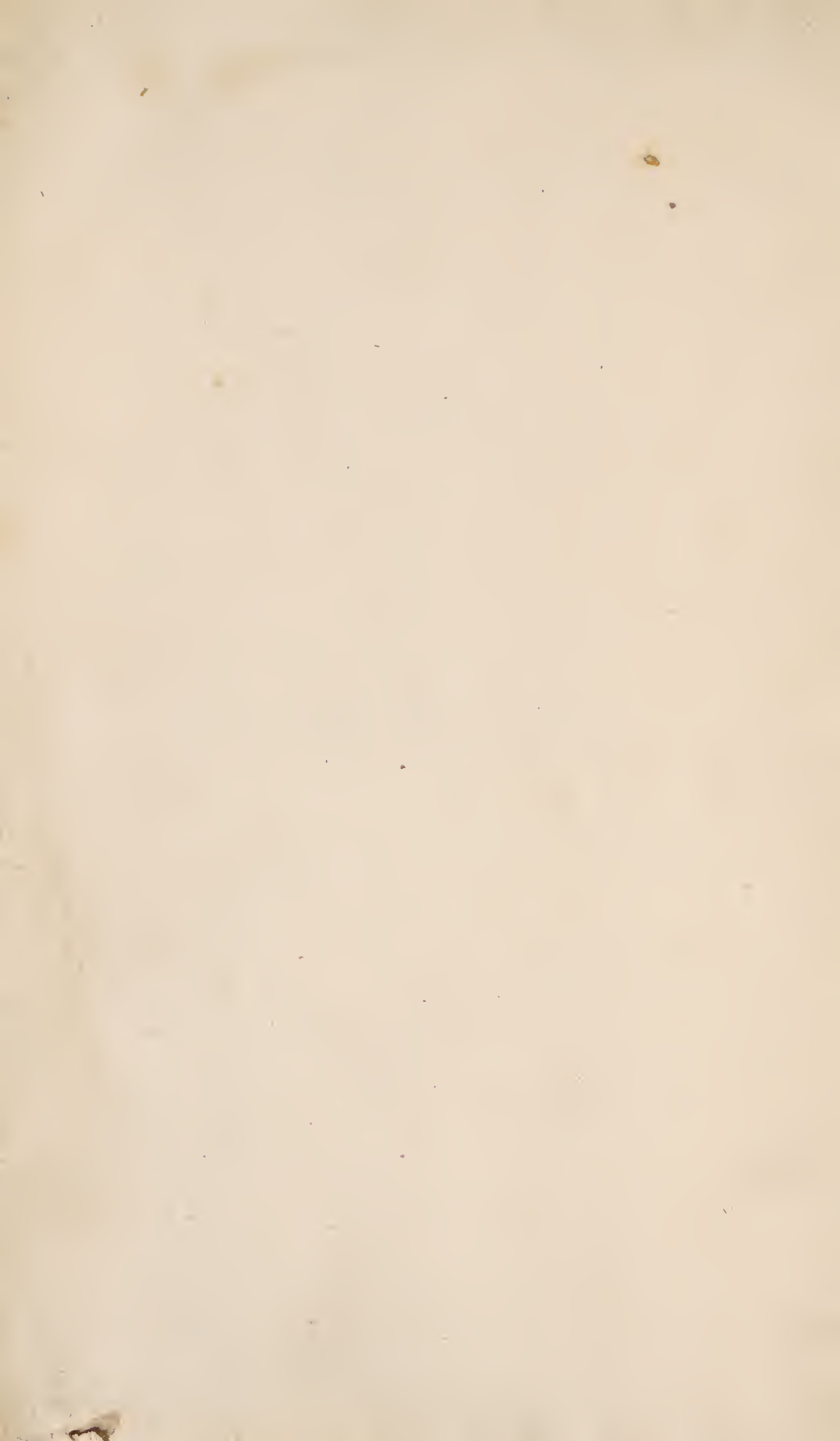



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By W. Ellis

ELLIS, William







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3 vols. in 1
1736-38.

THE
London and Country
BREWER.

Containing an Account,

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| <p>I. Of the Nature of the Barley-Corn, and of the proper Soils and Manures for the Improvement thereof.</p> <p>II. Of making good Malts.</p> <p>III. To know good from bad Malts.</p> <p>IV. Of the Use of the Pale, Amber, and Brown Malts.</p> <p>V. Of the Nature of several Waters, and their Use in Brewing.</p> <p>VI. Of Grinding Malts.</p> <p>VII. Of Brewing in general.</p> <p>VIII. Of the <i>London</i> Method of Brewing Stout, Butt-Beer, Pale and Brown Ales.</p> <p>IX. Of the Country or Private Way of Brewing.</p> <p>X. Of the Nature and Use of the Hop.</p> <p>XI. Of Boiling Malt Liquors, and to Brew a Quantity of Drink in a little Room, and with a few Tubbs.</p> | <p>XII. Of Foxing or Tainting of Malt Liquors; their Prevention and Cure.</p> <p>XIII. Of Fermenting and Working of Beers and Ales, and the unwholsome Practice of Beating in the Yeast, detected.</p> <p>XIV. Of several Artificial Lees for feeding, fining, preserving, and relishing Malt Liquors.</p> <p>XV. Of several pernicious Ingredients put into Malt Liquors to encrease their Strength.</p> <p>XVI. Of the Cellar or Repository for keeping Beers and Ales.</p> <p>XVII. Of Sweetning and Cleaning Casks.</p> <p>XVIII. Of Bunging Casks and Carrying them to some Distance.</p> <p>XIX. Of the Age and Strength of Malt Liquors.</p> <p>XX. Of the Profit and Pleasure of Private Brewing, and the Charge of Buying Malt Liquors.</p> |
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To which is added,

A Philosophical Account of Brewing Strong *October* Beer.
By an Ingenious Hand.

By a Person formerly concerned in a Common Brewhouse at *London*,
but for Twenty Years past has resided in the Country.

PART I. THE THIRD EDITION, Corrected.


L O N D O N :

Printed for J. and J. Fox, at the *Half-Moon* and *Seven Stars*, in *Westminster-Hall*; and at their Shop at *Tunbridge-Wells*, during the Summer Season. M. DCC. XXXVII. [Price One Shilling and Six-pence.]





T H E
P R E F A C E.

 *HE many Inhabitants of Cities and Towns, as well as Travellers, that have for a long time suffered great Prejudices from unwholesome and unpleasant Beers and Ales, by the badness of Malts, under-boiling the Worts, mixing injurious Ingredients, the unskilfulness of the Brewer, and the great Expence that Families have been at, in buying them clogg'd with a heavy Excise, has moved me to undertake the writing of this Treatise on Brewing; wherein I have endeavour'd to set in a true light, the many Advantages of Body and Purse that may arise from a due Knowledge and Management in Brewing Malt Liquors, which are of the greatest Importance, as they are in a considerable degree our Nourishment, and the common Diluters of our Food; so that on their goodness depends very much the Health and Longævity of the Body.*

This bad Oeconomy in Brewing, has brought on such a Disrepute, and made our Malt Liquors in general so odious, that many have been constrain'd, either to be at an Expence for better Drinks than their Pockets could afford, or take up with a Toast and Water, to avoid the too justly apprehended ill Consequences of drinking such Ales and Beers.

Wherefore I have given an Account of Brewing Beers and Ales after several Methods; and also several curious Receipts for feeding, fining, and preserving Malt Liquors,

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that are most of them wholesomer than the Malt itself; and so cheap, that none can object against the Charge; which I thought was the ready way to supplant the use of those unwholsome Ingredients, that have been made too free with by some ill principled People, meerly for their own Profit, tho' at the Expence of the Drinker's Health.

I hope I have adjusted that long wanted Method of giving a due Standard both to the Hop and Wort, which never was (as I know of) rightly ascertain'd in Print before; tho' the want of it I am perswaded, has been partly the occasion of the scarcity of good Drinks, as is at this time very evident in most Places in the Nation. I have here also divulg'd the Nostrum of the Artist Brewer, that he has so long valu'd himself upon, in making a right Judgment when the Worts are boiled to a true Crisis; a matter of considerable Consequence, because all strong Worts may be boiled too much, or too little, to the great Loss of the Owner; and without this Knowledge a Brewer must go on by Guess; which is a hazard that every one ought to be free from that can; and therefore I have endeavour'd to explode the old Hour-glass way of Brewing, by reason of the several Uncertainties that attend such Methods, and the Hazard of spoiling both Malt and Drink; for, in short, where a Brewing is perform'd by Ladings over of scalding Water, there is no occasion for the Watch or Hour-glass to boil the Wort by, which is best known by the Eye, as I have, both in this, and my second Book, made appear.

I have here observed that necessary Caution, which is perfectly requisite, in the Choice of good and the Management of bad Waters; a Matter of high Importance, as the Use of this Vehicle is unavoidable in Brewing, and therefore requires a strict Inspection into its Nature; and this I have been the more particular in, because I am sensible of the great Quantities of unwholsome Waters, used not only by Necessity, but by a mistaken Choice.

So also, I have confuted the old receiv'd Opinion, lately publish'd by an Eminent Hand, that long Mashings are the best Methods in Brewing; an Error of dangerous Consequence

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quence to all those who brew by Ladings over of the hot Water on the Malt.

The great Difficulty, and what has hitherto proved an Impediment and Discouragement to many from Brewing their own Drinks, I think, I have in some measure removed, and made it plainly appear, how a Quantity of Malt Liquor may be brewed in a little Room, and in the hottest Weather, without the least Damage by Foxing or other Taint.

The Benefit of Brewing entire Guile small Beer from fresh Malt, and the ill Effects of that made from Goods after strong Beer or Ale, I have here exposed; for the sake of the Health and Pleasure of those that may easily prove their Advantage, by drinking of the former, and refusing the latter.

By the time the following Treatise is read over, and thoroughly considered, I doubt not, but an ordinary Capacity will be in some degree a better Judge of good and bad Malt Liquors as a Drinker, and have such a Knowledge in Brewing that formerly he was a stranger to; and therefore I am in great Hopes, these my Efforts will be one principal Cause of the reforming our Malt Liquors in most Places; and that more private Families than ever, will come into the delightful and profitable Practice of Brewing their own Drinks, and thereby, not only save almost half in half of Expence, but enjoy such as has passed thro' its regular Digestions, and is truly pleasant, fine, strong, and healthful.

I Question not, but this Book will meet with some Scepticks, who being either prejudiced against the Introduction of new Improvements, or that their Interest will be hereby eclipsed in time; To such, I say, I do not write, because I have little hopes to reform a wrong Practice in them by Reason and Argument. But those who are above Prejudice, may easily judge of the great Benefits that will accrue by the following Methods, I have here plainly made known, and of those in my Second Book, lately Published; wherein I have amply set forth, how to Brew without boiling Water or Wort, and several other Ways, that will be of considerable Service to the World.



This Day is Published, Price 2 s.

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N. B. In Order to give the Publick an Idea of the Usefulness of this
Grammar, not only to those who are willing to learn the *French
 Tongue*, but also to any Person who formerly learnt it, and since
 may have partly forgot it ; the following Lines are inserted as
 a Specimen of the Whole.

1. <i>The French as writ- ten and spelt.</i>	2. The English.	3. <i>The French as pro- nounced.</i>
le Firmament,	<i>the Firmament,</i>	le Firmamang.
le Lever du Soleil,	<i>the Sun rising,</i>	le Levè du Soleil,
le Chant,	<i>Singing,</i>	le Shang.
les Maisons,	<i>the Houses,</i>	le Mèzong.
l'Eau,	<i>the Water,</i>	l'O.

Printed for J. and J. Fox, in *Westminster-Hall :*

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C H A P. I.

Of the Nature of the Barley-Corn, and of the proper Soils and Manures for the Improvement thereof.



THIS Grain is well known to excel all others for making of Malts that produce those fine *British* Liquors, Beer and Ale, which no other Nation can equalize; but as this Excellency cannot be obtained unless the several Ingredients are in a perfect State and Order, and these also attended with a right Judgment; I shall here endeavour to treat on their several particulars, and first of Soils.

This Grain I annually sow in my Fields on diversities of Soils, and thereby have brought to my Knowledge several differences arising therefrom. On our Red Clays this Grain generally comes off reddish at both ends, and sometimes all over, with a thick skin and tuff nature, somewhat like the Soil it grows in, and therefore not so valuable as that of contrary qualities, nor are the black, blewish, marly Clays of the Vale much better, but Loams are, and Gravels better than them, as all the Chalks are better than Gravels; on these two last Soils the Barley acquires a whitish body, a thin skin, a short plump kernel, and a sweet flower, which occasions those fine, pale, and amber Malts made at *Dunstable*, *Tring*, and *Dagnal*, from the Barley that comes off the white and gravelly Grounds about those Places; for it is certain there is as much difference in Barley

2 *The Nature of the Barley-Corn,*

as in Wheat or other Grain, from the sort it comes off, as appears by the excellent Wheats that grow in the marly vale Earths, Peas in Sands, and Barley in Gravels and Chalks, &c. For our Mother Earth, as it is destinated to the service of Man in the production of Vegetables, is composed of various sorts of Soils for different Seeds to grow therein. And since Providence has been pleased to allow Man this great privilege for the employment of his skill and labour to improve the same to his advantage; it certainly behoves us to acquaint ourselves with its several natures, and how to adapt an agreeable Grain and Manure to their natural Soil, as being the very foundation of enjoying good and bad Malts. This is obvious by parallel Deductions from Turneps sown on rank, clayey, loamy, Grounds, dressed with noxious Dungs that render them bitter, tuff, and nauseous, while those that grow on Gravels, Sands, and Chalky Loams under the assistance of the Fold, or Soot, Lime, Ashes, Hornshavings, &c. are sweet, short, and pleasant. 'Tis the same also with Salads, Asparagus, Cabbages, Garden-beans, and all other culinary Ware, that come off those rich Grounds glutted with the great quantities of *London* and other rank Dungs which are not near so pure, sweet, and wholesome, as those produced from Virgin-mold and other healthy Earths and Manures.

There is likewise another reason that has brought a disreputation on some of the *Chiltern* Barley, and that is, the too often sowing of one and the same piece of Ground, whereby its spirituous, nitrous, and sulphureous qualities are exhausted and worn out, by the constant attraction of its best juices for the nutriment of the Grain: To supply which, great quantities of Dungs are often incorporated with such Earths, whereby they become impregnated with sour, adulterated, unwholesome qualities, that so affect the Barley that grows therein, as to render it incapable of making such pure and sweet Malts, as that which is sown in the open Champaign-fields, whose Earths are constantly rested every third Year

Year, called the Fallow-season, in order to discharge their crude, phlegmatick, and four property, by the several turnings that the Plough gives them part of a Winter and one whole Summer, which exposes the rough, clotty, loose parts of the Ground, and by degrees brings them into a condition of making a lodgment of those saline benefits that arise from the Earths, and afterwards fall down, and redound so much to the benefit of all Vegetables that grow therein, as being the essence and spring of Life to all things that have root; and tho' they are first exhaled by the Sun in vapour from the Earth as the spirit or breath thereof, yet it is return'd again in Snows, Hails, Dews, &c. more than in Rains, by which the surface of the Globe is saturated; from whence it reascends in the juices of Vegetables, and enters into all those productions as food and nourishment, which the Creation supplies.

Here then may appear the excellency of steeping Seed-barley in a liquor lately invented, that impregnates and loads it with Nitre and other Salts that are the nearest of all others to the true and original Spirits or Salt of the Earth, and therefore in a great measure supplies the want thereof both in inclosure and open Field; for even in this last it is sometimes very scarce, and in but small quantities, especially after a hot dry Summer and mild Winter, when little or no Snows have fell to cover the Earth and keep this Spirit in; by which and great Frosts it is often much encreased and then shews itself in the warmth of Well-waters, that are often seen to wreak in the cold Seasons. Now since all Vegetables more or less partake of those qualities that the Soil and Manures abound with in which they grow; I therefore infer that all Barley so imbibed, improves its productions by the ascension of those saline spirituous particles that are thus lodged in the Seed when put into the Ground, and are part of the nourishment the After-Crop enjoys; and for this reason I doubt not, but when time has got the ascendant of prejudice, the whole Nation will come into the
B 2 practice

4 *The Nature of the Barley-Corn,*

practice of the invaluable Receipt published in two Books, entituled, *Chiltern and Vale Farming Explained*, and, *The Practical Farmer*; both writ by *William Ellis* of *Little Gaddesden* near *Hempstead* in *Hertfordshire*, not only for Barley, but other Grains.

But notwithstanding Barley may grow on a light Soil with a proper Manure; and improved by the liquor of this Receipt, yet this Grain may be damaged or spoiled by being mown too soon, which may afterwards be discovered by its shrivelled and lean body that never will make right good Malt; or if it is mown at a proper time, and if it be housed damp, or wet-tish, it will be apt to heat and mow-burn, and then it will never make so good Malt, because it will not spire, nor come so regularly on the floor as that which was inned dry.

Again, I have known one part of a Barley-Crop almost green at Harvest, another part ripe, and another part between both, tho' it was all sown at once, occasion'd by the several situations of the Seed in the Ground, and the succeeding Droughts. The deepest came up strong and was ripe soonest, the next succeeded; but the uppermost, for want of Rain and Cover, some of it grew not at all, and the rest was green at Harvest. Now these irregularities are greatly prevented and cured by the application of the ingredients mentioned in the Receipt, which infuses such a moisture into the body of the Seed, as with the help of a little Rain and the many Dews, makes it spire, take root and grow, when others are ruined for want of the assistance of such steeping.

Barley like other Grain will also degenerate, and become rank, lean, and small bodied, if the same Seed is sown too often in the Soil; 'tis therefore that the best Farmers not only change the Seed every time, but take due care to have it off a contrary Soil that they sow it into; this makes several in my neighbourhood every Year buy their Barley-seed in the Vale of *Ailsbury*, that grew there on the black, clayey, marly Loams, to
sow

sow in Chalks, Gravels, &c. Others every second Year will go from hence to *Fulham* and buy the Forward or Rath-ripe Barley that grows there on sandy Ground; both which Methods are great Improvements of this Corn, and whether it be for sowing or malting, the plump, weighty, and white Barley-corn, is in all respects much kinder than the lean flinty Sorts.



C H A P II.

Of making Malts.

AS I have described the Ground that returns the best Barley, I now come to treat of making it into Malt; to do which, the Barley is put into a leaden or tyled Cistern that holds five, ten, or more Quarters, that is covered with water four or six Inches above the Barley to allow for its Swell; here it lyes five or six Tides as the Malster calls it, reckoning twelve Hours to the Tide, according as the Barley is in body or in dryness; for that which comes off Clays, or has been wash'd and damag'd by Rains, requires less time than the dryer Grain that was inned well and grew on Gravels or Chalks; the smooth plump Corn imbibing the water more kindly, when the lean and steely Barley will not so naturally; but to know when it is enough, is to take a Corn end-ways between the Fingers and gently crush it, and if it is in all parts mellow, and the husk opens or starts a little from the body of the Corn, then it is enough: The nicety of this is a material Point; for if it is infus'd too much, the sweetness of the Malt will be greatly taken off, and yield the less Spirit, and so will cause deadness and sourness in Ale or Beer in a short time, for the goodness of the Malt contributes much to the preservation of all Ales and Beers. Then the water must be drain'd from it very well, and it will come equal and better on the floor, which may be done
in

in twelve or sixteen Hours in temperate weather, but in cold near thirty. From the Cistern it is put into a square Hutch or Couch, where it must lye thirty Hours for the Officer to take his Gage, who allows four Bushels in the Score for the Swell in this or the Cistern, then it must be work'd Night and Day in one or two Heaps as the weather is cold or hot, and turn'd every four, six, or eight Hours, the outward part inwards and the bottom upwards, always keeping a clear floor that the Corn that lies next to it be not chill'd; and as soon as it begins to come or spire, then turn it every three, four, or five Hours, as was done before according to the temper of the Air, which greatly governs this management, and as it comes or works more, so must the Heap be spreaded and thinned larger to cool it. Thus it may lye and be work'd on the floor in several Parallels, two or three foot thick, ten or more Foot broad, and fourteen or more in length, to Chip or Spire, but not too much nor too fast; and when it is come enough, it is to be turned twelve or sixteen times in twenty-four Hours, if the Season is warm, as in *March, April, or May*; and when it is fixed and the Root begins to be dead, then it must be thickned again, and carefully kept often turn'd and work'd, that the growing of the Root may not revive, and this is better done with the Shoes off than on; and here the Workman's Art and Diligence in particular is tryed, in keeping the floor clear and turning the Malt often, that it neither moulds nor Aker-spines, that is, that the Blade does not grow out at the opposite end of the Root; for if it does, the flower and strength of the Malt is gone, and nothing left behind but the Aker-spire, Husk, and Tail: Now when it is at this degree and fit for the Kiln, it is often practised to put it into a Heap and let it lye twelve Hours before it is turned, to heat and mellow, which will much improve the Malt if it is done with moderation, and after that time it must be turned every six Hours during twenty four; but if it is overheated, it will become like Grease and be spoiled,

ed, or at least cause the Drink to be unwholesome : When this Operation is over, it then must be put on the Kiln to dry four, six, or twelve Hours, according to the nature of the Malt, for the pale sort requires more leisure and less fire than the amber or brown sorts : Three Inches thick was formerly thought a sufficient depth for the Malt to lye on the Hair-cloth, but now six is often allowed it to a fault ; fourteen or sixteen Foot square will dry about two Quarters if the Malt lies four Inches thick, and here it should be turned every two, three, or four Hours, keeping the Hair-cloth clear : The time of preparing it from the Cistern to the Kiln is uncertain, according to the Season of the Year ; in moderate weather three Weeks is often sufficient. If the Exciseman takes his Gage on the floor he allows ten in the Score, but he sometimes gages in Cistern, Couch, Floor, and Kiln, and where he can make most, there he fixes his Charge : When the Malt is dryed, it must not cool on the Kiln, but be directly thrown off, not into a Heap, but spread wide in an airy place, till it is thoroughly cool, then put it into a Heap or otherwise dispose of it.

There are several methods used in drying of Malts, as the Iron Plate-frame, the Tyle-frame, that are both full of little Holes : The Brass-wyred and Iron-wyred Frame, and the Hair-cloth ; the Iron and Tyled one, were chiefly Invented for drying of brown Malts, and saving of Fuel ; for these, when they come to be thorough hot, will make the Corns crack and jump by the fierceness of their heat, so that they will be roasted or scorch'd in a little Time, and after they are off the Kiln, to plump the body of the Corn and make it take the Eye, some will sprinkle water over it that it may meet with the better Market : But if such Malt is not used quickly, it will slacken and lose its Spirits to a great degree, and, perhaps, in half a Year or less, may be taken by the Whools and spoiled : Such hasty drying or scorplings are also apt to bitter the Malt by its skin, and therefore these Kilns are not so much

much used now as formerly: The Wyre-frames indeed are something better, yet they are apt to scorch the outward part of the Corn, that cannot be got off so soon as the Hair-cloth admits of, for these must be swept, when the other is only turned at once; however, these last three ways are now in much request for drying pale and amber Malts, because their fire may be kept with more leisure, and the Malt more gradually and truer dried, but by many the Hair-cloth is reckoned the best of all.

Malts are dried with several sorts of Fuel; as the Coak, Welch-coal, Straw, Wood, and Fern, &c. But the Coak is reckoned by most to exceed all others for making Drink of the finest Flavour and pale Colour, because it sends no smoak forth to hurt the Malt with any offensive tang, that Wood, Fern, and Straw are apt to do in a lesser or greater degree; but there is a difference even in what is call'd Coak, the right sort being large Pit-coal chark'd or burnt in some measure to a Cinder, till all the Sulphur is consumed and evaporated away, which is called Coak, and this when it is truly made is the best of all other Fuels; but if there is but one Cinder as big as an Egg, that is not thoroughly cured, the smoak of this one is capable of doing a little damage, and this happens too often by the negligence or avarice of the Coak-maker: There is another sort by some wrongly called Coak, and rightly named Culme or Welch-coal, from *Swanzey* in *Pembrokeshire*, being of a hard stony substance, in small bits resembling a shining Coal, and will burn without smoak, and by its sulphureous effluvia cast a most excellent whiteness on all the outward parts of the grainy body: In *Devonshire* I have seen their Marble or grey Firestone burnt into Lime with the strong fire that this Culme makes, and both this and the Chark'd Pit-coal affords a most sweet, moderate, and certain fire to all Malt that is dried by it.

Straw is the next sweetest Fuel, but Wood and Fern worst of all.

Some I have known put a Peck or more of Peas, and malt them with five Quarters of Barley, and they'll greatly mellow the Drink, and so will Beans; but they wont come so soon, nor mix so conveniently with the Malt, as the Pea will.

I knew a Farmer, when he sends five Quarters of Barley to be malted, puts in half a Peck or more of Oats amongst them, to prove he has justice done him by the Maker, who is hereby confin'd not to Change his Malt, by reason others wont like such a mixture.

But there is an abuse sometimes committed by a necessitous Malster, who to come by Malt sooner than ordinary, makes use of Barley before it is thoroughly sweated in the Mow, and then it never makes right Malt, but will be steely and not yield a due Quantity of wort, as I knew it once done by a Person that thrashed the Barley immediately from the Cart as it was brought out of the Field, but they that used its Malt suffered not a little, for it was impossible it should be good, because it did not thoroughly Chip or Spire on the floor, which caused this sort of Malt, when the water was put to it in the Mash-tub, to swell up and absorb the Liquor, but not return its due quantity again, as true Malt would; nor was the Drink of this Malt ever good in the Barrel, but remain'd a raw insipid Beer, past the Art of Man to Cure, because this, like Cyder made from Apples directly off the Tree, that never sweated out their phlegmatick crude juice in the Heap, cannot produce a natural Liquor from such unnatural management; for Barley certainly is not fit to make Malt of till it is fully mellowed and sweated in the Mow, and the Season of the Year is ready for it, without both which there can be no assurance of good Malt: Several instances of this untimely making Malt I have known to happen, that has been the occasion of great quantities of bad Ales and Beers; for such Malt retaining some of its Barley nature, or that the Season of the Year is not cold enough to admit of its natural working on the floor, is not capable of producing a

true Malt, but will cause its Drink to stink in the Cask instead of growing fit for use, as not having its genuine Malt nature to cure and preserve it, which all good Malts contribute to as well as the Hop.

There is another damage I have known accrue to the Buyer of Malt by Mellilet, a most stinking Weed that grows amongst some Barley, and is so mischievously predominant, as to taint it to a sad degree, because its black Seed, like that of an Onion, being lesser than the Barley, cannot be entirely separated, which obliges it to be malted with the Barley, and makes the Drink so heady, that it is apt to fuddle the unwary by drinking a small quantity: This Weed is so natural to some Ground, that the Farmer despairs of ever extirpating it, and is to be avoided as much as possible, because it very much hurts the Drink that is made from Malt mixed with it, by its nauseous Scent and Taste, as may be perceived by the Ointment made with it that bears its Name: I knew a Victualler that bought a parcel of Malt that this weed was amongst, and it spoiled all the Brewings and Sale of the Drink, for it's apt to cause Fevers, Colicks, and other Distempers in the Body.

Darnel is a rampant Weed and grows much amongst some Barley, especially in the bad Husbandman's ground, and most where it is sown with the Seed-Barley: It does the least harm amongst Malt, because it adds a strength to it, and quickly intoxicates, if there is much in it; but where there is but little, the Malster regards it not, for the sake of its inebriating quality. There are other Weeds or Seeds that annoy the Barley; but as the Screen, Sieve, and throwing will take most of them out, there does not require here a Detail of their Particulars. Oats malted as Barley is, will make a weak, soft, mellow, and pleasant Drink; but Wheat when done so, will produce a strong, heady, nourishing, well-tasted, and fine Liquor, which is now more practised than ever.

C H A P. III.

To know good from bad Malts.

THIS is a Matter of great Importance to all Brewers, both publick and private, for 'tis common for the Seller to cry all is good, but the Buyer's Case is different; wherefore it is prudential to endeavour to be Master of this Knowledge; for I have heard a great Malster that lived towards *Ware*, say, he knew a grand Brewer, that wetted near two hundred Quarters a Week, was not a judge of good and bad Malts, without which 'tis impossible to draw a true length of Ale or Beer. To do this, I know but of few Ways, *First*, By the Bite; is to break the Malt-Corn across between the Teeth, in the middle of it or at both Ends, and if it tasteth mellow and sweet, has a round body, breaks soft, is full of flower all its length, smells well, and has a thin skin, then it is good: *Secondly*, By Water; is to take a Glass near full, and put in some Malt, and if it swims, it is right, but if any sinks to the bottom, then it is not true Malt, but steely, and retains somewhat of its Barley nature; yet I must own this is not an infallible Rule, because if a Corn of Malt is crack'd, split, or broke, it will then take the water and sink, but there may an allowance be given for such incidents, and still room enough to make a judgment. *Thirdly*, Malt that is truly made, will not be hard and steely, but of so mellow a Nature, that if forced against a dry Board, will mark, and cast a white Colour almost like Chalk. *Fourthly*, Malt that is not rightly made will be part of it of a hard Barley nature, and weigh heavier than that which is true Malt.

C H A P. IV.

Of the Nature and Use of Pale, Amber, and Brown Malts.

THE pale Malt is the slowest and slackest dried of any, and where it has had a leisure fire, a sufficient time allowed it on the Kiln, and a due care taken of it; the flower of the grain will remain in its full quantity, and thereby produce a greater length of wort, than the brown high dried Malt, for which reason it is sold for one or two shillings *per* Quarter more than that: This pale Malt is also the most nutritious sort to the body of all others, as being in this state the most simple and nearest to its Original Barley-corn, that will retain an alcalous and balsamick quality much longer than the brown sort; the tender drying of this Malt bringing its body into so soft a texture of Parts, that most of the great Brewers brew it with Spring and Well-waters, whose hard and binding Properties they think agrees best with this loose-bodied Malt, either in Ales or Beers, and which will also dispense with hotter Waters in brewing of it, than the brown Malt can.

The amber-colour'd Malt is that which is dried in a medium degree, between the pale and the brown, and is very much in use, as being free of either extrem. Its colour is pleasant, its taste agreeable, and its nature wholesome, which makes it be preferr'd by many as the best of Malts; this by some is brewed either with hard or soft waters, or a mixture of both.

The brown Malt is the soonest and highest dried of any, even till it is so hard, that it's difficult to bite some of its Corns asunder, and is often so crufted or burnt, that the farinous part loses a great deal of its essential Salts and vital Property, which frequently deceives its ignorant Brewer, that hopes to draw as much

Drink

Drink from a quarter of this, as he does from pale or amber sorts: This Malt by some is thought to occasion the Gravel and Stone, besides what is commonly called the Heart-burn; and is by its steely nature less nourishing than the pale or amber Malts, being very much impregnated with the fiery fumiferous Particles of the Kiln, and therefore its Drink sooner becomes sharp and acid than that made from the pale or amber sorts, if they are all fairly brewed: For this reason the *London* Brewers mostly use the *Thames* or *New River* waters to brew this Malt with, for the sake of its soft nature, whereby it agrees with the harsh qualities of it better than any of the Well or other hard Sorts, and makes a luscious Ale for a little while, and a Butt-beer that will keep very well five or six Months, but after that time it generally grows stale, notwithstanding there be ten or twelve Bushels allowed to the Hogshead, and it be hopp'd accordingly.

Pale and amber Malts dryed with Coak or Culm, obtains a more clean, bright, pale Colour than if dryed with any other Fuel, because there is not smoak to darken and fully their Skins or Husks, and give them an ill relish, that those Malts little or more have, which are dryed with Straw, Wood, or Fern, &c. The Coak or *Welch* Coal also makes more true and compleat Malt, as I have before hinted, than any other Fuel, because its fire gives both a gentle and certain Heat, whereby the Corns are in all their Parts gradually dryed, and therefore of late these Malts have gained such a Reputation that great quantities have been consumed in most Parts of the Nation for their wholesome Natures and sweet fine Taste: These make such fine Ales and Butt-beers, as has tempted several of our Malsters in my Neighbourhood to burn Coak or Culm at a great expence of Carriage thirty Miles from *London*.

Next to the Coak-dryed Malt, the Straw-dryed is the sweetest and best tasted: This I must own is sometimes well malted, where the Barley, Wheat, Straw, Conveniencies, and the Maker's Skill are good; but as
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the fire of the Straw is not so regular as the Coak, the Malt is attended with more uncertainty in its making, because it is difficult to keep it to a moderate and equal Heat, and also exposes the Malt in some degree to the Taste of the smoak.

Brown Malts are dried with Straw, Wood, and Fern, &c. the Straw-dried is far the best, but the Wood sort has a most unnatural Taste, that few can bear with, but the necessitous, and those that are accustomed to its strong smoaky tang; yet it is much used in some of the Western Parts of *England*, and many thousand Quarters of this Malt has been formerly used in *London* for brewing the Butt-keeping Beers with, and that because it sold for two shillings *per* Quarter cheaper than the Straw-dried Malt; nor was this Quality of the Wood-dried Malt much regarded by some of its Brewers, for that its ill Taste is lost in nine or twelve Months, by the Age of the Beer, and the Strength of the great Quantity of Hops that were used in its Preservation.

The Fern-dried Malt is also attended with a rank disagreeable Taste from the smoak of this Vegetable, with which many Quarters of Malt are dried, as appears by the great Quantities annually cut by Malsters on our Commons, for the two prevalent Reasons of cheapness and plenty.

At *Bridport* in *Dorsetshire*, I knew an Inn-keeper use half Pale and half Brown Malt for brewing his Butt-beers, that proved to my Palate the best I ever drank on the Road, which I think may be accounted for, in that the Pale being the slackest, and the Brown the hardest dried, must produce a mellow good Drink, by the help of a requisite Age, that will reduce those extremes to a proper Quality.

C H A P. V.

Of the Nature of several Waters, and their Use in Brewing. And first of Well-waters.

WA T E R, next to Malt, is what by course comes here under Consideration, as a Matter of great Importance in Brewing of wholesome fine Malt-liquors, and is of such Consequence, that it concerns every one to know the nature of the Water he Brews with, because it is the Vehicle by which the nutritious and pleasant Particles of the Malt and Hop are conveyed into our Bodies, and there becomes a Diluter of our Food : Now the more simple and freer every Water is from foreign Particles, the better it will answer those Ends and Purposes ; for, as Dr. *Mead* observes, some Waters are so loaded with stony Corpuscles, that even the Pipes thro' which they are carried, in time are incrusted and stopt up by them, and is of that pe-tryfying nature as to breed the Stone in the Bladder, which many of the *Parisians* have been instances of, by using this sort of Water out of the River *Seine*. And of this Nature is another at *Rowel* in *Northamptonshire*, which in no great distance of time so clogs the Wheel of an overshot Mill there, that they are forced with convenient Instruments to cut Way for its Motion ; and what makes it still more evident, is the sight of those incrusted Sides of the Tea-kettles, that the hard Well-waters are the occasion of, by being often boiled in them : And it is further related by the same Doctor, that a Gentlewoman afflicted with frequent returns of violent Colick Pains was cured by the Advice of *Van Helmont*, only by leaving off drinking Beer brewed with Well-water : It's true, such a fluid has a greater force and aptness to extract the tincture out of Malt, than is to be had in the more innocent and soft Liquor of Rivers : But for this very reason it ought not, unless upon meer necessity, to be made use of ;

of; this Quality being owing to the mineral Particles and alluminous Salts with which it is impregnated. For these Waters thus saturated, will by their various gravities in circulation, deposit themselves in one part of the animal Body or other, which has made some prove the goodness of Water by the lightness of its body in the Water Scales, now sold in several of the *London* Shops, in order to avoid the scorbutick, colicky, hypochondriack, and other ill Effects of the clayey and other gross Particles of stagnating Well-waters, and the calculous Concretions of others; and therefore such Waters ought to be mistrusted more than any, where they are not pure, clear, and soft, or that don't arise from good Chalks or stony Rocks, that are generally allowed to afford the best of all the Well forts.

Spring-waters are in general liable to partake of those minerals thro' which they pass, and are salubrious or mischievous accordingly. At *Uppingham* in *Rutland*, their Water is said to come off an Allum-rock, and so tinges their Beer with its saline Quality, that it is easily tasted at the first Draught. And at *Dean* in *Northamptonshire*, I have seen the very Stones colour the rusty Iron by the constant running of a Spring-water; but that which will lather with Soap, or such soft Water that percolates thro' Chalk, or a grey Firestone, is generally accounted best; for Chalks in this respect excel all other Earths, in that it administers nothing unwholesome to the perfluent Waters, but undoubtedly absorbs, by its drying spongy Quality, any ill minerals that may accompany the Water that runs thro' them. For which reason they throw in great Quantities of Chalk into their Wells at *Ailsbury* to soften their Water, which coming off a black Sandstone, is so hard and sharp that it will often turn their Beer sour in a Week's time, so that in its Original State it's neither fit to wash nor brew with, but so long as the alcalous soft Particles of the Chalk holds good, they put it to both Uses.

River-waters are less liable to be loaded with metallick, petrifying, saline, and other insidious Particles of the Earth, than the Well or Spring sorts are, especially at some distance from the Spring-head; because the Rain-water mixes with and softens it, and are also much cured by the Sun's heat and the Air's power, for which reason I have known several so strict, that they wont let their Horses drink near the first rise of some of them; this I have seen the sad Effects of, and which has obliged me to avoid two that run cross a Road in *Bucks* and *Hertfordshire*: But in their runnings they often collect gross Particles from ouzy muddy mixtures, particularly near Town, that make the Beer subject to new fermentations, and grow foul upon alteration of Weather, as the *Thames* Water generally does; yet is this for its softness much better than the hard sort; however, both these Waters are used by some Brewers, as I shall hereafter observe: But where a River-water can be had clear in a dry time, when no great Rain has lately fell out of Rivulets, or Rivers that have a gravelly, chalky, sandy, or stone Bottom, free from the Disturbance of Cattle, &c. and in good Air, as that of *Barkhamstead St. Peter's* in *Hertfordshire* is; it may then justly claim the name of a most excellent Water for Brewing, and will make a stronger Drink with the same Quantity of Malt than any of the Well-waters; insomuch that that of the *Thames* has been proved to make as strong Beer with seven Bushels of Malt, as Well-water with eight; and so are all River-waters in a proportionable degree, and where they can be obtain'd clean and pure, Drink may be drawn fine in a few Days after Tunning.

Rain-water is very soft, of a most simple and pure nature, and the best Diluter of any, especially if received free from Dirt, and the Salt of Mortar that often mixes with it as it runs off tyled Roofs; this is very agreeable for brewing of Ales that are not to be kept a great while, but for Beers that are to remain

some time in the Casks, it is not so well, as being apt to putrify the soonest of any.

Pond-waters; this includes all standing Waters chiefly from Rain, and are good or bad as they happen; for where there is a clean Bottom, and the Water lies undisturbed from the tread of Cattle, or too many Fish, in an open sound Air, in a large Quantity, and where the Sun has free access; it then comes near, if not quite as good as Rain or River-waters, as is that of *Blew-pot* Pond on the high Green at *Gaddefden* in *Hertfordshire*, and many others, which are often preferr'd for Brewing, even beyond many of the soft Well-waters about them. But where it is in a small Quantity, or full of Fish (especially the sling Tench) or is so disturbed by Cattle as to force up Mud and Filth; it is then the most foul and disagreeable of all others: So is it likewise in long dry Seasons when our Pond-waters are so low as obliges us to strain it thro' Sieves before we can use it, to take out the small red Worms and other Corruptions, that our stagnant Waters are generally then too full of. The latest and best Doctors have so far scrutinized into the prime Cause of our *British* malady the Scurvy, as to affirm its first rise is from our unwholesome stagnating Waters, and especially those that come off a clayey surface, as there are about *Londonderry* and *Amsterdam*; for that where the Waters are worst, there this Distemper is most common, so that in their Writings they have put it out of all doubt, that most of our complicated symptoms that are rank'd under this general Name, if they dont take their Beginning from such Water, do own it to be their chief Cause.

C H A P. VI.

Of Grinding Malts.

AS trifling as this Article in Brewing may seem at first, it very worthily deserves the notice of all concern'd therein; for on this depends much the good of our Drink, because if it is ground too small, the flower of the Malt will be the easier and more freely mixt with the Water, and then will cause the Wort to run thick, and therefore the Malt must be only just broke in the Mill, to make it emit its Spirit gradually, and incorporate its Flower with the Water in such a manner, that first a stout Beer, then an Ale, and afterwards a small Beer may be had at one and the same Brewing, and the Wort run off fine and clear to the last. Many are likewise so sagacious as to grind their brown Malt a Fortnight before they use it, and keep it in a dry Place from the influence of too moist an Air, that it may become mellow by losing in a great measure the fury of its harsh fiery Particles, and its steely Nature, which this sort of Malt acquires on the Kiln; however, this, as well as many other hard Bodies, may be reduced by Time and Air into a more soluble, mellow, and soft Condition, and then it will imbibe the Water and give a natural kind Tincture more freely, by which a greater Quantity, and stronger Drink, may be made, than if it was used directly from the Mill, and be much smoother and better tasted. But the pale Malt will be fit for use at a Week's end, because the leisureness of their drying endows them with a softness from the time they are taken off the Kiln to the time they are brewed, and supplies in them what Time and Air must do in the brown sorts. This method of grinding Malt so long beforehand can't be so conveniently practised by some of the great Brewers, because several of them brew two or three times a Week, but now most of them out of good Husbandry grind their Malts in-

to the Tun by the help of a long, descending, wooden Spout, and here they save the Charge of emptying or uncaſing it out of the Bin (which formerly they uſed to do before this new way was diſcovered) and alſo the Waſte of a great deal of the Malt-flower that was loſt when carried in Baskets, whereas now the Cover of the Tun prevents all that Damage. In my common Brewhouſe at *London*, I ground my Malt between two large Stones by the Horſe-mill, that with one Horſe would grind Quarters an Hour. But in the Country I uſe a ſteel Hand-mill, that coſt at firſt forty Shillings, which will, by the help of only one Man, grind ſix or eight Buſhels in an Hour, and will laſt a Family many Years without hardning or cutting. There are ſome old-ſaſhion'd ſtone Hand-mills in being, that ſome are Votaries for, and prefer to the Iron ones, becauſe they alledge that theſe break the Corn's body, when the Iron ones only cut it in two, which occaſions the Malt ſo broke by the Stones, to give the Water a more eaſy, free, and regular Power to extract its Virtue, than the Cut-malt can that is more confin'd within its Hull. Notwithſtanding the Iron ones are now moſtly in Uſe for their great Diſpatch and long Duration. In the Country it is frequently done by ſome to throw a Sack of Malt on a Stone or Brick-floor as ſoon as it is ground, and there let it lye, giving it one turn, for a Day or two, that the Stones or Bricks may draw out the fiery Quality it received from the Kiln, and give the Drink a ſoft mild Taſte.



C H A P VII.

Of Brewing in general.

BREWING, like ſeveral other Arts, is proſtituted to the opinionated Ignorance of many conceited Pretenders, who, if they have but ſeen, or been

concern'd in but one Brewing, and that only one Bushel of Malt, assume the Name of a Brewer, and dare venture on several afterwards, as believing it no other Task, than more Labour, to brew a great deal as well as a little ; from hence it partly is, that we meet with such hodge-podge Ales and Beers, as are not only disagreeable in Taste and Foulness, but indeed unwholsome to the Body of Man ; for as it is often drank thick and voided thin, the Feces or gross Part must in my Opinion remain behind in some degree. Now what the Effects of that may be, I must own, I am not Physician enough to explain, but shrewdly suspect it may be the Cause of Stones, Cholicks, Obstructions, and several other Chronical Distempers ; for if we consider that the Sediments of Malt-liquors are the Refuse of a corrupted Grain, loaded with the igneous acid Particles of the Malt, and then again with the corrosive sharp Particles of the Yeast, it must consequently be very pernicious to the *British* human Body especially, which certainly suffers much from the animal Salts of the great Quantities of Flesh that we eat, more than People of any other Nation whatsoever ; and therefore are more than ordinarily obligated not to add the scorbutick mucilaginous Qualities of such gross unwholsome Particles, that every one makes a Lodgment of in their Bodies, as the Liquors they drink are more or less thick ; for, in plain Truth, no Malt-liquor can be good without it's fine. The late curious *Simon Harcourt Esq;* of *Penly*, whom I have had the Honour to drink some of his famous *October* with, thought the true Art of brewing of such Importance, that it is said to have cost him near twenty Pounds to have an old Days-man taught it by a *Welch* Brewer, and sure it was, this very Man exceeded all others in these Parts afterwards in the brewing of that which he called his *October* Beer. So likewise in *London* they lay such stress on this Art, that many have thought it worth their while to give one or two hundred Guineas with an Apprentice : This Consideration also made an Ambassador give an extraordinary

nary Encouragement to one of my Acquaintance to go over with him, that was a great Master of this Science. But notwithstanding all that can be said that relates to this Subject, there are so many Incidents attending Malt-liquors, that it has puzzled several expert Men to account for their Difference, though brewed by the same Brewer, with the same Malt, Hops, and Water, and in the same Month and Town, and tapp'd at the same time : The Beer of one being fine, strong, and well tasted, while the others have not had any worth drinking; now this may be owing to the different Weather in the same Month, that might cause an Alteration in the working of the Liquors, or that the Cellar may not be so convenient, or that the Water was more disturbed by Winds or Rains, &c. But it has been observed, that where a Gentleman has employed one Brewer constantly, and uses the same Sort of Ingredients, and the Beer kept in dry Vaults and Cellars that have two or three Doors ; the Drink has been generally good. And where such Malt-liquors are kept in Butts, more time is required to ripen, meliorate, and fine them, than those kept in Hogsheads, because the greater quantity must have the longer time ; so also a greater quantity will preserve itself better than a lesser one, and on this account the Butt and Hogshead are the two best sized Casks of all others, but all under a Hogshead hold rather too small a Quantity to keep their Bodies. The Butt is certainly a most noble Cask for this use, as being generally set upright, whereby it maintains a large Cover of Yeast, that greatly contributes to the keeping in the Spirits of the Beer, admits of a most convenient broaching in the middle and its lower part, and by its broad level Bottom, gives a better Lodgment to the fining and preserving Ingredients, than any other Cask whatsoever that lyes in the long Cross-form. Hence it partly is, that the common Butt-beer is at this time in greater Reputation than ever in *London*, and the Home-brew'd Drinks out of Credit ; because the first is better cured in its brewing, in its Quantity,

tity, in its Cask, and in its Age; when the latter has been loaded with the pernicious Particles of great Quantities of Yeast, of a short Age, and kept in small Casks, that confines its Owner, only to Winter Brewing and Sale, as not being capable of sustaining the Heat of the Weather, for that the Acidity of the Yeast brings on a sudden Hardness and Staleness of the Ale, which to preserve in its mild Aley Taste, will not admit of any great Quantity of Hops; and this is partly the Reason, that the Handful of Salt which the *Plymouth* Brewers put into their Hogshead, hinders their Ale from keeping, as I shall hereafter take notice of.



C H A P. VIII.

The London Method of Brewing.

IN a great Brewhouse that I was concern'd in, they wetted or used a considerable Quantity of Malt in one Week in brewing Stout-beer, common Butt-beer, Ale, and small Beer; for which purpose they have River and Well Waters, which they take in several Degrees of Heat, as the Malt, Goods, and Grain are in a Condition to receive them; and according to the Practice there, I shall relate the following Particulars, *viz.*

For Stout Butt Beer.

This is the strongest Butt-Beer that is brewed from brown Malt, and often sold for forty Shillings the Barrel, or six Pound the Butt out of the Wholesale Cellars: The Liquor (for it is Six-pence forfeit in the *London* Brewhouse if the Word Water is named) in the Copper designed for the first Mash, has a two Bushel Basket, or more, of the most hully Malt throw'd over it, to cover its Top and forward its boiling; this must be made very hot, almost ready to boil, yet not so as to blister, for then it will be in too high a Heat; but

but as an Indication of this, the foul Part of the Liquor will ascend, and the Malt swell up, and then it must be parted, look'd into, and felt with the Finger or back of the Hand, and if the Liquor is clear and can but be just endured, it is then enough, and the Stoker must damp his Fire as soon as possible, by throwing in a good Parcel of fresh Coals, and shutting his Iron vent Doors, if there are any; immediately on this, they let as much cold Liquor or Water run into the Copper as will make it all of a Heat, somewhat more than Blood-warm, this they pump over, or let it pass by a Cock into an upright wooden square Spout or Trunk, and it directly rises thro' the Holes of a false Bottom into the Malt, which is work'd by several Men with Oars for about half an Hour, and is called the first and stiff Mash: While this is doing, there is more Liquor heating in the Copper, that must not be let into the mash Tun till it is very sharp, almost ready to boil, with this they mash again, then cover it with several Baskets of Malt, and let it stand an Hour before it runs into the Under-back, which when boiled an Hour and a half with a good Quantity of Hops makes this Stout. The next is mash'd with a cooler Liquor, then a sharper, and the next Blood-warm or quite cold; by which alternate degrees of Heat, a Quantity of small Beer is made after the Stout.

For Brewing strong brown Ale called Stitch.

This is most of it the first running of the Malt, but yet of a longer Length than is drawn for the Stout; it has but few Hops boiled in it, and is sold for Eight-pence *per* Gallon at the Brewhouse out of the Tun, and is generally made to amend the common brown Ale with, on particular Occasions. This Ale I remember was made use of by ——— *Medlicot* Esq; in the beginning of a Consumption, and I heard him say, it did him very great Service, for he lived many Years afterwards.

For Brewing common brown Ale and Starting-Beer.

They take the Liquors from the brown Ale as for the Stout, but draw a greater Quantity from the Malt, than for Stout or Stitch, and after the stiff and second Mash they cap the Goods with fresh Malt to keep in the Spirit and boil it an Hour; after this, small Beer is made of the same Goods. Thus also, the common brown Starting Butt-beer is brewed, only boiled with more Hops an Hour and a half, and work'd cooler and longer than the brown Ale, and a shorter Length drawn from the Malt. But it is often practised after the brown Ale, and where a Quantity of small Beer is wanted, or that it is to be brewed better than ordinary, to put so much fresh Malt on the Goods as will answer that purpose.

For brewing Pale and Amber Ales and Beers.

As the brown Malts are brewed with River, these are brewed with Well or Spring Liquors. The Liquors are by some taken sharper for pale than brown Malts, and after the first scalding Liquor is put over, some lower the rest by degrees, to the last which is quite cold, for their small Beer; so also for Butt-beers, there is no other difference than the addition of more Hops, and boiling, and the method of working. But the Reasons for brewing pale Malts with Spring, or hard Well-waters, I have mentioned in my second Book of Brewing.

For Brewing Entire Guile small Beer.

On the first Liquor they throw some hully Malt, to shew the Break of it, and when it is very sharp, they let in some cold Liquor, and run it into the Tun milk-warm; this is mash'd with thirty or forty Pulls of the Oar, and let stand till the second Liquor is ready, which

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must be almost scalding hot to the back of the Hand ; then run it by the Cock into the Tun, mash it up, and let it stand an Hour before it is spended off into the Under-back : These two pieces of Liquor will make one Copper of the first Wort, without putting any fresh Malt on the Goods ; the next Liquor to be Blood-warm, the next sharp, and the next cool or cold ; for the general way in great Brewhouses, is to let a cool Liquor precede a sharp one ; because it gradually opens the Pores of the Malt and Goods, and prepares the way for the hotter Liquor that is to follow.

The several Lengths or Quantities of Drinks that have been made from Malt, and their several Prices, as they have been sold at a common Brewhouse.

For Stout-Beer, is commonly drawn one Barrel off a Quarter of Malt, and sold for thirty Shillings *per* Barrel from the Tun. For Stitch or strong brown Ale, one Barrel and a Firkin, at one and twenty Shillings and Four-pence *per* Barrel from the Tun. For common brown Ale, one Barrel and a half, or more, at sixteen Shillings *per* Barrel, that holds thirty two Gallons, from the Tun. For Intire small Beer, five or six Barrels off a Quarter, at seven or eight Shillings *per* Barrel from the Tun. For Pale and Amber Ale, one Barrel and a Firkin, at one Shilling *per* Gallon from the Tun.



C H A P. IX.

The Country or private way of Brewing.

S E V E R A L Countries have their several Methods of Brewing, as is practised in *Wales, Dorchester, Nottingham, Oundle,* and many other Places ; but evading Particulars, I shall here recommend that which I think

think is most serviceable both in Country, and London private Families. And first, I shall observe, that the great Brewer has some advantages in Brewing more than the small one, and yet the latter has some Conveniencies which the former can't enjoy ; for 'tis certain, that the great Brewer can make more Drink, and draw a greater Length in proportion to his Malt, than a Person can from a lesser Quantity, because the greater the Body, the more is its united Power in receiving and discharging, and he can brew with less charge and trouble, by means of his more convenient Utensils. But then the private Brewer is not without his Benefits ; for he can have his Malt ground at pleasure, his Tubs and moveable Coolers sweeter and better clean'd than the great fixed Tuns and Backs, he can skim off his top Yeast, and leave his bottom Lees behind, which is what the great Brewer can't so well do ; he can at discretion make additions of cold Wort, to his too forward Ales and Beers, which the great Brewer can't so conveniently do ; he can brew how and when he pleases, which the great ones are in some measure hinder'd from. But to come nearer the matter, I will suppose a private Family to brew five Bushels of Malt, whose Copper holds brim-full thirty six Gallons or a Barrel : On this Water we put half a Peck of Bran or Malt, when it is something hot, which will much forward it, by keeping in the Steams or Spirit of the Water ; and when it begins to boil, if the Water is foul, skim off the Bran or Malt, and give it to the Hogs, or else lade both the Water and that into the mash Vat, where it is to remain till the steam is near spent, and you can see your Face in it, which will be in about a quarter of an Hour in cold Weather ; then let all but half a Bushel of the Malt run very leisurely into it, stirring it all the while with an Oar or Paddle, that it may not Ball, and when the Malt is all but just mix'd with Water, it is enough, which I am sensible is different from the old way and the general present Practice ; but I shall here clear that

Point. For by not stirring or mashing the Malt into a Pudding Consistence or thin Mash, the Body of it lies in a more loose Condition, that will easier and sooner admit of a quicker and more true Passage of the after-ladings of the several Bowls or Jets of hot Water, which must run thorough it before the Brewing is ended ; by which free percolation the Water has ready access to all the parts of the broken Malt, so that the Brewer is capacitated to brew quicker or slower, and to make more Ale or small Beer : If more Ale, then hot boiling Water must be laded over so slow that one Bowl must run almost off before another is put over, which will occasion the whole Brewing to last about sixteen Hours, especially if the *Oundle* way is followed, of spending it out of the Tap as small as a Straw, and as fine as Sack, and then it will be quickly so in the Barrel : Or if less or weaker Ale is to be made, and good small Beer, then the second Copper of boiling Water may be put over expeditiously , and drawn out with a large and fast stream. After the first stirring of the Malt is done, then put over the reserve of half a Bushel of fresh Malt to the four Bushels and half that is already in the Tub, which must be spread all over it, and also cover the top of the Tub with some Sacks or other Cloths to keep in the Steam or Spirit of the Malt ; then let it stand two or three Hours, at the end of which, put over now and then a Bowl of the boiling Water in the Copper, as is before directed, and so continue to do till as much is run off as will almost fill the Copper ; then in a Canvas or other loose woven Cloth, put in half a Pound of Hops and boil them half an Hour, when they must be taken out, and as many fresh ones put in their room as is judged proper to boil half an Hour more, if for Ale : But if for keeping Beer, half a Pound of fresh ones should be put in at every half Hour's end, and boil an Hour and a half briskly : Now while the first Copper of Wort is boiling, there should be scalding Water leisurely put over the Goods, Bowl by Bowl, and run off, that the Copper may be
fill'd

fill'd again immediately after the first is out, and boiled an Hour with near the same Quantity of fresh Hops, and in the same manner as those in the first Copper of Ale-wort were. The rest for small Beer may be all cold Water put over the Grains at once, or at twice, and boil'd an Hour each Copper with the Hops that has been boil'd before. But here I must observe, that sometimes I have not an opportunity to get hot Water for making all my second Copper of Wort, which obliges me then to make use of cold to supply what was wanting. Out of five Bushels of Malt, I generally make a Hogshead of Ale with the two first Coppers of Wort, and a Hogshead of small Beer with the other two, but this more or less, according to please me, always taking Care to let each Copper of Wort be strained off thro' a Sieve, and cool in four or five Tubs to prevent its foxing. Thus I have brewed many Hogsheads of midling Ale, that when the Malt is good, has proved strong enough for myself, and satisfactory to my Friends: But for strong keeping Beer, the first Copper of Wort may be wholly put to that Use, and all the rest small Beer: Or when the first Copper of Wort is intirely made use of for strong Beer, the Goods may be help'd with more fresh Malt (according to the *London* Fashion) and Water lukewarm put over at first with the Bowl, but soon after sharp or boiling Water, which may make a Copper of good Ale, and small Beer after that. In some Parts of the North, they take one or more Cinders red hot and throw some Salt on them to overcome the Sulphur of the Coal, and then directly thrust it into the fresh Malt or Goods, where it lies till all the Water is laded over and the Brewing done, for there is only one or two mashings or stirrings at most necessary in a Brewing: Others that brew with Wood will quench one or more Brands ends of Ash in a Copper of Wort, to mellow the Drink, as a burnt Toast of Bread does a Pot of Beer; but it is to be observed, that this must not be done with Oak, Firr, or
any

any other strong-scented Wood, lest it does more harm than good.

Another Way.

When small Beer is not wanted, and another Brewing is soon to succeed the former, then may the last small Beer Wort, that has no Hops boiled in it, remain in the Copper all Night, which will prevent its foxing, and be ready to boil instead of so much Water to put over the next fresh Malt: This will greatly contribute to the strengthening, bettering, and colouring of the next Wort, and is commonly used in this manner when Stout or *October Beer* is to be made, not that it is less serviceable if it was for Ale, or intire Guile small Beer; but lest it should taste of the Copper by remaining all Night in it, it may be dispersed into Tubs, and kept a Week or more together, if some fresh cold Water is daily added to it, and may be brewed as I have mentioned, taking particular Care in this, as well as the former ways, to return two, three, or more Hand-bowls of Wort into the Mash-Tub, that first of all runs off, till it comes absolutely fine and clear, and then it may spend away or run off for good: Others will reserve this small Beer Wort unboiled in Tubs, and keep it there a Week in Winter, or two or three Days in Summer, according to Conveniency, by putting fresh Water every Day to it, and use it instead of Water for the first Mash, alledging it is better so than boiled, because by that it is thickened and will cause the Wort to run foul; this may be a Benefit to a Victualler that brews to sell again, and can't vent his small Beer; because for such small raw Wort that is mix'd with any Water, there is no Excise to be paid.

For Brewing Intire Guile Small Beer.

There can be no way better for making good small Beer, than by brewing it from fresh Malt, because in
Malt

Malt as well as in Hops, and so in all other Vegetables, there is a spirituous and earthy Part, as I shall further enlarge on in writing of the Hop ; therefore all Drink brewed from Goods or Grains, after the first or second Worts are run off, is not so good and wholesome, as that intirely brewed from fresh Malt, nor could any thing but Necessity cause me to make use of such Liquor ; yet how many thousands are there in this Nation, that know nothing of the matter, tho' it is of no small Importance, and ought to be regarded by all those that value their Health and Taste. And here I advertise every one who reads or hears this, and is capable of being his own Friend, so far to mind this *Item*, and prefer that small Beer which is made entirely from fresh Malt, before any other that is brewed after strong Beer or Ale. Now to brew such Guile small Beer after the boiling Water has stood in the Tub till it is clear, put in the Malt leisurely, and mash it that it does not ball or clot, then throw over some fresh Malt on the Top, and Cloths over that, and let it stand two Hours before it is drawn off, the next Water may be between hot and cold, the next boiling hot, and the next cold ; or if Conveniency allows not, there may be once scalding Water, and all the rest cold instead of the last three. Thus I brew my Intire Guile small Beer, by putting the first and last Worts together, allowing half, or a Pound of Hops to a Hoghead, and boiling it one Hour ; but if the Hops were shifted twice in that time, the Drink would plainly discover the Benefit. Sometimes, when I have been in haste for small Beer, I have put half a Bushel of Malt, and a few Hops into my Barrel-Copper, and boil'd a Kettle Gallop, as some call it, an Hour, and made me a present Drink, till I had more leisure to brew better.

A particular way of Brewing strong October Beer.

There was a Man in this Country that brewed for a Gentleman constantly, after a very precise Method, and
that

that was, as soon as he had put over all his first Copper of Water, and mash'd it some time, he would directly let the Cock run a small stream, and presently put some fresh Malt on the former, and mash on while the Cock was spending, which he would put again over the Malt, as often as his Pail or Hand-bowl was full, and this for an Hour or two together; then he would let it run off intirely, and put it over at once, to run off again as small as a Straw. This was for his *October Beer*: Then he would put scalding Water over the Goods at once, but not mash, and Cap them with more fresh Malt, that stood an Hour undisturbed before he would draw it off for Ale; the rest was hot Water put over the Goods, and mash'd at twice for small Beer: And it was observed, that his *October Beer* was the most famous in the Country, but his Grains good for little, for that he had by this method wash'd out all or most of their goodnes; this Man was a long while in Brewing, and once his Beer did not work in the Barrel for a Month in a very hard Frost, yet when the Weather broke it recovered and fermented well, and afterwards proved very good Drink, but he seldom work'd his Beer less than a Week in the Vat, and was never tapp'd under three Years.

This Way, indeed, is attended with extraordinary Labour and Time, by the Brewer's running off the Wort almost continually, and often returning the same again into the mash Vat, but then it certainly gives him an opportunity of extracting and washing out the goodnes of the Malt, more than any of the common Methods, by which he is capacitated to make his *October* or *March Beer* as strong as he pleases. The Fame of *Penly October Beer*, is at this time well known, not only throughout *Hertfordshire*, but several other remote Places, and truly not without desert; for in all my Travels I never met with any that excell'd it, for a clear amber Colour, a fine Relish, and a light warm Digestion. But what excell'd all, was the Generosity of its Donor, who for Hospitality in his Viands, and this *October Beer*, has left but few of his Fellows. I re-
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member his usual Expression to be, You are welcome to a good Batch of my *October*; and true it was, that he proved his Words by his Deeds, for not only the rich but even the poor Man's Heart was generally made glad, even in advance, whenever they had Business at *Penly*; as expecting a Refreshment of this Cordial Malt Liquor, that often was accompanied with a good Breakfast or Dinner besides: Which reminds me of a poor Man I met on the Road, who ask'd me the Way to such a great House? On telling him, he replied; ah! Sir, I am almost undone, by losing this Horse that cost me above 7*l.* and now I am carrying him to the Hounds; they tell me, I shan't have a Cup of small Beer given me when I come there.

Of Brewing Molosses Beer.

Molosses or Treacle has certainly been formerly made too much use of in the brewing of Stout Beer, common Butt Beers, Brown Ales, and small Beer, when Malts have been dear: But it is now prohibited under the Penalty of fifty Pounds for every ten Pounds weight found in any common Brewhouse; and as Malts are now about twenty Shillings *per* Quarter, and like to be so by the Blessing of God, and the Assistance of that invaluable excellent Liquor for steeping Seed Barley in, published in a late Book intituled, *Chiltern and Vale Farming Explained*: There is no great Danger of that Imposition being rise again, which in my Opinion was very unwholsome; because the Brewer was obliged to put such a large Quantity of Treacle into his Water or small Wort to make it strong Beer or Ale, as very probably, raised a Sweating in some degree in the Body of the Drinker: Tho' in small Beer a lesser Quantity will serve; and therefore I have known some to brew it in that for their Health's sake, because this does not breed the Scurvy like Malt-liquors, and at the same time will keep open the Pipes and Passages of the Lungs and Stomach, for which purpose they put in nine Pounds weight into a Barrel-Copper of cold Water, first mix-

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ing it well, and boiling it briskly, with a quarter of a Pound of Hops or more, one Hour, so that it may come off twenty-seven Gallons.

A Method practised by a Victualler, for Brewing of Ale or October Beer, from Nottingham.

His Copper holds twenty-four Gallons, and the Mash-Tub has room enough for four and more Bushels of Malt. The first full Copper of boiling Water he puts into the Mash-Tub, there to lye a quarter of an Hour, till the steam is so far spent, that he can see his Face in it; or as soon as the hot Water is put in, throws a Pail or two of cold Water into it, which will bring it at once into a temper; then he lets three Bushels of Malt be run leisurely into it, and stirred or mash'd all the while, but as little as can be, or no more than just to keep the Malt from clotting or balling; when that is done, he puts one Bushel of dry Malt on the Top to keep in the Vapour or Spirit, and so lets it stand cover'd two Hours, or till the next Copper full of Water is boiled hot, which he lades over the Malt or Goods three Hand-bowls full at a time, that are to run off at the Cock or Tap by a very small Stream before more is put on, which again must be returned into the Mash-Tub till it comes off exceeding fine; for unless the Wort is clear when it goes into the Copper, there are little hopes it will be so in the Barrel; which leisure way obliges him to be sixteen Hours in brewing these four Bushels of Malt. Now between the ladings over he puts cold Water into the Copper to be boiling hot, while the other is running off; by this means his Copper is kept up near full, and the Cock spending to the end of brewing his Ale or small Beer, of which only twenty one Gallons must be saved of the first Wort that is reserved in a Tub, wherein four Ounces of Hops are put and then it is to be set by. For the second Wort I will suppose there are twenty Gallons of Water in the Copper boiling hot, that must be all laded over
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in the same manner as the former was, but no cold Water need here be mixed; when half of this is run out into a Tub, it must be directly put into the Copper with half of the first Wort, strain'd thro' the Brewing Sieve as it lies on a small loose wooden Frame over the Copper, to keep back those Hops that were first put in to preserve it, which is to make the first Copper twenty-one Gallons; then upon its beginning to boil he puts in a Pound of Hops in one or two Canvas or other coarse Linnen Bags, somewhat larger than will just contain the Hops, that an allowance may be given for their swell; this he boils away very briskly for half an Hour, when he takes the Hops out and continues boiling the Wort by itself till it breaks into Particles a little ragged, and then it is enough, and must be dispersed into the cooling Tubs very thin: Then put the remainder of the first and second Wort together and boil that, the same time, in the same manner, and with the same Quantity of fresh Hops the first was. The rest of the third or small Beer Wort will be about fifteen or twenty Gallons more or less, he mixes directly with some cold Water to keep it free of Excise, and puts it into the Copper as the first Liquor to begin a second Brewing of Ale with another four Bushels of Malt as he did before, and so on for several Days together if necessary; but at last there may be some small Beer made, tho' some will make none, because the Goods or Grains will go the further in feeding of Hogs.

Observations on the foregoing Method.

The first Copper of twenty-four Gallons of Water is but sufficient to wet three Bushels of Malt, and by the additions of cold Water as the hot is expended, it matters not how much the Malt drinks up: Tho' a third part of Water is generally allowed for that purpose that is never returned.

By the leisure putting over the Bowls of Water, the goodness of the Malt is the more extracted and washed

out, so that more Ale may be this way made, and less small Beer, than if the Wort was draw'd out hastily; besides, the Wort has a greater Opportunity of coming off finer by a slow Stream than by a quicker one, which makes this Method excel all others that discharge the Wort out of the Mash-Tub more hastily. Also by the continual running of the Cock or Tap, the Goods or Grains are out of danger of souring, which often happens in Summer Brewings, especially when the Cock is stopt between the several boilings of the Wort, and what has been the very cause of damaging or spoiling many Guiles of Drink.

This Brewer reposes such a Confidence in the Hops to preserve the Wort from fixing, even in the very hottest time in Summer, that he puts all his first running into one Tub, till he has an Opportunity of boiling it, and when Tubs and Room are so scarce that the Wort is obliged to be laid thick to cool, then the Security of some fresh Hops (and not them already boiled or soaked) may be put into it, which may be got out again by letting the Drink run thro' the Cullender, and after that a Hair Sieve to keep the Seeds of the Hop back as the Drink goes into the Barrel: But this way of putting Hops into the cooling Tubs is only meant where there is a perfect Necessity, and Tubs and Room enough can't be had to lay the Wort thin.

By this Method of Brewing, Ale may be made as strong or as small as is thought fit, and so may the small Beer that comes after, and is so agreeable, that this Brewer makes his Ale and strong keeping *October Beer*, all one and the same way, only with this Difference, that the latter is stronger and more hopp'd than the former. Where little or no small Beer is wanted, there may little or none be brewed, according to this manner of working, which is no small Conveniency to a little Family that uses more strong than small, nor is there any Loss by leaving the Grains in some Heart, where Horse, Cows, Hogs, or Rabbits are kept.

I am very sensible that the vulgar Error for many Years, has been a standard Sign to the ignorant, of boiling strong Worts only till they break or curdle in the Copper, which sometimes will be in three quarters of an Hour, or in an Hour or more, according to the nature of the Malt and Water; but from these, in some measure, I dissent, and also from those that boil it two or three Hours, for it is certain the longer Worts boil, the thicker they are made, because the watry or thin parts evaporate first away, and the thicker any Drink is boiled, the longer it requires to lye in the Barrel to have its Particles broke, which Age must be then the sole Cause of, and therefore I have fixed the Time and Sign to know when the Wort is truly enough, and that in such a manner, that an ordinary Capacity may be a true Judge of, which hereafter will prevent prodigious Losses in the waste of strong Worts that have often been boiled away to greater Loss than Profit.

I have here also made known, I think, the true Method of managing the Hop in the Copper, which has long wanted adjusting, to prevent the great Damage that longer Boilings of them has been the sole Occasion of, to the spoiling of most of our malt Drinks brewed in this Nation.



C H A P. X.

The Nature and Use of the Hop.

THIS Vegetable has suffer'd its Degradation, and raised its Reputation the most of any other. It formerly being thought an unwholsome Ingredient, and till of late a great breeder of the Stone in the Bladder, but now that falacious Notion is obviated by Dr. Quincy and others, who have proved that Malt Drink much tinctur'd by the Hop, is less prone to do that Mischiefs,

chief, than Ale that has fewer boil'd in it. Indeed, when the Hop, in a dear time, is adulterated with Water, in which Aloes, &c. have been infused, as was practis'd, it is said, about eight Years ago, to make the old ones recover their bitterness and seem new, then they are to be look'd on as unwholsome; but the pure new Hop is surely of a healthful Nature, compos'd of a spirituous flowery Part, and a phlegmatick terrene Part, and with the best of the Hops I can either make or mar the Brewing, for if the Hops are boil'd in strong or small Worts beyond their fine and pure Nature, the Liquor suffers, and will be tang'd with a noxious taste both ungrateful and unwholsome to the Stomach, and if boil'd to a very great Excess, they will be apt to cause Reachings, and disturb a weak Constitution. It is for these Reasons that I advise the boiling two Parcels of fresh Hops in each Copper of Ale-wort, and if there were three for keeping Beer, it would be so much the better for the Taste, Health of Body, and longer Preservation of the Beer in a sound smooth Condition. And according to this, one of my Neighbours made a Bag, like a Pillow-bear, of the ordinary six-penny yard Cloth, and boil'd his Hops in it half an Hour, then he took them out, and put in another Bag of the like Quantity of fresh Hops, and boiled them half an Hour more, by which means he had an Opportunity of boiling both Wort and Hops their due time, sav'd himself the trouble of straining them thro' a Sieve, and secur'd the Seeds of the Hops at the same time from mixing with the Drink; afterwards he boiled the same Bags in his small Beer, till he got the goodness of it out, but observe that the Bags were made bigger than what would just contain the Hops, otherwise it will be difficult to boil out their goodness. It's true, that here is a Charge encreas'd by the Consumption of a greater quantity of Hops than usual, but then how greatly will they answer the desired end of enjoying fine palated wholsome Drink, that in a cheap time will not amount to much, if bought at the best Hand; and if we consider

sider their after-use and benefit in small Beer, there is not any loss at all in their Quantity : But where it can be afforded, the very small Beer would be much improved if fresh Hops were also shifted in the boiling of this as well as the stronger Worts, and then it would be neighbourly Charity to give them away to the poorer Person. Hence may appear the Hardship that many are under of being necessitated to drink of those Brewers Malt Liquors, who, out of Avarice, boil their Hops to the last, that they may not lose any of their Quintessence : Nay, I have known some of the little Victualling Brewers so stupendiously ignorant, that they have thought they acted the good Husband, when they have squeezed the Hops after they have been boil'd to the last in small Beer, to get out all their goodness as they vainly imagin'd, which is so reverse to good Management, that, in my Opinion, they had much better put some sort of Earth into the Drink, and it would prove more pleasant and wholesome. And why the small Beer should be in this manner (as I may justly call it) spoiled, for want of the trifling Charge of a few fresh Hops, I am a little surprized at, since it is the most general Liquor of Families, and therefore as great Care is due to it as any in its Brewing, to enjoy it in a pure and wholesome Order.

After the Wort is cooled and put into the working Vat or Tub, some have thrown fresh Hops into it, and work'd them with the Yeast, at the same time reserving a few Gallons of raw Wort to wash the Yeast thro' a Sieve to keep back the Hop. This is a good way where Hops enough have not been sufficiently boiled in the Wort, or to preserve it in the Coolers where it is laid thick, otherwise I think it needless.

When Hops have been dear, many have used the Seeds of Wormwood, that they buy in the *London* Seed-shops, instead of them : Others *Daucus* or wild Carrot Seed, that grows in our common Fields, which many of the poor People in this Country gather and dry in their Houses against their wanting of them : Others

Others that wholesome Herb *Horebound*, which, indeed, is a fine bitter, and grows on several of our Commons.

But before I conclude this Article, I shall take Notice of a Country Bite, as I have already done of a *London* one, and that is, of an arch Fellow that went about to brew for People, and took his Opportunity to save all the used Hops that were to be thrown away, these he washed clean, then would dry them in the Sun, or by the Fire, and sprinkle the Juice of *Horebound* on them, which would give them such a greenish Colour and bitterish Taste, that with the help of the Screw-press he would sell them for new Hops.

Hops in themselves are known to be a subtil grateful Bitter, whose Particles are active and rigid, by which the viscid ramous Parts of the Malt are much divided, that makes the Drink easy of Digestion in the Body; they also keep it from running into such Cohesions as would make it ropy, valid, and sour, and therefore are not only of great use in boiled, but in raw Worts to preserve them sound till they can be put into the Copper, and afterwards in the Tun while the Drink is working, as I have before hinted.

Here then I must observe, that the worser earthy Part of the Hop is greatly the Cause of that rough, harsh, unpleasant Taste, which accompany both Ales and Beers that have the Hops so long boiled in them, as to tincture their Worts with their mischievous Effects; for notwithstanding the Malt be ever so good, the Hops, if boiled too long in them, will be so predominant as to cause a nasty bad Taste, and therefore I am in hopes our Malt-liquors in general will be in great Perfection, when Hops are made use of according to my Directions, and also that more Grounds will be planted with this most serviceable Vegetable than ever, that their Dearness may not be a Discouragement to this excellent Practice.

For I know an Alehouse-keeper and Brewer, who, to save the Expence of Hops that were then two Shillings *per* Pound, use but a quartern instead of a
Pound,

Pound, the rest he supply'd with *Daucus* Seeds ; but to be more particular, in a Mug of this Person's Ale I discover'd three several Impositions. *First*, He under-boil'd his Wort to save its Consumption. *Secondly*, He boiled this Seed instead of the Hop : And, *Thirdly*, He beat the Yeast in for some time, to encrease the Strength of the Drink ; and all these in such a *Leger-demain* manner, as gull'd and infatuated the ignorant Drinker to such a degree as not to suspect the Fraud, and that for these three Reasons : *First*, The under-boil'd Wort being of a more sweet taste than ordinary, was esteemed the Produce of a great Allowance of Malt. *Secondly*, The *Daucus* Seed encreased their Approbation by the fine Peach flavour or relish that it gives the Drink : And, *Thirdly*, The Yeast was not so much as thought of, since they enjoyed a strong heady Liquor. These artificial Qualities, and I think I may say, unnatural, has been so prevalent with the Vulgar, who were his chief Customers, that I have known this Victualler have more Trade for such Drink than his Neighbours, who had much more wholesome at the same time ; for the *Daucus* Seed, tho' it is a Carminative, and has some other good Properties, yet in the unboil'd Wort it is not capable of doing the Office of the Hop, in breaking thro' the clammy Parts of it ; the Hop being full of subtil penetrating Qualities, a Strengtheners of the Stomach, and makes the Drink agreeable, by opposing Obstructions of the *Viscera*, and particularly of the Liver and Kidneys, as the Learned maintain, which confutes the old Notion, that Hops are a Breeder of the Stone in the Bladder.



C H A P. XI.

Of Boiling Malt Liquors.

ALTHO' I have said an Hour and a half is requisite for boiling *October* Beer, and an Hour for Ales

Ales and small Beer ; yet it is to be observed, that an exact Time is not altogether a certain Rule in this Case with some Brewers ; for when loose Hops are boiled in the Wort so long till they all sink, their Seeds will arise and fall down again ; the Wort also will be curdled, and broke into small Particles if examin'd in a Hand-bowl, but afterwards into larger, as big as great Pins Heads, and will appear clean and fine at the Top. This is so much a Rule with some, that they regard not Time, but this Sign, to shew when the Wort is boiled enough ; and this will happen sooner or later, according to the Nature of the Barley, and its being well Malted ; for if it comes off Chalks or Gravels, it generally has the good Property of breaking or curdling soon ; but if of tough Clays, then it is longer, which by some Persons is not a little valued, because it saves Time in boiling, and consequently the Consumption of the Wort.

It is also to be observed, that pale Malt Worts will not break so soon in the Copper, as the brown Sorts, but when either of their Worts boil, it should be to the Purpose, for then they will break sooner, and waste less than if they are kept simmering, and will likewise work more kindly in the Tun, drink smoother, and keep longer.

Now all Malt Worts may be spoiled by too little or too much boiling ; if too little, then the Drink will always taste raw, mawkish, and be unwholsome in the Stomach, where, instead of helping to dilute and digest our Food, it will cause Obstructions, Cholicks, Head-achs, and other Misfortunes ; besides, all such under-boil'd Drinks are certainly expos'd to staleness and sourness, much sooner than those that have had their full Time in the Copper. And if they are boiled too long, they will then thicken (for one may boil a Wort to a Salve) and not come out of the Copper fine and in a right Condition, which will cause it never to be right clear in the Barrel ; an *Item* sufficient to shew the Mistake of all those that think to excel in Malt
Liquors,

Liquors, by boiling them two or three Hours, to the great Confusion of the Wort, and doing more harm than good to the Drink.

But to be more particular in those two Extrems, it is my Opinion, as I have said before, that no Ale Worts boiled less than an Hour can be good, because in an Hour's time they cannot acquire a Thickness of Body any ways detrimental to them, and in less than an Hour the ramous viscid Parts of the Ale cannot be sufficiently broke and divided, so as to prevent it running into Cohesions, Ropyness, and Sourness, because in Ales there are not Hops enough allowed to do this, which good boiling must in a great measure supply, or else such Drink, I am sure, can never be agreeable to the Body of Man; for then its cohesive Parts being not thoroughly broke and comminuted by time and boiling, remains in a hard texture of Parts, which consequently obliges the Stomach to work more than ordinary to digest and secrete such parboil'd Liquor, that Time and Fire should have cur'd before: Is not this apparent in half-boil'd Meats, or under-bak'd Bread, that often causes the Stomach a great fatigue to digest, especially in those of a sedentary Life? and if that suffers, 'tis certain the whole Body must share in it: How ignorant then are those People, who, in tipling of such Liquor, can praise it for excellent good Ale, as I have been an Eye-witness of, and only because its Taste is sweetish, (which is the Nature of such raw Drinks) as believing it to be the pure Effects of the genuine Malt, not perceiving the Landlord's Avarice and Cunning to save the Consumption of his Wort by shortness of Boiling, though to the great Prejudice of the Drinker's Health; and because a Liquid does not afford such a plain ocular Demonstration, as Meat and Bread does, these deluded People are taken into an Approbation of, indeed, an *Ignis fatuus*, or what is not.

To come then to the *Crisis* of the Matter, both Time and the Curdling or Breaking of the Wort should be consulted; for if a Person was to boil the Wort an

Hour, and then take it out of the Copper, before it was rightly broke, it would be wrong Management, and the Drink would not be fine nor wholesome; and if it should boil an Hour and a half, or two Hours, without regarding when its Particles are in a right Order, then it may be too thick, so that due Care must be had to the two Extrems, to obtain it its due Order; therefore in *October* and keeping Beers, an Hour and a quarter's good Boiling is commonly sufficient to have a thorough cur'd Drink, for generally in that time it will break and boil enough, and because in this there is a double Security by length of Boiling, and a Quantity of Hops shifted; but in the new way there is only a single one, and that is by a double or treble Allowance of fresh Hops boiled only half an Hour in the Wort, and for this Practice a Reason is assign'd, that the Hops being endow'd with discutient aperitive Qualities, will, by them and their great Quantity, supply the Defect of under-boiling the Wort; and that a further Conveniency is here enjoyed by having only the fine, wholesome, strong, flowery, spirituous Parts of the Hop in the Drink, exclusive of the phlegmatick, nasty, earthy Parts which would be extracted if the Hops were to be boiled above half an Hour; and therefore there are many now that are so attach'd to this new Method, that they wont brew Ale or *October* Beer any other way, vouching it to be a true Tenet, that if Hops are boil'd above thirty Minutes, the Wort will have some or more of their worser Quality.

The Allowance of Hops for Ale or Beer, cannot be exactly adjust'd without coming to Particulars, because the Proportion should be according to the Nature and Quality of the Malt, the Season of the Year it is brew'd in, and the Length of Time it is to be kept.

For strong brown Ale brew'd in any of the Winter Months, and boiled an Hour, one Pound is but barely sufficient for a Hoghead, if it be tapp'd in three Weeks or a Month,

If for pale Ale brew'd at that Time, and for that Age, one Pound and a quarter of Hops ; but if these Ales are brew'd in any of the Summer Months, there should be more Hops allowed.

For *October* or *March* brown Beer, a Hogshead made from eleven Bushels of Malt, boiled an Hour and a quarter to be kept nine Months, three Pounds and a half ought to be boil'd in such Drink at the least.

For *October* or *March* pale Beer, made from fourteen Bushels, boiled an Hour and a quarter, and kept twelve Months, six Pounds ought to be allow'd to a Hogshead of such Drink, and more if the Hops are shifted in two Bags, and less Time given the Wort to boil.

Now those that are of Opinion, that their Beer and Ales are greatly improved by boiling the Hops only half an Hour in the Wort, I joyn in Sentiment with them, as being very sure, by repeated Experience it is so ; but I must here take leave to dissent from those that think that half an Hour's boiling the Wort is full enough for making right sound and well relish'd Malt Drinks : However, of this I have amply and more particularly wrote in my Second Book of Brewing, in Chapter IV. where I have plainly publish'd the true Sign or Criterion to know when the Wort is boiled just enough.



C H A P XII.

Of Foxing or Tainting Malt Liquors.

FOXING is a Misfortune, or rather a Disease in Malt Drinks, occasioned by divers Means, as the Nastiness of the Utensils, putting the Worts too thick together in the Backs or Coolers, Brewing too often and soon one after another, and sometimes by bad Malts and Waters, and the Liquors taken in wrong Heats, being

being of such pernicious Consequence to the great Brewer in particular, that he sometimes cannot recover and bring his Matters into a right Order again under a Week or two, and is so hateful to him in its very Name, that it is a general Law among them to make all Servants that name the Word *Fox* or *Foxing* in the Brewhouse to pay Six-pence, which obliges them to call it *Reynards*; for when once the Drink is tainted, it may be smelt at some Distance somewhat like a *Fox*: It chiefly happens in hot Weather, and causes the Beer and Ale so tainted to acquire a fulsome sickish taste, that will, if it is received in a great degree, become ropy like Treacle, and in some short time turn sour. This I have known so to surprize my small Beer Customers, that they have asked the Drayman what was the Matter: He to act in his Master's Interest tells them a Lye, and says it is the goodness of the Malt that causes that sweetish mawkish taste, and then would brag at Home how cleverly he came off. I have had it also in the Country more than once, and that by the idleness and ignorance of my Servant, who when a Tub has been rinsed out only with fair Water, has set it by for a clean one; but this wont do with a careful Master, for I oblige him to clean the Tub with a Hand-brush, Ashes, or Sand, every Brewing, and so that I cannot scrape any Dirt up under my Nail. However, as the Cure of this Disease has baffled the Efforts of many, I have been tempted to endeavour the finding out a Remedy for the great Malignity, and shall deliver the best I know on this Score.

And here I shall mention the great Value of the Hop in preventing and curing the Fox in Malt Liquors. When the Wort is run into the Tub out of the mashing Vat, it is a very good Way to throw some Hops directly into it before it is put into the Copper, and they will secure it against Sourness and Ropyness, that are the two Effects of fox'd Worts or Drinks, and is of such Power in this respect, that raw Worts may be kept some time, even in hot Weather, before they are
boiled,

boiled, and which is necessary where there is a large Quantity of Malt used to a little Copper; but it is certain that the stronger Worts will keep longer with Hops than the smaller Sorts: So likewise if a Person has fewer Tubs than is wanting, and he is apprehensive his Worts will be foxed by too thick lying in the Coolers or working Tubs, then it will be a safe Way to put some fresh Hops into such Tubs and work them with the Yeast as I have before hinted; or in case the Drink is already foxed in the Fat or Tun, new Hops should be put in and work'd with it, and they will greatly fetch it again into a right Order; but then such Drink should be carefully taken clear off from its gross nasty Lee, which being mostly tainted, would otherwise lye in the Barrel, corrupt, and make it worse.

Some will sift quick Lime into foxed Drinks while they are working in the Tun or Vat, that its Fire and Salts may break the Cohesions of the Beer or Ale, and burn away the stench that the Corruption would always cause; but then such Drink should by a Peg at the Bottom of the Vat be drawn off as fine as possible, and the Dregs left behind.

There are many that do not conceive how their Drinks become foxed and tainted for several Brewings together; but I have, in Chap. VI. in my Second Book, made it appear, that the Taint is chiefly retain'd and lodged in the upright wooden Pins that fasten the Planks to the Joists, and how scalding Lye is a very efficacious Liquor to extirpate it out of the Utensils in a little time if rightly applied; and one other most powerful Ingredient that is now used by the greatest Artists for curing of the same.

C H A P. XIII.

Of fermenting and working of Beers and Ales, and the pernicious Practice of beating in the Yeast detected.

THIS Subject, in my Opinion, has long wanted a satyrical Pen, to shew the ill Effects of this unwholsome Method, which I suppose has been much discourag'd and hinder'd hitherto, from the general use it has been under many Years, especially by the northern Brewers, who tho' much fam'd for their Knowledge in this Art, and have induced many others by their Example in the southern and other Parts to pursue their Method; yet I shall endeavour to prove them culpable of Male-practice, that beat in the Yeast, as some of them have done a Week together; and that Custom ought not to authorize an ill Practice. *First*, I shall observe that Yeast is a very strong Acid, that abounds with subtil spirituous Qualities, whose Particles being wrapped up in those that are viscid, are, by a mixture with them in the Wort, brought into an intestine Motion, occasion'd by Particles of different Gravities; for as the spirituous Parts of the Wort will be continually striving to get up to the Surface, the glutinous adhesive ones of the Yeast will be as constant in retarding their Ascent, and so prevent their Escape; by which the spirituous Particles are set loose and free from their viscid Confinements, as may appear by the Froth on the Top, and to this end a moderate Warmth hastens the Operation, as it assists in opening the Viscidities in which some spirituous Parts may be entangled, and unbends the Spring of the included Air: The viscid Parts which are raised to the Top, not only on account of their own Lightness, but by the continual Efforts and Occursions of the Spirits to get uppermost, shew when the ferment is at the highest, and prevent the finer Spirits making their escape; but if this intestine

time Operation is permitted to continue too long, a great deal will get away, and the remaining grow flat and vapid, as Dr. *Quinty* well observes.

Now tho' a small Quantity of Yeast is necessary to break the Band of Corruption in the Wort, yet it is in itself of a poisonous Nature, as many other Acids are; for if a Plaister of thick Yeast be applied to the Wrist, as some have done for an Ague, it will there raise little Pustles or Blisters in some Degree like that venomous (as I have just Reason in a particular Sense to call it) Ingredient *Cantbarides*, which is one of the Shop Poisons. Here then, I shall observe, that I have known several beat the Yeast into the Wort for a Week or more together to improve it, or, in plainer terms, to load the Wort with its weighty and strong spirituous Particles; and that for two Reasons, *First*, Because it will make the Liquor so heady, that five Bushels of Malt may be equal in Strength to six, and that by the stupifying narcotick Qualities of the Yeast; which mercenary subtlety and imposition has so prevailed, to my Knowledge, with the Vulgar and Ignorant, that it has caused many of them to return the next Day to the same Alehouse, as believing they had stronger and better Drink than others: But, alas, how are such deceived that know no other than that it is the pure Product of the Malt, when at the same time they are driving Nails into their Coffins, by impregnating their Blood with the corrupt Qualities of this poisonous Acid, as many of its Drinkers have proved, by suffering violent Head-achs, Loss of Appetite, and other Inconveniencies the Day following, and sometimes longer, after a Debauch of such Liquor; who would not, perhaps, for a great Reward, swallow a Spoonful of thick Yeast by itself, and yet, without any Concern, may receive, for ought they know, several dissolved in the Vehicle of Ale, and then the corrosive Corpuscles of the Yeast being mixed with the Ale, cannot fail (when forsaken in the Canals of the Body of their Vehicle) to do the same mischief as they would

if taken by themselves undiluted, only with this Difference, that they may in this Form be carried sometimes further in the animal Frame, and so discover their Malignity in some of the inmost Recesses thereof, which also is the very Case of malignant Waters, as a most learned Doctor observes.

Secondly, They alledge for beating the Yeast into Wort, that it gives it a fine tang or relish, or as they call it at *London*, it makes the Ale bite of the Yeast; but this Flourish, indeed, is for no other Reason than to further its Sale, and tho' it may be agreeable to some Bigots, to me it proves a Discovery of the Infection by its nauseous Taste; however, my Surprize is lessen'd, when I remember the *Plymouth* People, who are quite the Reverse of them at *Dover* and *Chatham*; for the first are so attach'd to their white thick Ale, that many have undone themselves by drinking it; nor is their Humour much different as to the common Brewers brown Ale, who when the Customer wants a Hoghead, they immediately put in a Handful of Salt and another of Flower, and so bring it up, this is no sooner on the Stilling but often tapp'd, that it may carry a Froth on the Top of the Pot, otherwise they despise it: The Salt commonly answer'd its End of causing the Tiplers to become dryer by the great Quantities they drank, that it farther excited by the biting, pleasant, stimulating Quality the Salt strikes the Palate with. The Flower also had its seducing Share by pleasing the Eye and Mouth with its mantling Froth, so that the Sailors that are often here in great Numbers used to consume many Hogheads of this common Ale with much Delight, as thinking it was entirely the pure Product of the Malt.

Their white Ale is a clear Wort made from pale Malt, and fermented with what they call ripening, which is a Composition, they say, of the Flower of Malt, Yeast, and Whites of Eggs, a *Nostrum* made and sold only by two or three in those Parts, but the Wort is brewed and the Ale vended by many of the Pub-

Publicans, which is drank while it is fermenting in earthen Steens, in such a thick manner as resembles butter'd Ale, and sold for Two-pence Half-penny the full Quart. It is often prescribed by Physicians to be drank by Wet-nurses for the encrease of their Milk, and also as a prevalent Medicine for the Colick and Gravel. But the *Dover* and *Chatham* People wont drink their Butt-Beer, unless it is aged, fine, and strong.

Of working and fermenting London Stout Beer and Ale.

In my Brewhouse at *London*, the Yeast at once was put into the Tun to work the Stout Beer and Ale with, as not having the Conveniency of doing otherwise, by Reason the After-worts of small Beer comes into the same Backs or Coolers where the strong Worts had just been; by this means, and the shortness of time we have to ferment our strong Drinks, we cannot make Reserves of cold Worts to mix with and check the too forward working of those Liquors, for there we brew'd three times a Week throughout the Year, as most of the great ones do in *London*, and some others five times. The strong Beer brew'd for keeping is suffer'd to be Blood-warm in the Winter when the Yeast is put into it, that it may gradually work two Nights and a Day at least, for this wont admit of such a hasty Operation as the common brown Ale will, because if it is work'd too warm and hasty, such Beer wont keep near so long as that fermented cooler. The brown Ale has, indeed, its Yeast put into it in the Evening very warm, because they carry it away the very next Morning early to their Customers, who commonly draw it out in less than a Week's time. The Pale or Amber Ales are often kept near it, not quite a Week under a Fermentation, for the better incorporating the Yeast with the Wort, by beating it in several times for the foregoing Reasons.

Of working or fermenting Drinks brewed by private Families.

I mean such who brew only for their own use, whether it be a private Family or a Victualler. In this Case be it for Stout Beers, or for any of the Ales; the way that is used in *Northamptonshire*, and by good Brewers elsewhere; is, to put some Yeast into a small quantity of warm Wort in a Hand-bowl, which for a little while swims on the Top, where it works out, and leisurely mixes with the Wort, that is first quite cold in Summer, and almost so in Winter; for the cooler it is work'd, the longer it will keep, too much Heat agitating the spirituous Particles into too quick a Motion, whereby they spend themselves too fast, or fly away too soon, and then the Drink will certainly work into a blister'd Head that is never natural; but when it ferments by moderate degrees, into a fine, white, curl'd Head, its Operation is then truly genuine, and plainly shews the right management of the Brewer. To one Hoghead of Beer, that is to be kept nine Months, I put a Quart of thick Yeast, and ferment it as cool as it will admit of, two Days together, in *October* or *March*, and if I find it works too fast, I check it at leisure by stirring in some raw Wort with a Hand-bowl: So likewise in our Country Ales, we take the very same Method, because of having them keep some time; and this is so nicely observ'd by several, that I have seen them do the very same by their small Beer Wort; now by these several Additions of raw Wort, there are as often new Commotions raised in the Beer or Ale, which cannot but contribute to the rarefaction and comminution of the whole; but whether it is by these joining Principles of the Wort and Yeast, that the Drink is rendered smoother, or that the spirituous Parts are more entangled, and kept from making their Escape, I can't determine; yet sure it is, that such small Liquors generally sparkle and knit out of the Barrel, as o-
thers

thers out of a Bottle, and is as pleasant Ale as ever I drank. Others again, for Butt or Stout Beer, will, when they find it works up towards a thick Yeast, mix it once, and beat it in again with the Hand-bowl or Jett; and when it has work'd up a second time in such a manner, they put it into the Vessel with the Yeast on the Top, and the Sediments at Bottom, taking particular Care to have some more in a Tub near the Cask, to fill it up as it works over, and when it has done working, leave it with a thick Head of Yeast on to preserve it.

But for Ale that is not to be kept very long, they Hop it accordingly, and beat the Yeast in every four or five Hours for two Days successively, in the warm Weather, and four in the Winter, till the Yeast begins to work heavy, and sticks to the heavy part of the bowl, if turned down on the same; then they take all the Yeast off at Top, and leave all the Dregs behind, putting only up the clear Drink; and when it is a little work'd in the Barrel, it will be fine in a few Days, and ready for drinking. But this last way of beating in the Yeast too long, I think I have sufficiently detected, and hope, as it is now declining, it will never revive again; and for which reason, I have in my second Book encouraged all light Fermentations, as the most natural for the Malt Liquor and the human Body.

*Of forwarding and retarding the Fermentation of
Malt Liquors.*

In case Beer or Ale is backward in working, it is often practised, to cast some Flower out of the dusting Box, or with the Hand over the Top of the Drink, which will become a sort of Crust or Cover to help to keep the Cold out: Others, will put in one or two Ounces of powder'd Ginger, which will so heat the Wort as to bring it forward: Others, will take a Gallon Stone Bottle and fill it with boiling Water, which being well cork'd, is put into the working Tub, where it will communicate a gradual Heat for some time, and forward

ward the Fermentatation: Others, will reserve some raw Wort, which they heat and mix with the rest; but then due Care must be taken, that the Pot in which it is heated has no manner of Grease about it, lest it impedes, instead of promoting the working; and for this reason, some nice Brewers will not suffer a Candle too near the Wort, lest it drop into it. But for retarding, and keeping back any Drink that is too much heated in working, the cold raw Wort, as I have said before, is the most proper of any thing to check it with, tho' I have known some, to put one or more Pewter Dishes into it for that purpose; or, it may be broke into several other Tubs, where by its shallow lying, it will be taken off its Fury. Others again, to make Drink work, that is backward, will take the whites of two Eggs, and beat them up with half a Quatern of good Brandy, and put it either into the working Vat, or into the Cask, and it will quickly bring it forward, if a warm Cloth is put over the Bung. Others, will tye up Bran in a coarse thin Cloth, and put it into the Vat, where, by its spongy and flowery Nature, and close Bulk, it will absorb a quantity of the Drink, and breed a Heat to forward its working.

I know an Inn-keeper, of a great Town in *Bucks*, that is so curious, as to take off all the top Yeast first, and then by a Peg near the bottom of his working Tub, he draws off the Beer or Ale, so that the Dregs are by this means left behind. This, I must own is very right, in Ales that are to be drank soon, but in Beers, that are to lye nine or twelve Months in a Butt or other Cask, there certainly will be wanted some Feces or Sediment for the Beer to feed on, else, it must consequently grow hungry, sharp, and eager; and therefore, if its own Top and Bottom are not put into a Cask with the Beer, some other Artificial Composition or Lee, should supply its Place, that is wholesomer, and will better feed with such Drink, than its own natural Settlement; and therefore, I have here inserted several curious Receipts for answering this great End.

C H A P. XIV.

Of an Artificial Lee for Stout or Stale Beer to feed on.

THIS Article, as it is of very great Importance in the curing of our Malt Liquors, requires a particular regard to this last management of them, because, in my Opinion, the general Misfortune of the Butt or keeping Beers drinking so hard and harsh, is partly owing to the nasty foul Feces that lye at the Bottom of the Cask ; compounded of the Sediments of Malt, Hops, and Yeast, that are all clogg'd with gross rigid Salts, which by their long lying in the Butt or other Vessel, so tinctures the Beer, as to make it partake of all their raw Natures : For, such is the Feed, such is the Body ; as may be perceived by Eels taken out of dirty Bottoms, that are sure to have a muddy taste, when the Silver sort, that are catched in Gravelly or Sandy clear Rivers, eat sweet and fine : Nor can this ill Property be a little, in those Starting (as they call it in *London*) new thick Beers, that were carry'd directly from my Brewhouse, and by a Leather Pipe or Spout, conveyed into the Butts as they stood in the Cellar, which I shall farther demonstrate by the Example of whole Wheat, that is, by many, put into such Beer to feed and preserve it, as being reckoned a substantial Alkali ; however, it has been proved, that such Wheat in about three Years time has eat into the very Wood of the Cask, and there Honey-comb'd it, by making little hollow Cavities in the Staves. Others there are, that will hang a Bag of Wheat in the Vessel, that it mayn't touch the Bottom ; but in both Cases, the Wheat is discovered to absorb and collect the saline acid qualities of the Beer, Yeast, and Hop, by which it is impregnated with their sharp qualities ; as a Toast of Bread is put into Punch or Beer, whose alkalous hollow Nature, will attract and make a Lodg-
ment

ment of the acid strong Particles in either, as is proved by eating the inebriating Toast; and therefore the *Frenchman* says, the *English* are right in putting a Toast into the Liquor, but are Fools for eating it: Hence it is, that such whole Wheat is loaded with the qualities of the unwholsome Settlements or Grounds of the Beer, and becomes of such a corroding Nature, as to do this Mischief; and for that reason, some in the *North* will hang a Bag of the Flower of malted Oats, Wheat, Pease, and Beans, in the Vessels of Beer, as being a lighter and mellow Body than the whole Wheat or its Flower, and more natural to the Liquor: But whether it be raw Wheat or malted, it is supposed, after this Receptacle has emitted its alcalous Properties to the Beer, and taken in all it can of the acid qualities thereof, that such Beer will by length of Age prey upon that again, and so communicate its pernicious Effects to the Body of Man, as Experience seems to justify, by the many sad Examples that I have seen in the Destruction of several lusty Brewers Servants, who formerly scorn'd what they then call'd Flux Ale, to the Preference of such corroding consuming Stale Beers; and therefore I have hereafter advised, that such Butt or keeping Beers be tapped at nine or twelve Months end at furthest, and then an Artificial Lee will have a due time allowed it, to do good and not harm.

An Excellent Composition for feeding Butt or keeping Beers with.

Take a Quart of *French* Brandy, or as much of *English*, that is free from any burnt Tang, or other ill Taste, and is full Proof, to this put as much Wheat or Bean Flower as will knead it into a Dough, put it in long pieces into the Bung-Hole, as soon as the Beer has done working, or afterwards, and let it gently fall piece by piece to the bottom of the Butt; this will maintain the Drink in a mellow Freshness, keep Stale-
ness

ness off for some time, and cause it to be the stronger as it grows Aged.

A N O T H E R.

Take one Pound of Treacle, or Honey, one Pound of the Powder of dried Oyster-shells, or fat Chalk, mix them well, and put it into a Butt, as soon as it has done working, or some time after, and bung it well; this will both fine and preserve the Beer in a soft, smooth Condition for a great while.

A N O T H E R.

Take a Peck of Egg-shells, and dry them in an Oven, break and mix them with two Pound of fat Chalk, and mix them with Water, wherein four Pounds of coarse Sugar has been boiled, and put it into the Butt as aforesaid.

To fine and preserve Beers and Ales by boiling an Ingredient in the Wort.

This most valuable way I frequently follow, both for Ale, Butt-beer, and small Beer; and that is, in each Barrel Copper of Wort, I put in a Pottle, or two Quarts of whole Wheat as soon as I can, that it may soak before it boils, then I strain it thro' a Sieve; when I put the Wort in cooling Tubs, and if it is thought fit, the same Wheat may be boiled in a second Copper: Thus there will be extracted a gluey Consistence, which being incorporated with the Wort by boiling, gives it a more thick and ponderous Body, and when in the Cask, soon makes a Sediment or Lee, as the Wort is more or less loaded with the weighty Particles of this fizy Body; but if such Wheat was first parched or baked in an Oven, it would do better, as being rather too raw as it comes from the Ear.

Another Way.

A Woman, who lived at *Leighton Buzzard* in *Bedfordshire*, and had the best Ale in the Town, once told a Gentleman, she had Drink just done working in the Barrel, and before it was bung'd would wager it was fine enough to drink out of a Glass, in which it should maintain a little while a high Froth ; and it was true, for the Ivory shavings that she boiled in her Wort, was the Cause of it, which an Acquaintance of mine accidentally had a View of as they lay spread over the Wort in the Copper ; so will Hartshorn shavings do the same and better, both of them being great finers and preservers of Malt Liquors against staleness and sourness, and are certainly of a very alcalous Nature. Or if they are put into a Cask when you bung it down, it will be of service for that purpose ; but these are dear in Comparison of the whole Wheat, which will in a great measure supply their Place, and after it is used may be given to a poor Body, or to the Hog.

To stop the Iret in Malt Liquors.

Take a Quart of Black Cherry Brandy, and pour it in at the Bung-hole of the Hoghead. and stop it close.

To recover deadish Beer.

When strong Drink grows flat, by the Loss of its Spirits, take four or five Gallons out of a Hoghead, and boil it with five Pound of Honey, skim it, and when cold, put it to the rest, and stop it up close : This will make it pleasant, quick, and strong.

To make stale Beer drink new.

Take the Herb *Horehound*, stamp it and strain it, then put a Spoonful of the Juice (which is an extream good

good Pectoral) to a Pitcher-full of Beer, let it stand covered about two Hours and drink it.

To five Malt Liquors.

Take a Pint of Water, half an Ounce of unslack'd Lime, mix them well together, let it stand three Hours, and the Lime will settle to the Bottom, and the Water be as clear as Glass, pour the Water from the Sediment, and put it into your Ale or Beer, mix it with half an Ounce of Ising-glass, first cut small and boiled, and in five Hours time, or less the Beer in the Barrel will settle and clear.

There are several other Compositions that may be used for this purpose, but none that I ever heard of, will answer like those most Excellent Balls that Mr. *Ellis* of *Little Gaddesden*, in *Hertfordshire*, has found out by his own Experience to be very great Refiners, Preservers, and Relishers of Malt Liquors and Cyders, and will also recover damag'd Drinks, as I have mentioned in my Second Book, where I have given a further Account of some other things that will fine, colour, and improve Malt Drinks : The Balls are sold at



C H A P. XV.

Of several pernicious Ingredients put into Malt Liquors to encrease their Strength.

MALT Liquors, as well as several others, have long lain under the disreputation of being adulterated and greatly abused by avaricious and ill-principled People, to augment their Profits at the Expence of the precious Health of human Bodies, which, tho' the greatest Jewel in Life, is said to be too often lost by the Deceit of the Brewer, and the Intemperance of the Drinker : This undoubtedly was one, and I believe the greatest,

greatest, of the Lord *Bacon's* Reasons for saying, he thought not one *Englishman* in a thousand died a natural Death. Nor is it indeed to be much wonder'd at, when, according to Report, several of the Publicans make it their Business to study and practise this Art, witness what I am afraid is too true, that some have made use of the *Coccus India* Berry for making Drink heady, and saving the Expence of Malt; but as this is a violent Poison by its narcotick stupifying Quality, if taken in too large a degree, I hope this will be rather a prevention of its use than an invitation, it being so much of the nature of the deadly Nightshade, that it bears the same Character; and I am sure the latter is bad enough; for one of my Neighbour's Brothers was killed by eating its Berries that grow in some of our Hedges, and so nearly resembles the black Cherry, that the Boy took the wrong for the right.

There is another sinister Practice said to be frequently used by ill Persons to supply the full quantity of Malt, and that is *Coriander* Seeds: This also is of a heady nature boiled in the Wort, one Pound of which will answer to a Bushel of Malt, as was ingenuously confess'd to me by a Gardener, who own'd he sold a great deal of it to Alehouse Brewers (for I don't suppose the great Brewer would be concern'd in any such Affair) for that purpose, at Ten-pence *per* Pound; but how wretchedly ignorant are those that make use of it, not knowing the way first to cure and prepare it for this and other mixtures, without which it is a dangerous thing, and will cause Sickness in the Drinkers of it. Others are said to make use of Lime-stones to fine and preserve the Drink: but to come off the fairest in such foul Artifices, it has been too much a general Practice to beat the Yeast so long into the Ale, that without doubt it has done great Prejudice to the Healths of many others, besides the Person I have writ of in the Preface of my Second Book. For the sake then of Seller and Buyer, I have here offered several valuable Receipts for fining, preserving, and mellowing
Beers

Beers and Ales, in such a true, healthful, and beneficial manner, that from henceforth, after the Perusal of this Book, and the Knowledge of their worth are fully known, no Person, I hope, will be so fordidly obstinate as to have any thing to do with such unwholsome Ingredients; because these are not only of the cheapest sort, but will answer their End and Purpose; and the rather, since Malts are now only twenty Shillings *per* Quarter, and like to hold a low Price for Reasons that I could here assign.

I own, I formerly thought they were too valuable to expose to the Publick, by reason of their Cheapness and great Vertues, as being most of them wholsomer than the Malt itself, which is but a corrupted Grain: But, as I hope they will do considerable Service in the World towards having clear, salubrious, and pleasant Malt Liquors in most private Families and Alehouses, I have my Satisfaction.



C H A P. XVI.

Of the Cellar or Repository for keeping Beers and Ales.

IT's certain by long Experience, that the Weather or Air has not only a Power or Influence in Brewings; but also after the Drink is in the Barrel, Hogshead, or Butt, in Cellars, or other Places, which is often the cause of forwarding or retarding the fineness of Malt Liquors; for if we brew in cold Weather, and the Drink is to stand in a Cellar of Clay, or where Springs rise, or Waters lye or pass through, such a Place by consequence will check the due working of the Drink, chill, flat, deaden, and hinder it from becoming fine. So likewise if Beer or Ale is brewed in hot Weather and put into Chalky, Gravelly, or Sandy Cellars, and especially if the Windows open to the South,

South, South-East, or South-West, then it is very likely it will not keep long, but be muddy and stale: Therefore, to keep Beer in such a Cellar, it should be brewed in *October*, that the Drink may have time to cure itself before the hot Weather comes on; but in wet-tish or damp Cellars, 'tis best to brew in *March*, that the Drink may have time to fine and settle before the Winter Weather is advanced. Now such Cellar Extremities should, if it could be done, be brought into a temperate State, for which purpose some have been so curious as to have double or treble Doors to their Cellar to keep the Air out, and then carefully shut the outward, before they enter the inward one, whereby it will be more secure from aerial Alterations; for in Cellars and Places, that are most exposed to such Seasons, Malt Liquors are frequently disturb'd and made unfit for a nice Drinker; therefore if a Cellar is kept dry and these Doors to it, it is reckoned warm in Winter and cool in Summer, but the best of Cellars are thought to be those in Chalks, Gravels, or Sands, and particularly in Chalks, which are of a drying quality more than any other, and consequently dissipates Damps the most of all Earths, which makes it contribute much to the good keeping of the Drink; for all damp Cellars are prejudicial to the Preservation of Beers and Ales, and sooner bring on the rotting of the Casks and Hoops than the dry ones; infomuch that in a chalky Cellar near me, their Ashen broad Hoops have lasted above thirty Years: Besides, in such inclosed Cellars and temperate Air, the Beers and Ales ripen more kindly, are better digested and softned, and drink smoother: But when the Air is in a disproportion by the Cellars letting in Heats and Colds, the Drink will grow Stale and be disturbed, sooner than when the Air is kept out: From hence it is, that in some Places their Malt Liquors are exceeding good, because they brew with Pale or Amber Malts, Chalky Water, and keep their Drinks in close Vaults or proper dry Cellars, which is of such Importance, that notwithstanding any Malt Li-
quor

quor may be truly brewed, yet it may be spoiled in a bad Cellar that may cause such alternate Fermentations as to make it thick and sour, tho' it sometimes happens that after such Changes it fines itself again; and to prevent these Commotions of the Beer, some brew their pale Malt in *March* and their brown in *October*, for that the pale Malt, having not so many fiery Particles in it as the brown, stands more in need of the Summer's Weather to ripen it, while the brown sort being more hard and dry, is better able to defend itself against the Winter Colds that will help to smooth its harsh Particles; yet when they happen to be too violent, Horse-dung should be laid to the Windows as a Fortification against them; but if there were no Lights at all to a Cellar, it would be better.

Some are of Opinion, that *October* is the best of all other Months to brew any sort of Malt in, by reason there are so many cold Months directly follow, that will digest the Drink and make it much excel that brewed in *March* because such Beer will not want that Care and Watching, as that brewed in *March* absolutely requires, by often taking out and putting in the Vent-peg on Change of Weather; and if it is always left out, then it deadens and palls the Drink; yet if due Care is not taken in this respect, a Thunder or Stormy Night may marr all, by making the Drink ferment and burst the Cask; for which Reason, as Iron Hoops are most in Fashion at this time, they are certainly the greatest Security to the safety of the Drink thus exposed; and next to them is the Chesnut Hoop; both which will endure a shorter or longer time as the Cellar is more or less dry, and the Management attending them: The Iron Hoop generally begins to rust first at the Edges, and therefore should be rubbed off when opportunity offers, and be both kept from wet as much as possible; for 'tis Rust that eats the Iron Hoop in two sometimes in ten or twelve Years, when the Ashen and Chesnut in dry Cellars have lasted three times as long.

C H A P. XVII.

Of Cleaning and Sweetening of Casks.

IN Case your Cask is a Butt, then with cold Water first rince out the Lees clean, and have ready, boiling or very hot Water, which put in, and with a long Stale and a little Birch fasten'd to its End, scrub the Bottom as well as you can: At the same time let there be provided another shorter Broom of about a Foot and a half long, that with one Hand may be so imploy'd in the upper and other Parts as to clean the Cask well: So in a Hoghead or other smaller Vessel, the one-handed short Broom may be used with Water, or with Water, Sand, or Ashes, and be effectually cleaned; the outside of the Cask about the Bung-hole should be well washed, lest the Yeast, as it works over, carries some of its Filth with it.

But to sweeten a Barrel, Kilderkin, Firkin, or Pin in the great Brewhouses, they put them over the Copper-Hole for a Night together, that the Steam of the boiling Water or Wort may penetrate into the Wood; this Way is such a furious Searcher, that unless the Cask is new hooped just before, it will be apt to fall in Pieces.

Another Way.

Take a Pottle, or more, of Stone Lime, and put it into the Cask; on this pour some Water and stop it up directly, shaking it well about.

Another Way.

Take a long Linnen Rag and dip it in melted Brimstone, light it at the End, and let it hang pendant with the upper Part of the Rag fasten'd to the wooden Bung; this is a most quick sure Way, and will not only sweeten, but help to fine the Drink.

A N O T H E R.

Or to make your Cask more pleasant, you may use the Vintners Way thus : Take four Ounces of Stone Brimstone, one Ounce of burnt Alum, and two Ounces of Brandy ; melt all these in an earthen Pan over hot Coals, and dip therein a Piece of new Canvas, and instantly sprinkle thereon the Powders of Nutmegs, Cloves, Coriander, and Anise-seeds : This Canvas set on Fire, and let it burn hanging in the Cask fasten'd at the End with the wooden Bung, so that no Smoke comes out.

For a musty Cask.

Boil some Pepper in Water, and fill the Cask with it scalding hot.

For a very stinking Vessel.

The last Remedy is the Cooper's taking out one of the Heads of the Cask to scrape the inside or new-shave the Staves, and is the surest Way of all others, if it is fired afterwards within-side a small matter, as the Cooper knows how.

These several Methods may be made use of at Discretion, and will be of great Service where they are wanted. The sooner also a Remedy is applied, the better ; else the Taint commonly encreases, as many have to their Prejudice proved, who have made use of such Casks, in Hopes the next Beer will overcome it ; but when once a Cask is infected, it will be a long while, if ever, before it becomes sweet, if no Art is used. Many therefore of the careful Sort, in case they han't a Convenience to fill their Vessel as soon as it is empty, will stop it close to prevent the Air and preserve the Lees sound, which will greatly tend to the keeping of the Cask pure and sweet against the next Occasion.

To prepare a new Vessel to keep Malt Liquors in.

A new Vessel is most improperly used by some ignorant People for strong Drink after only once or twice scalding with Water, which is so wrong, that such Beer or Ale will not fail of tasting thereof for half, if not a whole Year afterwards ; such is the Tang of the Oak and its Bark, as may be observed from the strong Scents of Tan-Yards, which the Bark is one Cause of. To prevent then this Inconvenience, when your Brewing is over, put up some Water scalding hot, and let it run thro' the Grains, then boil it and fill up the Cask, stop it well and let it stand till it is cold, do this twice, then take the Grounds of strong Drink and boil in it green Wallnut Leaves and new Hay or Wheat Straw, and put all into the Cask, that it be full, and stop it close : After this, use it for small Beer half a Year together, and then it will be thoroughly sweet and fit for strong Drinks ; or,

Another Way.

Take a new Cask and dig a Hole in the Ground, in which it may lye half depth with the Bung downwards ; let it remain a Week, and it will greatly help this or any stinking musty Cask. But besides these, I have writ of two other excellent Ways to sweeten musty or stinking Casks, in my Second Book of Brewing.

Wine Casks.

These, in my Opinion, are the cheapest of all others to furnish a Person readily with, as being many of them good Casks for Malt Liquors, because the Sack and White-Wine Sorts are already season'd to Hand, and will greatly improve Beers and Ales that are put in them : But beware of the Rhenish Wine Cask for strong Drinks ; for its Wood is so tinctur'd with this sharp
Wine,

Wine, that it will hardly ever be free of it, and therefore such Cask is best used for small Beer: The Claret Cask will a great deal sooner be brought into a serviceable State for holding strong Drink, if it is two or three times scalded with Grounds of Barrels, and afterwards used for small Beer for some Time. I have bought a Butt or Pipe for eight Shillings in *London* with some Iron Hoops on it, a good Hoghead for the same, and the half Hoghead for five Shillings, the Carriage for a Butt by the Waggon thirty Miles is two Shillings and Six-pence, and the Hoghead eighteen Pence: But to cure a Claret Cask of its Colour and Taste, put a Peck of Stone-Lime into a Hoghead, and pour upon it three Pails of Water; bung immediately with a Wood or Cork Bung, and shake it well about a quarter of an Hour, and let it stand a Day and Night, and it will bring off the red Colour, and alter the Taste of the Cask very much. But of three several other excellent Methods for curing musty, stinking, new, and other tainted Casks, I have writ of in my Account of Casks in my Second Book.



C H A P. XVIII.

Of Bunging Casks and Carrying of Malt Liquors to some distance.

I AM sure this is of no small Consequence, however it may be esteemed as a light Matter by some; for if this is not duly perform'd, all our Charge, Labour, and Care will be lost; and therefore here I shall dissent from my *London* Fashion, where I bung'd up my Ale with Pots of Clay only, or with Clay mix'd with Bay Salt, which is the better of the two, because this Salt will keep the Clay moist longer than in its Original State; and the Butt Beers and fine Ales were bung'd with Cork drove in with a Piece of Hop-Sack or Rag,

which I think are all insipid, and the occasion of spoiling great Quantities of Drink, especially the small Beers; for when the Clay is dry, which is soon in Summer, there cannot be a regular Vent thro' it, and then the Drink from that time flattens and stales to the great Loss in a Year to some Owners, and the Benefit of the Brewer; for then a fresh Cask must be tapp'd to supply it, and the remaining Part of the other throw'd away. Now, to prevent this great Inconvenience, my Bung-holes are not quite of the largest Size of all, and yet big enough for the common wooden Iron hoop'd Funnel used in some Brew-houses: In this I put in a turned Piece of Ash or Sallow three Inches broad at Top, and two Inches and a half long, first putting in a double Piece of dry brown Paper, that is so broad that an Inch or more may be out of it, after the wooden Bung is drove down with a Hammer pretty tight; this Paper must be furl'd or twisted round the Bung, and another loose Piece upon and around that, with a little Yeast, and a small Peg put into the Bung, which is to be raised at Discretion when the Beer is drawing, or at other times to give it Vent, if there should be Occasion: Others will put some Coal or Wood Ashes wetted round this Bung, which will bind very hard, and prevent any Air getting into or out of the Cask; but this in Time is apt to rot and wear the Bung-hole by the Salt or Sulphur in the Ashes, and employing a Knife to scrape it afterwards. Yet, for keeping Beers, it is the best Security of all other Ways whatsoever.

There is also a late Invention practis'd by a common Brewer in the Country that I am acquainted with, for the safe Carriage of Drink on Drays, to some distance without losing any of it, and that is, in the Top Center of one of these Bungs, he puts in a wooden Funnel, whose Spout is about four Inches long, and less than half an Inch Diameter at Bottom; this is turned at Top into a concave Fashion like a hollow round Bowl, that will hold about a Pint, which is a constant Vent to the Cask, and yet hinders the Liquor
from

from ascending no faster than the Bowl can receive, and return it again into the Barrel: I may say further, he has brought a Barrel two Miles, and it was then full, when it arrived at his Customer's, because the Pint that was put into the Funnel, at setting out, was not at all lost when he took it off the Dray; this may be also made of Tin, and will serve from the Butt to the small Cask.

In the Butt there is a Cork-hole made about two Inches below the upper Head, and close under that a piece of Leather is nailed Spout-fashion, that jets three Inches out, from which the Yeast works and falls into a Tub, and when the working is over, the Cork is put closely in, for the Bung in the Head of the upright Cask is put in as soon as it is filled up with new Drink: Now when such a Cask is to be broach'd, and a quick Draught is to follow, then it may be tapp'd at Bottom; but if otherwise, the Brass Cock ought to be first put in at the middle, and before the Drink sinks to that it should be tapp'd at Bottom, to prevent the breaking of the Head of Yeast, and its growing stale, flat, and sour.

In some Places in the Country, when they brew Ale or Beer to send to *London* at a great Distance, they let it be a Year old before they tap it, so that then it is perfectly fine; this they put into small Casks that have a Bung-hole only fit for a large Cork, and then they immediately put in a Role of Bean-flour first kneaded with Water or Drink, and baked in an Oven, which is all secur'd by pitching in the Cork, and so sent in the Waggon; the Bean-flour feeding and preserving the Body of the Drink all the Way, without fretting or causing it to burst the Cask for want of Vent, and when tapp'd will also make the Drink very brisk, because the Flour is in such a hard Consistence, that it wont dissolve in that Time; but if a little does mix with the Ale or Beer, its heavy Parts will sooner sink than thicken the Drink, and keep it mellow and lively to the last, if Air is kept out of the Barrel.

C H A P. XIX.

Of the Strength and Age of Malt Liquors.

WHETHER they be Ales or strong Beers, it is certain that the midling Sort is allowed by Physicians to be the most agreeable of any, especially to those of a sedentary Life, or those that are not occupied in such Business as promotes Perspiration enough to throw out and break the Viscidities of the stronger Sorts; on which Account the laborious Man has the Advantage, whose Diet being poor, and Body robust, the Strength of such Liquors gives a Supply, and better digests into Nourishment: But for the unactive Man, a Hoghead of Ale which is made from six Bushels of Malt is sufficient for a Diluter of their Food, and will better assist their Constitution than the more strong Sort, that would in such produce Obstructions and ill Humours; and therefore that Quantity for Ale, and ten Bushels for a Hoghead of strong Beer that should not be tapp'd under nine Months, is the most healthful. And this I have experienc'd by enjoying such an Amber Liquor that has been truly brewed from good Malt, as to be of a vinous Nature, that would permit of a hearty Dose over Night, and yet the next Morning leave a Person light, brisk, and unconcern'd. This then is the true *Nostrum* of Brewing, and ought to be study'd and endeavour'd for by all those that can afford to follow the foregoing Rules, and then it will supply, in a great Measure, those chargeable (and often adulterated, tartarous, arthritick) Wines. So likewise for small Beer, especially in a Farmer's Family, where it is not of a Body enough, the Drinkers will be feeble in hot Weather, and not be able to perform their Work, and will also bring on Distempers, besides the Loss of Time, and a great Waste of such Beer that is generally much thrown away; because Drink is certainly a Nourisher of the Body, as well as Meats, and the more

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substantial they both are, the better will the Labourer go thro' his Work, especially at Harvest; and in large Families the Doctor's Bills have proved the Evil of this bad Oeconomy, and far surmounted the Charge of that Malt that would have kept the Servants in good Health, and preserved the Beer from such Waste as the smaller Sort is liable to.

'Tis therefore that some prudent Farmers will brew their Ale and small Beer in *March*, by allowing five or six Bushels of Malt, and two Pounds of Hops, to the Hoghead of Ale; and a Quarter of Malt, and three Pounds of Hops, to five Barrels of small Beer. Others there are, that will brew their Ale or strong Beer in *October*, and their small Beer a Month before it is wanted. Others will brew their Ale and small Beer in *April*, *May*, and *June*; but this according to Humour, and therefore I have hinted of the several Seasons for brewing these Liquors: However, in my Opinion, whether it be strong or small Drinks, they should be clear, smooth, and not too small, if they are design'd for Profit and Health; for if they are otherwise, it will be a sad Evil to Harvest-Men, because then they stand most in need of the greatest Balsamicks: To this End, some of the softning Ingredients, mention'd in the foregoing Receipts, should be made use of to feed it accordingly, if these Drinks are brewed forward. And that this particular important Article in the Brewing Oeconomy may be better understood, I shall here recite Dr. *Quincy's* Opinion of Malt Liquors, *viz.* The Age of Malt Drinks makes them more or less wholesome; and seems to do somewhat the same as Hops; for those Liquors which are longest kept, are certainly the least viscid; Age by degrees breaking the viscid Parts, and rendering them smaller, makes them finer for Secretion; but this is always to be determin'd by their Strength, because in Proportion to that they will sooner or later come to their full Perfection, and likewise their Decay, until the finer Spirits quite make their Escape, and the Remainder becomes rapid and sour. By what there-
fore

fore has been already said, it will appear, that the older Drinks are the more healthful, so they be kept up to this Standard, but not beyond it. Some therefore are of Opinion, that strong Beer brew'd in *October* should be tapp'd at *Midsummer*, and that brewed in *March* at *Christmas*, as being most agreeable to the Seasons of the Year that follow such Brewings: For then they will both have Part of a Summer and Winter to ripen and digest their several Bodies; and 'tis my humble Opinion, that where the Strength of the Beer, the Quantity of Hops, the Boiling, Fermentation, and the Cask are all rightly manag'd, there Drink may be most excellent, and better at nine Months Age, than at nine Years, for Health and Pleasure of Body. But to be truly certain of the right Time, there should be first an Examination made by pegging the Vessel to prove if such Drink is fine, the Hop sufficiently rotted, and it be mellow and well-tasted.



C H A P. XX.

*Of the Pleasure and Profit of Private Brewing,
and the Charge of Buying Malt Liquors.*

HERE I am to treat of the main Article of shewing the Difference between brewing our own Ales and Beers, and buying them, which I doubt not will appear so plain and evident, as to convince any Reader, that many Persons may save well towards half in half, and have their Beer and Ale strong, fine, and aged, at their own Discretion: A Satisfaction that is of no small Weight, and the rather since I have now made known a Method of brewing a Quantity of Malt with a little Copper and a few Tubs, a Secret that has long wanted Publication; for now a Person may brew in a little Room, and that very safely, by keeping his Wort from foxing, as I have already explained, which
by

by many has been thought impossible heretofore ; and this Direction is the more valuable as there are many Thousands who live in Cities and Towns, that have no more than a few Yards square of Room to perform a private Brewing in. And as for the Trouble, it is easy to account for by those who have Time enough on their Hands, and would do nothing else if they had not done this : Or if a Man is paid half a Crown a Day for a Quantity accordingly : Or if a Servant can do this besides his other Work, for the same Wages and Charge, I believe the following Account will make it appear it is over-balanc'd considerably, by what such a Person may save in this Undertaking, besides the Pleasure of thoroughly knowing the several Ingredients and Cleanliness of the Brewer and Utensils. In several of the northern Counties of *England*, where they have good Barley, Coak-dry'd Malt, and the Drink brew'd at Home, there are seldom any bad Ales or Beers, because they have the Knowledge in Brewing so well, that there are hardly any common Brewers amongst them : In the West, indeed, there are some few, but in the South and East Parts there are many ; and now follows the Account, that I have stated according to my own general Practice, *viz.*

A Calculation of the Charge and Profit of brewing six Bushels of Malt for a private Family.

	l.	s.	d.
Six Bushels of Malt, at 2 s. 8 d. per Bushel, Barley being this Year 1733, sold for } 14 s. per Quarter by the Farmer - - -	0	16	0
Hops one Pound - - - - -	0	1	6
Yeast a Quart - - - - -	0	0	4
Coals one Bushel, or if Wood or Furze -	0	1	0
A Man's Wages a Day - - - - -	0	2	6
Total	1	1	4

74 *The Nature of the Barley-Corn,*

Of these six Bushels of Malt I make one Hogshead of Ale and another of small Beer : But if I was to buy them of some common Brewers, the Charge will be as follows, *viz.*

	<i>l.</i>	<i>s.</i>	<i>d.</i>
One Hogshead of Ale, containing 48 Gallons, at 6 <i>d.</i> per Gallon is - -	}	1	4 : 0
One Hogshead of small Beer, containing 54 Gallons, at 2 <i>d.</i> per Gallon is - -	}	0	9 : 0
		-----	-----
		1	13 : 0
		-----	-----
Total saved		0	11 : 8

By the above Account it plainly appears, that 11 *s.* and 8 *d.* is clearly gain'd in Brewing of six Bushels of Malt at our own House for a private Family, and yet I make the Charge fuller by 2 *s.* and 6 *d.* than it will happen with many, whose Conveniency by Servants, &c. may intirely take it off; besides the six Bushels of Grains that are currently sold for 3 *d.* the Bushel, which will make the 11 *s.* and 8 *d.* more by 4 *s.* without reckoning any thing for Yeast, that in the very cheapest Time here sells for Four-pence the Quart, and many times there happens three Quarts from so much Drink; so that there may possibly be gained in all sixteen Shillings and Eight-pence: A fine Sum, indeed, in so small a Quantity of Malt. But here by Course will arise a Question, whether this Ale is as good as that bought of some of the common Brewers at Six-pence a Gallon: I can't say all is; however, I can aver this, that the Ale I brew in the Country from six Bushels of Malt for my Family, I think, is generally full as good, if not better than any I ever sold at that Price in my *London* Brewhouse: And if I should say, that where the Malt, Water, and Hops are right good, and the Brewer's Skill answerable to them; there might be a Hogshead of as good Ale, and another of small Beer, made from five Bushels, as I desire to use for my Family,

Family, or for Harveft-Men : It is no more than I have many times experienc'd, and 'tis the common Length I made for that Purpose. And whoever makes Ufe of true Pale and Amber Malts, and purfues the Directions of this Book, I doubt not but will have their Expectation fully answer'd in this laft Quantity, and fo fave the great Expence of Excife that the common Brewer's Drink is always clogg'd with, which is no lefs than five Shillings for Ale, and Eighteen-pence *per* Barrel for fmall Beer.



C H A P. XXI.

A Philosophical Account for Brewing strong October Beer. By an Ingenious Hand.

IN Brewing, your Malt ought to be found and good, and after its making, to lye two or more Months in the Heap, to come to fuch a Temper, that the Kernel may readily melt in the washing.

The well dressing your Malt, ought to be one chief Care ; for unlefs it be freed from the Tails and Duft, your Drink will not be fine and mellow as when it is clean dressed.

The grinding alfo must be confider'd, according to the high or low drying of the Malt ; for if high dry'd, then a grofs grinding is best, otherwise a smaller may be done ; for the Care in grinding confifts herein, left too much of the Husk being ground small should mix with the Liquor, which makes a grofs Feces, and consequently your Drink will have too fierce a Fermentation, and by that Means make it Acid, or that we call Stale.

When your Malt is ground, let it stand in Sacks twenty-four Hours at least, to the End that the Heat in grinding may be allay'd, and 'tis conceived by its so standing that the Kernel will dissolve the better.

The Measure and Quantity we allow of Hops and Malt, is five Quarter of Malt to three Hogheads of Beer, and eighteen Pounds of Hops at least to that Quantity of Malt, and if Malt be pale dry'd, then add three or four Pounds of Hops more.

The Choice of Liquor for Brewing is of considerable Advantage in making good Drink, the softest and cleanest Water is to be preferr'd, your harsh Water is not to be made use of.

You are to boil your first Liquor, adding a Handful or two of Hops to it, then before you strike it over to your Goods or Malt, cool in as much Liquor as will bring it to a Temper not to scald the Malt, for it is a Fault not to take the Liquor as high as possible, but not to scald.

The next Liquors do the same.

And, indeed, all your Liquors ought to be taken as high as may be, that is, not to scald.

When you let your Wort from your Malt into the Under-back, put to it a Handful or two of Hops, 'twill preserve it from that Accident which Brewers call blinking or foxing.

In boiling your Worts, the first Wort boil high or quick; for the quicker the first Wort is boiled, the better it is.

The second boil more than the first, and the third or last more than the second.

In cooling lay your Worts thin, and let each be well cooled, and Care must be taken in letting them down into the Tun, that you do it leisurely, to the End that as little of the Feces or Sediment which causes the Fermentation to be fierce or mild, for,

Note, There are in all fermented Liquors, Salt and Sulphur, and to keep these two Bodies in a due Proportion, that the Salt does not exalt itself above the Sulphur, consists a great Part of the Art in Brewing.

When your Wort is first let into your Tun, put but a little Yeast to it, and let it work by Degrees quietly, and if you find it works but moderate, whip in the
Yeast

Yeast two or three times or more, till you find your Drink well fermented, for without a full Opening of the Body by Fermentation, it will not be perfect fine, nor will it drink clean and light.

When you cleanse, do it by a Cock from your Tun, placed six Inches from the Bottom, to the End that most of the Sediment may be left behind, which may be thrown on your Malt to mend your small Beer.

When your Drink is tunn'd, fill your Vessel full, let it work at the Bung-hole, and have a Reserve in a small Cask to fill it up, and don't put any of the Drink which will be under the Yeast after it is work'd over into your Vessels, but put it by itself in another Cask, for it will not be so good as your other in the Cask.

This done, you must wait for the finishing of the Fermentation, then stop it close, and let it stand till the Spring, for Brewing ought to be done in the Month of *October*, that it may have Time to settle and digest all the Winter Season.

In the Spring you must unstop your Vent-hole, and thereby see whether your Drink doth ferment or not, for as soon as the warm Weather comes, your Drink will have another Fermentation, which when it is over, let it be again well stopp'd and stand till *September* or longer, and then peg it; and if you find it pretty fine, the Hop well rotted, and of a good pleasant Taste for Drinking,

Then, and not before, draw out a Gallon of it, put to it two Ounces of Ising-glass cut small and well beaten to melt, stirring it often and whip it with a Wisk till the Ising-glass be melted, then strain it and put it into your Vessel, stirring it well together, stop the Bung slightly, for this will cause a new and small Fermentation, when that is over, stop it close, leaving only the Vent-hole a little stopp'd, let it stand, and in ten Days, or a little more, it will be transparently fine, and you may drink of it out of the Vessel till two Parts in three be drawn, then bottle the rest, which will in a little Time come to drink very well.

If your Drink in *September* be well condition'd for Taste, but not fine, and you desire to drink it presently, rack it before you put your Ifing-glass to it, and then it will fine the better and drink the cleaner.

To make Drink fine quickly, I have been told that by separating the Liquor from the Feces, when the Wort is let out of the Tun into the Underback, which may be done in this Manner, when you let your Wort into your Underback out of your Tun, catch the Wort in some Tub so long, and so often as you find it run foul, put that so catched on the Malt again, and do so till the Wort run clear into the Underback. This is to me a very good Way (where it may be done) for 'tis the Feces which causes the fierce and violent Fermentation, and to hinder that in some measure is the Way to have fine Drink: Note, That the finer you make your Wort, the sooner your Drink will be fine, for I have heard that some curious in Brewing, have caused Flannels to be so placed, that all the Wort may run thro' one or more of them into the Tun before working, by which means the Drink was made very fine and well-tasted.

Observations on the foregoing Account.

This Excellent Philosophical Account of brewing *October Beer*, has hitherto remained in private Hands as a very great Secret, and was given to a Friend of mine by the Author himself, to whom the World is much obliged, altho' it comes by me: In Justice therefore to this ingenious Person, I would here mention his Name, had I leave for so doing; but at present this Intimation must suffice. However, I shall here take Notice, that his Caution against using tailed or dusty Malt, which is too commonly sold, is truly worthy of Observation; for these are so far from producing more Ale or Beer, that they absorb and drink Part of it up.

In Grinding Malts he notifies well to prevent a foul Drink.

The Quantity he allows is something above thirteen Bushels to the Hogshead, which is very sufficient ; but this as every Body pleases.

The Choice of Liquors or Waters for Brewing, he says, is of considerable advantage ; and so must every body else that knows their Natures and loves Health, and pleasant Drink : For this purpose, in my Opinion, the Air and Soil is to be regarded where the Brewing is performed ; since the Air affects all things it can come at, whether Animal, Vegetable, or Mineral, as may be proved from many Instances : In the Marshes of *Kent* and *Essex*, the Air there is generally so infectious by means of those low, vaeisy, boggy Grounds, that seldom a Person escapes an Ague one time or other, whether Natives or Aliens, and is often fatally known to some of the *Londoners* and others who merrily and nimbly travel down to the Isles of *Grain* and *Sheppy* for a valuable Harvest, but in a Month's time they generally return thro' the Village of *Sborne* with another Mien. There is also a little *Moor* in *Hertfordshire*, thro' which a Water runs that frequently gives the *Passant* Horses that drink of it, the Colick or Gripes, by means of the aluminous sharp Particles of its Earth ; its Air is also so bad, as has obliged several to remove from its Situation for their Healths : The Dominion of the Air is likewise so powerful over Vegetables, that what will grow in one Place won't in another, as is plain from the Beech and Black Cherry Tree, that refuse the Vale of *Ailesburry* tho' on some Hills there, yet will thrive in the *Chiltern* or Hilly Country : So the Limes and other Trees about *London* are all generally black-barked, while those in the Country are most of them of a Silver white. Water is also so far under the Influence of the Air and Soil, as makes many excellent for Brewing when others are as bad. In Rivers, that run thro' boggy Places, the Sullage or Washings of such Soils are generally unwholesome as the Nature of such Ground is ; and so the Water becomes infected by that and the Effluvia or Vapour that accompanies such

such Water: So Ponds are surely good or bad, as they are under too much Cover, or supply'd by nasty Drains, or as they stand situated or expos'd to good and bad Airs. Thus the Well-waters by Consequence share in the good or bad Effects of such Soils that they run thorough, and the very Surface of the Earth by which such Waters are strained, is surely endow'd with the Quality of the Air in which it lies; which brings me to my intended Purpose, to prove that Water drawn out of a Chalky or Fire-stone Well, which is situated under a dry, sweet, loamy Soil, in a fine pure Air, and that is perfectly soft, must excel most if not all other Well-waters for the Purpose in Brewing. The Worts also that are rooted in such an Air, in Course partakes of its nitrous Benefits, as being much expos'd thereto in the high Backs or Coolers that contain them. In my own Grounds I have Chalks under Clays and Loams; but as the latter is better than the former, so the Water proves more soft and wholesome under one than the other: Hence then may be observed the contrary Quality of those harsh curdling Well-waters that many drink of in their Malt Liquors, without considering their ill Effects, which are justly condemn'd by this able Author as unfit to be made use of in Brewing *October Beer*.

The boiling a few Hops in the first Water is good, but they must be strained thro' a Sieve before the Water is put into the Malt; and to check its Heat with cold Liquor, or to let it stand to cool some Time, is a right Method, lest it scalds and locks up the Pores of the Malt, which would then yield a thick Wort to the End of the Brewing, and never be good Drink.

His putting Hops into the Underback, is an excellent Contrivance to prevent foxing, as I have already hinted.

The quick boiling of the Wort is of no less Service, and that the smaller Wort should be boiled longer than the strong, is good Judgment, because the stronger the Wort, the sooner the Spirits flie away and the Waste of more Consequence; besides, if the first Wort was to be boil'd too long, it would obtain so thick a Body, as to prevent, in great Measure, its fining hereafter so soon in the Barrel; while the smaller Sort will evaporate its more watry Parts, and thereby be brought into a thicker Consistence, which is perfectly necessary in thin Worts; and in this Article lies so much the Skill of the Brewer, that some will make a longer Length than ordinary from the Goods for small Beer, to shorten it afterwards in the Copper by Length of boiling, and this Way of consuming it is the more natural, because the remaining Part will be better cured.

The laying Worts thin is a most necessary Precaution; for this is one Way to prevent their running into Cohesions and Foxing, the Want of which Knowledge and Care has undoubtedly been

been the Occasion of great Losses in Brewing ; for when Worts are tainted in any considerable degree, they will be roapy in time and unfit for the human Body, as being unwholsome as well as unpleasant. So likewise is his *Item* of great Importance, when he advises to draw the Worts off fine out of the Backs or Coolers, and leave the Feces or Sediments behind, by reason, as he says, they are the Cause of those two detested Qualities in Malt Liquors, staleness and foulness, two Properties that ought to employ the greatest Care in Brewers to prevent ; for 'tis certain these Sediments are a Composition of the very worst Part of the Malt, Hops, and Yeast, and, while they are in the Barrel, will so tincture and impregnate the Drink with their insidious and unpleasant Nature, that its Drinkers will be sure to participate thereof more or less as they have lain together a longer or a shorter time. To have then a Malt Drink balsamick and mild, the Worts cannot be run off too fine from the Coolers, nor well fermented too slow, that there may be a Medium kept, in both the Salt and Sulphur, that all fermented Malt Drinks abound with, and herein, as he says, lies a great Part of the Art of Brewing.

He says truly well, that a little Yeast at first should be put to the Wort, that it may quietly work by Degrees, and not be violently forc'd into a high Fermentation ; for then by Course the Salt and Sulphur will be too violently agitated into such an Excess and Disagreement of Parts, that will break their Unity into irregular Commotions, and cause the Drink to be soon stale and harsh. But if it should be too backward and work too moderate, then whipping the Yeast two or three times into it will be of some Service to open the Body of the Beer ; for, as he observes, if Drink has not a due Fermentation, it will not be fine, clean, nor light.

His Advice to draw the Drink out of the Tun by a Cock at such a Distance from the Bottom is right ; because that room will best keep the Feces from being disturb'd as the Drink is drawing off, and leaving them behind ; but for putting them afterwards over the Malt for small Beer, I don't hold it consonant with good Brewing, by reason in this Sediment there are many Particles of the Yeast, that consequently will cause a small Fermentation in the Liquor and Malt, and be a means to spoil rather than make good small Beer.

What he says of filling up the Cask with a reserve of the same Drink, and not with that which has once worked out, is past dispute just and right.

And so is what he says of stopping up the Vessel close after the Fermentation is over ; but that it is best to Brew all strong Beer in *October*, I must here take leave to dissent from the *Tenet*, because there is room for several Objections in relation to the sort of Malt and Cellar, which as I have before explained, shall say the less here.

As he observes Care should be taken in the Spring to unstop the Vent, lest the warm Weather cause such a Fermentation as may burst the Cask, and also in *September*, that it be first try'd by Pegging if the Drink is fine, well-tasted, and the Hop rotted; and then, if his Way is liked best, bring the rest into a transparent Fineness; for Clearness in Malt Liquors, as I said before, and here repeat it again, is a most agreeable Quality that every Man ought to enjoy for his Health and Pleasure, and therefore he advises for dispatch in this Affair, and to have the Drink very fine, to rack it off before the Ising-glass is put in; but I can't be a Votary for this Practice, as believing the Drink must lose a great deal of its Spirits by such shifting; yet I must chime in with his Notion of putting the Wort so often over the Malt till it comes off fine as I have already taught, which is a Method that has been used many Years in the North of *England*, where they are so curious as to let the Wort lie some time in the Underback to draw it off from the Feces there; nor are they less careful to run it fine out of the Cooler into the Tun, and from that into the Cask; in all which three several Places the Wort and Drink may be had clear and fine, and then there will be no more Sediments than is just necessary to assist and feed the Beer, and preserving its Spirits in a due Temper. But if Persons have Time and Conveniency, and their Inclination leads them to obtain their Drink in the utmost Fineness, it is an extraordinary good Way to use *Hippocrates* Sleeve or Flannel-Bag, which I did in my great Brew-house at *London*, for straining off the Feces that were left in the Backs. As to the Quantity of Malt for Brewing a Hogshhead of *October* Beer, I am of Opinion thirteen Bushels are right, and so are ten, fifteen, and twenty, according as People approve of; for near *Litchfield*, I know some have brew'd a Hogshhead of *October* Beer from sixteen Bushels of Barley Malt, one of Wheat, one of Beans, one of Pease, and one of Oat Malt, besides hanging a Bag of Flour taken out of the last four Malts in the Hogshhead for the Drink to feed on; nor can a certain Time be limited and adjusted for the Tapping of any Drink (notwithstanding what has been affirmed to the contrary) because some Hops will not be rotted so soon as others, and some Drinks will not fine so soon as others; as is evident in the Pale Malt Drinks, that will seldom or never break so soon in the Copper as the Brown sort, nor will they be so soon ripe and fit to tap as the high dried Malt Drink will. Therefore what this Gentleman says of trying Drink by first Pegging it before it is tapp'd, in my Opinion, is more just and right than relying on a limited Time for Broaching such Beer.

THE LONDON and COUNTRY BREWER.

CONTAINING

Several Errors committed
in making MALTS.

Of Brewing WHEAT-
MALT.

Of the Good and Bad
PROPERTIES of the
HOP.

Of the Nature, Preventi-
on, and Cure of Foxed
MALT-LIQUORS, and
UTENSILS.

Several Ways of Recover-
ing stale or pricked
MALT-LIQUORS.

FERMENTATION.

Brewing DORCHESTER
BEER, SHROPSHIRE

DRINK, and a WEST-
INDIA LIQUOR.

Brewing MALT-DRINKS
without Boiling Water,
Wort, or Hops.

Sir T— S—'s Method of
Brewing a Pipe of Pale
OCTOBER.

The Fraudulent Practice by
short-measured CASKS
exposed.

A LETTER from one
BREWER to another,
concerning Conceal-
ments of MALT-
DRINKS.

To which is added,

A DISSERTATION on the BREWERY, wherein is shewn
the ill Consequence of CLAY-WELLS, and CLAY-BUNGS;
how to brew a clear, sound DRINK with nasty, foul WA-
TER; the prejudicial Nature of FÆCES; with several other
Serviceable Matters.

*By a Person formerly concerned in a publick Brewhouse,
in London, but for Twenty Years past has resided in
the Country.*

PART II.

LONDON:

Printed for the AUTHOR, and sold by Mess Fox, in Westmin-
ster-Hall; W. Meadows, at the Angel in Corn-hill; T. Astley,
at the Rose, in St. Paul's Church-Yard; E Withers, at the
Seven Stars, opposite to Chancery-Lane, in Fleet-Street; and
W. Bickerton, at Lord Bacon's-Head, without Temple-Bar,
M.DCC.XXXVI. Price 1 s. 6 d.

THEREFORE, this being premised, I have in my former *Work* endeavoured to lend my helping Hand, to effect this so much desired and wished for End, as the Quantity of my Sheets would permit: But this being a Science more extensive, and capable of Improvement than the Generality of Mankind are apprehensive of, (who too much content themselves in following the Errors of their Predecessors) I have here in this second Part enlarged on some of my former Heads, as I judged most necessary; and likewise added and discussed such new Matter, as might conduce most to the Improvement of this Art, and the undeceiving of such, who, through Ignorance or Interest, suffer themselves to persist in their Errors.

WHEN a Person is about to brew Malt-Drink, it would not be amiss to put the following, or some suchlike Natural, Quare to himself, What am I going to do, or What is my Intention in this Procedure? 'Tis certainly to procure a fine, pure, and light Vinous Liquor, as free from any terrene, clammy, or other Heterogeneous Particles as may be.

BUT how the present usual Management by long Mashings, long Boiling of the Hop, either under or over Coction of the Wort, violent repeated Beatings in of the Yeast, Mixing injurious Ingredients in the Drink; the prejudicial (tho' common) Use of Clay, &c. I say, how these do answer the Purpose aforesaid, in affording a pure, light, wholesome, and Vinous Drink, I shall leave to the Determination of all such as will but make use of their Reason.

AND were People but to consider the true Nature of Yeast or Barm (that notwithstanding it is so necessary
and

and useful an Ingredient if rightly and judiciously managed, yet is it certain) that it contains very inimical and pernicious Properties, they would never practise those violent, long, and repeated unnatural Beatings in of it into the Drink, which cannot but be attended with many ill and mischievous Effects, notwithstanding the common Specious Pretences in its Behalf. Which I have in my former, as well as in the following Sheets, (I hope) fully confuted and made appear :

BUT farther to illustrate and evince the Truth of my Assertions, I cannot here omit the Case of a Person whose Father being a Tobacconist in London, sent his Son among his Customers at and about Stamford in Lincolnshire, where he fell into Drinking such Quantities of their Yeasty Ale as made him distracted, and so he remained till his obstinate Distemper yielded to the well adapted Medicines of an ingenious Physician, who after some Months Keeping him in his House about thirty Miles from London, at last brought him to his Senses again.

ANOTHER Instance of the ill Properties of Yeast were demonstrated in the following Experiment, (which I had from an ingenious and learned Gentleman who was an Eye-Witness of its Veracity) viz. That some Slices of Bread were put into about two Quarts of Yeast, which an hungry Dog lick'd up for the Sake of the Bread; the Consequence was this, the Dog died in a very little time after, being very much swelled, as it had been with a Dropsy :

THEREFORE I must necessarily join with those judicious Gentlemen, who are of Opinion, that the Drinking of yeasty Malt Liquors, whether new or stale, is the chief Cause of those too frequent fatal Diseases the Dropsy, Stone &c. among us; for if Malt Drink be
hard

hard or stale, in many Constitutions it is manifestly apt to generate sabulous Concretions, not only in the urinary Passages, but in other Parts of the Body; and it is evident that it receives this Staleness or Acidity chiefly from the Yeast, which the Drink is impregnated with, as it serves for a Lee for the Liquor to feed on; just as if we were to put any Quantity of an unwholesome bruis'd Herb or Root into a Cask of Drink, we might reasonably expect the Liquor to be tinctured by it, and to be endued with its ill Qualities: So that it plainly appears how very necessary it is (if we would enjoy wholesome and palatable Malt Drink) to free it as much as possible from that destructive Acid.

I HAVE likewise in this second Treatise farther enlarged on the great Use of artificial Compositions or Lees, and particularly recommended those late invented most excellent wholesome BALLS (mentioned in Page 96 of my former Part) which have so deservedly gained such a Repute, and which are so highly necessary and useful for all Keeping Malt Drinks especially, whether Pale, Amber, or Brown, to have always in them, as nothing can contribute more to their Fining, Feeding, and Preservation in a mild and sound State, and are perfect Antidotes to the ill Qualities of the Yeast, Faces, &c. Likewise of such a curing and improving Nature, that by their sole Use I have even recovered damaged or prick'd Drink and Cyder, and will answer in Wines. These BALLS are sold with proper Directions at the Booksellers whose Names are prefixed to this Works.

ANOTHER too common Misfortune of our having unwholesome and ill tasted Beers and Ales (especially in Warm Weather) is by what is commonly called Foxing, or more properly from a Putrifaction they are liable to in passing through their several Managements, the Cause, Prevention, and effectual Cure of which grand
Evil,

The PREFACE.

v

Evil, I have here freely explained and communicated; with several other Matters of great Importance, which duly attended to, will contribute not only to the establishing the Brewery upon a better Footing, but manifestly augment the HEALTH, PLEASURE, and PROFIT of the Subject in general.

ERRATA.

Page 18. Line 24. Read, I come now. p. 59. l. 10. for page 3: read, page 111. p. 61. l. 13. read, that a Pond.

Just Published,

New Experiments

IN

HUSBANDRY, for the Month of *April*.

NUMB. I.

CONTAINING

SEVERAL Processes of Plowing various Lands. The Transcendant Uses of the late invented *Hertfordshire* Double-Plough. The Improvements of *Grain, Grasses, Manures, and Trees*. The Prevention and Cure of *Rotten-Sheep*; also of the *Red Water, Foot-Rot, &c.* Keeping of *Hogs, Cows, and Horses*, from Diseases. The Bites of *Jockeys* exposed. Of Pickling *Pork*, and the proper Vessels to keep it in. The Breeding of *Fowls*. A New invented *Roll*. Several curious Letters concerning *Husbandry*, and the *Author's Answers*. With other Beneficial Matters tending to the Improvement of this most useful *Science*. And is not only necessary for all *Farmers, Graziers, &c.* in this Month, but of great Importance all the Year after.

By WILLIAM ELLIS, of *Little-Gaddesden*,
near *Hempstead*, in *Hertfordshire*.

Printed for the AUTHOR, and sold by Mess. Fox, in *Westminster-Hall*; W. MEADOWS, at the *Angel* in *Corn-hill*; T. ASTLEY, at the *Rose*, in *St. Paul's Church-Yard*; W. BICKERTON, at *Lord Bacon's-Head*, without *Temple-Bar*, and E. WITHERS, at the *Seven-Stars*, opposite to *Chancery-Lane*, in *Fleet-street*.



C H A P. I.

Of several Errors and Abuses committed in making BARLEY and WHEAT MALTS.

MALT, like many other Artificials, is most genuine when it is nearest to its Original Nature; and that is so, when it is of a white or pale Amber Colour, as the Barley receives the same from the Earth; for if it is otherways, it is occasioned by some Violence done to its Nature; as when it is over-ripe, or wash'd by Rains to a great Degree after it is mowed, or by its being heated too much in the Mow: So likewise is it in Malt, whose true Tincture and Colour proceeds from its fine Spirits and essential Vertues; for when the Colour is changed in making, the Vertues of it are also; that gives the Drink a different Nature, occasioned by some Violences done to the Spirits and fine Properties of the Malt, by the fierce Spirits and hot Vapours of the Fire, that change its mild Qualities into their own fiery Nature; which makes it plain, that all Digestion is most natural that preserves its true Colour most intire; so that the high coloured Brown Malt is parched and brought by the Potency of the Fire into a State

B

very

2 *Of several Errors and Abuses committed*

very remote from that Purity, which the true made Pale or light Amber coloured Malt enjoys ; from whence is produced the high Blood-coloured Ales and Beers, that many ignorant Persons cry up and admire as a Vertue or good Quality. But to be more particular on this Subject of Malts, I shall recite the Opinion of two Physicians that have appeared in Print : One says, — “ The contrary is to be understood, and nothing in Malt is a greater Vice or Evil, and the Drink made thereof, together with its long Boiling with Hops, does seldom fail to wound the Health of the Drinkers thereof ; its natural Operation in the Body, is to heat the Blood, destroying Appetite, obstructs the Stomach, sending gross Fumes into the Head, dulls the fine pure Spirits, hinders the free Circulation of the Blood, by stagnating the Humours, and in the cholerick and melancholy Complexion generates the Stone, Gravel, Gout, and Consumption : This Sort of Drink is also very injurious to Women, especially such as are with Child or give suck. — The other, who is a more late Writer, and one of the greatest Reputation, says, “ That Brown Malt makes a Drink much less viscid than the Pale, and fitter to pass the several Strainers of the Body ; but what is very strong of it, may be used in Excess enough to bring on several Inconveniencies of Health, tho’ a single Debauch with it, much more easily wears off, than one occasioned by Drink made from Pale Malt :” The same Author further enlarges and says. — “ That Pale Malt has certainly most of the Grain in it, as being slenderest dry’d, and is therefore most nourishing ; but also that very Reason requires a strong Constitution sufficiently to digest it. Those who drink much of it, are generally sleek and fat in the Bloom of their Age ; but if they are not suddenly cut off by Fevers as they

“ they generally are: they fall very early into a dis-
“ tempered old Age, and hardly support the Bur-
“ den of Life, with the Retinue of Diseases.” —

Hence it appears, that the Pale and Brown Malts are Extreams, one being too slack, and the other too high dried; which made the former Person write that all Extreams were degeneracy from the Nature of true Amber Malt made by a mild and gradual Operation; for then it would not be so apt to send dulling gross thick Fumes and Vapours into the Head, nor to heat the Blood, or obstruct the Passages, especially if Drink made from such Malt was of a middle Strength, and used before it was stale; then it would deserve the first Place of all fermented Malt Liquors, and be the best against the Generation of the Stone, Gravel, and Gout.

The second Error is, that tho' Amber Malts are truly the best of all others; yet in the making of these, there is often a great Abuse committed by several of its Makers, and that by an unnatural drying of it on the Kiln, which is done out of a covetous Desire of drying a great deal of Malt at once, in order to save Fire, Time, and Labour: To do this, they put it seven, ten, or twelve Inches thick on the Kiln; which never fails damaging the Malt; for the thicker it lies, the stronger the Fire must be kept, which will be apt to burn that which is next the Hair-Cloth, whilst that which is uppermost is neither hot nor cold, and thereby are the sweet spirituous Parts flattened; for notwithstanding all the Diligence that can be used, there is no drying it equally, because the Thickness thereof will force it to send Damp excrementitious Vapours, which Effluvia consequently re-enter such Malt, wounding and suffocating the finer Vertues and sweet Qualities, which gives an ill Taste to the Malt and the Drink made thereof: Besides it makes but little Drink, and that not good nor wholesome: And if strong Drink

4 *Of several Errors and Abuses committed*

is made thereof, it's evil Juices are more perceptible by heating the Body, and stupifying the Senses by it's gross heavy Fumes, which renders such Malt a great Enemy to Nature; for sure it is, that every Fault committed in the making of it, affects the Drink more or less; which has begot an Opinion, that there is hardly one Bushel in four rightly made throughout the Nation; and this is chiefly the Reason there are so many bad Sorts of Beers and Ales: Whereas formerly they used to be so careful to let the Malt lie only three four or five Inches thick on the Kiln at most, with a constant Fire not too fierce, and yet indifferent Brisk, which preserves the Spirit and Life of the Malt; for it may as well be too strong as too weak; when too weak, it flattens and dulls the spirituous sweet Qualities; and when too strong, it fires and stagnates them.

The third Error is in drying Malts. They are apt to be tainted by the Smoak through the Carelessness, Covetousness, or Unskillfulness of the Maker. For Smoak, as a Learned Pen defines it, is a stupifying keen Fume or Vapour, full of dark sulphureous Excrements, cast forth by the Fire, containing a gross Humidity, and fiery sharp Qualities very pernicious to Health, as it proceeds from the poisonous Juices of the Coal, Wood, &c. For Fire divides and separates the Forms and Properties of Nature; it is an Excrement all People desire to avoid, as being prejudicial to the fine volatile Spirits, and therefore offensive to the Eyes, where the natural Spirits have their Passage; for which Cause Smoak does first offend the Eyes, or any other stupifying Steam inwardly or outwardly; wherefore when any smoaky Drinks or Meats are separated in the Stomach, the Fume or Vapour thereof naturally ascends to the Head, and is very offensive to Nature, especially the Eyes (as Coal or Wood Smoak does) for it contains two pernicious Qualities, a fulsome
Bitter

Bitter, and a strong Astringent. Therefore all the Care possible must be taken that it is smoaked as little as can be; for that Smoak helps to advance the dull heavy reddish Colour in Drink, which shews the Excellency of the late Invention of drying Malt with Coak or Culm: And also the pernicious Practice of drying with Wood, Furze, or Ferne, &c. which yield a most disagreeable Smoak; yet must it pass thro' the several Kernels of the Malt, and thereby impregnate them with it's bitter, fulsome, unwholesome Qualities; which does not a little raise my Detestation and Abhorrence of that common Error and Imposition on the Ignorance of the People; and the more, when I consider the great Quantities of such Malt, that are annually consumed in some Parts of the West of *England*, and some other populous Cities and Places, in their Butt-Beers and Ales, notwithstanding the small Difference of Charge that there is between drying with Coak, Culm, and Straw, and with Wood, Furze, Fern, Peat, and Stubble, besides the great Inconveniency of the Wood-fire, that can't be so soon check'd nor extinguished as others are, which exposes the Malt to a Damage accordingly:

The Fourth Error is a very knavish, subtle one, indeed; and that is what tempts some Maltsters to suffer the Barley but to half spire, shoot or sprout, on the Floor, in order to save Time, Labour, and Charge; and then such Malt will have a third, fourth, fifth, or sixth part Barley in it, which consequently must deceive its Brewer; for the Barley part will never yield its Goodness like that which is malted, and so the Drink becomes in a great Measure spoiled.

The fifth Error is, what is called in the Cant of a villainous Maltster, Dressing of Malt, but honestly explained, it is no other than a Bite on the Buyer, and is thus managed; before the Malt is carried
out

6 *Of several Errors and Abuses committed, &c.*

out to answer its Sample or Boyce; A Man takes a Garden Pot, and with it sprinkles Water over the Out-side of a Heap; then with a Shovel he turns it, and does the like, and so on till he thinks it enough. Thus he plumps and swells the Malt Kernels, that to the Buyer seem bigger than the common Sort, and contain more Flower than the smaller ones can: But this Artifice carries three Reasons with it: One is to forward its Sale, the other to enhance the Price, and the other to fill the Bushel with fewer Corns. The Truth of which would plainly appear, if such Malt was afterward to be kept in a Heap a Month, two, or three; for in that Time, it would grow musty, or matt together, and very likely to breed those devouring Insects called *Whools*.

The Sixth Error and Abuse, is owing to the Carelessness of the Maltster, who either himself, or by suffering others with their Shoes to tread on many of the Corns of the Malt while they lie working on the Floor, which is often attended with ill Consequences; for by bruising the Kernels, there immediately commences the Growth of a Canker, that will shew itself in a Bunch, turn green, and perhaps one of them may infect six sound ones, and more, if the Misfortune happens to be in the Months of *March*, *April*, and *May*; by which Means a great deal of Drink has suffered in its Taste, and proved unwholesome to the Drinker. For this Reason a careful Maltster will put on a pair of Shoes made of an old Hat; and indeed, it is a pitty the Exciseman is not obliged to do so too; and then, in my Opinion, there would be less Damage done by dirty hard Shoes in the Malt-house; for as he walks between the Heaps, sometimes for near twenty Yards together, there commonly lie many loose Corns that are unavoidable to the Tread, and these consequently must be bruised and canker'd, to the great Prejudice of the Maltster, and

and more to the Drinker of Liquor made from such unwholesome Kernels. So likewise have I Reason to write against the careless Turner of the Malt, who often, I may say, is guilty of doing the like Damage to the Malt by his Shovel, when it's imployed in the Movements of the several Heaps, where it necessarily breaks and bruises many of the Kernels, by jobbing it in amongst them, and scraping along the Floor. But these are but few in Comparison of the many others that are incident to Barley and Malt. Of which I intend to enlarge on in my 3d and last Book.

C H A P. II.

Of W H E A T - M A L T.

WH E A T as it is the most excellent Grain of all others, and as such appointed by the Creator for the Nourishment of the human Body as an Eatable, has tempted my Pen to publish also its fine Quality in producing a good Drink, that no other Grain whatsoever can equalize for its peculiar Virtues; which has surpriz'd me to see that Wheat-Malt should be neglected, tho' this Grain has been sold in our Markets at three Shillings per Bushel, a few Years ago, for three Years together, and only Barley and Oat Malt in Reputation: Whereas this at three I believe I may venture to aver, is upon a Par with Barley at two Shillings, and Oats at one Shilling and Six-pence per Bushel for making of Malt, and far beyond both for making Strong Beer; also particularly for that famous and nutritious Liquor Mum, that has for some Years past been made by the *Germans* and others, to the just Reproach of the *English* , who thinking themselves compleatly furnished by Barley and Oat-Malt Liquors have supinely neglected

ted the Improvement of the best of all others, and that is Drink that might be made from this delicate Grain Wheat; for the following Reasons, *viz.*

First then the Flour of Wheat is much finer than that of Barley; and the finer the Flour, the finer the Drink; so also is the Bread made of the one and the other, that bears very distant Proportions of Goodness: The Wheat eats smooth, mellow, sweet, light, and nourishing; when the Barley eats rough, coarse, moist, heavy, and is scouring: Wheat Malt also differs much from Barley Malt; for the former, if well made, will return a pleasant, brisk, nourishing, wholesome Ale and Beer; while Barley-Malt is apt to make a more heavy, scorbutick, and less nourishing Liquor; because,

Secondly, This Wheat-Malt is more natural to the humane Nature, as it is made from the Staff of Life, provided it is not too high dried, and the Goodness burnt away to please the Fancy with a high coloured Drink, and so lose the purest Substance of the Malt according to the Proverb. — I don't care how white my Bread is, nor how brown my Drink is. — But this Proverb was first on Foot, before the Method of making Pale Malt was known: Also if this Sort of Malt is made from impure Wheat, then good Drink must not be expected from it; for such as the Malt is, such will be the Drink; as for Example: In a cheap time of Wheat, and in a dear time of Barley, which sometimes happens, it has been the Practice of a certain Brewer (I have been told) to buy up the smutty Wheat at a very low Rate for making Malt; because when Wheat is thus damnified, there are few that care to make Bread with it, unless it be in a dear time: But when such Grain is malted, it is less perceived in keeping Butt-Beers, than in Bread: Besides, in malt-ing, the black or smutty part of the Kernell is better lost than in the Wheat-Mill; for here the working
of

of it on the Floor, and the Fire of the Kiln cure that in a great Measure which the Stones can't, because the good and the bad parts are mix'd and ground together; when in malting, they are better separated and cured, yet not wholly discharged from the Tincture of the Smut, which is the bad Part of such Wheat Kernel.

Thirdly, It has been experienced that the *Dugdale*, or any other coarse Wheat will make good Malt and Drink, which may be a valuable Opportunity to many, because this Sort of Wheat grows only on some ground, and in some Countries where others can't be conveniently had, as in many Places of the North; and also on four Grounds in the South, this Wheat will best grow, and be a surer Crop than any other Sort; nor will it be damaged by Blights and Wets, when others are, by Reason of its great Out-guards, its Beards. This Sort of Wheat also is sold considerably cheaper in the Markets than any other, as being of a coarser Nature than the rest for making of Bread, but little inferior in Goodness for making of Malt, which gives an advantagious Opportunity, to a Person that thinks fit to make Malt of it, to enjoy its Ale or Beer at a low Price.

Fourthly, This Wheat-Malt has an admirable Quality in it, that no other has, and that is, the Drink of it will never be windy, which is a pernicious Quality inherent to most other Liquors, and is very unwholesome in Barley and other Malt-Drinks; but this, whether in Barrel, or Bottle, and kept ever so long, will always be free from that mischievous Effect.

Fifthly, The Goodness of this Malt discovers itself in making more potent Ale and Beer, than any other Sort can; for if eight Bushels are allowed to a Hogshead, and such Liquor be made too free with at only nine Months Age, it will be very apt to intoxicate, but with less Prejudice to the Health of the Drinker, than any of these unwholesome Barley-

Malt Liquors, whose Bodies are too commonly loaded with large Quantities of that pernicious Acid, Yeast.

Sixthly, This Malt is best made when it is managed by the Workman with Carefulness and Labour, soak'd in good Water, and to have its due Time in the Cistern, Couch, and Kiln. This is the main Art of making Malt; because where it is work'd too fast, and too hot, such Malt will certainly fail answering our Expectation. And so it will if the Wheat by Wets has first grown in the Field after reaping, or heated too much in the Mow; for then this, as well as Barley Malt, is very apt to rot in the Couch; and when it is laid on the Kiln to dry, it must be spread thin, and have a leisure Fire; otherways this Malt can never be well made, which reminds me of an Inn-keeper's Answer, (who brewed his own Drink) when I ask'd him the Reason why his Drink was so bad: He reply'd that it was the Fault of the Maltster, who would not allow the Malt a due time on the Floor nor Kiln. And so it is sure enough with too many of them, who, to save Time Labour, and Charge, run off the Malt too fast to be well made: But if you'll have Wheat-Malt in a right Condition, it must have a due Time on the Floor, that it may spire gradually, and a slow Fire in the Kiln, that its Flowery Part may be soft and in full Body: Then its fine spirituous Balsamick Qualities will be preserved in the Malt, and be communicated to the Drink, whereby it will answer those Ends that I have here propos'd. In short, the Ale or strong Beer made with Wheat-Malt is thought by many that have proved it to be the very best of all Liquors.

Of Water for Brewing Wheat-Malt.

This Element is particularly to be regarded as it affects Brewing; because there is no making of good Drink without good Water, be the Malt ever so kind in itself; nay, it is of such Consequence with Regard to our Diet, that as an eminent Physician has lately observed, we cannot be too Inquisitive into its Nature and Difference; nor too Sollicitous and Nice in our Choice of it; and therefore charges the Inhabitants of our great City with a gross Neglect in this Respect, for chusing of stagnating impure Clay Well water for brewing of Beer, and making other Drinks.

Of Brewing Wheat-Malt.

The Art of Brewing well, next to good Malt, Water, and Hops, is certainly of great Consequence; because let a Person have all these in their full Perfection, yet he may easily spoil and marr all, if he does not understand the true Method of making them into Ales and Beers; and for this Reason it too often happens amongst those that casually hit on the right way at one time, and miss it another, to lay the Fault on the Malt, Water, or Hops, in extenuation of their own Ignorance; when at the same time, they are the sole Cause of the Misfortune for want of due Judgment in this useful Science: I shall therefore here make it plain to mean Capacities, how they may obtain good Drink from good Ingredients.

And, first, I will suppose my Copper to hold Thirty-six Gallons, which is a Size sufficient for an Ordinary Family, and that I am to brew six Bushels of Wheat-Malt, for making a Hogshead of good Family-Ale; for which Purpose I have a good soft Water from a Chalk or Stone-Well, or clear Water

from a River, Rock, Pond, or from Rain : A Copper full of this, I heat as fast as I can under the Cover of a Peck of the hully Part of the Malt, or of Bran, which will expedite its Heat, and clear the Water ; so that it may be skim'd off for the Hogs, or put into the Mash-Tub with the Water when it is ready to boil or just broke : Then either let it lie till the Vapour is spent, so that you may see your Face in it, or as soon as the hot Water is put into the Tub, put a Pail or two of cold into it, which will temper it at once, and keep the Spirit of the Water from evaporating : Then immediately put five of the six Bushels of Malt into the Tub by degrees, stirring it with a Paddle or Oar just to keep it from balling and no more. When this is done, spread the reserved Bushel all over the rest, and let it remain so two or three Hours. Thus not only the Spirit of the Water is preserved, but likewise that of the Malt, which will surely greatly improve the Drink, by giving it a fine Haugst, or a true Tincture of the Malt : Then turn the Cock about half way, and receive three or four Hand-Bowls full of the thick part, and return it over the Malt, and so continue till it runs perfectly fine ; for on this depends very much the obtaining of clear Drink in the Barrel ; and therefore the nice Brewer will spend it off as small as a Straw, and let it run into the Under-Back or Tub on three or four Handfuls of Hops ; and when four or five Gallons are thus run off, lade over three Handbowls or Gallons of boiling Water on the Malt, and immediately put as much cold Water into the Copper to supply their Place, which will be at the full Heat again by the Time the last are discharged, and so continue lading over hot, and filling the Copper with as much cold Water, till a Copper of the first Wört is run off, which must be set by for some time in a large clean Tub too, and it will take no Damage ; for the
Strength

Strength of the Malt, and a few more Hops will preserve it sound: Then proceed and put over another full Copper of scalding Water by three Hand-bowls full at a time on the Goods, free of any cold Water till all is expended; which when done, put this second Wort into the Copper by its self, and boil it away briskly for half an Hour: Then put in a Pound of loose Hops, and boil it again half an Hour more; by which time I will suppose the Wort to be broke enough: But to be more certain in this material Point, you may, as soon as the Wort begins to boil, put in a Pound of Hops in one or two Canvas or other coarse Linnen Bags, and boil them only half an Hour as fast as can well be done, when they must be taken out; and the Wort kept boiling on, till the Particles which will be very small at first, become larger and some ragged; then it is truly boiled enough, and must directly be put into the Backs or cooling Tubs to lie thin, not above four or six Inches thick.

As soon as the second Wort is out of the Copper, put in the first, and boil it away in the same Manner, and with the same Quantity of fresh Hops as you did the last, taking care to keep back the loose Hops that were first put in to preserve it while in the Tub; and when the Particles are ragged, dispense it into the Coolers.

Thus you'll give both the Wortes and the Hops their thorough boiling in the Copper, and thereby enjoy their fine Flowery and spirituous Parts, and avoid their gross, unwholesome, and Phlegmatick ones; for without they have their due Cure here, the Drink can never be right clear and good in the Barrel: But observe, that

The second Wort will never break so soon as the first; and even that will be sooner or later, according to the Nature of the Malt, Water, &c which is the Reason that a limited Time of boiling must not
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be trusted altogether to, for a true Indication of the Wort's being enough; and therefore it is necessary to make a right Judgment of it, by viewing a little of the Wort now and then in a Hand-bowl, till it appears as I have before mentioned.

I knew a skilful Brewer that never stopt his Cock after it was once set a running, till he had all his first and second Worts run off; which has this excellent Conveniency in it, that the Goods or Grains have then no Power to sour or taint the Wort by its standing on them; a Misfortune that has spoiled many Thousands of Barrels of Drink, brewed after the old Fashion: And when he had thus stopt his Cock, and mash'd up the Grains with such a Quantity of cold Water, as he thought fit for his Small Beer, he let it stand altogether an Hour in cold Weather, and something less in hot, before he drew it off; then would boil it half an Hour with some fresh Hops, and an Hour after that by itself; for Small-Beer Wort must not be expected to break at all.

But by some a Cover is made use of, while the Water is heating or boiling in the Copper, and by many while the Malt lies liquored in the Mash-Vat, that the Steam or Vapour mayn't evaporate. I also solicit your Care, on account of the Wort's breaking in boiling, which you may likely perceive, if you slack your Fire in half or three Quarters of an Hour: And then if the Hops are all sunk, the Wort appears clear like Sack at top, and the small Particles play about like knits; then let it boil a little longer, and they'll be as big as Lice with Rags or Flews about them; that are sure Signs of the Wort being boiled to the Heighth; and this will sooner happen, the more furious you boilt it; but if you boil it much longer, it only wastes, and rather hurts it; nor will it work so well in the Vat, nor fine thoroughly in the Cask; because then it will obtain a more viscous Body; for as it comes
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out of the Copper, in such a Degree of Fineness, it will come out of the Barrel. But observe, that pale Malts won't break so soon as Brown, nor the second Wort so soon as the first; and small Wort not at all.

C H A P. III.

Of the good and bad Properties of the Hop.

I HAVE here undertaken to write of one of the most simple and purest of Vegetables, and yet, perhaps, the most abused of any other, both in its Use and Character. The purest, I say, because of the many fine Odoriferous, Aromatick Spirits that the Hop is indued with, as appears by the Sense of smelling on their being rubb'd and held to the Nose, and which are easily communicated to any Liquid, as these Spirits have their Residence mostly in the outward Parts of the Hopp, and are so tender, that they are not to be retained without being ram'd and bag'd to prevent the Air's Attraction, and the Escape that their fine Spirits are always ready to make: And for this Reason it is, that New Hops are so preferable to Old; because, notwithstanding all the Art that can be used, yet with Time will their subtle Spirits be expended in some Degree, and diminished in their Vertue as they lie in the Bag. But when this flowery pure Part of the Hop is singly and rightly obtain'd and incorporated with Ale or Beer, it then administers a most balsamick, opening, and penetrating Quality to the Body of Man, that the Virtuoso's in Physick declare will powerfully purge by Urine: And therefore are a special Remedy against breeding the Stone, as well as a great Strengthenener to the Stomach by its aromatick bitter Quality; and by its discutient and aperitive Nature,
good

good in all Obstructions of the Viscera, and particularly of the Liver and Kidneys. It is this Noble Property that gives the Ale and Beer a fine Flavour, and causes that smooth Gust, and pleasant Taste to the Palate, which after a proper Age in the Malt Liquor, every Drinker enjoys both in Mouth and Body, and is the true Homogeneous Quality created for the Service of Man; and not only in the Hop, but in all other kind of Vegetables; to preserve which, the Curious make their Raisin and other Wines, only by infusing their tender Ingredients in Hot Water, as knowing that boiling would extract their worser Part, and evaporate their better: As is also plain in all express'd Vegetables, particularly the Apple, whose first strong spirituous Juice, or Running from the Press, exceeds, for Taste and Health, the Weak gross Parts of the second; and for this Reason it is that Wormwood, Broom, Century, Tanzy, Sage, Carduus, or any other bitter Herbs, ought to be first dried, and then not suffered to infuse above a quarter or half an Hour at most in Wort; for in these there are harsh, earthy, austere Particles that are very ready to be emitted, and the warm Wort will quickly bring forth those worser Parts that will devour, suffocate, and destroy, the fine spirituous Virtues, and cleansing Properties, and then such Drink becomes of a hard, harsh, astringent Nature, apt to obstruct the Stomach, and send Fumes and Vapours to the Head, heating the Body and Blood too violently. And thus it is with the Hop when imprudently used; therefore the common way of infusing and decocting Herbs a long time is injurious to Health. As for Example, formerly they put a Quantity of Wormwood into their Butt-Beer, and there let it lie infusing, or rather rotting, four or six Months, till all the Drink is drawn; whereby the opening, penetrating, brisk, fine Spirits of such Vegetables are totally destroyed, and

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in their room the Beer is impregnated with their terrene and saline Parts, which contain harsh, bitter, churlish, and inimical Properties: For these Reasons, says a Physician, such common Wormwood Beer does not only hurt, but by degrees weakens the natural Heat of the Stomach, and sends heavy, dull Vapours into the Head, and so prejudiceth the Eyes. The Hop also, besides its fine volatile spirituous Part, which is readily extracted by a gentle warm Infusion, and is a most agreeable and wholesome Bitter, has likewise an innate, gross, terrene, and saline Part, which is thoroughly communicated to the Liquor by long Coction or steeping, and is a hot, very acrid, unwholesome, and disagreeable Bitter; yet is deem'd by the undiscerning Vulgar, a good Property. Indeed strong and fierce it is; but so far from being a Virtue to the human Body, that it certainly is injurious and destructive to it, in breeding the Stone and other Diseases: Hence it is, that all Drinks, especially the strong stale Sorts, that have the Hops boiled in them two or more Hours, strike the Palate with a harsh, rough, unpleasant, bitter Taste; and yet it was but very lately that I happened to be in a Brewhouse at *London*, where they wetted about thirty Quarters of Malt a Week, that the Master presented me with a Tankard of his Strong Beer, applauding it at the same time for having six Pounds of Hops boiled two Hours in each Hogshead; which is perfectly heterogeneous to the true Management of the Hopp, tho' he ignorantly extoll'd his Skill in a bad Action; for both in the Hop, and all other Vegetables, 'tis but lost Labour to boil or infuse them, beyond their first pure Spirit: Therefore boiling the Hop afterwards, is not only superfluous, but injurious, and serves only to raise and induce those acrid, bitter, and noxious Particles that so greatly damage the Drink; yet were never intended for the Use of Man, as being hurtful to his Nature, when

unduly separated from its better and light Parts. How much then does the ignorant Man abuse his Health, when his whole Drink has this second and worser Part of the Hop boiled in it! Alas! I cannot help being concerned for my fellow Creature, and pitty his supine Negligence in not regarding any Hints of this Nature, when it has been told him; because ill Customs have greater Power over a Man than Law or Nature, and nothing but a long Practice will convince the unlearned and obstinate Man: But to prove my Assertion plainer: Let any one take a Pot of Beer or Ale, and while it is warming, stir in it two or three Sprigs of Wormwood; then take it out, and let it drip into the Drink, and he'll find it presently bittered with the true fine Flavour and Spirit of the Herb: By all which, I think, I have sufficiently made appear, that the good Part of the Hop conduces to Health, while the bad Part deprives a Person of it. And so in most other Vegetables there are, surely, healthy and unwholesome Parts, that must be managed accordingly to enjoy the one and avoid the other. — But more of the Hop in my Third and last Part.

But I now I come to treat of the Use of the Hop, as it relates to Brewing. This fine Vegetable therefore I can now affirm, has at last obtained a just Reputation in some Parts of the Nation, under the due Notion of its good and bad Properties, by the Gentleman and Tradesman. As to the first, I know several that have been so nice in its Use, that they allow but half an Hour's Boiling the Wort and Hop for *October* Beer, as the common Brewer (I am told) does his *Dorchester*, as well as several Tradesmen that I am acquainted with: And one Gentleman, more careful than all the rest, is said to boil both, only a Quarter of an Hour: But, in my humble Opinion, they are none of them right yet; for tho' the Hop by half an Hour's Boiling in Wheat or Barley

ley Malt Wort, has its full time allowed, it I think the Wort has not ; and therefore the several Beers that I have tasted, of several Persons Brewing this way, all of them, to my Judgment, were rather too sharp ; which I impute to the under-boiling of the Wort, as not having its due Cure in Boiling, that naturally renders it in some Degree so with Age, notwithstanding the Hops Power; for if it han't its Cure in the Copper, how should it in the Barrel ? boiling being appointed for the first Digestion of the Wort ; and that will certainly be deficient, if the Cohesive Parts of the soft Wort are not broke and hardned ; then it will answer two great Ends, *viz* First, when the Wort is so much boiled (which commonly is in about an Hour) that it curdles and breaks into large Particles, it will be capable thoroughly to settle in the Barrel ; without which it can never be truly fine nor healthful, but consequently will be the Cause of Gravel, Stone, and Cholick in some Constitutions ; for that the ropy, tenacious Parts of the Wort, are not comminuted, separated, and discharged, sufficient to make its true Feces, till it has its mature Boiling. Secondly by this Cure of Boiling, the Wort is divided and hardened, consisting of numberless individual Particles, which gives a greater Power to the Yeast by Fermentation, to make an easy Discharge of their excrementitious Parts, and so is more able to resist Eagerness and Putrefaction ; witness the Wort that is brewed for making what is vulgarly called Vinegar ; which being neither boiled nor hop'd, but only fermented, will in a very few Days Time make this Aleager or Vinegar, if it is set in the Sun or by a Fire. It's true, indeed, that the Bitterness of the Hop does naturally hold the sweet Body and volatile Spirits, and as it were captivate them, being their mighty Defender against those keen Properties, that otherwise would advance and devour the sweet mild Qualities : But then, as I take it, this Power

of the Hop is confined only to the State and Condition the Beer is in, when first put into the Barrel; and therefore if such Drink is runn'd in any imperfect undigested State for want of its right Boiling, it will not be improved by the Hop beyond its original Nature.

Now that both the Wort and the Hop may have their due Cure, in the Copper as well as the Barrel, boil the Wort by itself half an Hour, and then rub the Hops well, and put them into the Wort, either loose, or in a Bag or two, and boil all together briskly till the Wort breaks, as I said before; then strain it into the Coolers very shallow. The Quantity of Hops on this Account for a Kilderkin of *October* Beer, should be, at least, three Pounds to be tapp'd at nine or twelve Months end, according as the Drink is mellowed and the Hop rotted: And so for Ale in Proportion to the Strength of the Wort, and the Time it is to be kept. To please my own Palate, I boil two Pounds of Hops in a Hoghead of mild Ale, the last half Hour, and find it answers extreamly well, tapp'd at about six Weeks end, without Regard to the hot Seasons or Blossom Time in Brewing it, as being under no Apprehension of a Miscarriage, provided my Malt, Water, Hops, Yeast, and Conveniencies are all in due Order. But to be safe in this Management, you may put a little Wort (somewhat cooled) upon the Hops before they are put into the Copper, to prevent what we call scalding them; and then the Hops will emit their Virtues more free, sooner, and regular, than when their Virtue is lock'd up in them by the fiery Heat of the Boiling Wort, there being also a resinous and clammy Nature in the Hop, which is best opened and divided by a previous gentle Heat; or when you have boiled one Parcel of Hops in a Bag half an Hour, as I said before, you may take them out, and boil such another Quantity of fresh Hops till the Wort
breaks;

breaks and thus a small Bag may be used in a little Copper, which may not so well agree with a large Vessel.

C H A P. IV.

Of the Nature, Prevention, and Cure of Tainted Fox'd Utensils and Malt-Liquors.

THIS is a most necessary Article in Brewing, and one of them that has been the least taken Notice of by Authors, altho' of the utmost Importance; because by this Evil, there have been many Thousand Barrels of Strong and Small Drink spoiled, both by common and private Brewers, who generally seem more wanting in this Knowledge, than of any other Branch of Brewing; and therefore if my Pen can be serviceable to the Publick, in remedying this grand Misfortune, I shall account it a valuable Opportunity of making known what I have learn'd and experienc'd in this Affair, in order to prevent those great Quantities of distemper'd Beers, Ales, and other Liquors from coming into the World for the future, as has been for many Years past, to the great Damage of the human Body; because when these Drinks are thus tainted, they can never be made thoroughly sound and fine in the Barrel; but will remain always in a nauseous, unhealthy, thick Condition, and be offensive to the Taste and Stomach; which undoubtedly will contribute to the Breeding of Diseases; and that by Reason the Misfortune consists first in the tenacious Thickness or Ropyness of the Drink, and the evil stinking Scent that arises therefrom, which has brought it under the Denomination of being foxed, and, indeed, is justly deserving of that or a worse Comparison. Now to account
for

for this Disaster, it is generally allowed to proceed from six Causes: First, from the Nastyness of the Utensils. Secondly, by the Filth and Corruption of the Water. Thirdly, by taking the Liquors in wrong Heats. Fourthly, by the Mustiness or other Damage in Malt. Fifthly, by the Wort's lying too thick in the Coolers. Sixthly, by letting them too hot into the Tun, or fermenting them while they are so. By all which, or by any one of these ways, may this abominable Sickness in Beer or Ale be bred; as new Milk is soon turned and spoiled, when put into unclean Pans; for this, like Wort, is of a pure Nature, and therefore the least Nastiness is, in some Degree, prejudicial to them; because all Dirt, Sullige, and Fur, that is left in the Crevices, and on the Sides of the Tubs and Utensils, contain in them a certain Acidity, that, like Rennet in Milk, sours and turns the Wort, more or less, from its thin, pure, loose Parts, into a foetid, stinking, Treacle Consistence, which commonly remains in it to the last, and will rather increase, than decrease; so that such Beer or Ale can never be made truly sweet again by the Art of Man; but, as such, will taint and poison the Coolers, Tuns, and Barrels in which it lies; for I have known it so Predominant, that it han't been got out for a Week or more together, to the great Prejudice of both Seller and Buyer: And sometimes I have heard of a whole Guile together of Strong Drink having been turned down the Kennel, as not fitting (when the Taint is in a great Degree) to be carried to a Customer's House: But to cure this horrid Misfortune, some are so silly among the private Brewers, to wash their Tubs or Coolers with only boiling Water, as thinking it the readiest way to scald it out; but, in Truth, it is scalding it in; for Boiling Water does only drive further back into the Wood a certain sour, fulsome Quality that the former Wort left behind, and which the Wood

of

of the Coolers or Tuns has suck'd in, the Humidity, or sweet Quality that the Wood receives from the Wort presently turning sour, very sharp, and keen, especially in the hot Season of the Year; so that when the fresh, new Wort comes into such Coolers and Tuns, it does most eagerly and powerfully attract and draw forth that lurking, keen, sour Quality that the Wood has imbibed and retain'd; which will occasion the whole to become sometimes only prick'd, or just tainted, and hardly perceivable to the Palate; but at other Times, when the Beer or Ale is infected very much, it is unsufferable both to Nose and Palate; and then such Drink will soon be sour: And this is one great Reason why such Quantities of Malt Liquors taste so mawkish, raw, and soon decay. And I myself, about twenty Years ago, had no other Knowledge to extirpate and drive out this Enemy, than to scrub the Backs and Tuns with only Coal Ashes and cold Water; whereas, in Truth, the Disease lies farther in the Wood than many imagine; and therefore is not to be got rid of very quickly, by such a palliative Cure: No, the Remedy must be according to the Disease; for in the Bottom of all Backs, Tuns, and cooling Tubs, there are Joints, down-right Pegs, or Dole-pins, which often receive and harbour the tainted Wort and Drink, and which are mostly imperceptible to the Eyes: 'Tis in these, I say, that the Distemper chiefly lies, and damages the succeeding Worts; for these Pins and Pegs are frequently swell'd by Wets, and dried again by the Air, and so are the several Joints, whereby they first receive, and then hold such corrupted Worts. Now as there is the Depth of an Inch or two in many of the great ones, it must be supposed, that a hasty scrubbing their superficial Part with only Coal Ashes and Water, is not soon capable of routing such a potent Enemy, whose nasty venomous Acidity and poisonous Nature, lurks
in

in the most subtle, difficult Places of the Backs, Tuns, and Tubs : Therefore some will put Stone-Lime over good Part of their Bottoms, and Water over that, to lie two or three Days and slack, in order to burn the Taint away ; which may do some Good : But then, as the Water and Lime acquires a plaistick Body, it becomes too thick to enter into the close Joints, and about the Pegs, as a thinner Body can ; and therefore I shall prescribe, I think, a much better Way, and that is : Take a Parcel of Wood Ashes made from Ash, if they can be got ; because they are the whitest, sweetest, and strongest, (but any other may do) and boil them in Water to a strong Lye, or Lee ; the Liquid Part of which lay over the Bottom of the Back, Tun, or Tub, scalding hot for some time, that it may have an Opportunity to soak and penetrate into the Joints and Peg-holes ; then with a Broom scrub the Sides and other Parts of them : This will be an effectual Cure each time it is used, if it is thoroughly done ; because of the great Quantities of searching fixed Salts, besides Sulphur, that is contain'd in the Ashes, which are contrary to the Nature of this Disease, and will prove a true Antidote ; and if the Coolers, Tuns, or Tubs, are after each Brewing wash'd and scrub'd out with cold Water, and then with this scalding Lye, it will prevent and cure this Malignity better than Lime, Wormwood, or most other Methods : For it has been found, that a Lye Tub, tho' generally neglected as the worst amongst the rest for a Cooler, has really proved the sweetest and safest of any for that Purpose ; provided there be no Soap mixed in it ; if there is, it will surely fox it.

What Consequence then must the Knowledge and Cure of this Evil be to those, that through meer Ignorance and Obstinacy, have brewed for several Months, nay, I believe I may say Years, in tainted Utensils, without so much as a Jealousy of the Misfortune

fortune they have actually laboured under. It's true their Drink is sometimes better, and sometimes worser; because they are not always under the same Degree of Taint, but are never thoroughly sound; yet because their Backs, Tuns, or Tubs are not rankly damaged, all goes off under the Supposition, that it will be better next time; which has been the true Reason that many home-brewed Ale-house Liquors, have justly bore the Name of bad Drink, and yet the Brewer so ignorant as not able to account for it.

I once knew a Person that had only a Hogshhead Copper in *London*, and entered himself at the Excise-Office a common Brewer, that he might have one in the score allowed him free of Duty, so at a Loss, that he had a constant Fox in his Utensils for two or three Months together, little or more, and which must have terminated in his great Loss, had he not had the good Fortune to be a Partner in a great Brew-house.

I also knew a Country-Victualler that brewed two or three times a Week, constantly foxed in his Tubs, and Barrels; but that was more than he knew himself, or would know; yet by his putting a great deal of Malt in his Drink, and the Ignorance of the Drinkers, this unskilful Brewer went on, and had his Share amongst others that better deserved.

Another way to cure foxed or tainted Utensils is, to take Bay Salt, and put it into your Coolers, Tuns, or Tubs, and strew some on their wet Sides; then upon that scalding Water, with which when they are well soaked, scrub them very well. This Salt is allowed to be stronger and sharper than the common Salt, and as such will penetrate and enter into the minutest Joints and Pores of the Wood, where it will eat in, and eradicate the nasty venomous Particles of the corrupted Taint, and make a greater Cure at one Application, than Ashes and cold Water

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will at several; so that Brewers, great or small, need have no Apprehensions of being damaged a second Time, by the succeeding Worts or Drinks, if they will make a due use of the Rules in this and my first Book, and of this famous Receipt that has often been try'd and approved of, for answering this Purpose, by several eminent Brewers: This Salt, which is of a hot moist Nature, is that with which they make their Camp Cellars, by mixing it with Clay, to keep their Wine and other Liquors in; this Salt being only the Sea Salt-water candied or coagulated by the Sun, will preserve the Body of the Clay a long time in a State of Humidity, and so prevent its hardening and cracking, whereby the Liquor contained under its Cover, will be in a fresh cold Condition in the hottest Seasons, as I have hinted in my first Part, for making Pots of Clay with it to stop Vessels. Again, besides the Infection that lies in the Backs or Coolers, Tubs or Tuns, it often extends itself, by tainting the Insides of the Leaden Pipes and Brass Cocks, thro' which the Wort is convey'd into the working Vat, or Tun, and there will lie and do Damage to the succeeding Worts, if not extirpated here also. To do which put some of the same Bay-Salt into the Mouth of the Leaden Pipe, and pour scalding Water on the same, and let it lie and soak some time, and you will find it effectually eradicate all Damage out of the same. Others will wet the Bottom and Sides of Tuns, and strew the Bay-Salt all about to it, and let it lie till next Brewing and soak.

C H A P. V.

Of Working or Fermenting Malt-Liquors.

IN my first Part, I think I have sufficiently detected the Male-Practice of beating or twhacking the Yeast into Malt-Drinks: But as this vile Practice has got

too much footing at this time in the World, to be soon exploded, I have thought it necessary to resume this Subject, and to say, that all violent Fermentations are unnatural to Malt-Liquors; because by any furious workings, the sharp earthy Particles are irritated and brought into Agitation, which should by no Means be stirred up, by reason they spend and destroy the pure, fine, sweet Spirits, and consequently cause the Beer or Ale to become Stale or Vapid the sooner. But many are so far from thinking this an Extream, that they promote it with all their Power, and force and beat the Yeast into the Body of the Drink for a considerable time together, with repeated Mixtures; which, as I have already observed, is generally done out of a wicked, avaricious End, to make six or seven Bushels of Malt go as far as eight or nine; and therefore 'tis a great Pity there is not a Penalty inflicted by Law on this Practice, as well as there is for using Molosses, in a Brew-house: For if the Truth was known, I believe the greatest Evil is on the Side of this destructive modish extraordinary Incorporation of the Yeast with the Beer, and all (in my Opinion) for the sake of thus rapaciously impregnating the Salt and Sulphur (two fiery Qualities) with the Liquor, that it may attack the Brain with its volatile Potency, and so impose a Credulity on the ignorant Man, that it is the pure Virtue and Strength of the Malt; and thereby it has induced many a poor Man, that works hard for his Shilling or Eighteen Pence a Day, to return the following one, for a Hair of the same Dog, to the Impoverishment of his necessitous Family, as I have seen it often done in the Country; and as my Discourse has had some Effect this way, I hope my Pen will have a great deal more, towards the Suppression of an Evil, utterly unknown to our prudent Forefathers; but thoroughly pernicious to many in our Time: For it's plain, that this ill

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forceable Usage in Malt-Liquors, by beating the Yeast into them, clogs and detriments the fine penetrating Particles ; so that in this Sort of Fermentation, the gross excrementitious Matter, cannot separate from the finer Parts, by which Means it will retain a strong, gross, fulsome Sweetness ; which, instead of being avoided as a very great Enemy to the Health of Man, many of the Vulgar People admire, and count it good and nourishing ; when, in Truth, such Liquor fails not to sur, foul, and obstruct the Stomach and Passages, sending back dark, dulling, Fumes and Vapours into the Head, and also generates an hard sabulous Matter in People subject to the Stone and Gravel ; therefore let both Men and Women refrain such Malt-Liquors, if they have any Respect to their own and Childrens Health.

It is the Advice of an eminent Person in Knowledge and Practice this way, that the lightest Fermentation or Working of Ales or Beers, is the most conducive Way to Health ; and that all heavy Fermentations are heterogeneous and unnatural to the Drink and Body of Man : For tho' the common Way is to tun Drink, when it begins to fall or ferment more gently ; yet then it will come under a fresh Fermentation in the Barrel, that oftentimes causes it to work again, as fierce as ever, which is apt to make it fret and spend itself ; for long or fierce Working, makes all Drink grow sharp and stale, sooner than when the Fermentation is moderate and regular : It will, indeed, in such Case become fine somewhat sooner ; because the volatile Spirits, or sweet Body, is wasted, or rather turned into Sharpness by too long and fierce working : Therefore those that have a Mind to avoid these Inconveniences, ought to tun or put up their Drink young, as the Brewers call it ; that is, before it hath fermented too much, *viz.* so soon as the Drink works, it ought to be put into the Vessels, and you need not doubt but it will work sufficiently.

Nay

Nay this Gentleman carries his Opinion further, and says, when your Wort is thoroughly cold, mix your Yeast well with it, and put it presently into the Vessel, and it will do extraordinary well in warm Weather; and if in Cold, Allowance must be made accordingly, by putting the Yeast into it blood warm. But how contrary is this healthful Way to the Practice of many who load their Ales in particular, with Quantities of saline, sulphureous Yeast; and that their Drink may have enough of it, they sometimes make Additions of fresh Parcels in the Time of Fermentation. About the Beginning of *June 1733*, I happened to be in a common Brew-house, and saw a square Tun with Drink in it under a violent Fermentation, which induced me to ask the Man how long it had been there: He told me from *Friday to Tuesday*; and that latterly he had been obliged to beat the Yeast in it every two Hours to keep it down. At another's I saw several square Tuns that were about four and a half, or five Foot deep, that were so built, as to admit of loose Frames of Boards fastened on all Sides into them, to allow for the great Risings of their Heads of Yeast, before they beat or whisk'd them in, which would be elevated sometimes several Feet higher than the fixed Tun. Here was Adulteration with a Witness; here the fine Spirits of the Wort were entangled, imprison'd and choak'd, that should have been cherish'd, nourished, and digested, with all the Moderation and Freedom possible, and in their room the hot, salt, Brimstone Spirits of the Yeast substituted and made Predominant, to a horrid Degree of Degeneracy indeed. But according to the Proverb, *One Man's Mistake, is another's Game.* — Remarks: — I cannot say this Person is intirely right in advising to Tun the Drink so young, as when it first begins to work (unless it be Small-Beer); but when the Ale or Beer has been work'd as cool as possible, to let it have

have a Digestion first in the Tub or Tun; and when it is arrived to a fine curled white Head, then to put it up as soon as it can be done, is a good way; because if it does not thus ferment first in the Tun, the Coldness of the Cask and Cellar in Winter, would be apt to check and hinder it doing so in the Barrel. Bt as he was a Physician, he directs this early Barrelling up the Drink, to be the most healthiest way of all others, and very likely it may be so. But be sure never to fill up the Vessel again with what has worked out.

C H A P. VI

Of Recovering prick'd, stale, and damaged Butt and other Malt Drinks.

I Was told by a credible Person, who was concerned with a great Brewer in *Westminster* about forty Years ago, that he made a Tryal to recover some stale prick'd Butt-Beer, that was return'd by one of his Customers, and began after this Manner: First, he ran off a piece of strong Wort; then he put some fresh Malt on the Goods, and over that the damaged Beer; that he let stand some time on the Goods and Malt: But instead of bettering it, it came off a Small Beer to his great Surprize; for, as he told the Story, the Rich robb'd the Poor; because the Goods absorb'd the strongest Part of the Drink, and emitted only the smaller Part, as white Loaves in an Oven, when mix'd with the brown Sort, will take from them, but the Brown not from the white.

A second Case.

Another Person, who was a Victualler in the Country, and brewed his own Drink, I personally
knew

knew that acted in such an Affair about four Years ago ; but after a different Manner. He first boiled his Water, and put it over four Bushels of Malt, by a Hand-bowl at a time, as usual ; and so soon as a small Quantity of the first Wort had run off just to take away the loose Flower of the Malt, he put over three Hand-bowls full of the damaged Beer cold, and when it was all discharged, he put over two Hand-bowls full of boiling Water, that also ran off without stopping the Cock at all ; and so on, a parcel of the Stale-Beer, and another of hot Water, till all the Strength of the Malt was thus washed out : And thus he served another four Bushels of Malt till all his damaged prick'd Stale-Beer was cur'd, and brought again into a mild pure State by Fermentation, as at other Times. And is an excellent approved way.

Remarks on the above-written Cases.

In these two Cases the small Brewer appears to be the greatest Artist ; because he improved his Drink, when the other was spoiled by Mismanagement ; for it is well known, that several spongy Bodies are, by their Make and Textures, a Propo for straining or refining Liquors ; and amongst others, a Body of Malt confined in a Tun or Tub, will answer one such End and Purpose, as is apparent by returning and putting over several Hand-bowls full of the first Running of the Malt, which is commonly thick, in order to receive it back again thin and clear ; so also will a Flannel Bag fastened about a Hoop, discharge foul Malt-Liquors as transparent almost as Sack, and which are used in all great Brew-houses, for straining the Dregs and Settlements left in the Backs or Coolers after the Worts are run off.

In the great Brewer's Operation I conceive he committed these Mistakes : First, by the Heat of the

the Goods, and the Beers lying amongst them an Hour or more, the agitating Parts of the Yeast contained in them were stirred up, and brought into a small Fermentation that disordered the whole Body of the Malt: The Stale Quality also of the Beer, I suppose, in some Degree might constringe and lock up the Pores of the Malt with its gross and sharp Properties, which caused it to emit a thinner Body than it receiv'd: Whereas all such Drink put over the Goods, should be directly run off with an open, small, continual Stream; that the Beer might have less Power to stay, astringe, and ferment the Goods, and thereby better prevent the Retention that their hollow Grains naturally make of the gross Part of any Liquor.

Secondly, here was an Omission of pouring on scalding Water after the Stale Drink was run off, in order to wash away the glutinous, gross Parts that the Beer had left on the Goods, which was to have prepared it for the Reception of the next Lading over more Stale-Beer; that the small Brewer very judiciously did, and by his alternate Additions of cold Stale-Beer, and scalding Water, he each time kept his Goods in right Order, so as to prevent their being clogg'd with the heavy thick Parts of the Beer; and thus recovered his damaged Drink. But then in this Case I must remark, that the small Brewer had the Advantage of the great one, in his Brewing of only four or eight Bushels of Malt; for here he could put over the several Parcels of Stale Beer and Water at Pleasure, which the great one could not so well, by Reason of his large Copper, Mash-Tun, and limited Times of Brewing; for in this Affair, there is a great deal of Leisure required, to give time to the Stale-Beer and Water to run off in a small Stream, that the Liquors may have the more Time to bring away with them the Goodness and
Virtue

Virtue of the Goods; otherways the damaged Beer cannot have a perfect Cure. And if there is a Quantity of such Drink to be cured, it may be done by repeating the Brewings till all is over. But here may an Objection arise, that such Drink may be thorough clear and fine; and that there is no Yeast nor Foulness to cause a Fermentation and clog the Goods. To this I answer, that all Drinks that have passed a Fermentation and Digestion by Yeast, are tinctured and incorporated with it; and tho' the Drink is aged, yet will the Effects of the Yeast remain in its Body in some Degree, and cause such a Fermentation; as may be perceived by the thick Froth of Malt-Liquors, when only warmed over the Fire for present Drinking. But admit there was not the least Yeast in the Drink, yet such strong Malt-Liquor has a much grosser Body tho' ever so fine, than Water; and which consequently will hinder it a free Percolation through the spongy close Grains, that like a Sieve will keep back the Sisy Part of the Beer, and transmit a thinner Liquor, as it happened in the great Brewer's Case.

A Third Way.

Take three Pounds of Hops that have been boiled in a first Wort only half an Hour; and as soon as they are cold, put them into a Hoghead of prick'd or stale damaged Beer or Ale. Then take two Pounds of pure soft fat Chalk; break it small, and put it likewise into the Cask; and if the Drink is not too far gone, it will fetch it again into a smooth Mellow fine Condition.

A Fourth Way

Is done by mixing new Drink with the old; but in this there is required a particular Management;
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for if too much of the stale prick'd Drink is incorporated with the new, it will not answer your Expectation; therefore observe to order this in a due Proportion; let there be one Gallon of such Stale Beer mix'd with three Gallons of new at least, that the latter may have the greater Power; for it is by such superior Force, that the acid sharp Qualities of the Stale, are overcome and reduced into the smoother Nature of the new, and thus it will bring the whole Body of the Mixture under a new Fermentation, that will both clear, fine, and soften it: An instance of which I knew done in a Kilderkin that had about six Gallons of Stale hard Beer a little prick'd. To this was put ten Gallons of new that work'd it well, and at six Weeks end, when the Cask was tapp'd, the Drink proved very clear and good.

C H A P. VII.

The Receipt for Brewing Dorchester-Beer.

Boil the Water and let it stand, till you can see your Face in it; then put your Malt in by Degrees, and stir it; let it stand two Hours; then leak on your Complement: Boil the Wort and Hops thirty Minutes; cool it as soon as possible, stirring it that the Bottoms may be mingled; then set it in the Guile-Tun, till it gathers a Head, which must be skimmed off; then put in the Yeast, and work it till the Head fall; then Tun it, keeping the Cask filling up so long as it will work.

Remarks on the Particulars of this Receipt.

This Receipt came to my Hands from a Physician who has a Name for being curious in Malt-Liquors: However, I shall make my Remarks on its Particulars,

The Receipt for Brewing Dorchester-Beer. 35

lars, for the better Understanding of the Nature of the Ingredients, and the several Methods here prescribed for their Uses. And first, I am informed, that at *Dorchester* they lie on a Chalk, which may afford a good or bad Water. If it is soft, and it will easily lather, it then is excellent for this Use; but if it is hard, creeky, and curdling, it is as bad; for Experience has proved, that astringent or binding Waters are not agreeable, notwithstanding the common Use they are put to in Brewing Malt-Drinks; because their hard Qualities will still remain in the Beer or Ale, and affect the human Body accordingly: For tho' it has passed several Digestions in Brewing; yet will not the mineral Nature of such Water be totally destroyed, as is evident in the Taste of Beers and Ales tinged by them, that will still communicate the bad Properties of such Waters to the Palate and Body, after having lain many Months in the Barrel: They also naturally give a sharper Taste, and induce Staleness in Drink much sooner than the softer Sorts; and if there are any unhealthy Qualities in them, or in the Malt, Hops, or Yeast, they are the sooner and faster fixed in the Body, as their astringent binding Properties have more or less Power.

It says that the Water is boiled.—It's true, according to the old Way among the private Brewers, this Method is followed: but by the more intelligible Sort, it is not; but only so much heated as to be ready to boil, or at most just broke into Boiling; for the longer it boils, the weaker it is, and the more unfit for Brewing; because the Spirits of the Water would evaporate away in the Steam, which ought as much as possible to be prevented; and therefore in great Brew-houses at *London*, they are right in this Article of not boiling their first Water or Liquor to the Expence of its Spirits, which are truly worthy of Conservation as they tend to the Preservation

36 *The Receipt for Brewing* Dorchester-Beer.

vation of the Drink, and giving it an agreeable brisk Flavour to the last.

Letting it stand till you can see your Face in it. — Is what I must own is generally practised throughout the Country, as an Indication that the Water is in a true Temper to receive the Malt; but in this also I cannot commend the Country Method; for if the Water did not spend itself in the Copper by boiling, it will now in the Mash-Tub, and there be deprived of its Natural Spirits in Steam, that here have an Evaporation for a Quarter or more of an Hour: But to be more particular in this Point, I cannot but think this Invention was first contrived to supply the Ignorance of the Brewer, who indeed is by this Means under less Hazard of committing a Mistake, than if he was to do as the *London* Brewer does; who, instead of staying till the Water cools in the Copper, lets in a Parcel of cold Water directly; and thereby brings all his Liquor into a Temper at once, and so prevents the Mischief that boiling the Water would do. But this is a Piece of Skill that every one is not Master of; and to such the old way is preferable.

Then put your Malt in by degrees, and stir it.— This has been such a random Direction in Receipts of this Kind, that I never met with a Brewer in my Life, either great or small, that I ever heard dispute about this Matter, or even mistrust there was any thing in it beyond common Management: But I am sure there is considerable, as I have constantly found by Experience, tho' their Mouths are frequently full of disallowing what is generally called a Pudding-Consistence in the Malt; and that such a Misfortune is only brought to pass by one particular way, *viz.* by scalding the Malt, which I own may be done: But I can now assure them, it may be done another way, and that is, by mashing the Malt too long; and then the
Brew

Brewing is never truly Natural where the Water is put over by the Hand-bowl, or what is called lading over; by reason the Malt then will lie in so heavy and close a Body, that the hot Water can't have so quick, free, and easy a Circulation about all the Sides and Parts of the Malt, as when it lies looser: And therefore, when the Malt is put into the Water, it should run but slowly, and be stirred as little as possible; I mean no more than needs must to keep it from balling; and then the Water will have free Access to all the light Body of the Malt. It's true, this most serviceable Nicety does not affect the great Brewer in his large Quantities of Malt, or where the Water ascends through a false Bottom, and the great Oars are used several Times in a Brewing; because they don't here lade over by degrees, but mash all at once. However, every one to their Convenience and Mind; the Lading over by degrees pleases me best.

Letting it stand two Hours. — This is soon said and writ; but there is more in the Matter than at first seems: The letting it stand two Hours, is a very good Way to give the Water Time to enter the Pores of the broken Malt, and extract its Virtue: In this Respect I approve the Country's Method beyond that of the Brewer, who generally lets it stand only one Hour; but I like his Way best, that caps the Malt or Goods: That is, so soon as the first Mash is done, he puts some fresh Malt spread over it to keep the Spirits in, and prevent their Escape in Steam, which is an excellent way to give the Drink the true Flavour of the Malt; that it will be sure to do, if it thus lies two or more Hours under Cover.

Leaking over. — Is what may be called putting over the Malt at times, many Hand-bowls of Water; that it may run gradually off, and wash away the Flower of the Malt by a slow degree, that the Vir-
tue

38 *The Receipt for Brewing Dorchester Beer.*

tue of the Malt may be leisurely extracted ; which is more natural, and much better, than by hasty Proceedings ; but this I have said enough to elsewhere.

Boil the Wort and Hops thirty Minutes. — This Article I would, if it was in my Power, reform in the first Part, but not in the latter. I am very sensible that the first Publication of the Hops true Nature, has done a great deal of Service in the World towards the Enjoyment of more wholesome Malt Liquors than heretofore this Nation usually enjoy'd ; and I would contribute the best of my Power, that the Wort may have also its Cure as well as the Hop : And therefore I advise, that the Wort, instead of being boiled half an Hour, may be boiled briskly till it's broke enough ; which may easily be done, if it boils but half an Hour before the Hops are put in, and then boil it longer with the Hops in ; or put in the Hops at the first boiling of the Wort in one or two Bags, and after half an Hour, take them out, and boil the Wort on by its self : Thus both the one and the other will have their due Cure : For in my Opinion, it ought to be established as a general Rule, that no fresh Hop ought to be boiled above thirty Minutes in Wort, nor the Wort boiled less than till it breaks into large Particles ; for if they are, I am sure the Liquor must suffer in some degree ; first, by the nasty, earthy, gross Parts of the Hop ; and secondly by the Wort's being raw, and not thoroughly digested.

Cool it as soon as possible. — This answers Nature's End in the best Manner ; for Wort can't be too cold to work, if it can be made to work at all : By this Temper it is, that the Wort is prevented fretting, and the fine Spirits of the Malt dissipated ; all violent Fermentations being an Enemy to Nature, and are often the Cause of sudden Staleness and Sour-

Sourness; for which Reason Brewers dare not take the same Liberty in Working of keeping Beers, as they do in the common Brown and Pale Ales that are to be drunk directly; because it would be in Effect forcing of Nature beyond her genuine Motion, which is the best Dictator, and proves herself most improved, when she is most gradually managed and assisted; and therefore the Art is so to work all Malt-Liquors, that the Salt and Sulphur, with which they abound, be kept in a due Regularity.

Stirring it that the Bottoms may be mingled.— This is very particular indeed, and contrary to the Practice of all *London* and *Country* Brewers that I ever knew: For in *London* the great Brewer takes great Care to leave the Dregs and Sediments behind in the long fixed Backs, and draw off their Worts from them as fine as possible, as thinking such gross Feces would prejudice the Drink, especially the keeping Sorts: Indeed it must be allow'd that foul Sediments as they subside the Thickness of one, two, or three Inches in a Butt, will become a Feed or Subsistence to the Beer for some time; but then let it be considered, that by putting all the Sediments into the Cask along with the Beer, the worst Part of all that is loaded with the gross earthy Salts and Sulphur of the Malt, Hops, and Yeast, are here reserved in the Beer to the last; whose harsh, earthy Qualities being very unwholesome, will not fail to communicate their rough Properties to the Drink, and on Change of Weather be very apt to disturb the Body of the Beer, and bring it under a Foulness and Staleness sooner than ordinary; for as the Feed is, such will be the Nature of the Malt-Liquor. The greatest Artists that have had a regular Learning in the Art of Brewing, allow that Drink, tho' it be ever so fine, put into the Guile-Tun out of the Coolers, will carry with it into the Cask such a share of Matter, as will become a sufficient Feces
for

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for feeding the Beer some time, if there is Malt enough given it: But where that is doubted, and that the Drink may be further improved, any of the Compositions, or rather the Balls, mentioned in my first Part, may be used, which I have experienced to be excellent for this Purpose, and are of a much more preserving, fining, and wholesomer Nature, than the foul natural Sediments of the Drink.

Then set it in the Guile-Tun till it gathers a Head, which must be skim'd off. — It's very likely a Head Will arise in the Guile-Tun, where all the Feces are put in with the Wort; because the Salt and Sulphur of the foul Dregs, will give it a Sort of small Fermentation, and cause a Cream to appear in a Head, which he says is best skim'd off, and so do I; for it is a Sort of Excrement that the Wort discharges of itself; and the less there is of such left in the Drink, the better it is. But I never like to see Wort have a Cream on it before the Yeast is put in; for oftentimes this is a Prefage of the Fox.

Then put in the Yeast, and work it till the Head fall. — This must be done without all doubt, and should be work'd as cool as possible; and when it has got to a good Head, to beat the Yeast in only once, and cleanse it into the Vessel, is the best Way of all others for keeping Beers. By this the Drink will have its Body fully opened with a due Fermentation, that is perfectly necessary to make it fine, and drink clean and light. I knew three petty Brewers of three Minds in this Respect. One said, draw off the Drink by a Cock placed six Inches above the Bottom of the Tun or Tub that the Sediments may be left behind. A second said, do that and skim off all the Yeast besides. A third said, put Beer, Yeast, and Sediments all into the Barrel. Now let us examine which of the three was most right. The first, had surely, a true Notion of the Matter; because it

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is these Fæces that would afterwards cause a violent Fermentation in the Barrel, and bring on Acidity, and Staleness in keeping Drinks: And to hinder their incorporating with the Beer is the way to have fine Drink. The second that was for taking off Top and Bottom, declared himself more in the right than any of the three; for that there would be Yeast enough left in the Drink to cause a Fermentation in the Barrel, notwithstanding the Top and Bottom are taken off before. But the Third, I think, wholly in the wrong, that would have all put into the Cask; for then by Consequence there must be a violent Fermentation excited, while such Drink abounds with the Salt and Sulphur of its additional Yeast, and Dregs of its own Body; that are two Principles of such a sharp, fiery Nature, as are easily put in Motion, even by the very Influence of the Weather; and which is the Cause that such Beers are so frequently disturb'd on its Changes, and become stale, thick, and sour in a little time.

Then run it, keeping the Cask filling up so long, as it will work. — A very good Way, indeed, and what is consonant to the best Management in Brewing; and for that Purpose some of the Drink is kept out by way of Reserve for this Use, having a thick Head of Yeast on it within about two or three Inches of the Top; which will greatly contribute towards keeping in the Spirits of the Drink; for I think there cannot be too much Security taken for keeping in the Spirits of the Drink, which are constantly upon the Wing, and ready to fly away upon all Occasions; and then such Drinks will soon become vapid, stale, and sour. But there is a most contrary Way practised by some Publicans that I know; and that is, when the Drink has done working, and the Yeast duly settled, there will be a thick Part and a thin Part; now as to the thin Part, these Sort of avaricious People carefully run as clear off the Tub or Pan,

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that

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that it is catched in as possible, and returns the same into the Cask, reserving only the thick Part out : This is another horrid, nasty, unwholesome Part of Brewing, that is worse than what I have complained of before, of beating or thwacking the Yeast into working Ale or Beer; for this is the very Tincture or Quintessence of that poisonous Excrement, and is so opposite to the sound Nature of Drink, and the Health of the human Body, that in the first it will immediately infect the whole Cask of Malt-Liquor with its fulsome Taste, and in the Drinker cause a Squeamishness or Sickness in the Stomach and Head for some time after, and often violent Cholicks. But according to the Proverb, What the Eye never sees, the Heart never rues; for were the ill Effects of such Liquor truly known, I don't suppose the very necessitous Man would take it into his Belly, that could possibly satisfy Nature any other way; because in very Truth, Drink thus poisoned, as I may in some Measure call it, with the most corrupt refuse Part of the Beer and Yeast, is only fitting for the Hog-Tub, or which is much better, to be thrown down the Kennel; for there it will do least Harm. It once happened as I was drinking at a Publick House in a Village, among other Discourse, the Brewer very frankly own'd, he always took particular Care to let the Yeast settle after it had work'd out of the Barrel; and then poured off the clear or drinky Part into his Vessel. On this I told him some of the pernicious Consequences attending such Mixture. His Answer was, That truly he had paid Excise for it, and he could not afford to lose it. This was only one I accidentally found out; but I do not in the least doubt, but there are Thousands in the Nation besides, that are guilty of this adulterous Part of Brewing; and then it is no Wonder that Cholicks, Stones, Gouts, Vapours, and Consumptions, &c. are so rife as they now are: Nay, the dead Drop-

pings,

pings, or Leaking of the Tap, are put by several into a reserved Cask, to digest and recover itself with Time, and then become saleable Drink; but this I likewise detest for it's nasty, vapid, unhealthy Quality that it contracts in the open Tub, exposed sometime to the Air, and other incident Corruptions, which must necessarily retain a filthy Nature, tho' confin'd two or three Months in a Vessel afterwards. And therefore I am incited to take Notice of the Hardship, that such Publican Brewers lie under of being forced to pay Excise for such excrementitious Drink, and thereby tempted to prejudice the Health of the ignorant Drinker, for the sake of reimbursing themselves of the Duty, and which, I think, should be a moving Consideration to an Officer to take care of oppressing the Subject with Overcharges in Gaging, that I remember too frequently happened to me, when I was concerned in the Publick Brewery. And as I thus write in Vindication of the Subject, I would nevertheless be understood, I am likewise a Votary for the very same Justice on *Cæsar's* Side, whose Dues are equally his Right; and therefore I shall here insert the Copy of a Letter written by a common Brewer in *London*, which I found amongst his Papers after his Death, viz.

Mr. ———

THIS is to inform you, that about eighteen Years ago, I set up the Trade of Brewing, and thought it not amiss to take all Advantages and Opportunities, to enrich myself by it, in respect of the Duty; but after I had gone on in this Error, God was pleased after two Years Gain this way, to lay a great Affliction upon me in respect of my Health; and being brought very near to the Grave in all outward Appearance, and being under the Apprehension of the awful Justice of the Almighty, I took in hand

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the Work of Examination more seriously ; and calling to Mind the Sins of my Child-hood and Youth, I proceeded to those of Riper Years, and of my present Circumstances ; and tho' before I thought it no Crime, to save what I could of the Duty, now Conscience tells me that it was a Sin, and a very great one ; because it's not rendering to *Cæsar* the Things that are *Cæsar's*, as our Saviour taught us to do ; and not doing to another, as I would he should do unto me. If I were the King or Governor, I would not be willing to be defrauded of what was given me, and becomes my Right by Law, (as this to the King or Queen of this Reaim is) ; and our Saviour that said Render to *Cæsar*, hath in this taught us to be just to our Governors, as well as our Equals, and pay Honour to whom Honour, Fear to whom Fear, Custom to whom Custom, and Tribute to whom Tribute is due. These things being now set in a clear Light, I was brought to a Hatred of this my beloved Sin of Gain, was made to resolve against it, and have kept from the Practice of it ever since ; tho' you may be assured, it was as pleasing to me, as to yourself, before I saw it to be a Sin ; but seeing I went on in it but two Years, I do account myself obliged to make Restitution to the Government for it to the utmost Farthing. I send this to admonish you to do the same ; and tho' you may think it a hard Task, yet it's no more than what I put myself under ; for there can be no true Repentance without Restitution, where we have Ability to do it, as you and I have. : And tho' you may say it will amount to a great Sum, it therefore calls the more for the Payment of it ; and if it comes to all you are worth, yet it's best to restore these ill-gotten Goods ; for what can it profit you or me, if we gain the whole World, and lose our own Souls : And therefore my Advice to you is, seeing you cannot reasonably expect to live much longer, to cast up as near as you can, all you have defrauded

defrauded the Government of, all the time you brewed, both by whole Guiles, and Parts of Guiles, in making your Length short, and then making it longer with Small-Beer, and also by hiding and otherways, which you know best; but it would have been best, not to have known any thing of it in Practice. It's my Resolution, that when I can't follow a Trade or Calling without defrauding, I will lay it down. I think you have laid it down as to yourself, but that is nothing, unless you make Restitution for all your unlawful Gain; and warn your Sons that they do not the like, but immediately break off from these wicked Practices, which otherways will be both to you and them Gall and Bitterness at the last: And that it may not be too late, I send this to you, not to do you Hurt, but Good; not to make you Poor by restoring, but by restoring to make you Rich in Faith and Heirs of the Kingdom of Heaven; which I think cannot be, while you retain the Sin or the Effects gotten by the Sin, or uphold or incourage your Sons in going on in the same Manner; for which God has promised to visit the Sins of the Fathers upon the Children to the Third or Fourth Generation, and especially such Children as go on in their Fathers Sins, as your's do in this Sin of Covetousness in the highest Degree; but if you will not own it to be a Sin, I tell you you must own it now, or you will be forced to own it when it will be too late to repent, or make Restitution for the Wrong you have done in it. I preach no other Doctrine to you, than what I take myself; and having done what I thought was my Duty, and what I was bound to do, I leave the Event to him that disposes of all Things. But withal I desire you to do what you can to restrain all others, you know have been, or are in this horrid Sin of Fraud and Injustice.

C H A P. VIII.

A Receipt for Brewing Drink after the Shropshire Method.

WITH regard to the Ingredients or Materials of Brewing good Beer and Ale, three Things ought principally to be taken care of, *viz.* Good Hops, good Malt, and good Water. As to Hops, provided they are well pick'd and dried, the *Kentish* Hop is esteem'd for Strength, to equal, if not exceed any of our *English* Growth, &c.

The Water to be made use of, if it can be had, is best that comes off a Marl or Chalky Bottom, or River Water after a Flood, reserved in Tubs with Taps two Inches from the Bottom to draw it off clear from the Sediments; but in some Places as there is a Necessity, so there are Ways and Means of meliorating the Water by throwing Chalk into, or ramming the Bottoms of Ponds and Wells with clayey Marl, &c.

That Malt is esteemed best, and I think deservedly too, which is made after the *Nottingham*, *Darby*, or *Dorchester* Way, which for Fineness of Colour, Strength and Taste, exceeds all other. Having obtained these three Ingredients in Perfection, the next Step towards having good Drink, is to take care of the manner of Brewing, which is various and different according to the Usage of different Places; But one Way has been universally approved of in Places famous for good Drink. The Way is this: Having boiled your Water very well with a little Bran thrown into the Copper, in mashing up, put about three Pecks or a Bushel of your ground Malt into a Tub; then pour upon it boiling hot Water; then stir it till all the Malt is wet; then lift it into your Mash-Tun, and so proceed till your whole Quantity of Malt is wetted;

wetted; then let it stand three or four Hours; when you draw off, let it run from the Tap in a small Stream, sprinkling the Top of your Mash once in three or four Minutes with hot Water. By this Means you will not disturb the Sediment, and may make your Ale as strong or as small as you please. In boiling observe the breaking, &c.

From the Coolers to the working Fat, from thence to the Vessel, &c.

Remarks on the before-written Receipt:

This Gentleman, it's plain, intended out of an honest and generous Disposition to benefit the World, by letting them know his Way of Brewing as it is practised by himself, and several others; and I must own I have drunk Ale and Beer at his House free of any other Fault but two; and they were, the Liquor's not being fine in the Glass, nor clear of that nasty, bitterish, earthy Taste, that all Hops give Drink in which they are boiled too long. But to be more particular, I will examine his Receipt from the Beginning, where he says, that good Hops are necessary; and that the *Kentish* Hop is equal to, if not exceeds all others. This, I own, is my Opinion; but why a peculiar Commendation is due to the *Kentish* Hop, is to be accounted for: It is my Notion, that they have no more Advantage in their Soil, than those of *Hertfordshire*, and some other Counties; because, in both, as I remember, there are Sands, Chalks, Clays, and Loams. Their Situation almost alike hilly, or what may be called Chiltern Countries, a Title that distinguisheth them from the Vale Countries; so that I can't think *Kent* has any Preference on that Account: But I must be an Advocate for it on two others; and they are, first, That as *Kent* lies Southward from *London*, it certainly has a greater Influence of the Sun's Rays than *Hertfordshire*,

Jordshire, and some others that lie more Northwards, which undoubtedly is a great Benefit to the Growth and Spirit of the Hop, as ripening them sooner and better, than those that have not such a happy Aspect, and are thereby delivered more from the Power of the cold Dews and Frosts that happen in the Beginning of *September*, to others which are gathered about that Time, and is prejudicial to them and many other Vegetables in some Degree by the Chill it gives them, which is the Reason that some of the Curious gather their Golden Pippens before they are thorough ripe, as rather having them a little shrievell'd, with a fine Spirit in them, than full mature, and damaged by the Cold; for the hotter the Weather is when they are ripe and gathered, the better it is for the Hop; and by the same Rule the *Southam* Cyder is stronger than any other in *England*; because the Fruit has a favourable Assistance from the Sun in this Southern Situation as well as the Root, that is obliged here to run shallow on the Marble Rocks, which indues the Fruit with a stronger Spirit than others are. Secondly, The Hop in this County of *Kent* may probably receive a stronger Spirit than others from the Effluvia of the warmer Air, that becomes more potent by the exhaled Vapours of the great Quantity of Salt Water, that I am apt to believe encircles near two Thirds of this County; and so I take it to be with what they call the Sea-Wormwood that grows on the Rocks about *Barnstable* in *Devonshire*; which is very Valuable for its Flavour and Strength beyond the common Sort that grows on some of our waste Grounds; and that by reason of its shallow Root, the Baskings of the Salt Waves, and the thin Warm Air or Vapour that arises from the Water, that is abundantly more subtle and finer than the gross Land Air; which undoubtedly impregnates this Vegetable with an excellent Spirit; as the *Kentish* Hop may also

also receive for some of the same Reasons. Yet some say the *Worcestershire* Hop excelles.

He comes next to the Water, and praises a Chalk or Marl Bottom, or River Water after a Flood. To this I answer, he is right as to the first two ; but as to his taking Water out of a River, presently after a Flood, and putting it into Tubs to settled before it can be used, I can't be of his Opinion ; because while such Water is making its Sediments in open Tubs, the Spirit of it dies in some degree, and you lose the best Quality of the Water, which all Brewers in a singular Manner ought to employ their greatest Care to preserve ; and that such Water has a powerful Vital Virtue, is evidenced (as I have in another Place observed) from that of the *Thames*, that is said to stink two or three Times in an *East India* Voyage, and at last upon opening the Bung, will send forth a fine Spirit of an inflamable Nature : And therefore where it can be had out of a River pure and clear, I think it far preferable to use it directly, than to obtain it by the Tap out of Tubs, unless meer Necessity is the sole Reason for the contrary.

Malt is the other Article ; and which he very justly allows to be the best of all others, when it comes nearest to the *Nottingham*, *Darby* and *Dorchester* Sort, which are dried with Coak ; and therefore are excellent for their Strength, pale Colour, and Flavour ; because the Kernels by this Sort of Fire are free from the unwholesome and unpleasant Quality of the Smoak, which all other Fuel in some degree or other taints the Malt with ; and not only hurts it in them two Evils, but also with their more irregular Heats that all Fires are subject to, except Cinder and Welsh Coal, whereby the Malt is better made in some Parts of its Body than others ; now the truer it is dried, the more and finer Drink it will make ; and then such Malt is further improved in its Strength and Colour, by the sulphureous pale Effluvia, arising

out of the Coak or Culm: But this Effect in the latter is apt to be too strong and unpleasant.

He also adds, that boiling Water is to be poured upon three Pecks or a Bushel of Malt, first in a Tub, and after it is stir'd, to be all put into the Vat, and so proceed doing the like by another Bushel, till all is put into the Mash-Tun. This is the Reverse of what I have taught in several of my Methods of Brewing; and it is my Opinion, that those who so universally (as this Gentleman terms it) follow his Receipt, it is because they know no better Way; for if he knew the *Nottingham*, *Darby*, and *Dorchester* Rules of Brewing, as well as he does the Nature of their Malt, he would I believe alter his Mind and Fashion; for in those Places they are Strangers to such a Hodge-podge Way, as being their chief Endeavour to keep the Malt, Goods; and Grains as light as possible in the Mash-Vat, or Tun, that the Water may have free Access to, and into all the Parts of the broken Malt, the better to extract its Quintessence and Spirit; and that they may do it gradually, they take special Care not to let the Water be boiling hot, when the Malt first unites with it, lest its fiery Violence, scald, lock up, and stop the Pores of the Malt, make it clot and cake together, and the most flowery Parts of the Malt run whitish, glewy, and sizy, like Paste; for when it so happens, their Hopes cease from obtaining good Drink that Brewing; because then the Malt will never mix kindly, nor give out its Strength to the Water. This is also proved in scalding of a Hog; where the Judgment of the Butcher is tried in taking his Water in such a Degree of Heat, as will cause the Hair to come off easily; but if he lets it Boil, it will rather set and fasten it on: Nay, the *Nottingham* Brewer is so tender in this Article, that after he has put a Bushel of dry Malt, over five that have been just mash'd to keep the Spirit, in; tho' it has lain

thus two or three Hours, yet he dares not let his Water be boiling hot, that he first lades over, lest it scald and spoil that Bushel; but takes care that it want several Degrees of that Heat: And when it is thus wetted, he then boldly puts over his Jets or Bowlfuls of boiling Water; for then all is out of the Power of this Sort of Damage. It's true this mixing of the Malt with boiling Water first in a Tub, will prevent its Balling, or gathering together in Heaps, so that the Water can come to all its Parts (which is the chief Reason, I suppose, that this Way was first invented); but then it must consequently bring all into what I call a Pudding-Consistence, that will cause the Malt to lie so close together, that the boiling Water afterwards can't have a free Circulation to all its Parts; nor can its Goodness then be got out so regularly and easily, as if it lay in a looser Mass; and therefore to supply this Misfortune of Balling, I put in the Malt very leisurely upon the Water in the Mash-Tub, and stir it, as I have already directed in the Chapter of Brewing Wheat-Malt, where the rest of his Receipt is fully answered,

A Receipt for Brewing a Drink according to a Method used in Philadelphia in Pennsylvania.

Take five Pounds of Molosses, half a Pint of Yeast, and a Spoonful of powdered Race Ginger. Put these Ingredients into your Vessel, and pour on them two Gallons of scalding hot, soft, and clear Water; then shake them thoroughly well together, till it ferments, and add thirteen Gallons of the same Water cold, to fill up your Cask; let the Liquor ferment about twelve Hours, then bottle it off with a Raisin or two in each Bottle.

This was given me by a Person, who says that a pretty wholesome cheap Drink for quick spending, may be made after the Form of this Receipt: But as I never yet tried it, I leave the Proof to those that may think fit to make use of it.

Another from South-Carolina.

I lately had an Information from a Person who lived six Years at *South Carolina*, and belonged to one of his Majesty's Ships of War there, that they have no Malt-Liquor, but what comes from *London* or *Bristol* at 10d. per Bottle. As for their common Drink, a Table-Beer, he says its very good, but apt to purge those that are nor accustomed to it upon their first drinking it; and if very new, as they are forced by Necessity sometimes to drink it so, it makes them very Sick: It is made in the following Manner. --- They make use of no Malt or Hops, but take a sufficient Quantity of the young Pine Tops (which they have growing in great Plenty in the Woods there, and from which Trees is procur'd the Turpentine they deal so largely in,) and boil them in Water for about an Hour, or till the outward Skin or Rind peels or slips off; then they strain the Liquor; to which they put a sufficient Quantity of Treacle, (the Quantities he could not inform me) or Molosses, which they boil for some time; then cool it a little, and put it up in their Vessels, which they call Punchins, and so work or ferment it being Strangers to Yeast. They take some of their Potatoes (which are of three Sorts, the yellow or Brimstone as they call it, the Red, and Brown; there are some of them a Foot or more long, and are very sweet in Taste almost like to our Parsnip, (but the Natives prefer the *Irish* Potatoe to eat with their Meat.) These they cut into Pieces very small, and mash them; then put them
into

into their Drink, which works it very well, and their Sweetness gives the Liquor an agreeable Relish; for its apt to be a little too bitter from the Pine-Tops, which are very strong, but very wholesome; tho' when they can get Spruce (which is somewhat scarce, and grows among the Rocks) they prefer that Drink before that made with the Pine, both for Wholesomeness and Pleasantness. They preserve the Grounds for to accommodate Persons, as we do our Yeast, that are Brewing.

A Country Victualler's Way of Brewing.

He has two Mashing Tubs, one that will mash four Bushels, and the other two; and one Copper that holds half a Hogshead. The Water, when boiled, is put into the biggest Tub, and a Pail of cold Water immediately on that: Then he puts his Malt in by a Handbowl full at a Time, stirring it all the while, and so on in a greater Quantity by degrees; (for the Danger of Balling is mostly at first) till at last he leaves half a Bushel of dry Malt for a Top-Cover: Thus he lets it stand three Hours. In the mean while another Copper of Water is directly heated, and put as before into the other Mash-Tub, for mashing two Bushels of Malt, which stands that Time. Then after the Wort of the four Bushels is run off, he lets that also of the two Bushels spend away, and lades it over the Goods of the four Bushels, the Cock running all the while, and it will make in all a Copper and half of Wort, which is boiled at twice; that is, when the first Copper is boiled an Hour, or till it breaks into large Flakes; then he takes half out, and puts the remaining raw Wort to it, and boils it about half an Hour till it is broke. Now while the two Worts are running off, there is a Copper of Water almost scalding hot made ready, and is put over the Goods or Grains
of

of both Tubs ; where after an Hour's standing, the Cock is turn'd, and this second Wort boiled away, that he again puts over the Grains of both Tubs to stand an Hour ; which when off, is put into the Copper and boiled again, and then serves hot as it is instead of the first Water for mashing four Bushels of fresh Malt ; where after it has lain three Hours and is spent off, it is boiled ; but while it is in the Mash-Tub, a Copper of Water is heated to put over the Goods or Grains that stands an Hour, and is then boiled for Small-Beer. And thus he brewed in all ten Bushels of Malt as soon as he could, with two Pounds and a half of Hops for the Whole.

Another,

Whose Copper holds about twenty Gallons, makes half a Hogshead of Ale off four Bushels of Malt, thus : He just mashes the first Copper of Water, and lets it stand three Hours before he draws it off, which he reserves in a Tub with Hops ; then having another Copper of boiling Water ready, he lades that over, a Hand-bowl full at a time, keeping the Cock continually running till all is off ; then he boils this second Wort first with Hops till it breaks ; when he takes half out, and puts the first Piece of raw Wort to the rest, and boils away again till it breaks ; then makes a Kilderkin of Small-Beer without any Hops, which when cold, he puts one Pail of cold Water to it to keep it from souring, and the next Day it is heated, and serves for the first Liquor towards brewing four Bushels of fresh Malt next Day, and at last makes a Kilderkin of Small-Beer. By which Method he pays no extraordinary Excise. — While the Wort is boiling, this Brewer for some time lades it up and down with a Hand-bowl, believing this Motion contributes much towards making the Wort break the sooner.

C H A P. IX.

*A Dissertation on several Parts of the
Brewery.*

ANOTHER, to brew four Bushels of Pale Malt, useth one Pound and a half of Hops thus: He rubs them well between his Hands, and then cools a little Wort, in which he wets them all; then puts them into a fine Net, and boils them only twenty Minutes, but his Wort longer till it breaks; by which he enjoys a fine palatable Liquor, fit to drink at a Month's End. — Remarks on the same — First, He is certainly right in using that Quantity of Hops to four Bushels of Malt, even for common Ale to be drunk in a little time; because as the Pale Sort is the most luscious of all others, there is required no less than so much. Secondly, And to have the purest spirituous Part of this Vegetable in a little While, he is no less judicious in rubbing them first; for by such Frotation they are put into a Condition of imparting their Essence more freely to the Wort in a little Time. Thirdly, his Method of soaking them first in cool Wort is good; for if Hops are put directly into boiling Wort, as the common Way is, you may then expect the Pores of them to be locked up and scalded by the astringent Heat of the Liquor, and thereby hindered emitting so much of their Virtues as is necessary in that Space. Fourthly, his Management in boiling the Wort longer than the Hop, and till it breaks, is a most sure Way of giving a Cure to both; for you may depend on it, if Worts are under or over boiled, they are not rightly brewed. If under, then it will not work kindly in the Vat, nor fine truly in the Barrel, nor taste pleasant in the Glass. If too much, its viscous Parts will not thoroughly break by Fermentation;
For

For by too long boiling, the Body of the Wort gathers into a thicker Consistence than it ought to have and when very much boiled, it's apt to fox, or become ropy in the Cask, and thereby subject to the Breed of Worms while it lies in the same. Fifthly, This may then justly upbraid the old erroneous Way that some are guilty of, who boil all their Beers and Ales by the Hour-Glass or half, or, in plainer Terms, in the Dark; for 'tis impossible for the Art of Man to adjust such Boiling by that Rule, or any other, except the Eye; because one Sort of Malt won't break so soon as another, nor will one Sort of Water admit of it so soon as another, nor will — a slow Boiling so soon as a quicker; and the Reason for such a wrong Method of Brewing was occasioned two Ways: One by the general ill Custom of the Times; and the other by the Difficulty that attends such an Observation in the great Copper, where the Curb is put up, and the Top of it is four or five Foot higher than the Wort, that leaves only a narrow Vent for the Steam to ascend out by; and then such Wort that is under or over boiled, by Consequence can't be so wholesome as that boiled to its true Crisis, by Reason it is not of so easy and natural Digestion; but like the Extrems of under or excessive boiled Meats, will not fail to disagree with the Constitution of the Body in a degree; and if such Brewers happen right, (as undoubtedly they sometimes do) it's more by Chance, than Cunning: But then where is the Prudence of those who have the Convenience of Buying or Brewing right Drink, and yet lay out their Money all their Year in bad Malt-Liquors, without regard to their precious Health (the greatest Jewel in Life) and the considerable Profit that may be obtained in saving the Excise; and how a Family may brew their own Drink in a little Room, and with a few Tubs, I think I have amply shewn in my first Book of the *London*
and

and *Country-Brewer*, besides many other serviceable Curiosities that since have been proved by those I never saw or knew, and their Praise sounded at the Booksellers Shops, &c. for the same. And as I have both in that and this Book detected the horrid Practice of beating great Quantities of Yeast into Ales, to the great Damage of the human Body; and also exposed the common but considerable Loss that Thousands fall under by Clay Bungs, I shall here only enlarge a little farther on the last. It's true, that these Bungs are certainly a very great Convenience to some Brewers, by being ready to supply the Place of better with little Trouble and Cost: But if a Person will but consider the several ill Effects attending the same, I am of Opinion, he will no longer suffer such a prejudicial Companion to be close to his Drink. For these are the Words wrote in *Dr. Quincy's Dispensatory*, page 223 — viz. “ We must consider that Clay is a mineral
 “ Glebe, and that the gross Particles, and Metallick
 “ Salts with which Waters passing through such a
 “ Bottom do abound, are, as *Dr. Lister* observed,
 “ not to be mastered; that is, indigestible in the
 “ human Body; not only therefore will these cause
 “ as he well argues, calculous Concretions in the
 “ Kidneys, Bladder, and Joints, and as *Hippocrates*
 “ experienced hard Swellings in the Spleen; but
 “ they must necessarily oftentimes, by their corrosive
 “ Quality, twitch and irritate the sensible Mem-
 “ branes of the Stomach and Bowels; and thus hin-
 “ der and interrupt the Digestion of our Food. Nay,
 “ besides all this, when they come into the Blood, it is
 “ no wonder if the small Canals of insensible Per-
 “ spiration, are frequently stop't up, and obstructed
 “ by them; for it is upon this score, that *Sanctorius*
 “ teaches us in his *Medicina Statica* Sect. 2. Aphor. 6.
 “ that heavy Water converts the Matter of Tran-
 “ spiration into an Ichor; which being retain'd, in-
 “ duces

“ duces a Cachexy ; what Mischiefs will ensue here-
 “ upon, every one sees, not only Pains in the Limbs,
 “ Livid Spots in the Surface of the Body, Ulcers,
 “ &c. from the Acrimony of the undischarged Moi-
 “ sture ; but many besides of those perplexing Symp-
 “ toms, which go by the Name of Hysterical and
 “ Hypochondriacal, that may take their Rise from
 “ the same Source.” — By which it may plainly
 appear what pernicious Consequence the Nature of
 Clay is of ; but least there are not enough ill Pro-
 perties in the Water, that is taken out of such stagna-
 ting Wells, whose Bottoms are a Clay, and with
 which many Thousand Barrels of Drink are brewed,
 truly, there must be an additional Evil, by a Heap or
 Pat of Clay on the Bung-hole, which by the jolting
 of the Dray-Carriage, is often wash'd for some Miles
 together into the Vessel, where it afterwards subsides,
 and becomes a Share of the Feces that such Drink
 feeds on ; by which its Essence is conveyed into the
 Body by the Vehicle of such Beer or Ale. And
 as a farther Proof of the metallick, saline Parts
 contained in Clay, we may only observe the glazy
 Quantities that run or gather from it, by the Ve-
 hemency of the Fire wherein Bricks are burnt that
 are made with the same Earth. And therefore in
 time, the discerning Part of the World will explode
 so nasty, and unwholsome a Thing from being used
 about their Casks of Drink, not only for the above-
 mentioned Reasons, but also for several others that I
 have mentioned in my first Part, and particularly for
 one I never yet took Notice of ; and that is, when
 such Pats of Clay are much mixed with the Yeast,
 that works sometimes several Days together through
 the Hole in its Centre, and remains on the Bunghole
 a considerable while, there is apt to breed, as I
 have seen many times, several Worms from the Heat
 of the Weather, and the putrifying Natures of the
 Clay and Yeast : But what the Eye sees not, the
 Heart

Heart rues not ; for so it generally is when Servants have the Bunging and Unbunging of such Casks of Malt-Liquors, and thereby passes unobserved by the many Customers. In this Case the Country People are most sagacious, where many who live among Plenty of red Clay, refuse any Application of this Sort to their Casks : On the contrary, they constantly use the Bung I have writ the Dimensions of in my first Book, and follow the right Method I have there mentioned of managing the same. pag. 3. These Considerations lead me still further to make Observations on the three Principles of Water, Malt, and Hops. And first of *WATER*

In my Brew-house, there were used two Sorts ; one the New-River, the other a Well : The New-River I must own is the best Sort that *London* affords for brewing, which was kept in a Recevoir or great Cistern, containing about thirty or forty Barrels under Ground, over which was a Wooden Floor, where a Firkin-man filled his small Casks of Beer three times a Week ; and as I remember, this Cistern was never cleaned in my Time ; for it was thought there was Business enough above Ground : But no Matter ; Who sees our vasey, muddy Sediments, that often encreased by the Foulnesses of new Supplies, and subsided at the Bottom ; where it from time to time tintured the succeeding Quantities of fresh Waters with its corrupt, unwholsome Qualities that keep Company with the Beer or Ale made with it to the last ; notwithstanding strictly speaking, all Brewing Utensils should be as neat as any used in Dairies, and accordingly are kept so by many, those that Brew their own Malt-Liquors especially. However it was thought good enough to Brew with, and relax the hard burnt Corns of the unwholesome Brown Malt. And for the Pale-Sort, we used the sharp, hard, stagnated Clay Well-water, that was thought most proper to extract the Quintessence out of this tenacious,

tough Grain. I have used the *Thames* Sort in Brewing to a considerable Advantage; I mean in making a greater Length of Drink from Malt by this Water, than any other would do in *London*; but how agreeable this was to the Health of the Drinker, if taken in the worst Part of that River, (for the best I own is a good Water) I leave to better Judgments. I shall only relate what a Person told me he tried on this Account; and that was when he was Journeyman to a Distiller, and his Master Abroad, he took the Opportunity of satisfying his Curiosity, by charging the Still with about 100 Gallons of *Thames* Water, and had for his Satisfaction only one off that he tasted, but soon spit it out in haste, as being of an unsufferable, nasty, brackish, muddy Relish. Another Case was that a Maltster living within a few Miles of *Dunstable*, was reported to have the best *October* Beer, by making use of his Horse-pond Black-Water, and accordingly it was taken by the Country for an Orthodox Story; and for what I know, it may have led others into an Error of using the same unwholesome Sort, in hopes of having the like fancied Success. But was I to act only as an Hear-say Author, I should certainly be very culpable as well as they, and more so as the Propagator of such considerable Damage, instead of detecting Errors, and directing profitable Methods. But to do the World Service on this Account, I shall here declare how a Person may brew with foul Water, (the Clay, Allom, and some other Mineral Sorts excepted) and yet have sound Beers and Ales, viz. — When you are confined to use a troubled, muddy, greenish, or even an ill sented Water, as many are in the Country, who have no other Supplies than what Ponds or Ditches, Cisterns or Tubs, afford, that generally, in dry Summers, become stagnated, and often contain in them many small Worms and other Animalcula. I say, in such a Case, boil your
Water;

Water; and while it is heating, throw half a large Handful of common Salt into a Copper of it, that holds a Barrel; and as the Liquor grows hotter, there will a Scum arise, which must often be carefully taken off, till no more appear: Then put such your boiling Water into the Tun or Vat; and when cooled by a Pan or two of cold, run your Malt on it by degrees, as directed, and you'll find that such foul Water will not only produce you a sound Wort, but also a white Yeast. For I am often forced by Necessity to brew with such Water, having only a Current out of the common Road that feeds my Ditch, and that Pond in my Garden. How happy also should the *Londoner* think himself for the Communication of this most serviceable Secret, on account of the *New-River*, *Thames*, and *Hampstead Waters*, that are very apt to run foul on great Rains, and Winds; but by this salubrious Antidote are obliged to throw off their otherways foul, nasty Fæces or Sediments, by a Scum that is hereby easily clear'd off before it passes the several Digestions of the Mash-Tun, Back, or fermenting Tuns; which when the Water was in such an ill State, neither I, nor the Workman that brewed for me, took any Measures to cure this grand Evil; for indeed to say the Truth, I then had no Notion of the ill Qualities of these fæculent Parts and Scums; tho' if we will but employ our Reason, there may be a true Conception easily made of both their unwholesome Natures. The first shew themselves to be the earthy, valsey Parts of the Water, by their ponderous Subsidence; for whenever there is sufficient Time and Opportunity allowed them, they will not fail to become a Body of Fæces at the Bottom of any Vessel that contains them. The second results from the first, as being the more light and frothy Part of those Fæces or Sediments, and are raised or separated from them, by the Agitation of the fiery Particles of the heated
Water

Water and Salt; and is of such Consequence to avoid, that every old Woman that can cook herself a Bit of Meat, will be sure not to be wanting in her Care of Salting the Water, and Despuming as fast as it appears, lest its pernicious Nature corrupt both her Meat and Soop, by being boiled into the same. And shall the Brewer be wholly regardless in this Matter, tho' he has a Thousand times more Reason; because he has more than a Thousand times the Quantity of thick, troubled Water to use and prepare for the most noblest Body in the World, even that which is humane. But so it is through a long Series of ill Custom and Ignorance, that this is become one of the least regarded Articles by many in the common Brewery. For in Truth, I never knew one of them in my Life that ever attempted to take off the Scum off the Water or Wort. On the contrary, when I have argued with a common Brewer, near me, of the horrid Nastiness of such Fæces or Scum. — Oh! says he, I matter not how foul my Water is, since I can bring my Wort off from my cooling Back, as fine as I please. — And really so it was, that by this Means my Customers were gulled out of any Scrutiny concerning the Water that they brew'd their Drink with; for if they could see the Liquor fine in the Mug, or Glass, all Questions about the Water and Scum were hardly so much as once thought on; tho' in Truth, nothing belonging to Malt-Liquor deserves it more, and therefore I shall here observe the Absurdity of this Brewer's Answer. — Does he not hereby as good as tell us, he cares not what the Nature of the Drink is, so it take the Eye and Heart of the Drinker, and excuse him from any Suspicion of Fault, tho' at the same time, in Fact, such a one is no less than his own Proficient at the Expence of my Health; for such as the nasty Nature of such Fæces and Scum is, so much is the Drink tinged with its Quintessence and unwholesome Qualities, by being boiled

all together, and thereby so united, as that neither Fermentation, nor Age, can ever disunite or separate such its ill Properties, while the Drink indures; because it is the Nature of Ebullition to conjoin and astringe the Parts of all Ingredients that come under its igneous Potency. This may also serve as an Answer to all those who are so vain to say, they value not any Foulness of Water or Wort, for that Fermentation will clear it, and throw off all by the Yeast. A poor Shift indeed, tho' a very common one. But how much the Health of the Customer is concerned in such Management, I leave to the Judgment of the Reader. In the next Place I am to observe, that to the nasty Fæces or Sediments of the Water, there are often added those of the Malt; for in my Brew-house, where we brew'd 5 times a Week, it is not to be supposed that we could give the Wort a due time to make its Sediments in the Backs, nor Leisure enough to run it off by the Cock in such a small Stream as was requisite to drain it fine into the working Tun; so that here both the Fæces of the foul Water, and those of the Malt were joined together in some Measure, and in this Condition work'd and fermented all Night till the Morning, when we sold perhaps twenty Barrels by the Gallon; that is, by Pails and Tubs, at 2d. and 2d. half-penny per Gallon. The rest we sent out by the Dray; but how wretchedly unwholesome must that OEconomy be, where such new Malt Beer was drunk the same Day it came from the Brew-house, or the Day after, as I have known many do, before it's well done working; they not considering that the human Body is a Sort of Alimbick that distils or separates the pure from the impure, and then what must become of the grouty, yeasty Fæculent Parts of such a Compound nasty Liquid. Is not this enough to lessen our Wonder, when we see many, of the Town born especially, look with white Faces and pale Lips, attacked with frequent
Cho-

Cholicks, eaten up with the Scurvey, and emaciated by lingring Consumptions, that undoubtedly are often the Effects of bad Drinks; which by Consequence make large Lodgments of Corruption in the humane System, while they stuff and load it annually with innumerable Draughts of Dregs and Foulnesses contained in such thick unsettled Drinks. But I wish I could end here, and had no further Reason to imploy my Pen in exposing this bad Husbandry, that extends itself too often to the Gentleman and Tradesman's Cellar, where the Barrel, Kilderkin, or Firkin, is taken in for Family Use: Here then by the Mismanagement of the Servant, or through Necessity of having none but one Cask to tap, the Vessel is set a running before it has had time to clear itself; and then there are little Hopes left of Drinking fine Beer out of that Cask. This was often the Case with several of my Customers, tho' it is certain no Malt-Liquor whatsoever can be good and wholesome if it is not truly clear and fine, and I think I may justly add, if it is not free from all nasty Faces that too often lie at the Bottom of Casks, in more than small Quantities, and tincture the Drink with their bad Qualities; but some there are who vainly fancy that Beer, (especially the aged Sort) ought to have something to feed on, otherways say they it will soon grow sour. To this I answer, that neither Beer nor Ale can be drawed off so fine from the Mash-Tun or Cooler, as to want a sufficient Sediment to feed it, as may be easily proved by an Observation when the Drink is drawn off, that never yet appeared to me without rather too much of this filthy Compound, which by its earthy and saline Parts naturally induces Hardness and Eagerness in the Liquor. And altho' Ale and Beer, loaded wth such Dregs may become fine in time, yet is such Drink more liable to be disturb'd on Change of Weather, than that which is more free from such an ill Companion, and that by Reason the Particles of the Atmosphere

sphere hovering about the Cask, will not fail on certain Seasons to join those in the Cask of their own Nature, and raise a Sort of Fermentation, to the great Disturbance of the Drink. And this Contact is more or less influenced, as the Cellar is of a dry or damp Nature. If it is a Chalk, Gravel or Sand, then it's best brewing in *October*, to give the Drink time to pass its Digestions in the Barrel before the Summer comes on: But if a Clay or any Water is apt to ouze, and stand in the Bottom of a Cellar, then *March* is to be preferr'd, that the Malt-Liquor may make its Sediments go through its Digestions in the Barrel, and get a fine Body before the Austerity of the Winter, renders such a damp watry Place too chilly by the frequent Interruptions of Frosts and Thaws. To this Purpose also some are so curious, and that in my humble Opinion with a great deal of Reason, to brew their pale strong Beers in *March*, on account of the lesser Share of Fire that such Malt has in it, than the brown Sorts, and therefore requires a whole Summer to meliorate and ripen it directly after its Brewing: But with the high dry'd Brown Sort, it is otherways, by reason of the great Quantities of Fire used in its drying or rather parching, whereby it is the more fitted to agree with any of its contrary Principles, as the damp, cold Seasons of a succeeding Winter, which relaxes and better reduces such Drink to a Melioration. It is this then that induces a sagacious Person to brew all his Brown strong Beers in *October*, that they may have their Cure before the Summer comes on. *N.B.* But observe, that you don't put too much Salt into the Water you brew with; if you do, it will certainly stale it very soon, and leave a Drought behind instead of quenching Thirst; and when you use any, there should be more Hops put into the Wort to ballance the hard stale Quality of the Salt in the Drink, or rather my alcalous Balls which are excellent to keep off Acidity,

dity, and preserve it in a mild, sound Condition; or some of those Receipts may be made use of which I intend to publish in my next Book that will answer somewhat of the same Purpose.

C H A P. X.

An eminent Physicians's Way of Brewing Ale and Beer without Boiling.

THIS paradoxical Method has for some Years past gained but little Reputation in the World among the ignorant, opinionated, and self-interested Part, whose Tenets are so attach'd to Particulars, that a general Improvement can seldom get Footing till Time and Custom paves its Way by the Example of the truly wise and impartial, who suspend their decisive Judgments 'till they have brought a Matter in Question to the undeniable Test of a demonstrative Experiment, and scorn to condemn a Thing (that has any Shew of Reason on its Side) by meer Speculation; for as he has justly observ'd, those who are wedded to Tradition, and their own Humour, give little Hopes that Reason will sway their bigotted Perverseness. But to prove the Rationale of this new Method, he has made several Remarks as a Student in Physick on the Animal OEconomy, and says, that as our Bodies suffer a daily wasting by our innate Heat, Perspiration of the Spirits and Humours through the Pores of the Skin, and the Impressions of the ambient Air, there is required a daily Recruit of Nourishment. To this end the Variety of Foods and Liquids are to be considered as they are more or less healthful to our Bodies; and as the Stomach is the Agent that digests all Meats into a milky Substance called Chyle, which passing into the Guts, meets with two different Juices from the Gaul and Sweet-bread, that being
mix'd

mix'd together, create an Ebullition or Fermentation, which further perfects the Chyle, and is sucked thence by the milky Vessels, and carried through several Receptacles till it mixes with the Blood, which returns its Nature and Nourishment to the Heart, whose Pulsation drives it into all Parts of the Body. And being thus intermix'd with the Blood, it is at length transmuted into it, like the former.

The Blood being thus made out of Chyle, is by the Arteries conveyed to all Parts of the Body for their Nourishment: But the most pure and spirituous Parts ascend up to the Brain (where out of it the Animal Spirits are made) being the Seat of Fancy, Reason, Judgment, and Memory; for from the Brain are all the Nerves or Sinews divided into all Parts of the Body, which cause its voluntary Motions, as Walking, Standing, Labour, &c.

First then if our Drinks or Meats be either improper in Quality, or too great in Quantity; in either Case it disturbs this curious OEconomy, Excess in both laying the Foundation of most Diseases; for every thing delighteth to produce its own Simile. Therefore all unwholsome Meats and Drinks are incapable of being converted into a pure and healthy Blood; but will in time acquire a Sharpness or some other evil Quality; which being carried to the Brain, clouds it with Vapours, interrups its noble Faculties, and by often Repetitions makes a Magazine of corrupt Humours: By which it appears, what vast Importance good Meats and Drinks are of for securing Health of Body, and improving all our intellectual Faculties; because the Passions of the Mind follow its Temperament; for such as the Dyet is, such will be the Blood. To this Purpose this ingenious Gentleman declares, the first Step towards the Generation of the Stone, Gravel, Gout, Consumption, and many Diseases is the drinking strong, hot, sharp, intoxicating, stale Liquors, and fiery prepar'd
K 2 Drinks,

Drinks ; as Beer high boil'd with Hops, Brandy, Rum, old Wines, which for the most part tend towards a hot sharp Spirit, and breed a hard gritty Substance in the Passages and Ureters, and burn up the radical Moisture. Which to prevent in the succeeding Generation, it is now practis'd by several of the great ones, to confine their Children to select Dyets, consisting chiefly of Puddings, Soops &c. but little of any Flesh ; and to that Degree, that I have known a Boy and Girl petition the Servants for a Morfel of a Fowl. This is done in order to prevent a Lodgment in their Bodies of those pernicious Scorbutick Salts, that all Flesh abounds with : And so in their Drinks they are not less curious.

Secondly, The boyling Hops two, three, or four Hours in Beer, is a Thing of pernicious Consequence ; because this Usage destroys the mild, opening Qualities of the Drink, and in their room institutes and impregnates the Wort with a harsh bitter astringent Nature ; and when Hops and Beer are so boiled, they prove very injurious to several Constitutions ; especially those inclinable to the Stone, or Gravel, by their extraordinary restraining Operation.

Thirdly, That the boiling of Wort, or any spirituous Liquor that is extracted from things whose Body is opened by Fermentation, as Malt is in a very high Degree ; does not only destroy and evaporate the fine, thin, subtle Spirits, which are only capable of Penetration ; but it does as it were fix or stagnate the whole ; by which it becomes of a grosser, fuller, or stronger Taste in the Mouth, which through Custom and Ignorance is esteem'd a Virtue, but the contrary is understood ; for thereby it becomes of a heavier Operation, lies longer in the Stomach, and sends gross Fumes to the Head, which is obvious by tasting unboyled Wort, and that boiled with or without Hops, and you'll find that this last has not only
lost

lost its pleasant sweet Taste, but its opening, penetrating Virtues by which it becomes of another Nature and Operation, which Fermentation does in some Degree help, but it cannot regain those fine, thin, soft Virtues that it lost in boiling, the fierce heat of the Fire being an utter Enemy to all spirituous Drinks, Liquors, and Cordials. It is also to be observed, that unboil'd Ales and Beers do generally drink smaller in the Mouth, than that which is boiled; because its spirituous, sweet, Balsamick Qualities, are not so much destroyed, suffocated, or stagnated by the igneous Particles of the Fire as the other; but it most naturally warms the Stomach, and is not so subject to send Fumes to the Head, runs thro' the Body quicker, purges more powerfully by Urine, which are naturally Testimonies of its Virtues, and that the better Parts are preserved in the Preparation. It's also to be observed, that all Drinks made without Fire, altho with raw, crude Fruits, Apples, Grapes, and the like, as Wine, Cyder, and many other Sorts, are not only more spirituous and brisker in Operation, but also more cleansing and penetrating if Order and Temperance be observed. But note, that all fermented Drinks are much better and greater Preservers of Health when new, than Old or Stale; for Age turns their mild Virtues into hard, inflammable, and keen Properties; for this Cause, all Stale Beer, old Wine, and Cyder, are far hotter in Operation than new, and consequently more prejudicial to Health, especially in the Gout, Gravel, Stone, and Consumption; therefore those who would drink Beer and Ale more wholesome and Homogeneous, may observe the following Rules, *viz.*

First make your Water or Liquor near boiling hot, then put so much into your Mash-Tub, as will wet your Malt; stir it, and let it stand half an Hour; then add your whole Quantity of hot Water that you purpose to put up for the first Time, and let it stand

stand an Hour and an half; but if you would have your first Wort very strong, then two Hours if the Season be not hot; then put what Quantity of Hops you think fit, into your Receiver, and let your Wort run on them; and after your Hops have infused an Hour and an half in your Wort, then strain it off into your Coolers, and you have done with the first Wort. Then put upon your Malt your second Liquor near the same Heat as the first, and let it stand only one Hour at most; then take what Quantity you please of fresh Hops, and put into your Receiver as before, and let your second Wort run on them; then take both second Wort and Hops together, and put up into your Copper; there let them infuse till your Wort is near boiling, but not boil; then strain this also into your Coolers, which you have done with also. Now if you will make Small-Beer, put what Quantity of Cold Water you think fit on the Grains, and let it stand half an Hour; then run it off to some fresh Hops, and put both this third Wort and Hops into the Copper as you did the second, and let the Hops infuse till they are near boiling; then strain it into your Coolers, and you have done. But remember that your Water never is to boil; for Boiling irritates and evaporates the subtle, fine, penetrating Gas or Spirit; and then the Water becomes more harsh, hard, fixed, and dead, which renders it not so capable to draw forth or extract the sweet Virtues of the Malt; to prove this boil a Quantity of River Water, put it into another Vessel, and let it stand a while; then take a like Quantity of cold, and put into another Vessel, and let that stand the same time as the other, and you'll find the boiled Water to stink, and never be sweet again; but your Water, which remains intire not touched with the Fire, will also putrify, or rather ferment; but then it will recover and become sweet and good for any Use as before.

Again,

Again, Tho' I have mentioned the making of Small-Beer after the Ale, I would here be understood, that all such Beer is injurious to Health, and the common Drinking thereof, does generate various Diseases, especially the Scurvey; because in the Grains is left nothing but a terrene gross Phlegm of a tart sour Nature, which incorporates with the Water; and to make it much worse, it is generally boiled with the Dregs of the Hops, which have been boiled several Hours before in the first and second Worts, that still encreases the Mischief: However, of this I have amply wrote in my first Book.

The Quantity of Hops for Beer, if you propose to keep it half a Year, or a Year, ought to be six or seven Pounds to a Quarter of Malt; but for Beer or Ale that is to be spent presently, two, three, or four, to eight Bushels will suffice. Tun your Drink young, that is, as soon as it works, put it into your Cask, and it will be much wholesomer than if it ferments too high before. And as to Boiling of Worts after they are drawn from the Malt, I do aver, (says this Gentleman) that it is not only unnecessary, but mischievous for the foregoing Reasons; 'tis not Boiling, but a due Fermentation that makes excellent generous Liquors. Malt passes through three Digestions: First, by the Sun and Elements. 2dly, by its being made Malt; and, 3dly, by its Infusion in Water, and needs not a fourth by boiling; for tho' I say it is to be heated, it is not to correct its Rawness so much, as to fit it the better to extract the Virtue out of Malt; which being once effected, all our Pains in boiling is superfluous; because this Drink has passed through all the Digestions and Fermentations necessary to its Conservation, and will keep accordingly; for I have made excellent Beer this way, that has kept twelve Months, tho' six Months is long enough: But if any are dubious of the Veracity and Benefit of what

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is here advanced ; for their farther Satisfaction and Conviction, I refer 'em to Experience as the best Master.

C. H. A. P. XI.

*Sir T—S—'s Method of Brewing
a Pipe of Pale Strong Beer.*

TAKE three Quarters of the finest white Pale Malt, let it be ground not too fine, but just that all the Corns may be broke; let your Water be soft, running Rain, or Pond Water; boil it half a Quarter of an Hour, then lade it off into your Mashing-Tub; let it stand till you can just bear your Finger in it: Then put in your Malt by little at a time, keeping it stirring all the while: It will take half an Hour's Mashing in this Manner: When done, cover it up close, for two Hours and a half, or three Hours, returning it back into the Mash-Tub, till fine. At first letting off, put in 14 Pounds of the finest Pale Hops, rubb'd in with your Hands, that they may not lie in Lumps, boil it to 20, not exceeding 30 Minutes, with as much Fierceness as possible, to be kept in the Copper; immediately after throw the Liquor off into the Cooler, straining the Hops clean out; let it be almost cold, not Blood-warm, before you let it down into your Working-Vat. One full Quart of good Yeast is enough for this Quantity; you may let it work one or two Days; then Tun it, keeping the bottom Sediment out; let it be fill'd up every Day for a Week; after bung it in three Weeks or a Month; it is sometimes near 12 Months before it is fine for Botling.

The above Receipt was communicated to me by an honourable and generous Gentleman ; on which I shall only make this short Remark, that in my humble Opinion his Boyling the Wort but half an Hour with the Hop, is not agreeable, because it can't have its due Cure in so little a time, tho' the Hop has ; but as I have already writ, and intend hereafter to publish more on this Subject, I refer you to the same.

The Fraudulent Practice by short-Measured Casks exposed.

CASKS. — These are unavoidable Necessaries, and must be had at any Rate : Their Sizes in *London* are generally the Pin, Firkin, Kilderkin, Barrel, Hoghead, and Butt ; of which Number there are three that differ from the rest in Measure on a particular Account ; and they are the Ale Firkin of eight Gallons, the Ale Kilderkin of sixteen, and the Ale Barrel of thirty-two Gallons : The Small-Beer Firkin being nine Gallons, the Small-Beer Kilderkin eighteen Gallons, and the Small-Beer Barrel thirty-six Gallons : Now as there is a considerable Difference in the Measure of these three Casks, I think it but doing Mankind common Justice to take Notice of a horrid Fraud that was never yet exposed in Print, committed by some ill Persons concerned in the Small-Beer Brewery for many Years past, and that by carrying these Ale Casks full of Small and Ten Shilling Drink, instead of the Beer Casks, whereby many honest Customers have been imposed on to a considerable Damage. A particular Case or two I shall here mention as it in some Degree related to myself. My Father happened to serve a Clock-maker in *Fleet-street* for some Years with Table-Beer in Kilderkins, and other Casks, till at last he was supplanted by a Firkin-man, who by a villanous Invention imposed on them both in this manner, *viz.* He comes

into the Shop under pretence of buying a Clock ; and after he had agreed to the Price, he tells the Owner that he was a Brewer, and would furnish him with Drink till all was paid. To this the Clock-maker agrees, and the Debt was discharged in these short measured Casks, that generally wanted considerable of being full. Now this Impostor did not confine himself to this Way of cheating only, but was detected in several other sly, and notorious Facts. Once a Gentleman that was another Customer came to a certain Brew-house, where he took up his Drink, to enquire for him ; but he being absent, told his Case to the Master Brewer, a worthy Person, that there was a Cask brought into his Cellar by two Men seemingly as a full one, but was truly an empty one or near empty, and at the same time carried another away from off the Stilling that had some Gallons in it. At another time this Monster in Iniquity, sold his Firkin-Trade to a Person for valuable Considerations, and presently afterwards went about and perswaded several of the Customers to take Beer of him again, to the great Prejudice of the honest Purchasers. And now as I have engaged my Pen so far, I will proceed to calculate what a Family, that drinks a Kilderkin of Ten Shilling Beer a Week, may suffer by such a Fraud, that wrongs the Customer of two Gallons in the Measure of the Cask, and sometimes another by the Vessel's wanting of full, which is three Gallons in all ; and amounts to Tenpence per Week, or 2 l. 3 s. 4 d. per Annum ; a Matter I think of Consequence, and calls for a strict Observation. But here I would be understood that I do not extend my Reflection on the honest Brewer or Firkin-man ; for I have known a Firkin-man that would always not only send out lawful Casks, but full Measure, and scorn'd to be guilty of the least wrong this way : So likewise the Strong-Beer Brewers, who I believe are most of them Men of

strict Justice and Probity ; an Instance of one of them I shall here mention as it occur'd to my Knowledge from the Relation given me by the Brewer concern'd in the Affair. — An eminent wholesale Victualler that sold Stout and other Stale Beer by the Butt and Hogshead to those new set up, who are often oblig'd to furnish themselves this way, till they can get a Stock of their own at a sufficient Age ; agreed with this Brewer for a Number of Barrels of Keeping Beer, on Condition he would let him have so many new Hogsheads as would contain all the Drink. Now in this Proviso, the Victualler had a sinister end, that the Brewer at first perceiv'd not ; for being acquainted with the Cooper that was to furnish them, he persuaded him to make them under Measure, that he might get a Profit by selling to the Customer a short Hogshead, instead of a full measured one ; and tho' he thus sold by the false Cask, he bought by the true gaged starting Barrel ; which happened afterwards to be discovered by the Brewer, who was so honest a Man, that he gave a large Sum out of his own Pocket to be distributed among those that had thus suffered, that they might have ample Restitution made for the Fraud committed by Means of his Cask, tho' unknown to him : I have been the more particular in the Relation of these Pieces of Knavery that they may be a Warning and Prevention to the Gent Tradesman and others how they deal with Men of bad Reputation, which this Firkinman generally had ; who, tho' he carried on his Frauds to a great Degree for a long time, lately died very miserably Poor and distracted.

But I can't yet discharge my Pen from this Sort of Imposition, by Reason that two considerable Small-Beer Brewers were also guilty of sending out these Ale Kilderkins, and Firkins to their Customers, one whereof declared that he had done it, but left it off some Time ago, when he thought
he

he had got enough (I suppose) to trust Providence by honest Measure. As to the other I don't know whether he ever did. A horrid Thing indeed for Persons sometimes to suffer not only by Drinks made with unwholesome Waters, Malt, Hops, and Yeast; but to compleat the Scene of Villany, must have short Measure into the Bargain, to a considerable annual Loss where there are two, three, or four Kilderkins consumed in a Week, as in some Families there are: Bad indeed it is with the Customer who is damaged by such a Wrong; but worse it will be to him that commits it, who must die without true Repentance, if a Restitution is not made, and he of an Ability to do it; and how that can well be done to those that may be deceased in the Time, and others that he may never come at, I know not. However, with many who have a Convenience of Brewing their own Drinks, the Risque of dealing with such Men may be avoided, and you may please your selves several Ways by so doing. Yet where the necessary Room and Utensils are wanting, the honest common Brewer, who uses a right Method, may supply such best, and who I must own is commonly provided with the best of Coolers, Backs, Tuns, Room, &c. for this Purpose.

But lest I prejudice myself by enhancing the Price of this Work, in swelling it beyond its intended Extent, I must refer my Reader to the Third and last Part of the **LONDON and COUNTRY BREWER**, that I have now ready in Manuscript, and intend to publish in a short time. Wherein I shall give a farther Detail of several most useful and necessary Particulars relating to Malt, Waters, Worts, &c. with a new Plan of Brewing Malt-Liquors, besides many other profitable Matters not proper here to mention.

F I N I S.

T H E

London and Country B R E W E R.

C O N T A I N I N G,

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| <p>I. Of the four QUARTERS of the Year as they relate to Brewing MALT-LIQUORS.</p> <p>II. The State of BARLEY for the Year 1737.</p> <p>III. Of MALT-KILNS.</p> <p>IV. Of FUELS for drying the several Sorts of MALT.</p> <p>V. Of the great publick BREW-HOUSE.</p> <p>VI. Of the small private BREW-HOUSE.</p> <p>VII. An excellent Way of Brewing a Butt of Pale strong BEER, by an Inn-keeper.</p> <p>VIII. Brewing a Hoghead and a Half of Pale-ALE from fresh MALT, by a private Person.</p> <p>IX. The best Way to make ELDERBERRY-BEER (called EBU-LUM) CHINA ALE, and several other Sorts.</p> | <p>X. Of the DEVONSHIRE white ALE.</p> <p>XI. A SCHEME for Brewing strong MALT-LIQUORS after a new improved Method.</p> <p>XII. Of WORTS, and their Improvements after a new Method.</p> <p>XIII. The BARNSTABLE Way of Brewing a Hoghead of fine Pale ALE.</p> <p>XIV. Of Working BEER and ALE after a new Way, to their great Advantage.</p> <p>XV. Of Brewing BUTT-BEER called PORTER.</p> <p>XVI. An Account of the Destructive WEEVILS, with several Ways to destroy them.</p> <p>XVII. Common PURL improv'd, by a famous new cheap Receipt now in use, rendring it far more wholesome and pleasant than by the common Way.</p> |
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To which is added,

The CELLAR-MAN,

Or many Receipts to cure, preserve and Improve DRINKS in the Cask; wherein the Case of CLOUDY-BEER is accounted for, and its effectual Cure amply prescrib'd. A new advantageous Way to get out the SAP of new CASKS, and to Season them at once; likewise particular DIRECTIONS for BOTTLING MALT-DRINKS; with many other useful Matters, never before Publish'd; truly necessary for those who are concern'd in *Brewing or Selling MALT-LIQUORS.*

By a Person formerly concerned in a publick Brewhouse, at London, but who for Twenty Years past has resided in the Country.

The third and last PART.

L O N D O N:

Printed for the AUTHOR, and sold by Mess. Fox, in *Westminster-Hall*; and at their Shop at *Tunbridge-Wells* during the Summer Season; *E. Withers*, at the *Seven Stars*, opposite to *Chancery-Lane*, in *Fleet-Street*; *T. Astley*, at the *Rose*, in *St. Paul's Church-Yard*; and *W. Meadows*, at the *Angel* in *Cornhill*.

MDCCXXXVIII. (Price 1s. 6d.)



T H E
P R E F A C E.



*H*AVING been pretty full and particular in the Prefaces to my two former Treatises, on this Subject, I shall be the Briefer here; and only observe, that, as I annually Travel through several Counties in the Way of my Business, I have had the greater, and really the only Opportunity of thoroughly acquainting my self with the different Methods of Making Malts, Brewing Beers and Ales, and Inspecting into their After-management: In all which, (tho' there be still too much Reason for Complaint) blessed be God, I have seen great Improvements, especially within these few Years, which, as they were very much wanted, and of great Importance to the Nation;

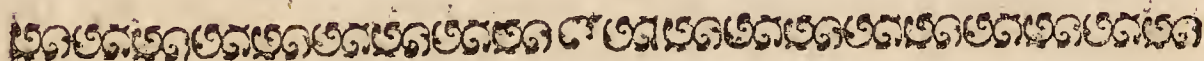
tion, induced me to use my utmost Efforts, in some Measure to bring them about, still hoping to see them advance, by the laudable Endeavours and Example of some unbiassed Persons, who will not any longer submit to support bad Customs, meerly for the Sake of Profit, in a Case that so nearly concerns the Health and Well-being of Multitudes. The aforesaid new Methods of making Malts, Brewing Beers and Ales, and their advantagious After-management in the Cellar, with Variety of other usefull Matters never before published, I have here freely Communicated; which (I hope) will not only render the Work Compleat, but also be attended with its most wished for Effects, viz. The fully Apprizing the unwary Drinker of his Danger, as well as better Informing the Judgment of the Artist, and Directing his Practice in the right Channel.





C H A P. I.

Of the four Quarters of the Year, as they relate to Brewing Malt Liquors.



I. Of the Spring Quarter.



AIR of itself is a Fluid of an Elastick or Springy, yielding Nature, of a thinner or thicker Body, as it is more or less compress'd, dry, or moist. From the two Principles of Heat and Moisture all Bodies are opened, and made to exert and diffuse their innate good or bad Qualities, whereby they are rendred capable of mingling or incorporating with the Air of the Place. From hence it is, that there is a pregnant Reason for brewing in the spring Time, because then both Air and Water are stored with Exhalations from growing Vegetables, which join others, and especially those of the same Kind: and thus it is, that the

2 *Of the four Quarters of the Year, as*

Particles which float in the Air, are, as it were, suck'd in by those of the Water, Malt, Wort and Hops, to their great Improvement, especially in the Open Country. Of this Communication, the ingenious Mr. *Boyl* makes a sort of Proof, by telling us that a Piece of Allum divested of its Salts, and hung up in the Air, will in time recover its pristine State from the Salts of the Air. Others say, that if a Water is distilled from a fragrant Vegetable, and becomes almost vapid and dead, tho' at more than a hundred Miles from any Land, will yet in the spring Time regain its Scent and Virtue, by joining in contact with its similar Particles, which float in the Air, and are diffused over the whole Earth and Sea: as is also particularly apparent in Wines, Cyders, &c. which commonly fret when the Vines and Trees are in Blossom. Therefore the spring Season must be very convenient for brewing Malt-Liquors; because then the Pores of the Earth are unlocked, and the Aromatick Nitral Vapours set free after having been bound in by the Winter cold; but now ascend by the warm Powers of the Sun, which replenish our Atmosphere with lively and Sulphureous Particles, arising from the sweet Vegetables that now exert their Strength by the Rarefaction and thinness of their Saps, and administer their fragrant and salutary Effluvia's to all things they can come at; and that in the greatest Perfection, when it arises from Corn-fields, Gardens, large Commons, and where Trees and Hedges are not too thick, and the Land too low and watery. And though Blossom-time is accounted dangerous for brewing even to a Proverb, yet I cannot help being of a contrary Sentiment, for reasons I shall by and by assign; and also because the Air and Waters in *March, April* and *May*, are seldom damaged by the violence of Heats and Droughts, which makes me suppose the Saying was broached when the Art of brewing was little known; for now the Springs generally run high by the Swell of the Winter Rains, that consequently must render them more pure: So that in this respect *March* far exceeds *October*, because it's to be supposed the Waters then are low after a Summer's dry Weather, which in course leaves them
very

very earthy. But the Rain Water in particular has the greatest Advantages, because it is freer from any earthy, saline and metallick Quality, than any other Sort whatsoever. Besides which, the fat, dewey and vegetable Exhalations in the Atmosphere, as they meet this delicate Water, must still be an additional Improvement to it, and make it exceed all other Sorts at this time of the Year for Brewing; and especially if Ale is made with it; which leads me to renew my former Observation, that now is the best Time to brew the Pale and Amber Sorts of Malt-Liquors, for their more immediate enjoying the Rarefaction and Melioration of the Summer-Air, which best agrees with all Drinks made from tough Malts, that have the least Share of Fire in them; as the Winter-Air does with the brown Sorts, whose bodies are loaded with igneous Particles, and best reduced into a smooth temperate Condition by that frigid Season; and therefore *October* is very justly prefer'd for brewing such high Colour'd Liquors.

II. *Of the Summer Quarter.*

In this Season is the Extream of Heat and Drought, as in Winter of Cold and Moisture; and therefore 'tis not so agreeable to Brewing as the Spring and Autumn, because it hastens Fermentation too much: Upon which it has so great a Power, that it is difficult to keep the Drink from too high an Agitation; and then the Spirits fly away, which should be most carefully preserved for the Conservation and Fining of the Drink. Now also Rivers, and more especially Pond-Waters, are most impure, not only from the great Quantity of growing Vegetables, but likewise from the Breed of Insects, that makes it both unwholesome and improper for brewing. And here I must observe the Unhappiness of those People, whose business necessitates them to live in a bad Air, and in the Use of worse Water, which many in the Low-grounds of *Kent*, *Essex*, and some other Parts of *Britain* do, particularly those in and about *Prittlewell* and *Ratchford*, about two Miles from the Salt Water in the Hundreds of *Essex*, over

4 *Of the four Quarters of the Year, as*

against the Isle of *Shepey*. It is here the Water so affects the Land-springs, that both their Wells and Ponds afford them little other than a brackish alluminous tasted Water; infomuch that it causes their Drink which is brewed with it, to turn soure presently, and their Bread to rope as well as their Beer; and the more because it's Saline Quality makes it so penetrating and sharp as to extract and bring away with it the Tincture of that muddy Sullage or Earth, that lies in great Quantities on their Shore, as well as those mineral Earths through which they are strained and pass; and thereby probably communicates such unwholesome Qualities to their Bread and Beer, which causes these lamentable Effects; as the Natives themselves justly believe, who say that their Water taints the Dough beyond the Power of the Fire to cure: For sometimes in two or three Days after it is baked, it will appear like Cobwebs, every time it is cut, and if broke, it will plainly show it self stringy and ropy. Not but that I must own this cobwebby, ropy Condition of the Bread may be, and is often brought on by using stale soure Yest, when the Water is absolutely good. Yet here is a plain Proof of the Corruption of the Water, because if the Yest is good, these Misfortunes will happen; to prevent which, some of them boil Hyssop in the Water, others the Twigs of an Ash or Black-thorn, and find it very much answers their purpose both in Baking and Brewing. But there is a Difference even in brackish Waters, occasioned by the Nature and Situation of the contiguous Earth; for in the Yard behind the Governour's House at *Upnor-Castle*, that lies on the River *Medway* about two Miles from *Rochester*, there is a Well out of which they pump a Water a little Brackish; and yet it makes both excellent Bread and Beer, as I have often tasted: The Reason is, the Shore that lies near it is a clean Sand, and so is the Earth through which the Salt Water is percolated or strained till it mixes with the Fresh that supplies the Well: And what gives it a further Advantage is, that tho' it stands below the Level of the high Water-Mark, by which it becomes brackish; yet the Water is free from those infectious Particles that a
muddy

muddy Shore, and a flat Situation would consequently give it: For the very same Reason, the Inhabitants of the great Castle of *Dover* enjoy a most fine clear soft Water, out of perhaps the deepest Well in *Kent*; and that free of any brackish Taste, because the Earth, adjoining to the Salt Water, is a Rock of Chalk, wherein this Well is situated within less than a Quarter of a Mile from the Sea. And here I cannot but observe a Neglect that many are guilty of, to make use of foul pond or river Waters, that in particular require first a Clarification of their fulsome, unhealthy Particles, before they are used in brewing, and especially such that are supplied by Currents from the common Road, or other dirty Conveyance. But where there is not Conveniency for doing this, or that the Trouble and Charge are thought too much to give them time in Cisterns or Tubs to make their Sediments; the last Opportunity ought punctually to be observed, and that is, by scumming clean such Water, as it is heating in the Copper: For though it may be objected, that these sort of Foulnesses may be discharged by the several after Fermentations, it is certainly wrong Management, to suffer such Filth to accompany the Wort till that Time; because the infectious Scum will be incorporated with the Drink, by the three Digestions of mixing with the Malt boiling and working, so as to tincture it with the ill Qualities that may be contained in such Waters, as I have shewn in the Example of Distillation. But when necessitated to brew with such foul Water, see the Remedy in my second Part. Well-Waters now are sometimes very low for want of sufficient Supplies of Rain, and thereby the subterranean Circulation is slow, and almost stopt, which gives the Earth a greater Power to load such Waters with earthy, mineral, stagnating and insidious Particles, which in Spring and Winter, they are most commonly free from, by the Plenty of fresh Waters, that then saturate the Land; for which Reasons, all possible regard ought to be had to obtain Water in true Order, as it is the Fountain of Life to all Vegetables; for by it they are generated, nourished, and increased; and thus it opens the

Gates

Gates of Nature, for all Properties to breathe and send forth their innate Qualities. — The softer and purer Part of Water may be drawn off, and the harder and more earthy, saline left behind, by passing it through an Alembick. Another common demonstrative Proof is, that of our Tea-kettles, whose Insides are loaded and crufted with the terrene, and fix'd saline rough Particles of the Water, which consequently must evaporate its better, softer and more pure parts by boiling, and thereby render it harder.

III. *Of the Autumn Quarter.*

This Season is commonly attended with moderate Weather, and often fine Showers, especially about *October*, that then begin to recruit the Rivers, Ponds, and Wells, with fresh Supplies of pure Water, after a dry Summer; which capacitates them to be more serviceable in brewing good Malt-Liquors, than in the preceeding Season: But are most advantagious to the brown Sorts, which stand in need of a cold Air to reduce their fiery, sharp Particles, that by many, of the Country People in particular, is not at all regarded, whom I have known to use a hard keen Water for this Purpose, which in a great Measure locks up the Pores of this Sort of parch'd and burnt Malt, and so deprives them of their expected Length or Goodness of their first Worts; which a soft Water would easily extract and bring away, and which in brewing strong *October* brown Beer, must be very detrimental, because it not only deprives them of their Quantity, but also endows such Drink with a sharp, griping Quality, that the sooner brings on Staleness and Loss. A further Proof of the Effect of hard Water we have very plain in a fresh Cod, which to dress nicely, the Cook cuts into several small Pieces, in order, as they call it, to crimp it, by letting them lie in hard cold Spring-Water about an Hour, and then boiling it in the same sort; by which Management it will harden, curdle and keep its Whiteness, insomuch that it will eat almost

most as firm as Beef. But in case there is no other Sort to be had to brew this brown Malt with, or if Pond or River-Water be foul, take some Ashes made on a clean Hearth burnt to Whiteness, from green *Ash*, or from *Beech* which some say is better; and after they have been well sifted, put the fine Ashes in a Bag, and hang it a whole Night in a Cask, Cistern, or square Tun of such Water: It will not only soften the one, but cause the gross Particles of the other to subside by Morning, and in a great Measure cure it of the unwholsome, metallick Qualities, make it better extract the Virtue of the Malt, and preserve it against Foxing, being of so wholesome a Nature as to be prescribed by Physicians as a good Diuretick.

When such Water is thus prepared for Brewing, draw it out of a Tub or other Vessel, by a Syphon, or a Cock, placed three or four Inches above the Bottom, that the Fæces may be left behind. At a certain Town in *Suffolk*, from *Michaelmas* to *Alballontide*, their Well-Water has such an earthy ill Quality, as renders it unfit to brew with; because the strong Beer made of it won't work, inso-much that they have been forced to brew it over again, though all the rest of the Year it is pretty good. Yet, by way of security, they are forced to boil their Wort several Hours, else it will stink in a Week or two's time. This Town joins to the Salt Water.

IV. Of the Winter Quarter.

Now Water by cold becomes of somewhat a thicker Body, so that though it is in it's utmost Heat, yet is it not so Capable to enter the Pores of the Malt and wash out it's Salt and Oyl, as when us'd in a more temperate Season. The same Effect also the Cold Air has on the Malt to restringe and keep back the Emission of its Virtue; for which Reason at such a Time, the Water should be used in the Highest degree of Heat the Nature of the Malt will admit of. To do which there consequently must be a greater Evaporation of Steam, which certainly is very prejudicial to the Drink; because the Vapour of the
Water

8 *The State of Barley for the Year 1737.*

Water is no less than the lighter, purer, more subtil and penetrating Part of it, that should enter into the small Pores of the Malt, and there, by its attenuating Particles, open, dilute and wash the Oil out of its tenacious mealy Body. From whence it is plain that there is a great Expence and Loss of the Water's finer Parts by the Steam, to the prejudice of the Drink; and though it is a general Practice to brew without having any regard to this serviceable Management; it is nevertheless true, that this Observation is most Valuable, and by all means should be observed with the greatest Nicety by all Brewers whatsoever. This Season greatly retards Fermentation, as the Summer forwards it too much. — Therefore a prudent Brewer will now avoid this Work as much as he can, and be the more cautious in guarding what Wort he's necessitated to make, from the danger of this Extream.

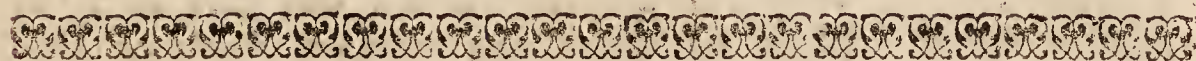


C H A P. II.

The State of Barley for the Year 1737.

THIS Summer 1737, being a very dry one, and attended with a wet Harvest; that Barley which was sown early in *February* and *March*, got so speedy a Cover, that with the Help of the Dews it grew apace, and prov'd an excellent Crop; but that which was sown later, in *April* and *May*, as bad. The first Shoot and Ear was of a large Size, the last produced a little Shoot and small thin Kernel; insomuch that this, and that which sprouted in the Field by Rain, after it was mow'n, would not make Malt; which occasion'd a Person of good Judgment to say, that he verily believ'd, every tenth Corn never spired on the Floor, but remained Barley to the last. Nay it was reported, that seven Quarters of these under-
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ling Kernells were sifted out of a large Quantity of Malt, which in a manner prov'd all Barley, and fit for little else but to grind and fat Hogs. So that many must consequently have suffer'd a great Loss, (the ignorant Buyer especially) both by Measure, Tax, Making, and above all by the Disappointment of Brewing good Drink; for that there has not been such a Season these seven Years past for bad Barley. This therefore is to inform all Farmers, and others who are Sowers of Barley, of that incomparable and invaluable Receipt, for the Improvement of this Noble Grain, publish'd by *William Ellis* of *Little Gaddesden* near *Hempsted* in *Hertfordshire*, in his Monthly Book for *April*, 1736, intitl'd *New Experiments in Husbandry*; which shows a new Method how to steep Barley Seed in a certain cheap Liquor a Night and a Day, and then to lime and sow it: A Receipt first invented at *Paris*, but perfected in *England*; which will cause it so to branch as to bring on a Cover at once, and secure the Crop throughout the Summer, in a flourishing Manner, with little more than the Help of Dews, and also give the Barly a fine even Body, an exalted Virtue, and a great Increase; as he himself yearly proves, and which no Sowers of Barley should be without, because even in later Seasons, on Chalks, Gravels and Sands, the Ingredients will bring on a most fertile Cover and Growth. In the same Book is contain'd many more practical, valuable Secrets never before publish'd, and sold by the Booksellers hereof.



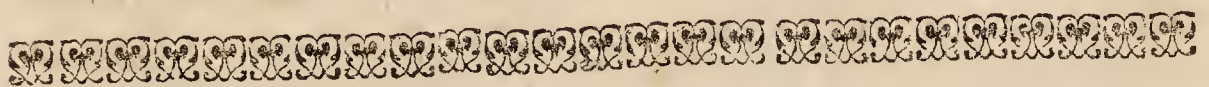
C H A P. III.

Of Malt Kilns.

THE Plate Kiln, and the Tyle Kiln, which are full of small Holes, were invented to dry brown Malts, and to save Charges; because in both these they use no Hair Cloth, but dry three Kilns of Malt in less than 20 Hours.

These I cannot commend, by reason the Ends of the Corns are apt to pitch and lodge in the Holes, and there are parched or burnt, when some other Parts of the Malt's Body will be in another Condition. So likewise is it with the Wire-Kiln, which is also work'd without the Hair-Cloth; but then the Kernels are apt to lye between the Wires and be scorched too much. However these all answer their Ends in making a high colour'd Malt to please the Londoner, especially, with their blood-red Drink. The next is the Free-stone Kiln, one of the best Sort of all for drying pale Malt, either with Coak, Welch-coal, or Straw, &c. and generally is at least twenty Hours in drying off one Kiln. Its common Dimensions are twelve Foot square, laid with four Rows of Stones, three Foot wide each Stone, or with more if less, containing many holes, each being as broad again at Bottom as at Top, over which a Hair-cloth lyes; these Stones lie on common flat Iron Bars, supported by common square upright Iron ones; and is now more and more in use. I have also seen another very profitable and sweet Method of drying brown Malts, exceeding all the Wire, Plate and Tile-Kilns, performed by the help of four cast Iron Plates, of about an inch thick or somewhat more, and near three foot square, with which they burn Newcastle Coal, and convey its fulsome Smoke through a Flew or Funnel, so that the Malt is dry'd very leasurely and in a pure Condition, by the Heat contained in the several Pieces of cast Iron; which at first was invented to supply the Place of the Iron Pipes that dry'd Malt by hot Air, at a very chargeable Rate; but this is a very cheap Way. Now as there are various Sorts of Fuels and Kilns to dry and cure Malt with, there are also diverse fancies and opinions concerning them. Some will use no Drink made from Welch-coal, alledging it has a disagreeable Tang from its sulphureous and smokey Vapour. Others argue, the same, on account of Coak or Cinder. Others object against the smokey unpleasant Taste of Drink made from Malt dry'd with Wood; while some again are Advocates for it, and prefer it to all others; so that the Custom of the Place in a great Measure carries

Of Fuels for drying the several Sorts of Malt. IY
ries it. However, there is too much Truth in this, that
was said by a judicious Maltster, in a famous Town where
there is reputed to be above twenty of them; That not
above six of that Number were Masters of their Business.
But, let them understand the Art ever so well, and practise
it with the most advantagious Conveniencies, yet none can
come up to the help of Flews, or Malt dry'd by the Sun
alone, through a sufficient number of Glafs Windows in a
proper Situation.



C H A P. IV.

Of Fuels for drying the several Sorts of Malt.

Wood.

THIS Article I think myself obliged to reassume,
although I have already wrote on the same in
my former Treatise; because I have since seen different
ways of performing the drying of Malts. There are
many Maltsters where Wood is plentiful that use this Fuel,
as being the Cheapest they can have for their purpose,
and is generally of but two Sorts, *viz.* The *Oak* and the
Beech. The first, as it is of a very hard and durable Sub-
stance, they lay up in great Piles or Cocks to dry, and waste
the sappy phlegmatick part of the Wood, so that when
they come to use it, it will the sooner run into fire, and
consequently less smoke, whereby the Tang or Va-
pour of it does the less Harm to the Malt. And so
careful are they in this respect, that some will keep the
Oak sort seven or ten Years by them before they use it.
But as the *Beech* is a Wood that much sooner decays,
they only pile it abroad one Year, and take it into the
Malt House next, so that two Years fits this for Use. And
to make it answer better, many in the Western Parts
burn Coak with this, or *Oak*, and thus make it run sooner

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into a clear Fire, and less into Smoke. The Roots also of the *Oak* by some are prefer'd, because of their soft nature and quick burning. So the *Ash* Billet is esteem'd a valuable Fuel, but this is scarce in most Places. With this Fuel of Wood, they generally dry their brown Malt.

Coak.

This consequently has less Sulphur or Bitumen in it than the Welch-Coal or Culme, provided it is carefully cured in the Oven or burning Place. For in the Management of this, there is a considerable Difference, which makes them say, that the Coak made at the Coal-pits, much exceeds that made elsewhere; because there they burn it in larger Cakes than they do in other Places, for the smaller it is burnt the worse it is. However, to make this go the further, many, as I have observed, lengthen it out with *Oak* of ten or fifteen Years old, which they burn together in a fixed Grate; for by this Age such Wood comes near Charcole which is the best of Fuel, and which undoubtedly would be mostly used for drying Malts, could it be afforded; because, nothing is more detrimental to Malt than Smoke; and though the Wood of *Ash* yields the whitest Smoke, yet will such footy Vapour, tinge the Malt with a high Colour. With Coak they generally dry the Malt used for brewing Ale; for if this is truly cured, it certainly has less Sulphur in it than any Welch-coal or Culme; and therefore the Drink made from such Malt may be used much sooner than that from Coal or Culme, which requires at least nine or twelve Months age, to overcome the sulphureous Tang of such Malt. Yet is this Coak also used by many to brew their *October* or keeping Strong-beer with, as an excellent Fuel, as was proved by its effect in the Butt-pale-beer, sold at the *Half-moon* in *Warminster*, which was the finest I tasted upon that Road, and frequently sent to *London* for Presents, being brewed with a hard Water, of a white Maumy Rock, that on Tasting, seemed to me more Brisk and Spirituous than any I ever drank; which, I think, is easily accounted

Of Fuels for drying the several Sorts of Malt. 13

accounted for: For upon Examining into the Nature of this Earth, I understood it to be a strong Sort of Chalk, well stored with Alcalious-salts, which consequently gave the Water a superiour Strength, as it did the lean, white, yellow, and red, sandy Land, it was laid on; for with this same Maum (not Marle) they dress and manure their Ground many Miles about this Place, and are forced for this purpose, to dig it out of Pits, and not out of narrow Places like Wells, as we do the soft Chalk, because this Sort is too brittle for such Confinement; and out of these Pits they take great Pieces, that they carry into the Fields, where they break it small with a Sledge, and, after a frosty Winter, it becomes so fine, as to mix with the Earth; and so enriches it, that for ten Years together, there needs no other assistance; it being a Rule here, that the harder the Maum, the stronger Nature it is of, and then it's thought to do double the service of soft Chalk. In short, Coak by many is preferr'd to Welch-coal or Culme, by reason it is less prejudicial to the Liquor; for the less Tang it has the more agreeable it is to the Palate.

Welch-Coal, Culme, or Stone-Coal.

By all these Names this Fuel is known in diverse Parts, and though it comes only out of *Pembrokeshire*, yet is there a great Difference in its Nature. One Sort, on holding a Piece against the Sun, will appear in shining golden Streaks, occasioned by the greater quantity of Sulphur, that its impregnated with more than others, and less of the Bitumen or pitch Part; so that this is said not to smoke at all, and therefore makes the finest of Pale Malt; whereas all other Sorts that appear of a solid, shining, jetty Black will smoke more or less. This Coal or Culme is dug up at *Milford*, *Haverford-west*, *Tenby*, and other Places in the County of *Pembroke*: But none is so much in esteem as the golden streaked Coal of *Tenby*, which is endowed with so much Sulphur, that in the Ships that come from thence, they can hardly bear the Room it's burnt in, and at *Bristol* is sold for 8 *d.* a Bushel, where they

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they are in no small concern for this Sort of Coal, because its great Usefulness has of late encouraged them to dig so much out, that their Mines at this Place are almost exhausted, and which in a few Years they are like to sustain the loss of. At a famous Town in the *West* for brewing Beer, they burn this Welch-coal in a moveable Iron Grate with four Wheels of about six Inches Diameter each, called there a Waggon, being eighteen Inches high, as much over, and three Foot long, to wheel out when they turn the Malt on the Kiln, lest the Brimstone Vapour of the Fire suffocate the Workman. In this County they distinguish one Sort from the other, by calling the biggest Stone-coal, and the smaller Culme, which latter many in *Wales* work up with Clay and Water, to the bigness of a Cannon-Ball, and then it will burn in Grates, but the Stone-coal will not without some Cover to keep it from the Light.

Wheat Straw.

This Fuel though it is one of the most ancient Sorts, still keeps its Reputation, so that when it is in due Order and managed by a skilful Hand, none exceeds it for drying of both pale and brown Malt, for Brewing either Ales or Strong-beers: Because, I suppose Wheat-straw to be in a thorough dry Condition when it is used, and a Fuel the most free of Salts and Sulphur of all others; as is plain from its Ashes, which are the least efficacious of all others, when laid on Meadow or ploughed Ground, as I have duly proved. From hence it is that the Smoke of this sweet Fuel is so little prejudicial to the Malt, and I must own, that in all my Travels, I never tasted any Malt-Liquor more Pleasant than that dried with Wheat-straw, which when rightly imployed, free of Weeds, under a Free-stone Kiln in particular, is inferiour to none; as it is commonly done at *Lavington* in *Wilts*, and other Places. But this delicate Fuel, is refused by many for two reasons; First, because it is somewhat dearer than some other Sorts; Secondly, because it requires the Care of two Men to a
Kiln;

Kiln ; for here the Fireman is obliged to give such close Attendance, that he cannot leave his Place to turn the Malt ; whereas, with Wood, Coak, or Coal Fuels, the Fireman can do both. Which leads me to take Notice of what, in my humble Opinion, is a Mismanagement in some Brewers, who for cheapness sake will buy Wood-dried brown Malt, commonly made on Kilns without a Hair-cloth, for brewing the common Butt Brown-beers, sometimes at 16 s. per Quarter, when the Pale sort is at 22 s. or 24s. As believing the smokey Tang, by Time and the great Quantity of Hops, will be overcome. But I have known many Instances, where the Hop has overcome such Drink by the Smallness of its Body. And no wonder such blood-red Beer has more Colour than Strength, since the Brewer, by the low Price he will have the Malt at, forces the Maltster to make it accordingly ; and then he so blows up Kernells by the Vehemency of the Fire, that by that and the Help of the Malt Tails, he fills the Bushel with a great deal of Show and little good Malt ; Infomuch, that I have heard of a Maltster who gave 30 s. a Quarter for his Barley, and sold his brown Malt at but 25 s. by means of the great Increase he was this way obliged to make, to ballance the Brewer's low Price. For it's a common saying, that there is brought to *London*, the worst of Brown Malt, and the best of Pale.



CHAP V.

Of the Great Common Brewhouse.

THE Improvement which has been made of late Years in this Brewhouse are many, infomuch that four Men's work may be done by two, and as well, as I shall make appear by the following Discourse ; and first of the Situation and Building of a Brewhouse. This in its full

full conveniency is certainly of great Importance towards obtaining good Malt-Liquors; for this purpose, where it is to be erected independent of any other Building, in my humble Opinion, three Sides in four of its upper Part or second Floor, should be built with wooden Battons about three Inches broad, and two thick, according to the present *London* Mode; which by its many vacant square Holes admits sufficient Air, and seldom too much Sun; so that the Backs or Coolers by this means have a quick Opportunity to cool a thin laid Wort; especially, if the Wall farther side stands to the *South-west*, where the Copper is to be fix'd with an Arm near the Bottom of the same, and a large Brass-cock at its End, to discharge with expedition hot Water into the Mash-tun, and Wort into the Coolers. For this purpose, its Bottom should stand about ten Foot above the common Level of the Street-ground, whereby is prevented in some degree the cooling of the Water and wasting of the Wort; for now the tedious ascending Motion of the Pump is avoided, and the Charge of that and Man's Labour saved. But besides the great Copper there is commonly, in a large Brewhouse, a lesser one; if the first holds twenty Barrels, the other may contain Eight: The large one for boiling brown Worts, the lesser one for Amber and Pale-Ales. In former Days, if there were two Coppers in a Brewhouse, they were at such a Distance, that it might be properly said, there were two little Brewhouses near one another, which obliged the Master to have a Man to attend each Copper. But the present Contrivance excels the old one, and these two Coppers are now so erected that each Fire-place is within Foot of one another; so that one Stoker supplies the two Fires and Coppers, which saves the Wages of one Man, that usually amounted to near 30 *l.* a Year; besides having them now under a more immediate Inspection of the Workman Brewer.

The second Improvement that has been made is also of considerable Service, and that is by grinding the Malt directly into the Mash-tun; which is performed by the help

Help of a long descending wooden close square Spout or Gutter, that immediately receives it from the high fix'd Mill-stones, and conveys it into a cover'd Mash-tun, that thus effectually secures the light Flower of the Malt from any Waste at all. Whereas, formerly they used to grind it into a great square boarded Place, which lay lower than the Mash-tun, commonly called a Case or Bin: From hence it was taken out with two Baskets and put into the Mash-tun, to the Loss of some Quantity of the finest Flower of the Malt, that would fly away and make a Lodgment on the Men's Cloaths, and the adjacent Places. But now the Charge of building and repairing the square Case is altogether saved, its Room put to some other service, the Expence of Ropes and Pullies sunk, and the two Men's time converted to other necessary Uses in the Brewhouse.

The third Improvement is the Water-pumps. These formerly were erected in a Brewhouse for the convenient Conveyance of Water out of the Receivoir and Well; the Former for the New-River, and the Latter for Spring-Water. They were work'd with long Iron Pendant-handles with a large Knob of Lead fix'd to their Bottom ends for the greater Ease of Men's Labour: But the present Contrivance works both these Pumps with more expedition by a single Horse put into the Malt-mill, and that in as true a Manner as any Men whatsoever; which saves great part of a Man's Wages.

The fourth Improvement is by the Wort-pump. This used to be work'd with a long Iron-handle as the Water-Pump was, but is now likewise supplied by the Horse-mill in the same Manner that is, and will with great Expedition throw up the Worts out of the Underback into the Copper.

The fifth Improvement relates to the Backs or Coolers, which are certainly more conveniently placed in a great Brewhouse, than in the private or small one; because in many of the former, they have full room to lay them on a single Stage or Story. To each of these is fastened a Leaden-pipe about an Inch or two Bore, with a Brass-

Cock at the End, that discharges the Wort at pleasure into a square or round Tun ; besides which is also another Hole about four Inches Diameter, fill'd with a wooden Plug, whose Use is to let out the Dregs swept through it into a Tub under the same, to be strain'd by a Flannel-Bag fastened to a Barrel-Hoop, and the clear Wort thus strained is mixed with the Rest. This leads me to observe the Misfortune that I have seen some labour under, who being confined to a narrow Space of Ground, run into Brewings of great Quantities of Drink, which obliges them to build three Stages of Backs one over another, that often occasions their Worts to Fox, or Damage in some degree, by the long Heats the under one sends upwards, so that the flat Planks are made hot both at Bottom and Top, and thereby deprived of one of the principal Conveniencies in Brewing, a due Freedom of Air, which a single Stage seldom ever wants. By means of the Copper Arm, the Worts now run swiftly into a single Teer of Backs, that formerly used first to be emptied by a Pump placed in the Copper, and thrown up into a little Back, just over it, from whence it ran out into the great Backs ; and if there were one or two Teer more, the Wort was convey'd into the same by a small wooden Pump placed in the Copper-Back. This better Management saves the Loss of a great deal of Time, Waste, and Men's Labour. These Improvements, and many others that I am sensible of, rais'd my surprize to see several great common Brewers in some of the *Eastern* Parts of *England*, brew ten Quarters of Malt or more at a Time in a Mash-tun, placed almost close to the Ground, the under Back deep in it, expos'd to the Fall of Dirts, drowning of Insects, and other Foulnesses. The open Copper also a little above the common Level of the Earth, the Coolers in a proportionable Lowness. And to make up a compleat Mismanagement, They Brew most of their Four-penny Ales after their Six-penny Beers : So that you can have no mild Drink here, but what tastes of the earthy Parts of the Malt and Hops to such a Degree that I was commonly forced to be at an extravagant Charge, and

mix some Ingredients with it, to correct its unpleasant Taste and unwholesome Qualities.



C H A P. VI.

Of the Private Brewhouse.

BY this Name, I would be understood to mean all such Places that are occupied and set apart for Brewing Malt-Liquors, for Tradesmen, Gentlemen, and Others, own particular Uses. A matter of Pleasure, and Profit enough in my humble Opinion to induce an *Englishman* to love the Production of his own Country, and prefer it to those of Foreigners; because by this Opportunity every one may be Master of his own Fancy, have his Utensils in the best Manner he thinks fit, chuse his own Malt, brew when he will, and what Sort he likes best. Here he may enjoy his leisure Workings and light Fermentations; in short he may here act the absolute Governour, and brew his Drink after the best Rules and Instructions. And when Malt-Liquors are thus made according to the newest Improvements, in my Opinion there will be less Cause than ever of gratifying our Palates with adulterated Wines, at the Risque of our Healths and Expence of our Pockets. In order then to come by such salubrious Drink, it is truly necessary in the very first Place to be Master of a convenient Brewhouse; for without this, it is but a lost Attempt to get right Malt-Liquors. And here the Case admits of two Suppositions; First, whether such a one is to be had by Choice; or, Secondly, of Necessity: If by the First, then the *Northern* Part claims the Preference for Shade and Coolness, that are of Importance in this Affair; but if by Necessity, then the Case allows of no dispute: However, where it so happens, that the Brewhouse can be near the Cellar, it will save a great deal of Time, Charge and Labour; because then the Drinks are

fooner, easier, and safer convey'd into it; but more where it can be carried by the Leather-pipe from the Tun, Cooler, or Starting-tub into the Cask; as is now done by some of the abler Sort.

And observe that the Arm and Cock are not confin'd altogether to a raised Copper in a great Brewhouse; for in a Private one, this is also absolutely necessary, even though the Copper is confined to stand as near the Ground as possible; because both the hot Water and Worts may be drawn off quicker, and safer from any Danger of Scalding and Wetting, that the common plain Copper very much exposes a Person to, who is obliged to empty by Scoop, Pail, or Hand-bowl; which is a Conveniency of no small Moment, if we consider the many Disasters that have befallen this hazardous Method; besides the Time, Wear and Tear, which are here likewise saved.

In private Brewhouses, there is seldom room enough to be had for those necessary Conveniencies, Square-backs; or, if there is, the Charge is often grudged, or at least can't be afforded; but where it can, it is wrong to want them, because these are the chief Securities against fox'd, sour, and foul Malt-Liquors; for here it is that the Sediments must be first left behind, and the Worts cooled at discretion; for it is certain that the shallow Back can discharge the Wort finer than the Tub, as being fixed in its Place and never disturbed while the Worts are running off; whereas Tubs must be moved to pour the Drink clear from the Bottoms, or else the Hand-bowl must be gently used, which in some degree will likewise disturb some Part of the gross Fæces or Bottoms. These Backs in the great *London* Brewhouses are generally made with the Heart of *Oak*; but in most Country Towns, they make them of *Deal* or some of the aquatick Woods at an easy Price. But then, as I said before, these Coolers are of but little Service where they are placed too close to one another, because one heats the other, and often charrs the Wort; as I and many others have too much reason to complain of: For when I travelled the Road in 1737, at several Towns, I could have no other than foxed Ale, and thick
unwholesome

unwholesome stale Beers, which made me ask a great Inn-keeper, who was his own Brewer, why his Malt-Liquors were in such a bad State? His Answer was, that all the Summer Time it was commonly so, but good in Winter. This induced me to inspect his Brewhouse, where I found his Copper, Mash-tun, and Coolers, as near as they could be together; his Underback or Receiver deep in the Ground, and Part of it in the Way of the Dirt of Shoes and other Nastiness to fall into; his two square Coolers fixed about eighteen Inches one above the other, and all in a small narrow Place; so that this Person was seldom or never clear of fox'd or prick'd Drinks in some degree: Though in Winter his Ignorance made him believe they were sound brewed, because the Taint was then not so much as in Summer.

The Mash-tun here should be as smooth withinside as if it was turned; because such an Utensil is not so apt to Furr as another made out of a large Wine-cask, whose Staves being uneven withinside, give room for a Lodgment of the Remains of Worts, which fail not to become of an Acid Nature and corrupt the next pure Worts, if not thoroughly eradicated. And indeed all Tubs, Pails, and Jetts, used in brewing, should be of the smooth Sort. Of this, some are so curiously Nice, that if by accident one of them happen to be dipt into cold Water, they will scald it a-new, and dry it before it is made use of. This small Mash-tun has several Forms belonging to it for discharging its raw Worts into the Receiver or Underback. One is by a Cock fastened in the Bottom, over which is another called a false Bottom, and is the best Way of all others; because by this, you may spend off the Wort very easy, safe and fine, free of any Danger from the Stoppage of Malt. The Second is by a Brasc-cock, fixed in the Side near the Bottom to a Tapp-wipps withinside. The Third is by a long wooden upright Plug, surrounded by a high Basket Strainer that stands almost in the Middle of the Bottom. The Fourth and last Way I think a bad one indeed, and that is done by a Spiggot and Foffet, which I have seen many use: Here
when

when they draw off the Wort from the Malt, they put a Birchen Twig into the Tap to adjust the Stream ; but sometimes the Weight of the Wort forces out the Spiggot, and then the Current alters, to the Fouling of the Wort ; to stop which the Fingers must be employed to put in the Twig tighter, and so expose them to a second Scalding.

The Floor of either a great or small Brewhouse is justly deserving of some consideration, as it is always more or less serviceable by its good or bad Condition ; for this like a Dairy-Room, should have all the propitious Allowances given it that can be, towards keeping it dry, sweet, and cool ; and therefore such a Floor should always be laid somewhat higher than the common Level of the Ground ; or with such a gradual Declination, as may bring away all Wetts and Slops, that consequently must often happen in such a Brewhouse ; for if it was otherwise, and Water and Worts were permitted to make Lodgments in Holes or hollow Places, there must in course be produced corrupt and foul Puddles, whose ill Scents and nasty Daubings are always ready to affect and damage the Utensils and Worts. For this Reason, all boarded and planked Floors are to be rejected, as they are oblig'd to be laid hollow on Joysts and Sleepers, that will surely rot them in a little Time, and create unwholesome Stinks and Vapours ; besides the great Danger that attends such a wooden Floor in it's Slipperiness when wetted, that exposes a Person to Falls as he is carrying scalding Worts or Water ; and also when two Men may be under the heavy Burden of a Barrel of Drink on the Slings, that weighs near 400 Pounds, which may occasion the Loss of their Lives. An Instance of this Folly, I knew once happen to a common Brewer in *London*, who thought it the cheapest way to have a boarded Floor in his Brewhouse, and accordingly bought *Oaken Ship-Planks* at *Chelsea*, for that purpose ; but the Consequence was, that in a little Time he repented himself of his Mistake, and had it laid with the broad *Portland Stone*.

C H A P. VII.

Brewing a Butt of pale Strong-Beer, by an Innkeeper.

I H A V E my Malt just broke in Grinding, to prevent my having foul Drink by the Mixture of its fine Flower in too great a Quantity, which I let stand in Sacks by the Mash-tun side, ready to be put in after the Water that is now heating in a Copper, holding a Hogthead and a Firkin under a close Wooden-cover to keep in the Steam, where it is to continue till it is ready to boil. In this condition, a Hogthead of it must be put immediately into the Mash-tun, and, as soon as possible, a Pail of cold Water in that, to qualify it, (though most others venture to mix this tough Malt with it in a boiling Heat) for receiving ten Bushels of Malt, that I put in very leasurely, whilst a second Person stirs it with an Oar or Paddle, as it runs out of the Sack, without any further mashing throughout the Brewing of Strong-Beer or Ale. Then immediately, with my Oar, I make room about the Basket upright Strainer for the sifted hully Part of one Bushel more of Malt, which I lay round it as close as I can; and, the Flower thereof, I spread over the Top, besides a single Bushel of Wheat-Bran over all that; here it is to remain three Hours in Winter, and two in Summer. At this Time, I have a Firkin of hot Water left in my Copper, to which I add a Barrel of cold to make it up forty-five Gallons: This I heat away, and make it just ready to boil against my first Wort comes off the Goods; which when it is fit to do, I loosen my Plug and spend it off by a small Stream on one Pound of rubbed Hops, returning first what comes foul till it runs clear: Then I make use of my hot Water in the Copper, and leak it over the Goods by a Jett, or three Hand-bowls at a Time, letting that almost go off before I put on more; and so continue till I have a Hogthead
and

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and six Gallons of Wort, which will about empty my Copper; for in this Case, I allow near a third Part of the Water's being drunk up by the Malt never to be returned, and sometimes more than the Waste of one eighth Part for the Worts boiling away. As soon as this is done, I rub three Pounds of Hops more, with near a Quarter of an Ounce of Salt of Tartar, and throw all into the Copper. At this Time I have another Copper, that holds a Barrel of Water, now boiling hot, which I lade over the Goods by degrees as before, 'till I got a second Wort off for making me half a Hoghead of Ale, that I sell within Doors for Four-pence a Quart. In the mean Time, I boil my Copper of first Wort, 'till all the Hops sink, which is the Sign of its being enough, without staying for the Wort's breaking or curdling; accordingly I strain it, and let it lie very shallow in Coolers. By this Time, I receive a Barrel of second Wort off, having here as much Wort returned as the Water that went in. This I boil with all the Hops that came out of the First, till it breaks, and then strain it into Coolers; observing to supply the Grains with a Hoghead of cold Water as soon as the second Wort comes off; which after it is soundly mashed, and has lain three Quarters of an Hour, I draw off, and boil it without any Hops a Quarter of an Hour; then I discharge it into my Coolers, to be heated next Morning and used instead of the first Water, which is call'd Doubling, for Brewing eleven Bushels more of Malt in the same Manner the last was done; only with this Difference, that when at last I mash up with cold Water for Small-Beer, I put only so much on as will bring me off thirty-four Gallons, for making me half a Hoghead in my little Copper, with the Hops that I us'd before.

Observations on the same.

The common Method of having but one Copper to one Mash-tun, has too often proved the Inconveniency of it by the bad Effects of Beers and Ales made from the
same,

ame, which are often in Summer especially, prick'd or
sour'd on the Grains, by the Length of Time they are
obliged to allow for the several Mashings and Soakings of
the Malt or Goods in the hot Waters; and if the Misfor-
tune seldom amounts to this Degree of Damage, yet, it
frequently happens that the Wort, less or more, is in an
unhealthy and unpleasent Condition; which to avoid, I
would advise every one that has a Conveniency to have
two Coppers to one Mash-tun. In this Case I address
my self to all except the great Brewer, who, though in
my humble Opinion he has most need of it, yet by long
Custom being us'd to his single Utensils, I can hardly
suppose he will alter; But I hope some of the smaller sort
will have regard to this Item, as a Method that certainly
must be very useful, in giving them an Opportunity to
enjoy a fine sweet Wort: For its generally allowed, if the
Wort goes into the Copper in a bad State, it will come
out so, and never receive a true Cure, as being damaged
in its first and best Condition. Now whether the Tun has
a false Bottom, or a Basket and Plug, or a Brass-cock
near the Bottom; the Form hinders nothing of this Be-
nefit: For if you brew with the false Bottom, by Mash-
ings and not Leakings over, then as soon as your first
Wort is spent off into the Underback or Receiver, you
are to run off your hot Water out of your Copper into the
Mash-tun for a second Wort; and directly get the first
Wort into the same to boil: Now as this your second Wort
will come off the Goods, half an Hour at least, before the
First is ready to go into the Coolers, here happens too
great a Vacation of Time, that may chance to prejudice
it, by thus being necessitated to let it lye out of the Cop-
per so long, which a second Copper prevents by receiving
and boiling it away directly. And as to the Mash-tun,
that discharges its Wort by Plug or Cock without a false
Bottom, this second Copper is rather more serviceable,
because your first Wort commonly lying two or three Hours
with the Malt, part of the same Copper which follows
will be expended in Leakings over to make a compleat Cop-
per of the first Sort: Then if you have but one Copper,

26 *Brewing a Butt of pale Strong-Beer, &c.*

there can be no hot Water made ready as it should be for a second Wort, 'till the first is boiled off, and that will take up near two Hours; all which time the Goods must lie idle, and very likely prick or sour. Otherwise, you must hop the first Wort, and put it by into Tubs till the second is boiled, which will consequently by this lose some of the Hop's Spirit, and the purer softer Part of the Wort, &c. But if you have a second Copper of hot Water ready, when the first Wort is put into the first Copper, the Danger of these Misfortunes will be entirely avoided.

Secondly, The Heat of the Water, as I have more amply remarked in my two former Treatises on Brewing, should be in a greater Degree for Pale than Amber and brown Malts.

Thirdly, The Mashings also, for reasons I have formerly assigned, should be as little as possible, so as the Malt is kept from Balling.

Fourthly, The Steam of the Water should be kept in, as I have before accounted for.

Fifthly, The putting the hully Part of a Bushel of Malt round the Basket, is what never was exposed in Print before, though it is an excellent Way towards obtaining a fine Current of Wort, that gives a Benefit to the Liquor, even to the last.

Sixthly, The Rubbing of the Hops with Salt of Tartar is likewise a new Method of great service, in forcing the oily Part of the Hop to emit its viscid Quality, and expeditiously join in contact with that of the Wort: For by this, the fine flowery Part of it may be obtained, clear of the earthy Phlegmatick, which long boiling never fails of extracting, to the great prejudice of the Beer and its Drinker's Health. A Proof of it is evident from the smooth pleasant Taste that such Malt-Liquor receives from this Management, and which of late is in such esteem, that I know a Collector of the Customs, who boils his Hops but five Minutes, which certainly would be too little a While to get a sufficient Tincture from them, was it not for the penetrating and attenuating Nature of this Salt, whose Vertue is not only valuable on this account, but also

also for fining and preserving the Drink afterwards. And though the common Criterion or Sign of the Wort and Hops being boiled enough, is by this Innkeeper and many others observed to be when the Hops all sink ; yet I think he is wrong in not boiling the Wort longer than the Hops, because I am sure the Drink won't be so soon fine in the Barrel, as that boiled till it breaks or curdles.

Seventhly, As to the boiling a Hoghead of small Wort at last, to serve as the first Water or Liquor to be used in the succeeding Brewing, the same or next Day, it is a good way ; because it adds to the Strength of the next Liquor, and conduces to preserve it sound the longer. But before I conclude these Observations, I must take Notice of an egregious Abuse that this Innkeeper and most others are guilty of, by brewing their common Ale from the Goods of the first Wort ; a Misfortune that is mostly known to Travellers by woful experience: For in many Parts of the Nation, there is no other mild Sort to be had, and then a Man is obliged to swallow so much Dirt of the Malt and Hops, that he must have a strong Constitution to overcome its dire Effects. — So also with the same Reason I observe, that when these Butt-Beers are loaded with Hops, without a sufficient Strength in the Drink to sheathe their acrimonious Points ; such Liquor I say must consequently be very injurious to weak Constitutions, whose Stomachs are less able to bear their Sharpness ; and what is worse, It must go very hard with such, when, on a Road, they are so unfortunate as to be confin'd to such Liquor in a Publick-House, which perhaps is the only one in the Village.

C H A P. VIII.

*Brewing a Hoghead and a Half of Pale-Ale
from fresh Malt, by a private Person.*

AS my Copper holds a Hoghead and a Firkin, and I am to brew twelve Bushels of Malt, I charge it full of Spring-Water, which I heat till it is just ready to boil, but not boil: This I put into my Mash-tun, and run ten Bushels of Malt very leisurely on the same, keeping it all the while stir'd by a second Person; which when it is sufficiently done, I cap with the eleventh Bushel, and let it stand while I get another Copper full of boiling Water as fast as I can; twenty-four Gallons of which I put into my Tun and mash up, covering all with the twelfth Bushel. Then I immediately add eighteen Gallons of cold Water to thirty-nine of hot left in the Copper, and get it into a boiling Heat against all my first Wort comes off; which after it has stood two Hours, I spend away, and boil it with two Pound of Hops, (first well rubb'd) in a roomly Canvas or such as they call straining Cloth; and at the end of thirty Minutes after it has begun to boil, I take them out, continuing the Ebullition till the Wort breaks enough, when I directly empty it into Coolers, and there have about forty-two Gallons. By this time, my second Wort is ready to go into the Copper, that I made by mashing up my Goods with the fifty-seven Gallons of boiling Water, and letting it stand three Quarters of an Hour before I discharged it. This I boil away with two Pound more of fresh Hops in the Canvas Bag, in all respects as I did my first Wort, and so receive off forty-nine Gallons, which with thirty-seven I had before, makes me eighty-six, that will (allowing for after Wastes) be about a Hoghead and a Half of Ale: And last of all, I mash up with thirty-six Gallons of cold Water to stand three Quarters of an Hour; and then I boil it with all my
Strong-drink

Strong-drink Hops, about an Hour and a Half, till I have about twenty-seven Gallons or half a Hoghead off for Small-Beer.

Observations on the same.

We may observe, that the Author of this Receipt is of Opinion, that the Water is hotter and more capable of extracting the Vertue of Pale Malt before it boils than after. For in this condition, he says, it is more loaded with igneous Particles than when raised to the State of boiling, whereby its Parts are more broke and divided, and so become more open to evaporate the Particles aforesaid, and admit too much of the circumambient Air, which must consequently render it cooler than before such Ebullition commenced. And further to prove this Assertion, if you do but just dip your Finger into Water, just before it boils, it will blister, but when boiling it will not.

Secondly, He here caps his Malt twice, the better to further the Business in hand, by confining the Heat or Steam, and is a good Way.

Thirdly, His boiling the Hops in a Canvas, must certainly give him the Satisfaction and Benefit of adjusting the time of such Ebullition, and also by it enjoy the great Advantage of boiling the Wort till it breaks or curdles.

Fourthly, But above all, he brews his Ale from Malt, and not from Goods, which must certainly load such Drink with the pure Saccharine Juice and lively Particles of the Grain, which are here obtained in their natural Order: On the Contrary, that Ale which is made only from Goods (*i. e.* after a first Wort is run off the Malt) must consequently be unpleasant and unwholesome as I have before remarked.

C H A P. IX.

To make China-Ale, and several other Sorts.

TO six Gallons of Ale, take a Quarter of a Pound or more of China-root thin sliced, and a Quarter of a Pound of Coriander-Seed bruised; hang these in a Tiffany or coarse Linnen-bag in the Vessel, till it has done working, and let it stand fourteen Days before you bottle it; tho' the common Sort vended about Town, is nothing more (at best) than Ten Shilling Beer, put up in small stone Bottles, with a little Spice, Lemmon-peel, and Raisins or Sugar.

To make an Ale that will taste like Apricot-Ale.

Take to every Gallon of Ale, one Ounce and a half of Wild Carrot-feed bruised a little, and hang them in a Linnen-bag in your Barrel till it is ready to drink, which will be in three Weeks; then bottle it with a little Sugar in every Bottle.

Egg Ale.

Take to twelve Gallons of strong Ale, eight Pounds of lean Beef, which must be cut into little Bits and half stewed with a little Water; and when it is cold, let the Gravy be put into the Vessel of Ale, the Fat being blown off; then let the Beef with twelve Eggs, their Shells being only bruised, but the Films not broken, a Pound of Raisins of the Sun stoned, two Nutmegs, a little Mace and Ginger, and two Oranges cut round, be put into a Linnen-Bag, and hang it in the Barrel before it has done working; put in also two Quarts of Malaga-Sack, and stop it up; let it stand three Weeks; then bottle it, and into every Bottle put a Clove and a Lump of Sugar.

Cowslip Ale.

Take to a Barrel of Ale, a Bushel of the Flowers of Cowslips pick'd out of the Husks, and put them into
your

To make China-Ale, and several other Sorts. 31

your Ale, when it hath done working, loose in the Barrel without bruising, and let it stand a Fortnight before you bottle it, and when you bottle it, put a Lump of Sugar in each Bottle.

Blackberry-Ale.

Take two Bushels of Malt, and make it into Strong-Ale, allowing a Quarter of a Pound of Hops to it; when the Wort is cold enough, put it up into your Vessel with a little Yeast, and the Juice of three Quarters of a Peck of Blackberries full ripe, and ferment them all together; when it has work'd sufficiently, stop it up close, and at six Weeks End you may bottle it, and in a Fortnight after, it will be fit to drink.

Cock-Ale.

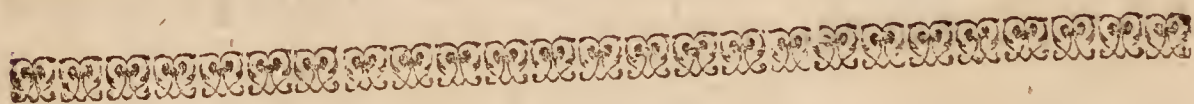
Take a Cock of half a Year old, kill him and truss him well; and put into a Cask twelve Gallons of Ale, to which add four Pound of Raisins of the Sun well pick'd, ston'd, wash'd and dry'd; Dates sliced half a Pound; Nutmegs and Mace two Ounces: Infuse the Dates and Spices in a Quart of Canary twenty-four Hours, then boil the Cock in a Manner to a Jelly, till a Gallon of Water is reduced to two Quarts; then press the Body of him extreamly well, and put the Liquor into the Cask where the Ale is, with the Spices and Fruit, adding a few Blades of Mace; then put to it half a Pint of new Ale Yeast, and let it work well for a Day, and in two Days, you may broach it for Use; or, in hot Weather the second Day; and if it proves too strong, you may add more plain Ale to palliate this restorative Drink, which contributes much to the invigorating of Nature.

Elderberry Beer.

Take a Hogshhead of the first and strongest Wort, and boil in the same one Bushel of pick'd Elderberries full
ripe,

Devonshire White-Ale.

ripe, strain off, and when cold work the Liquor in the Hogshead, and not in an open Tun or Tub; and after it has lain in the Cask about a Year, bottle it and it will be a most rich Drink, that they call Ebulum, and has been often prefer'd to Port-Wine, for its pleasant Taste and healthful Quality. — N. B. There is no occasion for the Use of Sugar in this Undertaking; because, the Wort has Strength and Sweetness enough in its self to answer that end; but there should be an Infusion of Hops added to the Liquor, by way of preservation and relish. Some likewise, hang a small Bag of bruised Spices in the Vessel. You may make a white Ebulum with Pale Malt and white Elderberries.



C H A P. X.

Devonshire White-Ale.

THIS Ale that I have just hinted of in my first Part, I shall here write a further Account of, in order to set forth its Excellency, and pave a Way for its general Reception in the World. To this end I write with an eager Pen, by the Inducement of the best Qualities belonging to a Publick Liquor, *viz.* Pleasure and Health. About sixty Years ago (as far as I can learn) this Drink was first invented at, or near the Town of *Plymouth*, that lies on the Outside of *Devonshire* next *Cornwall*; A Place with its Dock so populous, that it was thought to contain near as many Inhabitants as the City of *Exeter*, though that had fourteen Parishes, this but two, and the Dock part of a Third; rich in War and poor in Peace; for when Trade was most flourishing in *Queen Ann's* Time, there were above six Goldsmiths Shops in it, well furnished. This Liquor is brewed from Pale Malt, after the best Method known in the Western Parts of this County; and as it is drank at *Plymouth*, in particular by the best of that Town, the Alewives

Alewives, whose Province this commonly falls under to manage from the Beginning to the End, are most of them as curious in their brewing it, as the Dairy-Woman in making her Butter ; for as it is a White Ale, it is soon sullied by Dirt, and as easily preserved in its frothy Head : Besides, here their Sluttishness would be more exposed, perhaps, than in any other Place in *England* ; because, in this Town there are few or no Cellars, on account of their Stony Foundation which is all Marble : And therefore their Repositories being above Ground, are generally exposed to the View of their Guests, who may passingly see this Liquor fermenting in a Row of earthen Steens, holding about five or more Gallons each : And, though the Wort is brewed by the Hostess, the Fermentation is brought on by the Purchase of what they call Ripening, or a Composition (as some say) of the Flower of Malt mixed with the Whites of Eggs : But as this is a *Nostrum* known but to few, it is only guessing at the Matter ; for about thirty Years ago, as I am informed, there were only two or three Masters of the Secret, who sold it out as we sell Yeast, at so much for a certain Quantity ; and that every time a new Brewing of this Sort of Ale happened : A great Ball or Lump of it was generally sufficient to work four or five Steens of Wort, and convert it from a very clear Body into a thick Fermenting one, near the Colour and Consistence of Butter'd-Ale, and then it was only fit to be used ; for if it was let alone to be fine or stale, it was rejected as not worthy of buying and drinking. Yet some out of Curiosity have kept it in Bottles, rack'd it off clear, and made of it Flip and other Compositions very good. Now this White Ale being thus fermented into such a gross Body, becomes a Sort of Chyle ready prepared for Digestion in the Stomach, and yet so Liquid as to pass the several Secretary Ducts of the Animal System soon enough to give room for new Supplies of this pleasant Tipple, even at one common Sitting in a Publick House : For though this Drink is not so thin and clear as the brown Sorts, yet by its new, lubricous slippery Parts, it is soon discharged out of the Stomach ; and notwithstanding

standing such Evacuations, it leaves a very nutritious Quality behind it in the Body, that brings it under a just Reputation for preventing and recovering those who are not too far gone in Consumptions; and therefore would be of extraordinary Service to labouring People: In short, this famous Liquor is of such a salubrious Nature, as renders it a most agreeable Drink both to the sedentary and active Person; which plainly shows the transcendent Quality peculiar to this White-Ale, beyond all other Malt Liquors whatsoever: For who dare, nay who can make so free with any new Beer or Ale, while it is under Fermentation, as with this, and that by Reason of the poisonous Quality of the Yeast, and the fulsome, nauseating, unwholesome Nature, that such working Drinks are endowed with; whereas this invites one to drink it as fast as any of the common brown or pale Ales, and at the same Time administers to the Body such medicinal Assistance, that no other Malt Drink, Wine, nor any other potable Liquor now in Use, as I know of, comes up to it, not only for the aforesaid Intention, but it is likewise usually prescribed by Physicians, as a Remedy in the Cholick and Gravel by its lubricating, diuretick Nature; and tis the best Liquor in the World for a wet Nurse to drink for increasing a most nourishing Milk. Its strength also is so great, that though it is drank while working, it is as intoxicating as the common Ales or Beers; for by the Time a Man has drank a Quart or two to his Share, he will find it enough to go off with; and if any one thinks fit to make it stronger, (as is often done) it is only adding half a Pint of Sherry with a little Loaf-Sugar and Nutmeg, and then it will not only be strong, but very pleasant; and sometimes entertaining to a Fault; insomuch, that several have been inticed by its luscious, stimulating Taste, and cordial Quality, to a degree of Extravagance, by their too frequent Expence of Money and Time in the Enjoyment of this delicate improv'd Ale. — To all which, I shall add the Opinion of an experienced Physician who has drank of it, *viz.* I take the *Devonshire* White-Ale to be a very pleasant nutritive Liquor, and well fitted to pass the several Secretions of
the

the Humane Body; not only by its consisting of such rarify'd adhæfive Particles from the Saccharine Juice of the Vegetable, but its being drank in a particularly agreeable, brisk, and smooth State, in Taste not unlike our first Nutriment, which certainly renders it easy of Concoction in the Stomach, and being moderately taken, it may justly claim a Place in the first Class of dietetick Restoratives.



C H A P. XI.

*A Scheme for Brewing strong Malt-Liquors
after a new improved Method.*

PROCURE a strong, sound, fine Wort, by using good Straw-dried Amber-Malt, just broke; pure, soft, running, or rain Water, in a right Degree of Heat, that is, just before it boils, and stirr'd together no more than is absolutely necessary to keep from Balling, letting it stand under a Cover of fresh Malt its due time in a double Mash-tun; I mean, a lesser One, put into a Larger; the Former to be exceeding smooth withinside, and to have four Feet, either fixed or moveable in the Latter, with a proper Brass-Cock, long enough in its Barrel to screw through both their Bottoms, and a Strainer to be fastned to one End every time it is us'd; or, which is better, the Inner-one to have a false Bottom as in the common Way: The Cavity or Distance between the Tuns should be from six to twelve Inches or more, according to their Size; their Tops to be of an equal Height, and to have another common Cock to fix in towards the Bottom of the outer Tun, to draw off the Water at pleasure; pouring boiling Water in so as to encompass the inner one very near as high as the Mash: Then when the Wort is let go, to receive it in a Goose-quill Stream upon good new Hops well rubb'd between the Hands, setting the

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first Wort so received with the Hops aside, continuing to lade over by Hand-bowl-fulls hot Liquor enough for a second Wort, which must be received on rubb'd Hops as before: Then strain and mix both Worts together, displaying them thin to cool; this done, receive a little of it into a clean Hand-bowl, or rather well glaz'd earthen Pan, (and indeed were earthen Ware, such as we call the Stone-*fort*, made use of throughout the whole Management, it would be much the better) wherein is a sufficient Quantity of good fresh Yeast, and mix them well together; this Mixture put into your Barrel, Kilderkin, or other Vessel being thoroughly sweet and dry, and let the Rest of the Wort run as fine as possible upon it, till the Vessel is full and the Whole well mixed. After a due Fermentation, put away what has work'd out, and fill up the Vessel with the Infusion of Hops, as hereafter directed, stopping it up as close as may be, excepting the Top-vent or Cork-hole, in the upright Cask where it work'd out at, over which paste a Piece of brown Cap-paper, and so let it remain, 'till upon Pegging it at discretion you observe it comes fine: Then, if you would keep it longer, have ready another Vessel of the same Size, into which rack off your Drink, and at the same Time put into it three Parts of parch'd Wheat, and one of whole malted Horse-beans freed from their Hulls, or Dumplins, made after this Manner, *viz.* Take fine Malt, Rye, and Bean-flower, (if the two last were malted, they wou'd be the better,) each equal Parts; mix them up with a strong Infusion of Hops, or some of the same Drink, into a Mass, out of which form Dumplins; then bung it very tight, and keep it in a cool Cellar for three or four Months or longer, and you'll enjoy a fine, sound, sparkling, pleasant and wholesome vinous Liquor from the Tap; or, you may then again rack and bottle it off for Use.

The Infusion of Hops,

For this Purpose it would be very proper to have a large Vessel made of Copper and well tinn'd, in the Shape of a Coffee-

Coffee-pot, wide at Bottom and narrow at Top, with a Spout in the Side, having a Strainer next to the Body, and a Screw-Top to it; likewise, a Head to screw on: Into this Pot put your Hops, being first well rubb'd between the Hands, with a little Salt of Tartar, (a Quarter of an Ounce to four Pounds of Hops,) and as much fair Water as will cover them well: Let it stand all Night cold, and the next Morning set it over a gentle Fire so as to boil up; take it off and let it stand till cold (the Tops being close screw'd all the while;) then pour off the clear Liquor, without pressure, through the Spout, which immediately pour gently into the Vessel, by the Help of a long, narrow spouted Funnel to reach down into the Drink, without much damaging the Head of it.

The Reason why I deviate from the common Way of Brewing is, that it is a justly received Maxim among the most Judicious, that the more light, pure, soft and vinous our Malt-Liquors are, so much the more are they homogenous, and better adapted to pass the several Secretions of the Humane Body, and consequently the more wholesome: Therefore this being our Business, In the first Place I observe, that long Mashing (as commonly practis'd) renders the Wort liable to several Accidents, especially, according to the Season of the Year it is perform'd in; but one more particularly of impregnating the imbib'd Liquid, with so much of the farinaceous or gruelly Part of the Malt, as not only to induce an Acidity, but likewise a Ropiness in the Drink, which I take to be owing chiefly to this erroneous Management; because it must be granted, that it is a due and regular Degree of Heat, (*cæteris paribus*) that causes the Grain to emit its Vertue; now by long Mashing, by and by the contrary Principle gets the Ascendant, and so chills and stagnates it, as to bring on this vicious Property, which, the longer it is thus kept neither hot nor cold, it is the more exposed to. Therefore, I have recommended this new Method of a double Mash-tun, whose outer Part by being filled with boiling Water as soon as the Mash is set, so facilitates the Operation by way of *Balneum Mariæ*; that before

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before the incircling Water is cold, the Wort may be let go: And in Winter especially, this must be of considerable service, because you may keep the Water in what Degree of Heat you please, by running it off as it cools, and still adding more boiling. In order to this, you should have two Coppers employ'd, to be more certain in the Heat of your Liquors, and to expedite the Performance; which is a Matter of no little Moment, seeing it is so essentially necessary in avoiding the aforesaid bad Accidents, and procuring a pure, sound, vinous Wort. Again, boiling Malt-Liquors, though so customary, (in my Opinion) frustrates our Expectation; insomuch, as it certainly hardens and thickens them, which is one chief Reason why they are commonly allotted so much Time to digest in the Vessel, in order to break and divide their cohesive mummy Particles; which are much better primarily prevented by not boiling the Wort at all, notwithstanding the common Objection, That without boiling, the Liquor will be raw and not keep: To which I answer, that the Liquor has before received due Maturation in the Copper and Mash-tun, besides the after Digestion and Rarefaction it acquires in the Vessel by Fermentation and Age. And as to its being more liable to decay; it is certainly, not the Boiling that preserves Malt-Liquors, but their Spirit, which is obvious to a mean Capacity; and could we possibly extract the Quintessence of the Malt without it, I should much rather chuse not to use any Heat. Lastly, in order to enjoy Malt-drinks, that are to be kept any Time, in a sound, fine and mellow Condition, I have found it very necessary to free them (as soon as thoroughly digested and fine in the Vessel) from their gross Sediments, or common Lee, which, from it's yeasty Particles, &c. never fails more or less to damage such Drinks, especially the pale Sorts by inducing an Acidity, and rendring them liable to fret and become foul upon Alteration of Weather; therefore a proper artificial, alcalious Composition substituted in its stead, prevents these bad Accidents, and very much preserves and meliorates the Liquor it is put into.

Examples

Examples to illustrate the great Advantage of Infusing the Hop in a close Vessel, and not boiling it in an open Copper.

By this I engage my self in an Article, hitherto omitted by all others, and yet I think it a very Capital one; by reason the first flowery Spirit of this aromatick, fine, oily Vegetable is of such an excellent Nature, that the most learned Naturalist allows it to have no *Succedaneum*; and therefore I endeavour'd to contrive a Way (that I have experienced) to confine and preserve its noble Quality entire, which cannot possibly be done, where there is an open Evaporation allowed the Hop; and though I have all along hitherto in my two former Treatises encouraged a short Boiling of fresh Hops in order to their answering this great End, yet believe me, it is only doing the Thing in part, that even then is a thousand Times preferable to the filthy, unwholesome, old Way of boiling them two or three Hours; which as I have remarked, never fails of extracting the Worser and losing the better Part of this fine Ingredient. So that this, like the best of many other Things, may be perverted; as I can prove by many Examples, of which the following shall suffice, *viz.* There is a certain Plant call'd *Daucus* or Wild-carrot, which grows plentifully in some common Fields, about knee-high, with a bunchy Head, in the Shape of an Onion in seed; and is brown good part of the Winter; the Seed of which is a Carminative, and has several other excellent Qualities; particularly two, one of a bitterish, and the other of a peachey Savour; of which Seeds take half a Pint and boil them in a Canvas-bag in a Kilderkin of Ale-Wort half an Hour, and they will not fail to give it a fine Relish, and keep it sound some time: But if you take the same Seeds at the End of that Time, and squeeze them into the Drink, there will come out an unsufferable, ill palated oily Juice, that will spoil all the Liquor it is mixed with. The same it is more or less with other Vegetables, the Hop in particular, if used after the same Manner,

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ner, or by too long boiling, and evaporating its best Part or Spirit by the Steam. Somewhat agreeable to this, is the modern Practice of preparing some Medicines from Vegetables; the Vertues of which were heretofore directed to be obtained, by decoction or boiling as in the *bitter Decoctions*, and that of *Sena*, of our old Dispensatory, but now (among other great Amendments and Improvements by the learned Faculty) they are expressly and more elegantly order'd to be infus'd.

A certain Virtuoso who once dealt pretty largely in the Distilling Business, and was noted for his Skill in Meliorating our *English Brandy*, so as to render it little inferiour to Foreign, used the following Method, *viz.* to hang a pretty large Piece of dry Florentine Orrice-Root by a Pack-thread, or otherwise, in the Top-Part of an Alembick, so as the boiling Liquor may not touch it, and it will give the Spirit or Water so drawn off, a fine, agreeable, Rasbery, vinous Relish and Flavour: But if you boil it in the Liquor, it will have none of this delicate Quality, but instead thereof, impregnate it with a very disagreeable, harsh, earthy Taste. So likewise, if you infuse this Root cut in Slices in a little *English Brandy* for about six or eight Hours, it will much improve it; but if any considerable time longer, it will affect it in the disagreeable Manner aforesaid.

But for a further Proof that Hops should not be boiled in Wort, but infused, I add the following demonstrative Reason. A Distiller boiled off a Brewing of strong Wort in his Still, and for an Experiment, as soon as he had put in his Hops clap'd on the Head, and there came off by the Worm only a bitter Water saturated with the pure aromattick Part of the Hop.

Now as some may not have the Conveniences of using the Copper-pot with its screw Head as I have before described; such may have one made of Tin instead thereof; or I would advise you first to rub and then to put one, two, or more Pounds of Hops with the Salt of Tartar into an earthen glazed Pot, allowing

Room enough, and made somewhat like a Churn, broad at Bottom and narrow at Top; on these pour so much pure, soft Water as will wet and cover them well, so that a Quart may be got off each Pound, and immediately stop it up with a Cork, or some other thing to keep all the Steam so in, that none may make it escape; set it over a gentle Fire, and let it boil up; then remove it and set it by till thoroughly cold: Then pour the bitter Liquor off into the Cask as soon as it has done working, and bung it down tight directly. But here in course will arise an Objection against this Procedure, because the Hop is to be infused in hot Water and not Wort, and so must make the Drink weak and raw. To this I answer, That though I have here recommended Water rather than Wort, yet every one is at his Liberty to act as he pleases, and upon Trial, I believe, will be convinced, that pure soft Water is the best *Menstruum* or Vehicle to penetrate into, divide, and imbibe the viscid or cohesive Part of the Hop by Infusion, especially as it is assisted by the Salt of Tartar, which is a great Alkali and very wholesome; so that by thus confining the Steam of both Water and Hop in a glazed earthen, or other Vessel, the Quintessence of the Hop will have a pure Extraction as soon as cold, after the same manner that Teas are made, whereby the finest Parts of this most serviceable Vegetable will be obtained, and the earthy, unwholesome Qualities left behind for the imbittering of Small-beer, or doing a good Piece of Service by giving them to a poor Neighbour; whereas if hot Wort was used instead of Water, it would not be able to receive such a strong Tincture from the Hop; because both the Hop and Wort are two oily Bodies that cannot so easily incorporate as a thinner Liquid: Nor can so much Water as a Quart to a Kilderkin of strong Drink be of any Signification, since it is loaded with the full Strength of the spirituous Hop, that, to preserve in the best manner, I put into the Barrel as soon as it has done working, and immediately bung it up in order to conserve its

Spirit intire, which if mixed with the Wort that is to be afterward fermented, in course there will be a great Expence of those Spirits, which may after this method be truly perserved.

*A further Account of Brewing Malt-Liquors
without Boiling.*

IN my second Book, Page 69, I largely wrote on this Article, and yet think myself under some Obligation to enlarge on the same Subject here, by further recommending this advantagious Method to the World, as being very profitable, pleasant, and wholesome. A Miller near *Chelmsford* in *Essex*, is famous for brewing his Drink after this Manner, that he makes so strong as to burn if thrown into the Fire, and is always fine. His Way is to boil the Hops in Water, and after they are strained out, he puts that Water into his Tun for the first Mash; and if he has occasion for more hot Water, he boils fresh Hops, strains them out, and puts the Liquor over the Goods, as he did the first time; because the more terrene, and feculent Parts of the Hop commonly extracted by Ebullition, are by this Method as it were filtered out, and left behind in the Grains; for there is a natural Contact between the earthy, Phlegmatick Parts of the Malt and Hops, and so *è Contrá*, as the Salts of the Yeast sooner joyn or have a readier Contact with those of the corrupted or fermented Grain, *i. e.* Malt in Wort, than they do with Molosses, or other Bodies that have not more or less undergone a Prefermentation: After this he cools his Wort and ferments as usual, but without boiling it at all. And also in *Hertfordshire*, I know a Man that has brewed all his Drink for his own Family many Years after this Manner, with great Reputation. The same likewise I found practised at *Froome*, and some other Parts of *Somersetshire*, and is certainly an excellent Way, provided this can be done without losing any of the Hop's Spirit by Evaporation: Where-

Wherefore instead of boiling them in an open Copper, they should be infused or boiled under such a confining Cover, as will secure their Vertue; then if they are strained out, and the Water put over the Malt, the Wort will certainly be the better; and in this Case fewer Hops will do, because their whole Strength is thus intirely preserved. Wort is better for not being boiled, because boiling thickens and hardens it; and Water also by evaporating the lighter, softer, and more pure Part: Though I can't say that any Spirit evaporates in boiling Wort; because if the Grain is so opened as to emit any Spirits in Malting, it is thoroughly lost in the watering and drying, as was fairly demonstrated by the Experiment of the Still above mentioned in the Account of infusing Hops. Also the common Objection of its being raw, and not fit for keeping, I have already obviated by this reason, that it is not boiling that matures and preserves Malt-Liquors, but a right, and due Fermentation, and its Spirit; which is likewise further confirm'd by the Practice of a certain wealthy Virtuoso near *Bristol*, who constantly brews his Ale and Table-Drink without boiling their Worts: and, in his own Words, He sometimes keeps his Ale near twelve Months, and believes both to be as good as any of his Neighbours: Notwithstanding he is very particular in another Respect, which is, that he never puts Hop or any other Bitter to either Sort, and affirms it to be pleasanter and wholesomer without; tho' he formerly us'd to brew in the common Way.

C H A P. XII.

Of Worts and their Improvements after a new Method.

WORT is the Oily, Spirituous Parts of the Malt, obtain'd by Infusions and Washings of hot Water, that lye and soak with the Grain, one, two or more Hours; which gradually opens the Pores, whereby it the more freely imparts its Virtues by the further Assistance of a Cover of fresh Malt, which here prevents the Escape of the finer, softer, and most penetrating Parts of the Water by Steam, and causes a more equal Distribution of them throughout the Body of the Mash, by a due confinement of the Heat; and being swell'd and saturat'd to its utmost distention, returns the overplus Liquor laden with the sweet, balsamick, nourishing, pleasant Parts of its Flower, and so continues to emit the same in a regular Tincture, by the several Ladings over or Washings that leisurely follow, and are constantly discharged by the Cock without stopping, till the just Quantity is got off in a fine transparent Stream. Now to enjoy this virgin, delicate Liquor so obtained, free of all Adulteration, much Waste, and in its utmost Purity, is the Design of this Part. To this End, I put fresh Hops first rubb'd well between the Hands into the Tub under the Cock for the Wort to run on, all the time it is spending off, and when I have my Quantity of first Wort, I empty the Tub of that and the Hop, still continuing without intermission my Leakings over and Runnings out on another Parcel of fresh Hops for my second Wort; and if after that small Beer is to be made, more fresh Hops should be employed to receive it all the time it comes away: And when I have got possession of a genuine Wort, it is to be managed as before, and as hereafter I shall direct. Now I am to account for the Excellency of this Method,

thod, and to show that it transcends that practised by me at my great Brewhouse; where after the first Piece of Wort was discharged off from under its Capping of fresh Malt, all the after Worts were obliged to be exposed an Hour, or near one each, on the Goods, to infuse and bring away their Strength; about half an Hour running off, and almost half an Hour longer before it can be pump'd out of the Underback into the Copper. In all which three Ways the Worts sometime suffer in their better Part, which I prove by the Accidents of pricking, or a little souring of the Wort, that frequently happens in the Mash-tun or Underback, especially in hot Weather. From hence it was that my Malt-Liquors would sometimes suddenly acquire Staleness, because truly speaking, they thus were deprived of part of their original, native Sweetness before they went into the Copper, that is irrecoverable afterwards. But as this ancient Management commonly affects the Wort more or less in its fundamental Principle, but so as at first not to be perceived by the Unwary and Ignorant; it generally likewise escapes the Censure of the Drinker as to its true Cause, who falsely imputes the Badness of it to the Underboiling it, the Length of time in keeping it, or to the Want of a sufficient Quantity of Hops in it. However, it is certain that such damaged Wort is of dangerous Consequence to the humane Body; for if the Wort is sick, it cannot fail of communicating its unwholesome Quality to the Blood; and therefore I hope my Caution will give a just Idea to my Reader of the too commonly over-look'd Mischief that accompanies such ill brewed Beers and Ales, and so prevent the Loss of Health, Time, and Money, that many have been brought under, by not knowing the Source and Spring of their Illness; for it is certain that great Errours may be insensibly committed in the smallest and meanest Preparations, for want of rightly understanding the Forms of Nature. So that I think myself obliged to write against the necessitous (though common) Way I formerly

merly followed, in suffering the Wort to lye in the open, broad Mash-tun, and Underback of my great Brewhouse an hour and a half, or two hours, without so much as a Hop in it to secure its innate, tender Virtue, or Sweetness, against receiving prejudice from Time, Utensils, Heat, and *Effluvia's* of corrupted Air. On the contrary, the Method of obtaining Wort by Ladeing over hot Water proves the vast Benefit that it receives, when intirely preserved in its pure, natural State; as by such quick Dispatch, and the Tincture of the Hops it surely does. For it is certain, that both these Conveniencies potently oppose and resist Acidities and other ill Qualities, which often have proved the Bane of humane Bodies, and in their Room maintained Malt-Drinks in a wholesome, pleasant, mild Condition from their first running out of the Mash-tub to their last Consumption. Which Management, is also much better than that practised by some common Brewers, who to secure all safe, lay a good Quantity of Hops in the Hollow between the false and fix'd Bottom of the Mash-tub: But by their Leave they are wrong in so doing, because here their Hops are obliged to lye the whole time of the Brewing, which consequently must extract the foul, disagreeable, earthy Part of them, and do the Drink great Damage. For herein consists the nicest Point in extracting the Virtue of any Vegetables, Minerals, &c. especially such as require several Digestions; first, by a proper *Menstruum* to obtain, and afterwards to preserve their fine, purer, and better Parts, so as at the same time to avoid their more gross and terrene Qualities: In this, I say, consists the Perfection of all such Artificial, Spirituous Liquors that are to be procur'd by Infusion, Decoction, &c. Thus, Take a common Fire-shovel and heat it, then put Coffee-berries on it, and heat them also till they sweat; while this is doing, set some Water over the Fire in a Coffee-pot, when heated, throw it away, and dry the empty Pot on the Fire; then take the Powder of the heated Berries and put into the

warm

warm Pot, and immediately Water heated under a close Cover and just before it boils, over it; and then this previous, gentle Heat by the present Admission of igneous Particles into the Pores of the Berries, will so distend and divide them, as to cause them much readier to communicate their purer, and lighter Parts to those of the heated Water; and in three or four minutes standing close cover'd will afford a pleasant, strong Liquor without partaking any of the harsh, acid, gross Part of it, which the common Management yields more or less by using the Powder cold, boiling and standing double the time.

Worts prepared by Digestion.

By this Way, as a late Writer observes, the Particles of Bodies are extracted, which are more light than the terrestrial Ones they proceed from, and that by a certain *Menstruum* that they intimately mix with. To this end, a gentle Fire is commonly used, that the Corpuscles which are most volatile may separate as it were of their own accord; for a fierce Fire forces out the Fæces as well as the finer Particles; and if it does not abate the Strength of the Liquor, it will not fail of fouling it; according to which Rules, says he, there may be practised a Sort of curing strong Worts, thus, *viz.* Put your Wort into the Copper, and on it fit a blind Head that may be closely secured with a Paste, which by a moderate Fire may be digested Twenty or more Hours, with a sufficient Quantity of Hops, or some other Ingredient instead of them, after which it may be fermented as usual. By this Method, either Malt, or Treacle Wort, is said to be brought into an excellent, drinkable Condition, without diminishing its Spirit or fine Part. But I can't joyn in Sentiment with him on this Account, because by this long, close Stewing, the whole Power of the Hop is incorporated with the Wort to the last degree, never to be separated while it is Drink; and
then

then it will be attended with many ill Consequences, as I have before observed: Besides, the Wort here is heated or boil'd in the dark in a very blind Manner, and may thus obtain too thick a Body, which will much take off that fine, vinous Consistence which all Malt-Liquors should have: For Wort, though it has by a proper Length of Time boiled into innumerable Particles; yet by being afterwards boiled on too long, the whole Body of it will again reunite and become an intire Consistence, as it was before it broke into such Particles. But I must own, if this Operation, can be truly adjusted, so that the Wort and Hop may be boiled to a true Crisis under Cover, it is an excellent Way, and I am a Votary for such keeping in the Steam of Wort; though there is an Objection made by some, that the Wort can't loose any Spirit in boiling openly, because the Liquor was never yet fermented. To this I answer, that though a Spirit can't be extracted from Wort, till it is fermented, yet its certainly true that the softest and finest Parts of either Water or Wort will fly away in open and long boiling, that were intirely necessary to incide and dissolve the viscid Body of the fermented Liquor, and make it healthful to the Drinker. Therefore I think this same Author more in the right when he advises, that as soon as Wort and Hops are put into a Copper, there should be a large blind Head fixed on the same, that is to be luted so fast as nothing can evaporate; Then gently boil the space of one or two Hours as the Strength of your Liquor is; then remove the Head, strain the Hops, and let out the Wort into a Cooler, so, says he, you have a Liquor in which is the full Virtue of the Grain and Hop. But in my humble opinion he has not hit the Mark yet; for though such Confinement preserves the Steam, and some Virtue of the Wort from flying off, it is an obscure and uncertain Way; because there is no seeing when the Wort breaks, nor an Opportunity of taking out the Hops in due Time, so that there ought to be a better Method contrived,

trived. To which End I advance my Notion as follows, viz. In *September* 1736, as I was travelling through *Norfolk*, I happen'd into the Company of an eminent common Brewer, to whom I was hinting the great Service of confining the Steam of Worts while they boiled. In answer to which he told me he had attempted the very thing, by fastening his two wooden Doors just above the Curb of the Copper, and also thought he had secured the square Hole in the Middle of his Copper-back; accordingly he ordered the Stoker to boil the Wort as usual; but it was not long before the Board on the square Hole gave way, and the Wort bursted out with such Fury that it boiled over on the Ground, and had like to have scalded the Fire-Man; which so affrighted him that away he went, and could never be perswaded to live with his Master afterwards. Here I observed his Copper-back to be but three Foot higher than the Copper, which consequently was too short a Distance for such a Tryal: for in this Case there should be such a space allowed as to weaken the Ascent of the boiling Wort and Steam: So that I am of Opinion nothing less than four or five Feet high Vacation ought to be allowed for this Performance, in order to break the Force of such an Ebullition, by thus giving it Room enough to expand, and with all the Advantage that can be given to the Strength of the Brick and Wood-work about the same. By this Contrivance you may adjust the true Time of boiling both Wort and Hops, and that by only turning the Cock at the End of your Copper-Arm, and see at any time in a little drawn Wort, in what Condition all the rest is; which is far more profitable to the Brewer, and much better for the Drink than boiling a first Wort four Hours with all its Hops, as I heard another did in an open, low Copper, and yet was reckoned the greatest Brewer in the Country he lived in. In fine, the Benefit of this new Way must be considerable, since it's generally allowed, that according to the present common Mode of laying a Back over

the Copper, with a narrow Hole in the middle of the same for the Evacuation of the Steam, and a Pair of folding Doors at the Front; near half of the Waste of Worts is saved, which used to be lost when boiled in an open Copper.

How three Men in Partnership Brewed and sold Ale without buying Malt or paying Excise.

This Scheme as I was credibly informed, was invented by a *Yorkshire* Man, who buoy'd up with the Assurance of Success, propos'd it to two of his Country Men, that readily came into his Measures. For this Purpose they took a ground Room in *Grays-Inn Lane*, which they furnished with a large Tub, a few Casks, and a small Kettle. Then they proceeded and bought a Sack of the coarsest Sugar, putting the same into the great Tub, first charged with a due Quantity of cold Water that they mashed and mixed well together. To this they added an Infusion of Hops, so made by pouring scalding Water on a Parcel in a Firkin, that when soaked enough they drew out at the Tap-hole, and work'd all with Yeast as is done in Malt-Liquors. When the Drink was ready, they carried it out in the Dark to a Cellar in *St. Martins-Lane*, where they sold it for common Ale at a Price that invited good Custom, and that brought in such a Profit as soon made two of the Partners become extravagant Rakes to the Ruin of their dark Enterprize.



C H A P. XIII.

The Barnstable Way of Brewing a Hoghead of fine Pale Ale.

THEY draw off a Hoghead of fine pleasant Straw Coloured Ale from twelve Bushels of Malt, thus, viz. They boil the Water, then throw two Pails of cold

cold into the Mash-tun, and the boiling hot Water on that; then immediately put in the Malt half a Bushel at a time: After stirring it till all is soaked, they Cap it with Malt or Bran, and cover it close to stand three Hours; then see if the Mash is sunk in the Middle which it will sometimes do, and when it does, it shows the Strength of the Goods, and must be filled up level with boiling Water to stand half an Hour after, when it is to be run off in a Goose-quill Stream, which is to be returned upon the Goods again, by a Bowl or Pail full at a time as back as you can from the Cock; for then the Liquor strains through the Body of the Goods, and at last comes very fine; otherwise you force the thick Part down to the Cock: this is called Doubling, which they continue to do for half an Hour, then stop and let it stand half an Hour longer in Winter, but not in Summer; then they rub four Pounds of Hops very fine into the Kieve for the Wort to run on; they don't draw it off too near before they lade over more boiling Water out of the Copper, that is to be continued till you have your Quantity of Ale Wort, which with all your Hops is to be boiled till the Liquor breaks or curdles; then they empty all into large earthen long Pans or Coolers that they work when cold with the same Hops all together, thus; *viz.* They put a little Yeast (as little as may be, and that not a Day old if they can help it) to a Parcel, and mix that with all the rest to work Twelve or Fourteen Hours, and then they directly strain it into the Barrel, where they keep filling it up with fresh Wort till they leave it full at last. When the Fermenting is finished they paste a Piece of brown Paper over the Bung-hole for a Fortnight, which will very much conduce to its fining by its having a little Air, and then bung for good with a wooden Stopple. Thus they'll draw their Ale perfectly fine in three Weeks or a Month at most.

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N. B. They never Mash here above once for their strong Drink, and seldom make small because of its great Cheapness. Therefore they think it turns to a better Account to leave a Strength in the Grains for feeding their Swine.



C H A P. XIV.

Working Beer and Ale after a new Way to their great advantage.

YEAST is an Acid, as appears by its soon turning sour, and consists of a great Quantity of subtil, and spirituous Particles, wrapped up in such as are viscid: When therefore this is mixed with Liquor, it occasions an intestine Motion by the Interfering of Particles of different Gravities, as the spirituous Parts will be continually striving to get up to the Surface, and the viscid Ones continually retarding such Ascent and preventing their Escape. So that by these two concurring Causes, the Particles extracted from the Grain will, by frequent Occursions, be so comminuted, as continually to encrease the more subtil and spirituous Parts, until all that can be made so by Attrition or Fretting are set loose from their viscid Confinements, as a learned Author plainly demonstrates. It is also influenced by the Air that in Summer is warm, light, and thin, and greatly promotes it; in Winter it's thick, cold, and heavy, and much retards it. Also in Spring and Summer, the floating Particles of the Air that are of the same kind as those in the fermenting Liquor, joyn them with their Strength, and make the Working more violent. So Malt-Liquors made from Beans, Oats, or other Vegetables will ferment higher and be stronger, if brewed when they are in blossom.

After

After the old Way.

As I have all along in the several foregoing Operations endeavour'd to preserve the more pure, light, and subtil Parts of the Water, Malt, Wort and Hops. I shall here likewise do the same in Fermentation. In the Working of Beer, and Ale the Spirits have the greatest Opportunity of making their Escape, and therefore here is the place for your chiefest Care, that the Fermentation may be brought on cool and leisurely under the close Cover of a Lid and Cloaths to preserve the Spirits; for if you put your Nose over it while it is working, you'll find the Strength ready to suffocate you; which plainly shows it emits a great deal of spirituous Effluvia, that will fly away if not kept well in, as you may also prove by putting a lighted Candle a little down under the Cover and it will extinguish it. But if the Fermentation is not thus confin'd, your Candle will remain lighted, because the Spirits will then evaporate freely.

After the new Way.

This is very different from the old; for by this the Use of Tubs and working Tuns are wholly laid aside, on account of the great Loss of Spirits that such open Utensils expose the Drink to, that here have such a free communication with the circumambient Air, as to be influenced by it in a most plenary Manner; so that if too free an Access to the aerial Particles is detrimental to the Malt-Liquor, here is full Liberty for their Action. To prevent which, take a little Wort before it is quite cold, and mix it with some Yeast; when it is fermented, put it into a Hoghead or Butt, and on that let the Wort run out of the Back, or pour it out of your Tubs as fine as possible, and as cool as the Season will permit. Then stop up the Bung-hole in the Head with a turned Piece of Wood wrapped round

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round with wetted brown Paper, and let the Yeast work out of a common Cork-hole made in the Front of the upright Cask within about an Inch of the upper Head, by a little Piece of Leather nail'd under it, and a wooden Spout under that, to convey the Yeast into a Tub on the Ground; so will you enjoy a Drink much stronger, finer, and better relish'd, than when work'd and tun'd after the old Fashion: For this Way causes the Beer or Ale to taste smooth and retain a brisk, lively Quality to the last. But then such Working must be in a right manner, neit'her too much nor too little. If in the first Degree, it will be apt to boil in the Cask in Summer almost like the Motion in a Copper, and bring it under a stale Hardness, make it taste harsh in the Mouth, and give too deep a Colour to the paler Sort of Drink: For this Reason some will follow this Method of Fermenting it all together in the Cask only in Winter and not in Summer. If in the second Degree, it will be always sputtering and never fine. But the Danger of these Extreams will not be very hazardous where Care and Judgment attend the Work, and so may be performed at any time of the Year with safety, tho' the Equinoxes or most temperate Seasons are certainly the best. Besides which, here is a great deal of Waste prevented that always accompanies the Vat, Tun, Pump, Pail, or Jett, used in working Malt-Liquors after the old Way. And if there is almost half the Waste of Wort saved in boiling Malt-Liquors by a Copper-back, there is also a Waste of the Drink prevented that otherwise would happen if work'd in the open Tub or Tun: And to prove the great Benefit of this Method, make but an Experiment even in your small Beer, and you'll find, that, work'd in the Cask, stronger, pleasanter, and will keep longer, than that first work'd in an open Vessel, and afterwards put into the Barrel, which consequently must likewise render it much wholesomer, than Drink fermented in the open Tun, because by this Means it is furnished with a great Plenty of its own original Spirits, that otherwise would certainly

tainly make their Escape, and the Liquor become flat and weak. So that in my humble Opinion, (and I hope it will become general in a few Years,) no Drink made from Malt will be esteemed, but what is brewed by infusing or boiling the Hops a little While, according to these my Directions, and work'd only in the upright Cask, as I have here directed.

To forward Fermentation.

If you have but little, or if you have bad Yeast mix a little Sugar, Flower, and Salt with it, and some warm Wort, or Beer, and it will raise it, and make it go a great way in working Beers and Ales. So it will if mix'd with Grounds of strong Beer, and will make it fit both to bake Bread and work Beers and Ales, and the sooner if you let the Mixture lye by a Fire. But some for a Make-shift will mix only hot Water and Sugar with stale Yeast, and recover it fit for Service.— Others will knead Bean Flower with Water into a Dough, and put it into the Wort.— Or if you put Wort in a Vessel on its Grounds, it will ferment it, provided it is not sour; but the Grounds won't work the Wort if put among it in an open Tub.— Others when Drink is backward in working will put some Stone-Lime into it.— Salt, Pepper, and Flower mix'd together will make Drink work that would not before.— Powder'd Ginger alone will help.— Or Ginger, Brandy and Flower mix'd together.— Or a Gallon Stone-Bottle fill'd with hot Water.— Or in case you can get no Yeast, Honey, Sugar, Leaven, or Treacle, will do it alone.— Or Flower, Salt, and Whites of Eggs mix'd with Treacle.— Or by putting a Chaffing-dish of live Coals under the bottom of a Tub or Tun.— Or by using some Salt of Tartar.— But in particular be very careful not to break the young yeasty Head, for this Cover helps the viscid Body of the Wort to keep in the Spirits, for all Fermentation is much promoted by rest.— Also to supply the Want
of

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of common Yeast, in Gentlemens Houses distant from Towns, I have heard, they cut and beat Isinglass small and fine, which being four Ounces in Quantity, they mix with two Quarts of stale Beer; then let it stand in Infusion till dissolved, but without stirring it; then draw or pour off the Beer, and keep the thick Part in a Pan before the Fire, so as just to keep it warm, and in about two or three Hours time, it will rise and ferment and look like Yeast; and then it is fit to use, either to work Drink with, or to bake Bread.— If your Yeast is sourish it will be apt to fox your Drink.— If you work your Drink too hot, you may expect to have it quickly fall, and either fox, or be flat, and suddenly stale.— You may make as much Yeast as will lye on a Crown-piece work a Thousand Barrels, by first putting it into a Pint, then a Quart, and so on.— All new Drink must be tun'd before it falls, or else it looses its Spirits.— Some are so ignorantly covetous that they will reserve out some raw Wort, and set it a working in order to save the Waste of it in boiling; the Consequence may likely cause a sweet and bitter disagreeable Taste in the Drink, and afterwards bring it into a prick'd Condition.— Yeast will be good two Months together, if cold Water is put upon such thick Yeast as it is settled at the bottom of a Tub, and pour'd off once a Week, and fresh immediately put on.— Or when the Drink is working, put into the Vat, a Whisk, Hasle-rod, Broom, or a Branch of Juniper, or Furze, and let it lye all the time it is fermenting; then take it and hang it up in a dry Place, and though it be Six or Eight Months before it is used, it will be very sweet and serviceable for the next Brewing.— Or Bottle the Yeast after the manner I have formerly directed.— Or when strong Drink works slowly through the Viscidity or Clamminess of the fermenting Liquor, or Coldness of the Season, a few live Coals or new made Wood-ashes will remedy that Inconvenience; by dissolving the oleaginous Particles and separating them, the alkaline Salt in the Ashes being excellently adapted for this purpose; the
same

same effect will be produced by a little Salt of Tartar, or an Onion dipp'd in strong Mustard, or a Ball made of Quick-Lime, Wheat Flower, and the White of an Egg beat up into a PASTE, a Piece of Which being thrown in will occasion a new Fermentation: But these last are only to be used when you are sure this Defect proceeds solely from the Thickness of the Liquor; for otherwise these volatile and fiery saline Substances will so break and divide the Texture of the Fluid, that with themselves they will make way for all the contained spirituous Particles to fly off at the Surface.

To cure new Drink damaged by the Frost.

If you are necessitated to brew strong Drink in frosty Weather, it is a great Chance but the Frost takes it in the working Vat, especially if you should let the Wort be ever so little too cold before you put the Yeast to it; there is then no preventing it. You may know when this Misfortune has happened to your Drink by its not working so kindly as other does; for it will ferment a fresh upon a succeeding Thaw, even if it has been in the Cask for a Month or two, and a Frost should have continued all that time; however this is a certain Rule to know it by, *viz.* when upon tapping it you find it very sweet, somewhat like a Syrrup (though you have allowed the sufficient Quantity of Hops to it as usual) and is commonly foul: Such Liquor will never be well tasted as other Drink, keep it ever so long, without using some Remedy.— The usual one to a Barrel of such Drink, is to make a little more than a Pail-full of fresh Wort, into which put a good Quantity of rubbed Hops, and boil it about half an Hour, so that it may be extraordinary bitter; and when it is cold enough, draw off a Pail-full of this damaged Drink and fill up your Cask with the bitter Wort in its stead, and it will work a new.— The Fermentation being over, stop it up, and let it stand for a Month, And if upon tryal you find it has come to, well.— But if it

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still

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still retains its sugarry Taste, then get ready another Barrel sweet and dry, into which rack off this Drink, and put into it half a Peck of parch'd Wheat, and a Pound of good Hops gently dry'd before the Fire, rubb'd a little and tied up in a fine Net; this hang in your Barrel by a String fastened to the Bung, which drive down tight, leaving only the Vent-hole open for a Day or two in case any Fermentation should ensue; afterwards stop close, and in three Weeks or a Month's time, it will be cur'd and fit to draw.

N. B. The Pail-full of damag'd Drink may be added to your Table-beer.

To check a forward Fermentation.

In *Northamptonshire*, and many other Places, they reserve a Piece of raw Wort for this purpose, and to prepare it for keeping, they get it off the Lees as fine as they can, and lay it very thin, else it would ferment of itself by the heat of the Salt and Sulphur contain'd in them. In Summer time when the Beer or Ale ferments too high, they mix a Parcel of this raw Wort to lower it, and so on in the same manner for several Days, which every time adds new Viscidities, that entangle and keep the spirituous Parts from flying off, at the same time breaking the cohesive Principle into finer Particles, whereby it makes the Drink so much the lighter and fitter for a more easy Digestion: Contrary to that worser way of beating in the Yeast, and loading the Drink with a heavy, clogging, unwholesome Matter: by which Management, the raw Wort will keep sound more than a Week, and is so serviceable for improveing Ale, that its constantly practis'd throughout the Year; for in Winter they commonly heat their Parcels to invigorate the new Drink, that it may potently resist the Severity of cold Weather; and then, as I have several times observed, the Malt Liquor will knit and sparkle in a Glass though drawn out of a Barrel. And I must own I think they brew the best Ale in this County

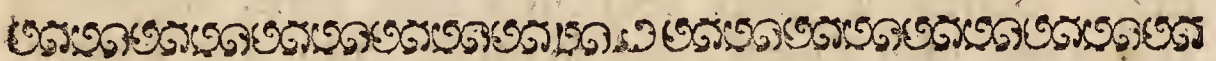
County of any other. So in the same manner they serve their small Beer that drinks extremely pleasant. In case your Drink works too violently in the Cask, (after my new Method,) then run a Brass-Cock into the middle Cork-hole of your Butt, and draw out a parcel, and in the Room thereof, put as much raw Wort into the Bung-hole in the Head, as will sufficiently check it, or burn Brimstone under or about the Vessel and it will do it directly.— Also Salt, Allum, Niter, Spirit of Vitriol, Oyl of Sulphur, Spirit of Salt, and all other Acids abate violent Workings of Malt Liquors. For the rest see my first Part, Page 53.— *Third Edition.* But before I leave this Topick, I think it necessary to add the following Account, as it was related to me at *Norwich*, in *September*, 1736. by one of the same Brew-house. The Tun-man, being ambitious to supplant the Work-man Brewer, contrived to bring about his End by dividing a Lump of Grease, and scattering the Bits into several Parts of the Tun, that then had a Guile of Nogg or strong Beer working in it; and though the Brewer left it fermenting in fine Order, yet when he came again, he found it all fallen flat, and only just covered with a thin Creamy Head. Thus this Villain brought the Brewer several times into disgrace, till at last they suspected and detected him in the Action, on which the Rogue fled.— When Liquor is of a thin Substance, and abounds with many subtile, and very fugitive Particles, something of a gross and viscid Consistence must be used to bridle and restrain their too great Activity; To which end, the White of an Egg and Wheat-Flower, old Yeast, and a cool Position, are very serviceable.

C H A P. XV.

Of Brewing Butt Beer called Porter.

THE Water just breaks or boils when they let in a Quantity of cold to keep it from scalding, which they let run off by a great brass Cock down a wooden Trunk (which is fix'd to the Side of the Mash-tun) and up through a false Bottom into the Malt: Then Mash with wooden Oars half an Hour; by this time the Water in the Copper is scalding hot, which they likewise let run into the Malt and Mash half an Hour longer. This they cap or cover with fresh Malt, and let it stand two Hours; then spend away by a Cock-Stream into the Under-back, where it lies a little while till a second Liquor is ready to boil, but not boil, with which they Mash again to have a sufficient length of Wort that they boil at once, or twice, according to the Bigness of their Utensils. Others will make a third Mash, and boil a second Copper of Wort. The first Wort is allowed an Hour and a half's boiling with three Pounds of Hops to each Barrel. The second Wort two Hours with the same Hops, and so on. Some calling the First, Hop-wort; the Second, Mash-wort; the Third, Neighbour-wort, and the Fourth, Blew. Which last being a most small Sort, is sometimes allowed Six or Seven Hours boiling with the same used Hops. When in a right Temper they let down the Worts out of the Backs into the Tun from their grosser Contents, where they coolly ferment it with Yeast, till a fine curl'd Head rises and just falls again, that sometimes requires Twenty-four, sometimes Forty-eight Hours, as the Weather is hot or cold to perform this Operation. Then they cleanse it off into Barrels one Day, and carry it out the next to their Customers, keeping the Vessels filling up now and then in the *Interim*. For making this Drink with a good Body, they commonly draw off a Barrel and a Firkin, or a Hoghead, from a Quarter of brown Malt, and
sell

sell it for Twenty-three Shillings, *per* Barrel. But this is govern'd by the Price of the Customer ; so that two or three Sorts are sometimes carried out from one Brewing, for with the Blew they can lower it at pleasure; always observing that the higher the Malt is dried the cooler the first Liquor or Water must be taken or used ; therefore the first Wort governs the second Liquor either to be hotter or cooler. If that was too hot you may know it by its bearing too great a Head or Froth in the Receiver, and so *è Contra* ; a midling Head shows the first Liquor to have been taken right.



C H A P. XVI.

An Account of the destructive Weevils, with several Ways to destroy them.

IN some Counties they call it Bood, others Pope, and Whool. It is a Kind of Beetle about the Bigness of a large Flea, and, like a small Ant, will crack under the Nail like a Flea, and will not only eat the Malt Kernel, but also where they are in Abundance will bite a Person in bed, haunt the Cup-board, and even feed on the Plates where Meat has been eat on. These Insects are the Pest of Corn Lofts, and are such Travellers, that when one is empty, they'l presently make their way to another, unless the Granary stands independant of other Buildings. They don't breed in Winter, only in Summer, and then the Slackness or Dampness of the Malt, which by lying in a Heap, heats, contributes to their Increase ; so a Wall, that the Grain lies next too, by its giving in wet Weather, will cause a Moisture and sometimes have the same Effect : likewise when Malt is kept two or three Years together in a Loft, the Dust that it acquires may bring on a Heat, and that cause, the breed of this Insect. And why the great *London* Brewers are not so much troubled with them as the Country, is
because

because they are always emptying and receiving, that so disturbs them as to hinder their Increase. A Brewer in the Country built a Loft that stood from other building, and though he thought himself secure by this Means, yet was it not long before he had his hated Guests; for being necessitated to buy Malt at another Town, he ignorantly bought some Weevils or Whoools in it, which to get rid of, he would not suffer any Malt to lie in the same six Months together; this answered his Purpose, for it starv'd them quite. But where they are in great Numbers, and have food enough, they'll destroy a great deal in a little time, beginning at the end of a Kernel, and so eating into the Flower, spoil the Malt and deceive the Brewer; for these as they are nourish'd or encreas'd by Putrefaction, and often unperceived ground with the Malt, and boil'd in the Drink, fox it, and cause it to grow stale and rope, and thus are the Beginning of Corruption, which like Leaven, is continually encreasing till it has brought the Whole under a total Damage.

To prevent.— Screen the Malt now and then from the Dust, and lay it dry against Boards, and empty your Loft in due time.

To destroy great Numbers of them, and keep them under.— Is to shovel the Malt up into a Heap, and they'll all make up to the Top, by which you may take off the major Part and sift them out, then stirring and heaping the Malt again, you may repeat the Work.

A Second Way.— Leave a Peck or less of Malt or Grains on the Floor, and the Whoools will come out to feed on them, when they may be shovel'd up. They are most in Lofts at the latter End of the Summer Season.

A third Way.— When the Loft is empty they'll be apt to creep up and lodge on the Walls; in this case, white Wash with a Brush dipt in Water wherein quick Lime has been just quench'd, and it will kill many of them.

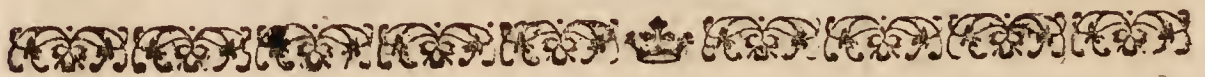
A fourth Way.— If the Room can be inclosed from
Air,

Air, then you may destroy them by burning Brimstone or Guiny-Pepper in the same, but no Person must be in the reach of it.

A fifth Way.— Is to carry a good Parcel of Horse-Pismires, or the great black Ants, which you may shovel up with some of the Mould of the Hill, and put all into a Sack, which if you scatter in the Loft as soon as the Corn is out, they'll effectually kill the Whoools, and afterwards leave the Place.

But for further setting forth the destructive Nature of this poisonous Insect, take the following Account as it was related to me by a Servant who had been brought up under a Person from *Nottingham*, famous for brewing Malt-Liquors. A Victualler hearing of this valuable Servant, used his strenuous Endeavours to hire him. Accordingly succeeding, he employed him to brew a Quarter of Malt. The hot Water being in the Mash-tun, he opened the Sack to put in the ground Malt, when to his great Surprize, he saw vast Numbers of Weevils creeping in the same; however, he put in both them and Malt, and mashed away, but in such pain from the fetid Stink of the Weevils, that he could hardly bear his Nose over the Place, and resolved never to brew there a second time; which he made good, and returned to his old Master again: An Example one would think sufficient enough to open the Eyes of the ignorant Citty and others, who consequently drink great Quantities of such unwholesome Malt-Liquors made from whoolly Malts, as may be inferr'd from what I am going to say, *viz.* The small Town where this happened lies above Twenty-five Miles from *London*, and furnishes large Quantities of Malt to that Place by the Waggon. Now according to the Opinion of some, all or most of their Malt-Lofts or Granaries in the same are infected by the Weevil, and have been so for many Years past, insomuch that they despair of ever getting rid of this their constant Lodger. If then this horrid Creature breeds in such abundance in one small Town, and accompanies the Malt alive both
before

before and after grinding, even into the Mash-tun, the Drinkers in course must swallow the Quintessence of their nasty Bodies; which before, on sight of only one being crushed under the Nail, would be apt to turn his Stomach. And therefore it highly concerns all to be assured their Beers and Ales are brewed from sound Malt, clear of that stinking Insect, the Weevil: They likewise infest Ships, and are frequently found in their Bread, which these Insects feed on as long as they can, and then die in it, and afterwards poor Tarr is often forced to take up with it; hard Fate, when it won't afford even a Weevil any longer Subsistence.



C H A P. XVII.

Common Purl improved by a famous new cheap Receipt now in use, rendring it far more wholesome and pleasant than by the common Way. Or an eminent Victuallers Method of making Purl.

ROMAN Wormwood two Dozen; Gentian-root six Pounds; Calamus Aromaticus (or the sweet Flag-root) two Pounds; Snake-root one Pound; Horserhadish one Bunch; Orange-peel dried, and Juniper-berries, each, two Pounds; Seeds or Kernels of Sevill-Oranges clean'd and dry'd, two Pounds. These he cuts and bruises and puts them into a clean Butt, and starts his mild brown, or pale Beer upon them so as to fill up the Vessel, about the beginning of *November*, which he lets stand till the next Season. This he does annually, and ought to be followed by all of the Business.

N. B. Was he to add a Pound or two of Galingal-Roots, to it, the Composition would be the better. This
Victualler

Victualler is of Opinion that there is scarce six in Twenty of his Fraternity in Town, who do not make their Purl only with their Refuse or Waste-Drink, such as they receive in their Tap-tubs, by throwing into it no other Bitter, but a Parcel of common weedy Wormwood; which Compound, one would think, more fit for a Puke, than a grateful, cordial, stomachic Bitter.

A Cure for the Gout or Rheumatism.

When I was at the City of *Wells*, the Town of *Bridgewater* and some other Parts of *Somersetshire*, in 1737, I could not but lament the deplorable Condition of several Publicans whom I saw there miserably afflicted with the *Gout*, which I think was chiefly owing to their stale, Butt, pale Beer, that here is their common strong Drink. To one Inn-keeper, who a long time was forced to walk with two Sticks, and another Bed-ridden, I gave the following Medicine that restored them, *viz.* Take one Ounce of clean Gum Guaiacum finely powdered, and put it into a Quart-bottle of right *Jamaica Rum*. Of this take half a Quarter of a Pint or less as you go to Bed, and it will cause a small Sweat, and perhaps a Stool or two. If it does not carry off the Pain in one Night, repeat it once or twice more. It is a very safe Remedy, curing both *Gout* and *Rheumatism*; and is now in great Reputation and Use among the Nobility in general; from one of whom I had this famous Receipt; which frequent Experience also warrants to be a most excellent one for any Degree of the Scurvy, and is accordingly now daily taken by many after the following manner. *viz.*— Infuse two Ounces of the Powder in one Pint of old Rum; of this Liquor, put one or two Tea Spoon-fulls into a Glass of cold Water, and drink it at Night, or better in a Morning fasting.

Observations on some Country Drinks.

In *Suffolk* and *Norfolk* they run very much upon a light brown or deep Amber colour'd Butt-beer, which

in the latter Place is called Nogg, is commonly fold for Six-pence *per* Quart, and in some Parts is a light, good Drink : But then, like their Cheefe where they make most-ly Butter, their common Ale is hardly fit to Drink, as being generally made from the earthy Goods of the strong Beer and its Hops. About *Rochester* in *Kent*, they brew a most potent, deep, brown, stout Beer, at four Pence *per* Quart, and which indeed best agrees with their brackish Water and bad Air. In *Somersetshire*, and some other Parts of the *West*, they affect a pale Butt-beer; and at *Bristol*, besides their stale Drink, a mild, cool-work'd common Ale is much in Request for being of a deep Amber or light brown Colour, and so clear that they often bring it in Decanters; A Condition ! That I could wish to see the hot work'd *London* common brown Ale always in, that both it, and the pale Yeast-beaten Ales &c. may be free of that *Odium*, which Strangers are (but too justly) very apt to cast on them. At *Bedminster*, an eminent Quaker, who had got so much by the Distillery as to live on his Estate, told me he had rather brew in a Kettle, than drink the Town-brew'd Malt Liquors; a Reflection which I think cannot take place, if the excellent New-River Water, sound Malt, an Airy Brew-house, and a true Art were employed in the brewing of them : In order to which I have endeavour'd, in my First and Second, as well as in this Third and last Part of the *London and Country Brewer* to bring about; and that this may be of the greater Service I have here added the following many valuable Receipts for fining, preserving, and improving Beers and Ales in the Cellar, which, if duly and rightly observed, will in great measure spoil a Sort of business lately set up in the Metropolis, by some called *Vinegar Coopers*, who buy great Quantities of damag'd stale Butt-beers for that purpose.



C H A P. XVIII.

T H E

C E L L A R - M A N.



OF U L Experience shows the Want of this Art in those who are ignorant in a Cellar of Malt-Liquors, by the great Numbers of Vessels of Drink which are annually damaged or spoiled on this very Account. For this Reason, some think that a well qualified Person who has under his Care great Quantities of Beers and Ales is no less useful than a skilful Brewer ; for though the latter is the prior Workman in preparing and finishing Liquors for the Cellar in a short time, yet is the former engaged sometimes Years together to preserve and keep in due order his several Sorts, that their Owner may not sustain any damage by Leakage, ill sented Casks, Staleness, Ropyness, Foulness, or any other Incident ; but that through the Skill and good Management of this Person such Liquors be improved even beyond that natural Order the Brewer left them in. On this Account also may Victuallers, as well as private Persons, become Curers of their own Drinks, which by these Means they may improve after their own Taste, without being confin'd to the Caprice of a Cooper, or the Niggardliness of his Master: For I know some Brewers that are seldom at a greater Expence than Elder-berries and Isinglass for their brown Drinks, and but little otherwise for their Pale; which brings to my Memory, the Expression of a Person who invited his Friend to a good Pot of Drink ; says he, if you'l go to a House I know off, we shall be sure to have

right, for this Man never admits a Cooper into his Cellar.— Also at *Reading* in *Berkshire*, I knew an Inn-keeper there, who is such an Artift as to supply the starting Cooper's Place, and doctors his Beers and Ales so well, that the worthy, eminent Brewer he takes them of, declared when he tasted them, he could hardly believe they were the Drinks he sold him, on account of their being so much improved beyond those in his own Store-house. So at *Newberry*, where is kept about two Thousand Barrels at a time of pale or light Amber Beers in Cellars and Store-houses belonging only to one Brew-house, they are so skilful and careful as to improve and preserve them in a right Condition till their Vent at *London*, &c. lessens their Number.

Of Foxing, Bucking, or Charning Malt-Liquors, Three *Synonymous* Terms for what in *London* they call only by the Name of Foxing; but in some Parts of the *West*, by the other two. In my Second Book I thought I had fully laid open this great Evil, however I find myself obliged to enlarge on the same in this place, and say, that besides the wooden, upright Pins, which fasten down the Planks to the Joists of the cooling Backs, and working Tuns, there lies between them Tow or Wadding drove in mighty close, and is what some call Corking, to keep the Water, Worts, and new Beers and Ales from leaking through the Joints, which being of a spungy, hollow Nature, especially in hot, dry Seasons, readily imbibes and very tenaciously retains any nasty Acidity that can make a Lodgment in it, and which fails not sometimes to infect the succeeding Worts, before the Yeast is put into them, and sometimes in the working Tun. there will appear a whitish Cream on the Top, and then the Drink receives the Damage before the Yeast can get dominion of the Wort. When it so happens there is no longer doubt but that such unnatural, poisonous Fermentation has brought the Fox into your new Wort, Beer or Ale, and then cure it if you can. However as difficult as it appears, by having rendred abortive several Attempts that have been made to this Purpose,

pose, I shall endeavour to write such Receipts, as I hope will contribute to its great Service, if not a Cure, and make such damag'd Drinks wholesome and pleasant.

First Receipt.— Take a large Handful of Hyffop out of a Garden, and cut it small; with this mix a small Handful of Salt, and put all into a Hoghead of ropy Drink, and in two Weeks, it will be clear, if you stir the Vessel well when its put in, and let the Ingredients remain to the last, stopping all close directly.

Second Receipt.— I knew a Person catch'd in his Brewing with this Disease, by means of a Tub that the Servant had used in washing, and put by without scouring or scalding; for all Soap naturally leaves a white Furr behind it on the Sides of the Tub, which by drying on encreases its Acidity, and turns the Wort into what we call a fox'd, ropy Condition, in some measure as Rennet does Milk. Now as Hops are of an active, rigid Nature, they are certainly an Enemy to the ramous Quality of the corrupted Drink, by piercing and cutting through its cohering Parts. For which, take a Parcel of fresh, strong Hops (according to the Quantity and Property of the Drink in the Vessel, and put them into an earthen, glazed Pot, with a little Salt of Tartar; then pour on them boiling Water enough for the Hops to infuse in like Tea, covering the Pot very close to keep all Steam in. When cold strain the Liquor off, pour it into your Vessel, and stop it close directly.

Third Receipt.— Take an Ounce of beaten Allum, with two of Mustard-seed bruised, and an Ounce of ras'd Ginger, likewise well bruised; put all into half a Hoghead of fox'd, ropy Drink, and it will easier cure this Misfortune in the Barrel than in the Tun; because in the latter, the Efficacy of the Remedy will work off with the Yeast to a great degree. This Composition will break the ropy Parts of the Drink and fine it well.

Fourth Receipt.— I knew a great common Brewer experienc'd a Secret that absolutely cured his fox'd Drink, which was in the following Manner, *viz.* At every
Brewing

Brewing after he had strained the Sweepings of his Coolers through a Flannel-bagg, (as they all do,) he run through the same Part of his damaged strong Drink, and put it into a Barrel by itself, and so on; some every Brewing till all was so done, and it proved an entire Cure.

Fifth Receipt.— Take Ash, or rather Beechen Billets, and let their Ashes run through a Wire-sieve fiery hot into the Drink while in the Tun.

Sixth Receipt.— Some slack Stone-lime, and sift it into such Drink; but the Bay-salt is beyond them all to prevent and cure this Disease, by using it as I have, in *Page 25.* of my Second Book, made known. For Salt of any kind is an active Substance, said to give all Bodies their Consistence, and preserve them from Corruption. It occasions the many Variety of Tastes that are, and will not suffer any Insect to live in it, but like a Wall keeps the Body safe it is mix'd with against the Putrifaction of hot Airs, Liquids, Earths, or any opposite Contingent. If you put foxed Drink into a Barrel, and let it remain some time, the Vessel won't be tainted by it, but will be sweet and good on only washing it, first with cold, and then with scalding Water: The Reason is, the Joints of the Staves are so close by the Force of the Hoops, that the Liquor has not Room to penetrate as in the square Tuns, and Coolers. But above all 'tis the diligent, cleanly Brewer that escapes this Damage, when the indolent Sloven is in for it. Of the first Sort, some are so curious, as I have said, not to suffer a Pail to be dipt in cold Water, but to be scalded before it is used again. Others will allow a good Distance of time before they brew again, that the Utensils may be thoroughly clean'd and dried; for all season'd Tuns, Tubs, and Casks are capable even of themselves to excite and bring new Worts into a Fermentation in time. So likewise Worts that are laid too deep in Coolers in warm Weather will ferment of themselves, in no great distance of time, without the help of Yeast: The same in Winter though more slow; For this reason some are so justly nice as to lay them
but

but two or three Inches thick, while others will venture them six or eight, to make haste for the next Piece of Wort to succeed, and then often the Fox is bred. It's true, that it is best working Beers and Ales in season'd Tuns and Tubs, because the Powers of the former fermented Liquor that remain'd in the Wood will communicate its Quality to the next Wort, and impregnate it with its fermenting Parts, and so forward the Operations much sooner than any new Back, Tun, or Tub, that will rather drink up its Spirits, work it more slow, and leave the Drink vapid and weak.

A Kilderkin of fox'd Drink cured.— A Fortnight after it had been in the Vessel, it was rack'd off into another, and then two Pounds of *Malaga* Raisins were cut in bits and hung in a Bag by a String, that at a Month's End were taken out, least after they had emitted their Sweetness an Acidity should ensue; besides which, a Mixture of Treacle, Bean-flower, Mustard-seed bruised, and Allum powder'd, were added; which not only cured the fox Part, but also a burnt Tang that the Malt gave the Liquor.

A new Method of Seasoning new Casks.— Put the Staves, just cut and shaped, before they are work'd into Vessels, loose in a Copper of cold Water, and let them heat gradually so that they must be well boiled, and in boiling take out a Hand-bowl of Water at a time, putting in fresh till all the Redness is out of the Liquor, and it become clear from a Scum of Filth that will arise from the Sap so boiled out: Also take care to turn the Staves upside down, that all their Parts may equally have the Benefit of the hot Water. Observe also that in a dry, sultry Summer the Sap is more strongly retained in the Wood, than in a cool and moist one, and therefore must have the more boiling. Then when the Vessel is made, scald it twice with Water and Salt boiled together, and you may boldly fill it with strong Beer without fearing any Tang from the Wood.

Keeping empty Vessels sweet.— I knew a Person that brews his Drink for publick Sale, so curious in
this

this Affair, that though he has red Clay before his Door in plenty, yet will never use it for stopping or bunging his Vessels, saying it will make the Bung-hole stink in a little time, even though it is mixed with Bay-salt; and therefore makes use of the wooden Bung I have described in my First Book, which as soon as he has put into the Vessel with some brown Paper, he directly mixes some Wood-ashes with Water and puts it all about the same, with as much care as if the Cask had been full of strong Drink, though it is done only to keep the Grounds sweet while they are so. And thus a Vessel may be preserved in sound Order near half a Year; for it is the Air that makes them stink; but if the Grounds are stale or sour before this is done, then it won't answer.

To Sweeten very stinking or musty Casks.— In my Second Book, Page Twenty-four, I have shewed the best Way of all others to cure foxed or tainted Coolers, Tuns, or Tubs, and here I shall do it for the Cask, and that by several Ways. First I make a strong Lee or Lye of Ash, Beech, or other hard Wood-ashes, and pour it boiling-hot into the Bung-hole, and repeat the same if there is Occasion. This is a most searching Thing that will penetrate into the Pores and minutest Crevices, and overcome this horrid Misfortune. The second is done by Malt-duft boiled in Water, and immediately poured off into the stinking or musty Cask, where it must be well bung'd for some time.— The third and best of all is, what I have thoroughly experienc'd to answer the full End of sweetning a stinking or musty Cask, even beyond the Cooper's firing; and that is to fill your Vessel with boiling Water, near, but not quite to the Brim, and then directly put in Pieces of unslack'd Stone-lime, which will presently set the Water a boiling, that must still be fed on with more Pieces till the Ebullition has continued half an Hour at least, but if very bad, longer: And after you have so done, bung all down, and let it remain till it is almost cold and no longer, lest the Lime at bottom harden too much, and it be difficult to wash out. In this Manner you may make the
Water

Water boil in the Cask as in a Copper, and by the subtile Salts of the Lime, it will make its way into the Pores and Chinks of the Wood, so as to extirpate all ill Sent and Taste, provided the Taint has not quite got through the whole Wood.— A fourth Way is to mix Bay-salt with boiling Water, and pour it into the stinking or musty Cask, which must be bung'd down directly, and let remain some time to soak.— A fifth Way is to take the Head out of the Cask, and burn some Pitch on a Chafing-dish of Coals, clapping the loose Head on again while the Fire burns: When this is done, burn some Frankincense in the same manner to sweeten the Vessel, though Pitch of it self is not bad.

To preserve Brewing Tubs clean and sweet.— A Nottingham Woman-Brewer is always so careful to keep her cooling Tubs sweet and clean, that she never fails, as soon as she has done brewing, to rub the Inside of them with a Brush and scalding Water; then sets them by; and never fears the Fox. But if there is any Yeast or Furr left on their Sides, its a chance if the next Wort does not ferment into a creamy Head, and Fox.

To Fine, Relish, and Preserve a Butt of strong Beer. Take a Gallon of Wheat-flower, six Pounds of Molosses, four Pounds of Malaga Raisins, one Handful of Salt; make it into Dumplins, and put them into the Bung-hole in the Head as soon as you have rack'd the Drink into another Butt.

To Recover a Butt of flat brown Beer, and to Fine and Mellow stale, prick'd, and foul Drinks.— Take a Handful of Salt, and as much Chalk scraped down fine and well dryed on a Plate before the Fire; then take Ising-glass and dissolve it in stale Beer till it is about the Consistence of a Syrrup; which strain, and add a Quart of it to the Salt and Chalk, and also to two Quarts of Molosses mix'd first all together with a Gallon of the Drink, and put it into the Butt. Then with a Staff slit into four at the lower end, stir the rack'd Beer well about till it ferments, on which immediately stop up

very close, and in Eight and Forty Hours you may draw it.

To Fine, Preserve, and Relish a Hoghead of pale Drink.
Take one Quart of Oyster-shells dryed twice or thrice in an Oven, and then beaten to Powder; the pure, white Side is much the best; mix a Quart of it with one Ounce of beaten Grains of Paradise, and some Lemon-peel sliced or shred small, put all into a Hoghead.

Another for the same Purpose.— Take Alabaster, burn it, and beat it to a Powder, when cold mix it with about an Ounce of burnt Allum, and a Quarter of a Pint of dulcifyed Spirit of Wine; put all into a Kilderkin of strong Drink just before it is bung'd down.

To preserve pale Malt-Liquors.— Take calcin'd Oyster-shells and Crab's Claws beaten well, and boil in a Gallon of the same Drink, which when cold put into the Vessel.

To Fine and Keep Malt-Drinks.— It has been many Years a Custom with some to do this by boiling, either Ivory, or Hartshorn Shavings in the Wort; about one Pound to a Hoghead I think will do. Most of it will dissolve in the Liquor, for after it is well boiled, there will be but little perceived. This not only fines the Drink by its glutinous Dissolution, which by its Gravity drives down the lighter Fæces, but it also preserves it sound and healthy by reason of its alcalious Nature. However you must take care not to use it in too great a Quantity, because then it will certainly give the Beer or Ale an urinous Taste, and also make it rope.

To stop the Fretting of Drink.— Boil three or four Ounces of fresh Hops in a Bag a few Minutes, then dry them in the Sun, or otherwise, put them into the Cask in which the Drink frets and it will cure it.

To Fine, keep Sound, and add a Flavour to pale Drinks.
Take white Pebble-stones and bake in an Oven till they crack, then beat them to a Powder, therewith mix a good Parcel of Syrop of white Elderberries, which are now pretty common (or Honey, but this is apt to turn Acid) or Treacle: To this add Lemon-peel,
and

and a few Sprigs of Clary if you think fit, while it is in Seed. Put these into a Butt of pale strong Beer or Ale as soon as it is rack'd off, and stir all together well with a Paddle.

To Fine and keep pale Drink from Fretting.— Take a Pound of Rice, dry it and beat it very small with a Penny-worth of powdered Allum, and a Handful of powdered fat Chalk; for Chalk is a great Absorbent, and with other Ingredients carries down the Fæces, and keeps them from damaging the strong Drink. But in time the Salt and sulphur of such Fæces will tincture the whole Mass to its prejudice; therefore when the Drink is fine, rack it off, and feed it with Rice, Allum, and Chalk as abovesaid.

To Renew and Fine the Bottoms of Casks, or any flat Drink.— Take one Pound and a half of Sugar, and boil it in Water, when cold add a little Yeast, when fermented put it into a Firkin of such Liquor, and it will set the Whole a working, and make it drink brisk and pleasant.

To recover ropy, flat, or prick'd Drink without putting any Ingredients into the Vessel.— They roll and tumble the Barrel backwards and forwards up and down on a Stilling, till they thoroughly break the caked hard Fæces, and thus bring the Liquor under a fresh Fermentation, so strong as almost to endanger the Head or Hoops flying off, if kept stopt. Then after it has stood a while and settled, they peg and try it. If once serving it thus does not answer, it must be repeated till it does. Once performing this Operation recovered a large Cellar full of strong Beer in *Norwich*, which, though it was roped after an extraordinary Manner, and not saleable (but well tasted,) yet by this Management they were courted for it, even by another Brewer who bought most of it.

To Fine any Sort of Drink.— Take the best staple Ising-glass, cut it small with Scizzars and boil one Ounce in three Quarts of Beer; let it lie all Night to cool; thus dissolved, put it into your Hogshead next Morning

perfectly cold ; for if it is but as warm as new Milk, it will jelly all the Drink. The Beer or Ale in a Week after should be tapt, else it's apt to flat, for this Ingredient flats as well as fines, and therefore is now more in Difuse than formerly; but remember to stir it thoroughly well with a wooden Paddle, when the Ising-glass is put into the Cask.

A second Way.— Put two or three Handfulls of small red Gravel, or, better, scouring Sand into a Barrel, stir it well about and it will answer.

A third Way.— Boil a Pint of Wheat in two Quarts of Water, then squeeze out the liquid Part through a fine Linnen Cloth. Put a Pint of it into a Kilderkin, it not only fines but preserves.

To Fine pale Drinks, A fourth Way.— Get a Powder from the Sculptors or Image-makers, and mix it with a Dissolution of Ising-glass. This Dissolution is made after the Proportion of one Pound of Ising-glass dissolved in three Gallons of stale Beer, by stirring it well now and then with a Whisk in the cold Drink; and, which is an Allowance for fineing three Butts, with a sufficient Quantity of the Powder.

A fifth Way.— Some Brewers put, for fineing and heightning the Colour of brown Beer, five or six Quarts of pick'd Elder-berries into a Pail of Ising-glass Beer. In time they'l dissolve in the Beer, or you may squeeze and strain them through a Sieve, and then it is fit for Use.

To Fine and Feed Drink, A sixth Way.— Take the Whites of three Eggs and their Shells, and mix with Flower of Horse-beans made fine, (that have been split and dried on the Kiln,) but none of the Husk, and some clean Brandy, make it all up with some Treacle, and put it into a Kilderkin.

A seventh Way.— They'l take Hops that have been boiled Twenty or Thirty Minutes in a first Wort, and dry them again; then put half a Pound into a Kilderkin, and it will fine it very well; and are better than fresh unboil'd Hops; because these will gather, some
into

into a Head and some fettle, and so are apt to foul the Drink in Draught. Others have used green Hops off the Vine, when they have been near ripe, and put into a Vessel, that answered very well.

An eighth Way.— It is the Practice of a certain Man, whenever he happens to have any Drink too stale, to put some scalding Water on Hops under Cover; where after having infused some time, he puts all into the Bung-hole to fine, recover, and preserve the same.

To keep small Beer without Hops.— Another uses no Hops in making his small Beer, all the Winter especially, but instead thereof, mixes a Penny-worth of Treacle with a Handful of Wheat and Bean-flower, to which he adds a Penny-worth of beaten Ginger, and kneads it into a due Consistence, which he puts into a Hog-head and bungs up.

The Method of a private Family to improve their Drink. They never tun without putting a little Salt and powder'd Ginger mix'd together into it.

Musty Drink, Is occasion'd by musty Vessels, it is cured by running it through the Grains.

To preserve Drink that is to be sent abroad.— Draw off the Ale, or Beer into a clean Cask; then pound some slit, dried Horse-beans, free of their Hulls, till they are well powder'd, or made so by grinding them in a Mill: With this mix a little Yeast and knead it; then dry it by a Fire; but not in an Oven, because it may be too hot for this Use. The Quantity of a small Dumplin will serve a Hoghead.

To recover prick'd stale Drinks.— For this see my Second Book of the *London and Country Brewer*, Page 30.

To help decayed Drink.— Some will put the Ashes of Beech into a Bag which they'l let hang in the Liquor by a String, and bung close; some put Horse-beans into the Drink to preserve it mellow, but too many will give it a disagreeable bitter Tang.

To recover thick, mummy Drink that is Acid.— Make a strong Hop-tea with boiling Water and Salt of Tartar, and

and it will do by adding it to the Rest ; or rack a Vessel of mummy Beer into two Casks, and fill them up with new Beer brewed not so strong and it is a Cure.

Vamping Malt-Liquors.— Is of late much in practice for its excellent Service in recovering, preserving, and fineing strong *October* and *March* Beers in particular ; because by a new Fermentation the whole Body of the old Drink is renewed and brought under a fresh Nature ; and thus a Butt of such Liquor need never suffer damage or be spoiled by Staleness or Age, since you may alter the Case at pleasure. The Way to do it is thus : Divide your Butt into two by racking it off, then fill both up with new Drink of the same Sort, and in three Weeks or a Month you may draw it off fine.

The new Way of Managing strong Drinks from the Tunning to the Drawing.— To do this there is more than one way used. One Person I know never stops the Cork-hole of the upright Butt, but lets it alone a Month, two, or three, till he perceives the Drink well settled, and then racks it off into another Butt, with two Pounds of new Hops, which he immediately stops up at both Bung and Cork-hole.

Another leaves his Cork-hole open only a Month, and then stops it up ; then about a Month before he draws for good, he takes out a little of the same Beer, and puts it on two Pounds of rubbed new Hops, which he pours into the Cask, and stops all close and secure.

Another lets his large Cask of three Hogsheads stand, with an open Vent, six Months, only with a Piece of brown Paper pasted before the Cork-hole ; and then he puts in two Pound of Hops that had been boiled but twenty Minutes in a first Wort, and dryed, and one good Handful of Salt ; then directly stops all up very close, and in about a Month's time it will be fit to draw fine and be brisk to the last. But others are so nice in this Point, that instead of keeping these boiled Hops dryed by them, they so contrive to brew, that they may have them directly, to put into the Cask of Beer which they want to fine down, just as they are done

done with; and say, that for this purpose an used Hop boiled but a little While, is better than an entire dry one, because the former will sink and drive down the Fæces presently, when the fresh ones are apt to remain on the Top. On these Accounts People differ, some will fine without Racking, others will rack before they fine; some will use Salt, others none but Hops. But when they intend to tap their Butt-Beer at four Months old, they always use Salt with the Hops: For Salt stales Malt-Liquors in four Months, as much as twelve Months Age will do without it. And as for the leaving open the Cork-hole Vent, I am of opinion, that Malt-Liquors digest and maturate in the Cask in some measure as Food does in the Stomack, and thus become more fitted for the animal Secretions by a due Age, which must be more or less according to the Strength of them. Therefore it's the Practice of some not to stop up the Cork-hole for six Months together, on purpose to expose the Drink all that time to the free Admission of the Air, which will rush in, and, by its Elasticity and Pressure, throw down the gross Particles, keep it from fretting, and thereby fine and ripen it the sooner.

Racking off Malt-Liquors.— Dregs (in my Opinion) consist of the earthy and farinaceous Parts, mix'd with the acrid Salts of the Compound the Liquor is made up of, and intrinsically contain no Spirit but what they absorb from it; which Salts not being fixed are capable by sundry Causes to be incited into Motion, and so cause extra Fermentations, which, when frequent, so exhaust the Spirit of the Drink as to get the Ascendant, and render it vapid, sour and ill tasted. But I remember the Assertion of a certain Person to be otherwise, who said that the Lee of any Liquor is the strongest Part of it, but most and soonest subject to spoil and corrupt, and so long as that holds good the Liquor feeds on it, but after such a critical Time it will spoil the Drink, and this he says is the Cause for Racking; but how reasonable this is I leave others to determine. Some are so curious in the Observation of this, that they

won't

won't draw off their Drink into another Cask, before it has passed a second Fermentation in the first Butt, and this happens sooner or later, as the Quantity of Fæces; the Temper of the Air, and the Place it stands in is; the Crown of Yeast that lies just below the Cork-hole (while it remains on) securing it from taking damage several Months together: And when they don't rack it, such Beer is accounted in best Order when it is drawn after the middle Hole is stopt up, because it has the greater Feed from the remaining Fæces. Observe also that, the Cask you intend to receive your rack'd off Liquor in, should always be first season'd by the Steam of a Brim-stone Rag, which will effectually stop it's Fermentation and fine it. I must likewise hint that its too common a Way with some to drive the Brass-Cock with a Hammer, or Mallet into the middle Hole of the Butt, and then very likely the Crown of Yeast falls down, and the Drink grows vapid, flat, and thick; so also are those liable to the same Inconveniences who thus inconsiderately peg a Cask.

A general Mixture for preserving, fineing and relishing Malt-Liquors.— Take one Penny-worth of Treacle, Powder of fat dried Chalk, Bean-flower, Wheat-flower, Oyster-shell-powder, Pebble-stone-powder, of each a Hand-ful; one Quartern of *French* Brandy, and two Ounces of powder'd Ginger; knead all together into four or five Dumplins and put all into a Butt of rack'd; strong brown Beer; And to relish it, you may hang a Penny-worth of Orrice-root, and six Pounds of chopt Raisins in a Bag fastened by the Bung: But these two last should be taken out at a Month's End. If for a Butt of pale Beer, instead of the Treacle, you may use a Syrop made with White Sugar.

To Correct any predominant Acidity in Malt-Liquors. The best thing is to buy of the Druggist, Mr. *Walmsley* on *Snow-hill*, or others, some of the Oyster-shells which have been collected from the Sea Shore, and there, by the Sun, Calcined to a Whiteness. Break these in a Mortar into Peices of the Bigness of Six-pence or a Shilling,

Shilling, and put them into the Liquor, for if you powder them, the least Motion will be apt to make them rise and foul the Liquor; which by this means is prevented and the Work done full as well. Chalk and other *Testacea* will answer the same, but not so well because they all more or less will give the Drink a disagreeable Taste.

Cloudy Beer accounted for, and its Cure.— This is a Misfortune attending both pale and brown strong Malt-Liquors, more of late Years, than in time past, and that in many Places in *England*; but most of all in *London*, where it causes frequent Returns from the Customer to the great Prejudice of the Brewer, and is occasion'd by the Hop and Malt. First by the Hop, which contributes to it by emitting its oily Body in long boiling to the Wort, and the longer the Ebullition is continued, the more you draw out its heavy oleaginous Body; that consequently fouls the Drink, and hinders its fineing; for though it may deposite its grosser Part, yet will this oily one always be in Motion, not only to retard the Fæces from subsiding by enveloping them in its tenacious Body, but is afterwards also endeavouring to gain the Ascent (as the Nature of Oyl is;) but this it cannot thoroughly do, because of its intimate Union with that of the Malt in the Percussions that the igneous Particles produce in boiling. This I take also to be the Reason, why Grains of Paradise have puzzled some Brewers to account for their constantly fouling the Malt-Liquor they are boiled in, (to encrease its Strength,) and that such Drink always remains so notwithstanding their most accurate Attempts to the contrary. So that if these are to be used, the only Way will be only to infuse them as well as the Hop as I have before observed.

N. B. The aforesaid oily Matter not being rightly managed and digested I take to be the Cause of, and Cause of cloudy Beer, and therefore resists and will not incorporate with the forcing of Ifing-glasses.

Secondly, when this Evil proceeds from pale Malt, it is occasion'd by its being too slack dryed, or rather

by its being crufted Without-side by the Violence of the Fire, when the Inside is full flack or almost raw; and as thus the Malt-Kernel is in two feveral Conditions, fo is the Liquor made from the fame in two different Orders, as is plain from the View of fuch cloudy Beer in a Glafs, known by holding it up, and then it will appear bright and clear, but hold it down, and it will feem fouler and of a grey, wheyifh Colour. So the brown Malt, that of late Years, fince the Invention of the Plate-kilns in particular, the Kernels are made to crack, bounce and fly up by the Vehemency of the Heat, whereby they dry two or three Kilns in the time they ufed to do one, which makes fome Part of the Malt parch'd or burnt, and the other Part raw or under dried, and which very probably may be the Cause of cloudy Drink, that by many is thought incurable.

To Cure cloudy Beer.— Rack off your Butt; then boil two Pounds of new Hops in a fufficient Quantity of Water with a due Proportion of coarfe Sugar, and put all together into the Cask when cold; and it is far better than a Pap made with Rye-flower and Malt-fpirits as fome are for. Others have attempted this Cure by only foaking new Hops in Beer, which when squeezed, they put into the Cask of cloudy Beer.

Another Way to cure a Butt of cloudy Beer.— Take twenty Pounds Weight of baked Pebble-ftone Powder beaten very fine, with the Whites of twelve Eggs, and Bay-falt powder'd to the Quantity of a Handful; beat and mix thefe very well with two Gallons of the Beer and pour all into the Butt of Drink ftirring it foundly; and after three or four Days at moft it will be fine, then draw it off its Lee; Thus you'l have a clean, fine, well relifhed Drink free of that flying difagreeable Lee that before poffefs'd the whole Body of the Liquor, and which otherways would have remained in the fame to the laft.— I have feveral more ufeful Curiofities in the Art of Brewing to communicate when I have tryed fome, and got the compleat Knowledge of others.

Cautions

Cautions relating to Malt-Liquors.

First, *Of the Sediments or Fæces of Malt-Liquors.*— As these abound with the acrid Salts of the Malt, whenever the Drink is in too stale a Condition, it should be racked off before any of the aforesaid preserving, fineing Ingredients are put into the Cask: Because in this Case, its a Chance if such corrupted Fæces do not get the Ascendant of the designed Antidote, and help to corrupt that as it has before done the Beer. For not only the Fæces, but the whole Body of the Drink will consequently oppose the Remedy, and if they be Major, the Attempt will prove abortive.

Secondly, Salt and Allum must be used with great Precaution, because they potently induce Staleness in Malt-Liquors in a little time, if mixed in too great a Quantity with other Ingredients that are to be put into the Cask, and so are apt to overcome their alcalious Parts. Therefore some will use no common Salt this way, but throw a Handful or two of it into the Mash-tub among the Malt, to preserve the Liquor sound while it lies with the Grains; and thus the Salt is thought to loose Part of its sharp Nature by its being strained through the oily Part of the broken Kernels; but even this has its Inconveniency as it is apt to retard Fermentation.

Thirdly, *of Stone Powder.*— This by some of the Brew-house Coopers is made use of for fineing down their Butt-beers, and is very good when it's a little burnt, because then it becomes a Sort of Lime, and its fixed Salts are thereby made to yield their Virtue to the Drink. But when the Powder of a soft Stone unburnt is used, (as too commonly is done with a Mixture of Ising-glass,) then it gives the Liquor an earthy, raw, unpleasant Taste and unwholesome Quality, which will spoil other good Ingredients it is incorporated with; as I knew once done by a Person who had made a Compound of several in good Order, that were all damaged by this, to the great Prejudice of the Beer.

Fourthly, *Whites of Eggs*. These certainly will clear, feed, and preserve Drink, if mixed with Wheat-flower, &c. but then it ought to be considered that the Whites are apt to corrupt in time and do damage, where the Drink is not very strong and able to preserve them sound; besides if in this Case too many of them are used, they may bring the Beer into a ropy Condition, or give it too raw a Taste: Some therefore when these are to be used will boil them up in Water and Sugar to a fine Syrop, and then such Syrop of Sugar will be advantageous in preserving as well as clearing the Drink when mix'd with other Ingredients.

Fifthly, *Egg-shells, and Crabs Claws*.— These like all the other *Testacea* are of an alcalious Nature, but more especially so when the crude Part of them is taken away. Therefore to cure these and make them fit to be put into the Cask of Drink, bake them a little, and then you may either mix them with other Ingredients, or use them alone, by way of preserving Beers or Ales against Staleness.

Lastly, *Oyster-shells*.— These are likewise a great Alkaly or Absorbent, and are of particular Service in the Management of Malt-Liquors, especially if us'd in the manner aforesaid; but should by no means be us'd crude or unprepar'd: Therefore as many are not capable of purchasing them from the Druggists, let such first wash and wipe them dry, then bake them two or three times in an Oven after Bread is drawn, beat off their brown Part and break the White into small Pieces for Use.

Bottling MALT-LIQUORS. This is certainly a great Improvement if perform'd in a right time and manner, because Drink thus confin'd is more free from Air, Heat, and Fæces, than in a Barrel, which often exposes its Spirits to Loss by Vent and frequent Drawings out. But the greatest Improvement of all, is when Drink becomes flat and deaden'd by the Casks absorbing its Spirits, or that the Sediments have attracted them, &c. In all which Cases Bottling often recovers the Liquor and re-establishes

establiſhes it in a greater Fineneſs, Purity, and Briskneſs than ever, and eſpecially if an additional proper Food be allowed it that will give it a long Duration in a ſafe mellow and cool Condition, and the ſurer if kept from heat and cork'd well. In this Oeconomy particular Regard ought to be had to the Age of the Liquor, that it be full ripe and not too young when it is bottled; if it is, very likely it will throw out the Cork or burſt the Bottles; which to prevent, cork looſe at firſt, and afterwards firm; and if after this a Ferment is perceived, looſen again. Stone Bottles are not ſo good as Glaſs, becauſe of their rough inſide, that is ſooner apt to furr, taint and leak, their Mouths uneven to Cork, and their Sides not to be ſeen through. Some are ſo curious as to uſe the Glaſs Stopple inſtead of the Cork, which if rightly fitted, admits of no penetration, as is well known to the Chymiſt, who by this means retains the Spirits of his fiery Liquors in the beſt manner. You may for a Day or two after bottling keep the Bottles in cold Water or in a cold Place, or have ſome cold Water now and then throw'd over them, to prevent any Ferment coming on, leaſt the Air, by being thus cloſely confin'd, ſhould break the Bottles, when a Cork in the room of a Glaſs Stopple would ſave them as being of a porous Nature. Glaſs Bottles are ſweetned and clean'd either by hot or cold Water, if ſtinking put them in a Kettle of cold and boil them, but don't put them down while hot on a cold Place, leaſt they crack: then lay them on dry Boards, Straw, or Cloth; if dirty, waſh with hard Sand, ſmall Stones, or better with Shot. Some ſteep Corks in ſcalding Water to make them more pliable to the Mouths of the Bottles and to fill up their Pores, and for a further Security faſten them in with ſmall iron Wire twiſted about, after the *Herefordſhire* Faſhion, that they practiſe in bottling their fine Styre Cyder. Weak Drink ſooner breaks Bottles than Strong, becauſe the Liquor has not Strength enough to detain the Spirits. To preſerve Drink in Bottles lay them ſide ways, it keeps the Cork moiſt, the Air out, and confines it to the Side, where
it

it can't escape, a Way much better than putting the Mouth downwards in a Frame; for then if there be any Fæces they will come out at first. Putting Bottles in Sand in some measure keeps them from the Power of the Air, but this is not quite so good as if they were kept in Water, which prevents Fretting or Fermentation, and adds a Strength to the Drink by its intense Coldness, which likewise checks the Activity of its Spirits, and by its close Body keeps out Air, especially if it is Spring-Water. For this Purpose, in many Cellars there may be Tanks or Cisterns made to hold Water either with Stone or Brick by the help of Plaister of *Paris*, or with a cementing Composition made with Oyl, new slack'd Lime and a little Cotton-wool, that will harden the more, the longer the Water lies in them: Or lay such Stone or Brick in a Bed of Clay beaten and trod very fine before, so that it may be a Foot thick at least on all the Sides and Bottom, as the Brewers order their Tuns; and to empty them at pleasure a Hand-pump of a small Size may be made use of; or in Cellars there may be large Holes made in the Side-Walls that will contain a Number of Bottles, as is commonly done in the Country, and the nearer these are to the Ground the better the Liquor will keep. But if this Way is too troublesome, little Vaults may be built in the Cellar, arch'd over, that may be made so close as to keep out much Air, and so prevent the Damage that Drinks are subject to from their changeable Nature: On the contrary, if you have a mind to have your Bottle-drink soon ripe, keep it above Ground.

When Malt-Liquors are to be bottled off, observe the following Directions. Common, strong, brown Beer of eight or nine Bushels to the Hogshead, brewed in *October*, may, if free and clear of Ferment, be bottled off, at *Midsummer*; pale strong Beer brewed in *March*, may be bottled off, at *Christmas*, under the same Proviso: But always forbear this Work when it's Muddy by Change of Weather, or the falling down of the Crown of Yeast, because then the Drink goes through some Alterations that
thicken

thicken and work it in a small Degree, which causes the Lees at last to receive the Spirits, that are hereby made smaller by the Transaction, and from hence the Liquor is fed till it is ripe for Bottling. To feed bottled Beer or Ale there are several Ways. First, put three Horse-beans into each Bottle of strong Beer, and it will preserve it mellow a long Time. Secondly, put into a Quart of Spring Water half a Pound of Sugar, (the finer the better,) and a Penny-worth of Cloves; boil all together moderately half an Hour, and scum it well in that time; when cold put two Spoon-fulls into each Bottle that is to be kept long, and three to be drank soon; it is such a great Improvement that it is generally made use of by some Publicans to recover their Tap-droppings, which it will do in two or three Days, if the Bottle is kept in a warm Place. I know a Person that puts a little Oyl on the Top of the Drink in Bottles, in imitation of the *Florence* Wine-flask, without any Cork, and it keeps it from Wind in a very lively Order. To keep Bottles from bursting, make a Hole in the middle of the Cork with a Nail or Awl, and the Bottle will never burst, yet will keep out the Wind, because the Moisture of the Drink will swell it: Or put into each Bottle one or two Pepper-corns, and it will never fly. The common Way of making Drink ripe presently is to boil some coarse Sugar in Water, and when cold, work it with a little Yeast, of this put two, three, or four Spoonfuls into a Bottle with two Cloves over Night, and if it stands in a warm Place, it will be ready next Day, and be very apt to swell the Belly of the Drinkers with its windy, unwholesome, yeasty Quality. Others will do this Feat more quick, even in the time a Mug of Liquor is bringing out of the Cellar, though it be Tap-droppings; they'll put a Piece of Diaper or Damask over the Pot or Mug, and with a Jirk turn it Topsey-turvey and back again, which with a Jolt or two more, will cause a frothy Head in Imitation of bottled Drink. Or if Drink is a little prick'd or fading, put to it a little Syrop of Clary, and let it ferment with a little Barm,

Barm, and it will recover it, and when it is well settled, bottle it up, putting in a Clove or two with a little Lump of Sugar into each Bottle.

A private Person used to bottle off a clear Ale, by boiling a Bag of Wheat in the Wort. Another would put a Spoonful of sugar'd Water into each Bottle. Another would have clear Drink to Bottle off; by putting two or three Chalk-stones into the Barrel, or Powder of Chalk.

Thus by trying frequent Experiments, of adding more or less to any of the foregoing Receipts, according to your Palate, you will arrive to the Knowledge of discerning at first view what every particular Subject requires or will bear : And remember that all Liquors must be fine before they are bottled, else they'l grow sharp and ferment in the Bottles, and willn ever be good.

F I N I S.





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