless and incurable difficulty of breathing, which may have its source in various morbid conditions. The chronic diarrhea of your horse is a symptom, and the effect of a chronic catarrh of the stomach and intestines. Possibly this same chronic catarrh (chronic inflammation of mucous membranes) extends also to the mucous membranes of the respiratory organs, and in that case also constitutes the cause of the accelerated respiration. Such a chronic catarrh very seldom yields to any medicinal treatment, especially if of long standing. As a rule, a little more improvement can be effected by a good dietetic treatment and by avoiding an exposure to sudden changes of the weather. If a good pasture with pure water is available, a run at pasture from the first of May to twentieth of June will do more good than anything else. At all other times it is essential to feed sound food that is sufficiently nutritious and easy of digestion, and to give nothing but pure water, uncontaminated with worm-brood, for drinking. Your last question I cannot answer, because I do not know what you mean, and have no idea which of the many bones of a horse you call a "spoon-bone."

Knee-sprung.—P. J. O., Roselle, N. J. There are two entirely different ailments, or rather conditions, both of which are usually called "knee-sprung." The one, which cannot be called morbid, consists in a shifting of a part of the angles which ought to be in the shoulder and elbow joints to the knee and pastern joints. This condition is often met with in horses with good mechanical proportions (comparatively long bones and short legs, therefore with considerable angle in the upper joints), but which have been retarded in their development while colts by an insufficiency of nutritious food. Such horses, on account of too much angle, not only in the knees, but also in the pastern-joints, have very "soft" pasterns. They are not lame or stiff, and are often good travelers and good workers. The other condition is morbid, and is caused by a morbid contraction of the flexor tendons. These horses, therefore, also have too much angle in the knees, which are bent forward, but their pasterns are more or less perpendicular, and in the higher degrees these horses walk on their toes. This kind of knee-sprung is originally produced by an overexertion (straining) of the flexor tendons. As long as the contraction of the latter is not permanent or confirmed, a great deal of improvement can be effected by long-continued strict rest, and to a certain extent, and in some cases, by applications of a good counter-irritant, or a so-called blister to the strained tendons. As such a blister or counter-irritant nothing is superior to oil of cantharides, prepared by heating one part of cantharides and four parts of olive-oil one hour in a water-bath, which every druggist knows how to do. If, however, the contraction of the tendons is completed and all symptoms of inflammation have disappeared, nothing is left but to perform the operation of tenotomy, subcutaneously, of course. As this operation can be performed only by a competent surgeon, a description will only be superfluous. Under proper treatment after the performance, something upon which the success will depend, it will take eight weeks until the operated horse has again the use of his leg; and as only one leg can be operated on at a time, it will require at least four months until the horse can use both fore legs, and at least a year until the latter have gained approximately their former firmness and strength.

Smiles.

SHRINKING.

She shuns the water, yes, for she
May shrink with better grace
Than may her witching bathing-suit
From the water's damp embrace.

A BOSTON LULLABY.

Doff thy new spectacles,
Peregrine, darling one;
Minds are but obstacles
When work is overdoue.
Lullahy, hushaby, slumber thou festinate,
Hushahy, lullaby, never procrastinate.

Lay down thy Ibsen, dear,
Browning and Emerson;
Sealed be the cultured ear
Save to my benison.
Lullaby, hushaby, cherish obedience,
Hushaby, lullaby, captivate somnolence.

Dream of Lohengrin,
Siegfried, Brunnhilde fair;
Banish, my Peregrine,
Thoughts of the Pilgrims spare.
Lullaby, hushahy, sleep, dear, till night is done.
Hushaby, lullahy, mother's phenomenon.
—Life.

MISSED THEM.

At one of Lord Westerhy's famous dinner parties there arose a discussion as to the relative humor of the north and south of England. Illustrative of the wit of the south, Cardinal Manning told an experience which occurred when he was rector of Lovington, in Sussex. He went to visit a poor old parishioner, a widow of between seventy and eighty years of age, who had had nine or ten children, of whom all but one daughter had gone out into the world and left her. At last this daughter married, and she was alone. The archbishop said to her, "Dame, you must feel it lonely now, after having had so large a family!"

"Yes, sir," she said, "I do feel it lonesome. I have brought up a long family, and now here I am living alone. And I misses 'em, and I wants 'em; but I misses 'em more than I wants 'em."—Wave.

A PARLIAMENTARY HINT.

It was getting late, and still the venerable ex-United States senator lingered in the parlor with the young people. Evidently something had to be done.

"I hope, papa," said his daughter, gently, but resolutely, "that you will not be offended if I now move a close call of the house, during which all persons not entitled to the floor will please retire, while Charlie and I discuss a question of personal privilege!"—Truth.

WHAT HE FOUND.

"War," said the man who reads the papers, "is full of uncertainties and difficulties, and not the least of them are in the department of geographical orthography."

He had just been reading that fierce battles had occurred at Tyrnavo, Tirnova and Turnova; also at Melouna Pass, Milouna Pass, Melouni Pass or Maloney Pass, as the case may he.—Puck.

A LUCKY PRISONER.

Old lawyer—"I cannot take your case. Circumstantial evidence is so strong against you that it will be impossible to prove your innocence."

Prisoner—"But I am not innocent. I am guilty."

Old lawyer—"Oh, then maybe I can clear you."—New York Weekly.

BITTER DISAPPOINTMENT.

"Yes," she said, bitterly, "I must confess that he deceived me as to his habits."

"Does he drink or gamble or anything of that kind?" inquired the other.

"No. Before we were wed he led me to believe that he had a habit of talking in his sleep about all his doings. And he does not."—Indianapolis Journal.

TRAMPING A LA MODE.

"Didn't I tell you never to come here again?"

"I hope you will pardon me, madam, but it is the fault of my secretary; he has neglected to strike your name from my calling-list."—Tit-Bits.

NARROW ESCAPE.

"I have had such a terrible dream!" exclaimed Mr. Skinnphint, waking suddenly and wiping the cold perspiration from his face. "I thought somebody had passed a Canadian quarter on me and got away!"

THE PASTOR'S WISDOM.

"I never thought it of you, George," said the pastor's old schoolmate, in the seclusion of the ministerial study, "that I should live to hear you denouncing progressive euchre as wicked."

"If I didn't," said the good man, "they would be playing poker next. But as long as I can keep them believing that they are sinning a little they will stick to their euchre."—Cincinnati Enquirer.

TOO APPRECIATIVE.

Miss Gotham—"And I suppose they have bargain days in Glasgow, Mr. McIvor?"

McIvor—"Ma conscieuce, no! It wad na do ava."

Miss Gotham—"Indeed! Why, I thought bargain days would just suit your people."

McIvor—"That's just it! It would suit them ower weel. Gin they had bairgain days naebody wad buy onything on the ither days, ye ken."—Puck.

AS USUAL.

She had just returned after quite a long absence, and he had beeu explaining to her how much he had missed her.

"When did you miss me the most?" she asked.

"When two of my suspender-buttons came off," he answered, truthfully.—Chicago Post.

MANY UNHAPPY RETURNS.

"Where is all that paper I left on my desk?"

"I thought it was waste-paper, and threw it out," the girl explained.

"No, it wasu't waste-paper," said the poet, sadly. "I hadn't written any verse on it yet."—Typographical Journal.

COMBINED.

Bobby—"A boy called me a liar to-day, but you told me never to fight, and so I ran away."

Bingo—"That's right, Bobbie; but are you sure that was the reason?"

Bobbie—"Yes, sir. That and the size of the boy."—Life.

LITTLE BITS.

Harry—"You say Maud sings like an angel. Why, I never heard her sing at all!"

Penelope—"True; hut did you ever hear an angel sing?"—Harlem Life.

The hright youngster—"Mama, if I am good, will I go to heaven?"

Mama—"Yes, dear."

The bright youngster—"How'll I get back?"—Cincinnati Trihune.

Bertha—"And you permitted him to kiss you?"

Ethel—"How was I to prevent it? His face was so near mine, you know, that I couldn't see what he was about."—Boston Transcript.

A rural editor expressed his thanks for a hasket of apples thus:

"We have received a hasket of apples from our friend Gus Bradley, for which he will please accept our compliments, some of which are nearly six inches in diameter."—Tit-Bits.

Lady—"I don't believe you are a needy Greek; and if I remember aright you are the same man that was posing arouud here a short time ago as a needy Cuhan."

Tramp—"Well, lady, dere's one t'ing yer can't accuse me uv, an' dat is not beiug 'up ter date.'"—Judge.

Stern party—"Well, sir, I don't know as I am particularly desirous of hecoming your father-in-law, young man!"

Cholly Seeke—"Er—eh—I n-ne-never thought of that. You w-wo-would b-be my father-in-law, wouldn't you? I g-guess we'll l-let the—er—m-matter drop; g-good d-day."—Truth.

"My wife," said the young man in earnest tones, "is a jewel!"

"They all say that," said the elderly man, speaking apparently to the wall.

"Bnt I know. Of course, you won't believe it; bnt she watches me take my bicycle all to pieces without offering me a single suggestion."—Indianapolis Journal.

First Paris artist—"Vy you put zat salt in ze paint?"

Second artist—"Eet is for a marine picture. I make ze paint salt; zen when ze Americans put zair fingers on ze water and afterward put zair fingers to zair lips zay say, 'Eet is wonderful! Ve almost taste ze salt of ze ocean.' Zen zay buy."—New York Weekly.

"So you acknowledge raising that two-dollar bill to twenty, do you?" asked the judge of the prisoner, who had confessed to the charge against him.

"I do, your honor; but there are extenuating circumstances."

"Name them."

"In the first place, I am a conscientious believer in the inflation of the currency."

"That will do. You need go no further. Three years in the penitentiary."—Judge.

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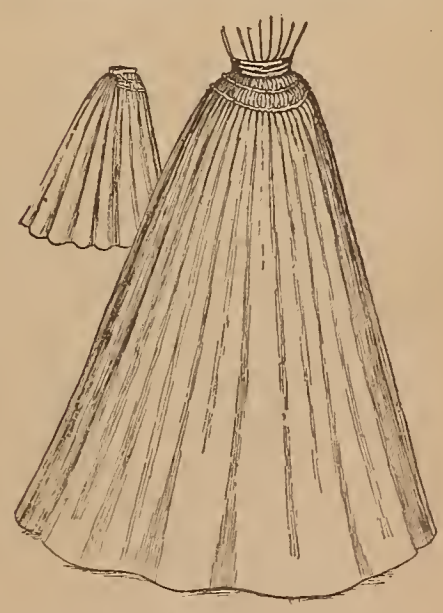

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XIX.—DIET FOR BEAUTY AND HEALTH.
Food for Clear Skins—Errors in Eating—The Diets of Stoutness and Thinness—For Impoverished Blood and Wasting Strength—Children's Foods—Emulsions and Extracts—For Those Dyspeptic—Wholesome Drinks—Feeding for Rich Blood—The Proper Nourishments—Concerning Cereals—Foods for Clear Skins and Bright Eyes—Aids to the Digestion—The Mineral Waters for Various Troubles—Headaches, Causes and Cures.

"The Arts of Beauty" has heretofore been sold entirely by agents, and never for less than a dollar and a half a copy. We purchased the right to print an edition of this splendid book, and in order to procure thousands of trial subscribers, we offer it at the marvelously low price named below. This premium edition is exactly like the agents' edition in every particular except that it is not expensively bound. It contains every word found in the agents' edition, which sells for $1.50 a copy. It has 256 pages. Satisfaction guaranteed or money refunded.

FOR 30 CENTS

We will send this book, and Farm and Fireside for the remainder of this year, for thirty cents; or with the paper one full year, fifty cents.

(Note.—The book can be sent to one address and the paper to another when so desired.)

This book will be given free as a premium for a club of two subscribers to Farm and Fireside.

(The subscribers may accept any of our premium offers in this issue, and may enter the word contest, which closes June 30th. See page 19.)

Postage paid by us in each case.

Address FARM AND FIRESIDE, Springfield, Ohio.

$100 Bicycle Free to Winner of First Prize

CONTEST CLOSES **June 30**

These bicycles are manufactured by the **THOMAS MANUFACTURING CO., Springfield, Ohio,** who will send, free of charge, to any address, their new catalogue, which will give a full description of the hundred-dollar bicycle which we offer as first prize in the word contest. See particulars just below. The manufacturers of these wheels are personally known to us. Their shops cover several acres of ground, and their word is as good as a government bond. Write for their catalogue, and you will never rest until you have sent in your list of words; and if the largest, you will get one of their hundred-dollar wheels free.

WE GIVE $200 IN PRIZES

To Farm and Fireside Folks

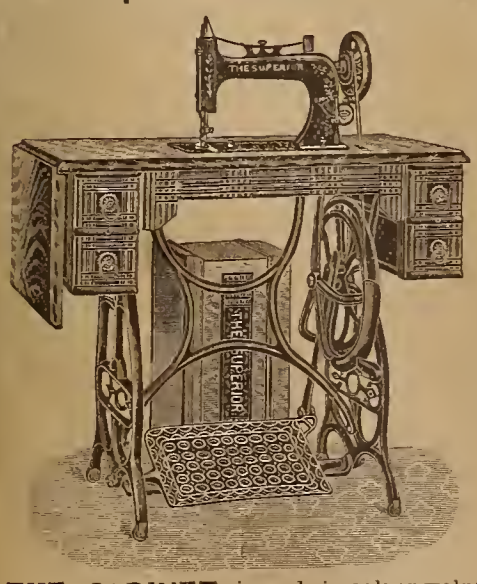
We offer valuable prizes for the largest number of words which can be spelled with the letters found in the three words "FARM AND FIRESIDE." Work it out as follows: A, add, are, arms, far, farm, farmed, farms, fee, fife, etc. Each letter may be used as desired, but not more times than it appears in the words "Farm and Fireside." Words spelled exactly alike, but having different meanings, count as ONE word only. DO NOT use proper nouns, as names of persons and geographical words, or obsolete and foreign words, for they will not be counted; all other words, including plurals, will be allowed. Any dictionary of the English language in common use may be consulted. ☛Contest closes June 30, 1897.☚ (See subscription offers on page 14.)

1st Prize,	For the largest list of words sent us,	One Bicycle (ladies' or gents'),	$100.00
2d Prize,	For the second largest list,	One Sewing-machine,	50.00
3d Prize,	For the third largest list,	One Gold Filled Watch,	20.00
4th Prize,	For the fourth largest list,	One Silver Watch,	6.00
5th Prize,	For the fifth largest list,	One Silver Watch,	4.00
Twenty other prizes for the twenty next best, valued at $1 each,			20.00
Total value of prizes,			$200.00

Conditions In order to be entitled to enter this contest, the contestant must accept some one of our subscription offers made in this or previous issues of Farm and Fireside. The list and the order for the subscription must come in the SAME envelop. The list of words must be written on a separate piece of paper and signed with the sender's name and address. Write the words in columns and number each word, beginning with **1**. Words beginning with the same letter must be written in the same column. This contest is for one month only; that is, it will close June 30, 1897. Present subscribers entering the contest will have their time extended.

In case of a tie, the sender of the largest list of words **first** received by us will get the **first** prize, and the sender of the largest list next received by us will get the second prize, and so on. Farm and Fireside is mailed so as to reach all subscribers on about the same day. We will stamp each list with the date and hour it is received in our office. Persons living in Springfield, Ohio, and Clark county, Ohio, will not be allowed to enter the contest.

A $50 MACHINE FREE



This fifty-dollar sewing-machine will be given free to the winner of the second prize.

It Has a Full High Arm.
By this we mean as high as the highest arm on any $50 machine—55 square inches of space *under* the arm.

Self-threading Shuttle.
Self-setting Needle.
Automatic Bobbin-winder.
Adjustable Hand-wheel.
Automatic Take-up.
Double Positive Feed.
The Best Shuttle-carrier.
The Best Tension-liberator.
Makes the Double Lock-stitch.
Has 14 Steel Attachments.
24 Accessories, including
12 Needles and 6 Bobbins.

THE STAND is strong and graceful. Furnished with oil-cups and nickel-plated casters. The bed-plate is let down flush with the cabinet-work.

THE CABINET is made in oak or walnut, highly polished, and has five drawers. Every machine is guaranteed for five years.

THIRD PRIZE.

$20 GOLD WATCH

It is a fine gold filled, hand-engraved case, with Elgin movement. Stem-wind and stem-set.

FOURTH PRIZE.

A $6 Silver Watch.

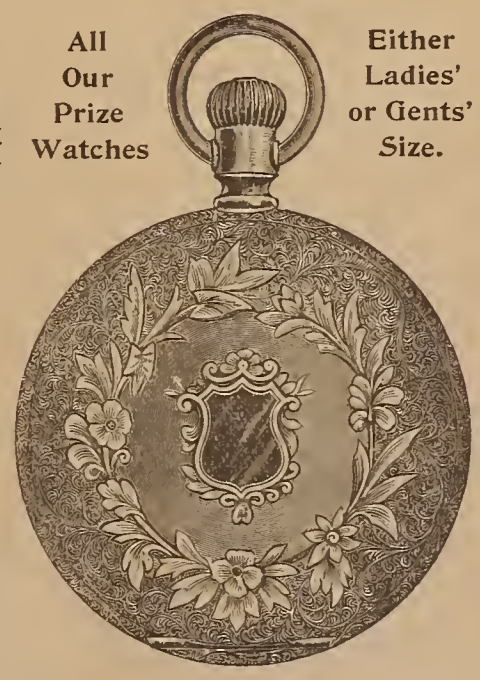
Stem-wind and Stem-set.

FIFTH PRIZE.

A $4 Silver Watch.

Stem-wind and Stem-set.

All Our Prize Watches Either Ladies' or Gents' Size.



Try your skill in word-making. You will be surprised how easily and quickly you can make out a list, and doing so will afford you pleasant and instructive entertainment. All our boys and girls should try for a prize. Remember, the twenty-five prizes positively will be awarded. Now, who will get them?

☛Contest Closes June 30, 1897.☚

Address FARM AND FIRESIDE, Springfield, Ohio.

Humor.

MAKIN' AN AWFU' FUSS ABOOT IT.

A beadle in the west of Scotland heated his church so effectually one winter's day that the building took fire, and was burned to the grounnd.

The deacon's court held a meeting, to which Jeems was called up, and severely admonished for the carelessness which had almost rnined the congregation.

Jeems listened for some time to the severe censures passed upon him hy the minister, hut at length hroke in indignantly, exclaiming:

"'Deed, sir, but ye're makin' an awfu' fuss ahoot it, man! It's the first kirk I ever hurned i' ma life!"—Scottish Leader.

CLASSIFIED.

"Josiar," said Mrs. Corntossel, "whut did that man say when ye asked him fur yer money hack after he sold ye the gold hrick?"

"He jes' went plum crazy on the spot. He looked me over, an' then he exclaimed, 'Well, you're a hird!'"

"He didn't mention what kind of a hird, did he?"

"Yes. An' bein' it was the fust time I ever heard anybody rave, his words made a deep impression on my memory. I asked him what kind of a hird he took me fur, an' he grinned an' says, 'Well, mister, jedgin' by the melancholy expression in yer eye, I should take ye ter he a hlue jay.'"—Washington Star.

COMPELLED TO DECLINE.

A Frenchman went to an American and said to him:

"What a polar bear do?"

The American answered:

"What does a polar bear do? Why, he sits on the ice."

"Sits on zee ice?"

"Yes," said the American; "there is nothing else to sit on."

"Vell, vat he do, too?"

"What does he also do? Why, he eats fish."

"Eats fish—sits on zee ice and eats fish. Then I not accept."

"You don't accept? What do you mean?"

"Oh, non, non. I does not accept. I was invite to act as polar hear to a funeral."—Bachelor of Arts.

GREAT TALKERS.

Dr. Hanslich, of Vienna, tells of having once asked Schumann how he got on with Wagner.

"Well," he replied, "Wagner is a great man, hut I can't get on with him at all. He talks at such a rate I can't get a word in edgeways."

Shortly after this Hanslich met Wagner, and put a similar question to him ahout Schumann.

"Ah," said Wagner, "I can't get on with him at all. He just looks at me with a vacant stare, and never says a word at all."

The story reminds one of a certain redoubtahle editor's interview with the late emperor of Russia. The pressman was granted an audience, and was told that he would be allowed just fifteen minutes. The fifteen minutes passed, and the editor's attention was called to the fact.

"But, your majesty," he remarked, "you have not yet said anything."

"No," replied the emperor; "you haven't given me the chance."

The interviewer, like Wagner, had talked the whole of the time away.—Elgin Courant.