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THE DERBYSHIRE

Instruction Book,

How to Brew Splendid Ale

Fine as Sherry and Possessing an Aroma equal to Burton Ten Penny,

PRICE EIGHTPENCE.

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CORRECT DIRECTIONS FOR BREWING ALE

Of Excellent Quality, averaging 6d. to 71d. per Gallon.

ers in the hour of social conversation, that the art of brewing (so called,) is, in reality, no art at all, but merely the dictates of common sense; put, they add, a handful of malt into a large tea pot, then fill it with liquor (water,) the first time under boiling heat, say a heat that you can just dip your finger in without being scalded; after it has stood three quarters of an hour, pour off the liquor and fill the pot again with now boiling water, and if the malt was mashed before the second water, so much the better to resemble the regular brewing. Now after the second wort or wetting, which ought to stand an hour and a quarter, pour it off as the first and give it a third liquoring to extract all the virtue of the malt. The whole of this malt liquor must now be boiled

with a few Hops in it half an hour or longer, and while boiling, add a little salt and a pinch of hartshorn shavings—it is now poured off into a pan, and when about blood heat, add a little yeast to ferment it, and the miniature brewing is

obtained.

There are no beverages so wholesome and invigorating as Ale and Porter, nor any so generally palatable; it may, indeed, be justly considered as our national drink; and therefore to procure it cheap and good, must be one of the most important points of domestic economy. To do this can scarcely be expected by those who get this commodity from the great brewer, for besides the profit, (which is not a little) of the brewer, the wholesale dealer must have his remuneration for his premises, labour, and capital expended. These circumstances must certainly exclude the possibility of cheap-

ness, unless, indeed, ingredients are used in the brewing which, by lessening the consumption of malt and hops, will make a cheaper article: but then, what can be said of Ale so brewed? Certainly not that it is good; in proof of this, it is only requisite to enumerate a few of the articles sold by the brewers' druggists. Among a host used for various purposes, we will mention a few. Bruised green copperas (sulphate of iron,) has always been put into porter. Formerly this was done by the brewers, now it is performed by the It is sometimes used alone, and sometimes it is used with alum. This is used to raise a froth, and is technically called Heading. Sulphate of lime is also frequently put into the casks when they have done working. These two articles are unwholesome enough, but they are innocent compared to what follow. The India berry, or Cocculus Indicus, obtains a very general use among public brewers; it is a strong narcotic, and its use therefore cannot fail to be highly detrimental to health. The Faba Amara, or bitter bean, is sometimes used, and is anything rather than beneficial to health. Strychnine, Nux Vomica and Opium, (all three deadly poisons,) are brewers drugs, and sometimes used in a compound called Multum; but Strychnine is now rarely used, and when so, principally to create a bitterness in ale. is also a favorite ingredient with some brewers such deleterious slow poisons as these are used, surely, a little trouble will not be an objection to procure a beverage that will refresh and strengthen. But many persons with limited room and small means are deterred from attempting to brew by a fear of the expense of the materials; but brewing by the common method may be performed with no other utensils than a twenty or thirty gallon pot, a mashing tub, that also answers for a tun tub, and a shallow tub for a cooler, and these will be found sufficient to brew Eighteen gallons of prime Ale. With a little contrivance, so easy is it to brew, "that where there's a will there is always a way."

Water. In the process of brewing, a great deal depends on the quality of the liquor employed. Hard or spring water is not good we were told, for it will not extract the strength from the malt, neither will it ferment well when brewed; but we are assured by our practical informant, that a small quantity of carbonate of soda added to such water would correct this supposed defect. As water from mineral springs is now extensively used, it will be found available when such water is used for other culinary purposes, and is rather beneficial than otherwise to health, and would help to prevent acidity. But in those districts where, from necessity, beer is brewed from well water, throwing up a sediment, the inhabitants are subject to nephritic complaints; viz., gravel or stone. The best water for brewing is good clear river water, spring water, or the water of a running brook. Fresh fallen rain water we have found to answer extremely well; but stale rain water or stagnant water of any kind makes the ale flat, and is very unwholesome. In a word, water which will make good tea will make good beer. The same observations apply to wines, &c.

To Brew Eighteen Gallons of Fine ALE for Family Use.

Two and a half pecks of good pale Malt will be sufficient. Grind it yourself if you possibly can, but not fine; bruising it in a mortar is better, as, if each grain be crushed, that is sufficient. The malt should not be reduced to powder, or it will cake in the mashing, and you will not get out all its strength. Your copper or iron pot must hold twenty gallons of water; three parts fill it, and, when you can distinctly see your face in it, damp or extinguish your fire, and then put in

your malt very slowly, stirring it well with one hand as you run it gently through the other. Use for this purpose any long stick that will reach the bottom of the copper; an old hairbroom stick will do, but what would do better would be a stick prepared for the purpose, as described under the head of Utensils. Part the malt completely and wet the whole of it. Put on the copper lid, let it remain closely covered for an hour, taking care that your fire does not increase during this period -indeed it had better be nearly extinguished; then open your copper, and again stir it well, and when you have again closed the lid, let it remain another half hour; then increase or re-light your fire, but do not let it burn up too rapidly, let it burn up gently till the wort comes to the boiling point, stirring it occasionally, and at other times, keeping the copper lid closely shut. When it reaches the boiling point, extinguish your fire, and let your copper remain closed another half hour; then place two sticks across a tub, on which rest a sieve, or suspend a coarse canvass bag stretched out, with a hoop sewed round the top over the tub; lade out your wort and grains from the copper into this, and when you have strained your wort, return it into the copper. Put in a quarter of a pound of hops, or rather less if they are quite new, and you do not like your ale bitter, as such beer as this is not made for long keeping, but for immediate use; boil the whole about an hour, or rather more. While the beer is boiling, empty your bag or sieve of the grains, and replace it over your tub or cooler. When the beer has boiled its time, strain it from the hops, and cool it as quickly as possible, by dividing it into two or three tubs, if you have them.

Some persons do not take the wort out of the copper at all, but add the hops to the wort as soon as it boils, and boil the whole together: this is certainly the less trouble, but the beer is not so good, neither will it keep so well. However, in either case, when the beer is cool enough, that is, when it is about the heat of new milk, or seventy degrees by the thermometer, put all the beer into one tub large enough to hold the whole, and allow for its rising during the process of fermentation. Stir in about a tea-cup full of good thick yeast, and meter the tub with a sack or cloth, to keep in the strength of the beer. The heat of the beer, when set to work, must be regulated by the state of the weather; in warm weather it may be almost cold, but in very cold weather, it must feel rather warm to the hand. Experience will soon teach you to know the proper heat.

When the beer has stood about twenty-four hours, if it has formed a good yeasty head, take off the yeast, and cover it up again. When another head is formed, remove that also. The time the beer will continue working depends a great deal on the weather; if it continues to work much after the second head is formed, check it by leaving the covering off. When it appears to have pretty well done working, and is cold, put it into your barrel, which must be very clean and sweet; a dirty or sour barrel will assuredly spoil your ale.

Barrels should have a good piece of chain put into them when they are washed, or some large pebble stones, and be well shaken and rolled about; let the barrel be well scalded, rinced, and drained dry before the beer is put in. When the barrel is clean place it where it is to remain, and put the beer into it, which may easily be done with a spouted mug; if you have a large funnel it will assist you. Place a large deep dish or small tub under the barrel, to catch what beer may work out or spill over; fill the barrel quite full and let the bung remain out, for the beer will work after it is put into the barrel. Save a little beer in a mug to fill up with, and as it works over put you finger in, and pass it round the inside of

the bung hole, to clear it of any bits of hop, &c., which may collect around it. Probably the beer will continue to ferment for a day or two after it is in the barrel: when it ceases, put in a handful of fresh hops, and place in the bung lightly. The bung should be covered with a piece of coarse cloth or canvass. The next day, if the beer appears still, or to have ceased working, drive the bung in tight; loosen the vent peg a few hours after. If much yeast rushes out, let the vent peg remain out till the fermentation subsides, then put it in tightly. Much of the goodness of the beer depends on the air being completely excluded. In hot weather beer like this will be ready to tap in three or four days, and in a week when the weather is cool. When you have tapped your beer, if you are obliged to loosen the vent peg in order to make the beer run out, be sure to put the peg in tightly again immediately, or by the admission of air the beer will be spoiled. is requisite to have two barrels, that while the first is being used a second may be brewed to supply its place. When the barrel is empty of all the beer which will run clear, pour out the grounds, and replace the bung and vent peg, that the barrel may not get mouldy before you again fill it.

PROCESS OF BREWING Eighteen Gallons of splendid Ale and Thirtysix of Table Ale.

That is to say, one barrel of ale, and two barrels of eighteen gallons each of table ale, the quantity of malt allowed being two bushels of pale amber.

The utensils requisite will be, according to the common method, a copper that will contain forty gallons; but one that would contain four-and-twenty gallons may do very well, by making two boilings of the table beer. Second, a mashing tub to contain sixty gallons, for the malt is to go into

this along with the water. Third, an under-back or shallow tub, to go under the mash-tub for the wort to run into when drawn from the grains. Fourth, a tun-tub that will contain thirty gallons, to put the ale into to work, the mash-tub, as we shall see, serving as a tun-tub for the small beer. Besides these, a couple of coolers about a foot deep, which may be made of the heads of wine butts or other such things; if you have four it would do better, in order to effect the cooling more quickly.

You must begin by filling the copper with water, and then making the water boil. The general rule is, that a bushel of malt absorbs about seven gallons of water; but besides this, there is the waste attendant on the boiling, removing from one tub to another, spillings, sediments, workings, &c., to be allowed for in determining the quantity of water requisite for a brewing of strong or middling strong ale.

In order to ascertain the quantity of water in the mashtub, which is desirable always to be able to know, having measured the quantity of one brewing, make a notch in the mashing-stick or a mark withinside the tub, at the height the water stands at in each mashing; and the quantity being that which you require, it will only be necessary, at a future mashing of the same quantity, merely to run on as much water as will reach the mark. Another method is to take a small lath of wood for each vessel, either mash-tub or cooler and placing the vessel on an even surface, pour in two gallons of water; when this has settled, insert the lath, and mark with a notch the point to which the water rises; pour on two gallons more and again notch the stick; so proceeding till the tub or cooler be full, repeating this on each vessel, and marking on the stick the vessel to which it belongs. Thus the quantity in either vessel may immediately be ascertained by dipping in the stick.

But in this, as in everything else, experience is the best teacher; and when you have brewed once or twice, if you always brew the same quantity, you will be so well acquainted with the relative size of your copper, tubs, and barrels, as to need no further assistance.

Having prepared your mashing-tub by placing in it your basket-spigot, or a kind of grating which is now commonly used instead of the basket, put into your mashing-tub water enough to well wet and separate the malt in, by stiring it. The proper degree of heat at which the water should be for mashing, that is putting in the malt, is one hundred and seventy degrees. The thermometer, which can be bought for a shilling, is the safest guide for determining this point, as the right degree of heat at which the mash is set is one of the nicest and most important points of brewing this splendid ale.

If you have no thermometer, you must have recourse to the old and, indeed, still common method in Derbyshire, that is determining the heat by the finger, thus:—the boiling water having stood a sufficient time in the mash-tub to cool; it is at the proper degree of heat for the reception of the malt; when you can just endure the finger in it, and withdraw it without being scalded, the water is at the proper heat. Now put in the malt, and stir it well in the water. To perform this, take the stiring-stick which will search or separate the malt well. This part of the process is called the mashing. When the malt is in, it should continue in this state for about a quarter of an hour. In the interim you must have filled np your copper and made it boil: at the end of the quarter of an hour you put in boiling water sufficient to make your eighteen gallons of ale. But, perhaps you must have thirty gallons of water in the whole, for the grains will retain at least ten

gallons of water, and it is better to have rather too much wort than too little. When your proper quantity of water is in, stir the malt well again; cover the mashing-tub over with sacks, or some such thing, and thus let the mash stand for two hours; at the end of that time draw off the wort. It is requisite that the mashing tub should have been placed on something sufficiently high to enable you to get a tub to stand below it, so as to receive the wort as it runs out. When you have drawn off the ale wort, you proceed to put into the mashing tub water for the table ale.

As you draw off the ale wort into the under-back or tub, you must lade it out of that, with your bowl, into the tuntub, as the under-back will not hold the whole of the wort: when you have got your ale wort into the tun-tub, it must remain there till your copper be empty and ready to receive it.

The copper being empty, you must put the wort into it, and put in with the wort a pound and a half of good hops. (Shropshire growth we have found excellent,) well rubbed and separated as you put them in: you must now make the copper boil, and keep it, with the lid off, boiling briskly for a full hour, if it be an hour and a half, it is none the worse. When the boiling is done put out your fire, and put the liquor into the coolers. But to separate the hops from the wort you must have a strainer, a sieve, or a small clothes' basket, or any wicker basket will do; you then set your coolers in the most convenient place, either out or in doors, laying a couple of sticks across one of the coolers, and put the basket upon it. Put your wort, hops and all, into the basket, which will keep back the hops. When you have got wort enough in one cooler, you will go to another, with your sticks and basket till you have got all your wort out. find your wort deeper in one cooler than the other, you can make an alteration in that respect till you have the wort so distributed as to cool equally fast in both or all the coolers.

The next stage of the process is to place the wort in the tun-tub, where it is to be set to work. Now, a most important point is the degree of heat that the wort is to be at when it is set to work. The proper heat is seventy degrees, which, where there is a thermometer, is readily ascertained, but as we before stated, in some places they determine the degree of heat by merely putting the finger into the wort. Seventy degrees is but just warm, a gentle lukewarmth, nothing like When the wort is nearly cool enough, but not quite, as it will cool a little in removing, put it into the tun-tub, which must hold thirty gallons; when the wort is in, take about half a pint of good yeast and put it in likewise. The yeast should first be placed in a bowl, or something that will hold about a gallon of your wort; this should then be nearly filled with wort, and the yeast well stirred into it with a stick or spoon, and stir in with the yeast a handful of wheat or rye flour; this mixture is then to be poured out clean into the tun-tub, and the whole mass of the wort is then to be agitated well by lading it up and pouring it down again with your bowl till the yeast be well mixed with the wort. Some people mix up the yeast and flour with some wort, as just described, and then set the little vessel that contains the mixture down on the bottom of the tun-tub, and leave it there, putting the wort out of the coolers into the tun-tub upon it: being thus placed at the bottom, and having the wort poured on it, the mixture is perhaps more completely effected in this than the other way. Some persons allow the bowl containing the yeast prepared as above, filled up to the brim, to float on the surface of the tun-tub, until it begins to work freely over, and then mix the whole well together.

The beer will begin to ferment sooner or later, as the weather may be, and the fermentation may be completed in twenty-four hours, or it may require double that time. When your wort is thus properly set to working, cover over the top of the tub by laying across it a sack or two. The place where the beer stands to work should neither be too hot nor too cold, about fifty-five is the best degree; what is called a cool place in summer, and a warm place in winter is best. weather be very cool, some cloths or sacks should be placed round the tun-tub, while the beer is working. In about six or eight hours a frothy head will rise upon the wort, and will continue rising more or less slowly for about forty-eight hours. At the end of about twenty-four hours the froth or yeast should be taken off with a skimmer; skim it again at the end of twelve hours more, repeating this till the head begins to fall from its sending up little or no more yeast. In cold weather, when the head rises slowly or thin it is usual to stir up or rouse the beer once or twice; but this is by no means a good practice, when it can be avoided, and it generally may, by giving the beer a little time as beating in the yeast neither renders the ale clear or wholesome. When beer is not sufficiently worked it cannot clear itself; if it works too much, it gets weak, and soon turns sour. Too rapid or speedy fermentation is never desirable, lest, by its excess, it exhausts the spirit of the beer; indeed, slow working, provided in the end it be complete and not carried to the other extreme of not working the beer sufficiently, need never be regretted. In cold weather, when it is difficult to raise a fermentation, it is our practise to fill a gallon or two-gallon stone bottle with boiling water, and well cork it, thus putting it into the beer, which will quicken the fermentation by keeping up a gentle heat.

When the fermentation is completed, it is ale; and when it is quite cold, (be sure you attend to this,) put it into the cask by means of a funnel; if it be not cold before putting into the cask, it will be what is called foxed, that is to say, have a rank and disagreable taste. The casks must be sound and sweet, and should be placed in a cellar, on a stand about a foot high—a block or small piece of wood must be put on each side to steady it; but it is best to let the cask be inclined a very little on one side when you fill it, because the beer must work again when put into the barrel or cask, and by this means will only work over one side of the barrel, and will descend in a single stream into whatever vessel you may please to receive the yeast which will thus flow over. In putting the beer into the casks you should by no means put in the thick sediment which will be found at the bottom of the vessel it has worked in, but lade it off as fine as possible, for if you cask the bottoms and all, you will most probably have thick and turbid ale.

To prevent beer becoming thick, one or two things must always be attended to, and you will not be liable to have turbid beer.

Let your wort lie some time in the under-back to draw it from the fæces there; be equally careful to run it off fine out of the cooler into the tun, and from the tun into the cask; in all which several places, the wort and drink may be had fine and clear: there will then be no more sediment in the barrel than is necessary to feed the beer.

When the ale has been carefully put into the casks, some considerable waste will occur by its working over, which must be repeatedly supplied by occasionally filling up the cask with a little beer, which it will be necessary to have preserved for this purpose in a stone jug.

As in brewing it will always be desirable to have rather too much than too little beer, as the casks must be repeatedly filled, that the remaining yeast may be worked out, yeast being narcotic and unwholesome, as well as rendering the ale turbid. If there be not ale enough, the casks must be filled up with table ale, or perhaps, with a decoction of malt and hops, put in either blood warm or quite cold, as the beer may be inclined to work too much or too little in the barrels. case of a surplus at the last, it may be put in small kegs or stone bottles. When the working completely ceases, set the cask right on its level, and put into it a handful of fresh hops. See that the cask is quite full, then put in the bung with a piece of coarse canvass or brown linen cloth of any sort; in a few hours after, drive the bung tightly in with a mallet if you have one; some fill a coarse bag with sand, and lay it over the bung, pressing it closely down Ale as good as this will keep for a length of time, but may be tapped at any time after a month, which is the least time it ought to be kept; but much of this depends on taste.

UTENSILS useful in BREWING large quantities, say 54 Gallons.

Though good family beer may be made with few or no utensils, yet those who brew large quantities, and have conveniencies, will find a little money laid out in brewing utensils well expended; and when the durable nature of these articles is considered, and the absolute saving of money, as well as health, that is to be effected by their means, their first cost sinks into insignificancy.

For brewing three eighteen gallon barrels of beer, namely, one of ale and two of table ale, the following articles only are requisite:—

First, a copper that will contain forty gallons, though if, as some prefer, eighteen gallons of ale and only eighteen gallons of table beer are brewed, a smaller copper will do; but the copper should be large enough to contain the beer, allowing space for the hops and the waste of boiling, as a considerable quantity flies off in steam.

Second, a mashing-tub, to hold sixty gallons, for this must contain the malt as well as the water, and admit of its being well stirred: it must be a little broader at the top than at the bottom, and not quite so deep as it is wide across the bottom, near which there is to be a hole about two inches over to draw the wort off; or you may mash twice in a tub half the size.

Third, an under-back or shallow tub to go under the mash-tub, to receive the wort as it runs out of the mash-tub from the grains.

Fourth, a tun-tub that wtll contain thirty gallons, to put the ale into, to work. The mash-tub will serve as a tun-tub for the small beer.

Fifth, three or four coolers, about a foot deep each, in order that the beer may cool rapidly, as a great deal of its goodness depends on this: it cannot be cooled too quickly.

Sixth, a basket-spigot, to prevent the grains passing out with the wort; or a grating which is now commonly used instead.

Seventh, a stirring stick, which must be somewhat thicker than a common broom-stick, and long enough to reach easily to the bottom of the mash-tub. It must have at the bottom four or five sticks, three or four inches apart, and about eight or ten inches long, passed through the stirring-stick, looking somewhat like a double rake. These are designed to separate the malt well, which would otherwise cake together, and not give out half its strength.

Eighth, a good bowl with a handle, which should contain just a gallon, thus serving as a measure.

Ninth, a strainer to separate the hops from the beer when boiled, which may be either a sieve, or, what is perhaps better, a clothes or any other wicker-basket.

Tenth, a funnel or a tunnel made of wood, resembling in shape half a small barrel, with a short pipe in it which goes into the barrel, and is used to pass the beer into the barrels.

Among utensils for large brewings, we need scarcely mention barrels, but two sets of these are requisite, in order that the second set may be filled when the first is tapped, and that the beer may acquire age.

A piece of chain is also useful to clean the barrels with. In Derbyshire and Shropshire they make the bung-hole large enough to admit the hand and a brush, with a pole-handle made for the purpose.

One or two buckets are wanting; but few housewives are without these, so that they can scarcely be called brewing apparatus.

When the brewing is over, all these utensils should be first well rinced with cold water; and when the copper is done with for the brewing, it should be filled and made hot, that the things may all be scalded and well scrubbed, and then put carefully away. As they will nearly all go one into another, they will not occupy much room when out of use; and there is not one of them but will last for years, nay, almost a lifetime, with common care, even though they should be used once a month.

A THERMOMETER, to ascertain the temperature, is highly useful; and though much and very good beer has been brewed without it, yet many of the processes are so easily decided by it, that its possession must prove to be a benefit. It is cheap to procure, costing one to two shillings.

The method of using the thermometer is to tie a string to it at the top, and to let it down into the liquid at the temperature of which you desire to ascertain; it must remain a minute or two; then raise the stem above the liquid to observe the degree at which the mercury stands in the tube, without drawing the bulb itself out of the water into the air, which would cool the mercury, and give a temperature lower than the correct one. You thus see at a glance the degree of heat at which the water is.

If it is too high, instead of waiting its cooling, which is a loss of time, put in a little cold water, stiring it in, and thus bring it down to the proper temperature.

TERMS USED IN BREWING.

The water, in the language of the brewhouse, is termed liquor; the ground or bruised grain or malt is termed grist; when put into the mash-tub, it is called goods; and the extract made from those goods by infusion in hot liquor is termed wort, and the word Beer is applicable to both Ale and Porter.

Tunning is putting all the beer together for fermentation, after it has cooled.

Cleansing is putting the beer or ale into the barrels, and removing the utensils.

USEFUL OBSERVATIONS.

Some persons mash their malt three times, some twice, others only once for ale. If there be only one mash for strong ale, as is sometimes the case, the time of infusion may be four If there be two mashes, three hours may be allowed for the first, and two and a half for the second infusion; if three mashes are made, two hours and a half are to be allowed for the first, two for the second, and one and a half or two hours for the third, it being desirous to allow as much time as is consistent with the proper forming the extract, and the necessary expedition of the process. It is, of course, understood that when malt has been thus completely exhausted, table beer cannot be made after the ale. Respecting the time of boiling the beer, many persons differ; but as a general rule, all beer should be boiled till the wort breaks pure; that is, till the hops subside to the bottom, and the mucilaginous parts of the malt are coagulated into lumps, and float up and down in it very rapidly, leaving the interstices of the wort perfectly The method to assertain this is to take a little wort in a bowl or dish, and let it stand steady to observe the effect, repeating this observation occasionally till you see it in the desired state.

In order to extract only the finer parts of the hops, some

persons boil the wort an hour before putting in the hops, thus avoiding the rank extract of the hops: but in putting hops into the copper, they should be well rubbed apart by the hand, and any bits of leaf or decayed parts carefully removed. Stir the hops well up in the copper. Many persons make a previous infusion of the hops in boiling water, pouring the infusion into the wort, leaving the hops to be boiled with the second wort or the table beer. Others boil the hops in a bag, useing fresh hops to each boiling of ale they may make; leaving the boiled bags for the table beer: this latter mode is to avoid the acrid flavour of the hop, preserving only the pure aroma.

GOOD ALE from SUGAR.—It is very possible to make good ale and table beer without the use of malt; this will not appear strange, when it is considered that it is the sugar contained in the malt that goes into fermentation, and any substance containing sugar will ferment and form beer; this mode of brewing from sugar as also from vegetables we have always in print, price 8d.

Those who reside in the country far from breweries, and yet who do not like to take the trouble incident to malt brewing ale, will find it easy to make good Porter without the use of MALT and without the neccessity of employing utensils used in brewing from MALT; in that case, we shall be happy to forward for Eightpence in Stamps, our new mode of Brewing Porter from a new ingredient wholly unknown but to a few Kent brewers—who do not, in this new method of producing strong Stout and prime Porter use any Malt at all, this may be supprising but it is nevertheless a fact; it also treats on the best mode of bottling, keeping, and fining.