

THE PRIVATE  
**BREWER'S GUIDE**

TO THE ART OF

**BREWING ALE AND PORTER,**

PARTICULARLY ADAPTED TO THE USE OF THE

FAMILIES OF THE NOBILITY, GENTRY, FARMERS, AND PRIVATE BREWERS,

WITH

**Complete Instructions**

FOR

**COUNTRY VICTUALLERS WHO BREW AT HOME.**

ALSO,

**AN ACCOUNT OF DRUGS,**

**TABLES OF DUTIES, LAWS OF EXCISE, THE ART OF SWEETENING**

**CASKS, INSTRUCTIONS FOR MAKING UP SPIRITS,**

**PURCHASING WINES, &c.**

—◆—  
**ON A PLAIN AND ENTIRE NEW PLAN.**  
—◆—

**By JOHN TUCK,**

*Late of Croydon, Brewer.*

---

**LONDON:**

**PRINTED FOR W. SIMPKIN AND R. MARSHALL,**

**STATIONERS' HALL COURT, LUDGATE STREET.**

**1822.**

THE NEW YORK  
PUBLIC LIBRARY  
797003  
ASTOR, LENOX AND  
TILDEN FOUNDATION  
R 1918 L

NEW YORK  
PUBLIC LIBRARY  
ASTOR, LENOX AND  
TILDEN FOUNDATION

To JOHN ELLIOT, Esq.

*Colonel of the Westminster Light Horse  
Volunteers.*

SIR,

In dedicating this little work to you, however deficient in merit, it affords me a public opportunity of gratefully acknowledging many favours received from you.

I remain, Sir,

Your most obedient servant,

JOHN TUCK.

*London, Aug. 1822.*

Country Brewers, and Gentlemen desirous of practical instructions, or of having a Plant or complete apparatus fitted up, altered, or any advice relating thereto, may be attended by the Author in any part of the kingdom, on moderate terms, by addressing him at the

*New Inn, Old Bailey, London.*

N. B. Breweries or Stocks valued, and any Agency relating to the Brewhouse punctually performed.

# P R E F A C E

TO THE FIRST EDITION.

---

IT should be perfectly understood, that the Author of this Treatise on Practical Brewing, offers no more than plain and useful instruction to those who are not *too* wise to be instructed—to teach a plain and certain way of producing a sound and wholesome beverage without waste. He presumes not to teach the learned, nor to introduce any thing that is not easy to be comprehended by the plainest understanding. He enters little into improvements in machinery—the instructions he has given, are, for what he calls, hand-work, which may be followed from a two, four, or ten quarter mash tun to a larger one. He assures his readers that no nos-

trums, or pretended secrets, will be found in this work; and at the same time, honestly and plainly tells them, that there is no secret in the art of Brewing, *but to know how*—and that knowledge is only to be obtained by attention and practice. The Author further asks permission to state, that he is a Brewer, and not a Grammarian—of course, he implores mercy for the literary errors he may have committed.

He has divided the process into distinct parts or chapters, by which the learner, he presumes, will be better able to comprehend.

It is further necessary to observe, that the idea of this publication arose from attending a brewhouse to give instructions to the proprietor, reducing them to writing in the form now given—when it

## PREFACE.

vii.

occurred that they would be instructive to young brewers—the original has been enlarged upon, and written at various times, in the years 1818, 1819, and 1820, which will account for the difference of prices in malt and hops, and other materials, which have greatly varied.

# P R E F A C E

TO THE SECOND EDITION.

---

THE First Edition of this Work having been most favourably received, as is clearly evinced by the number of respectable names of Gentlemen in the profession becoming purchasers ; also by the public in general ; which is the more flattering, as the work has never been advertised. In consequence of many kind intimations, the Author has enlarged in explanation several parts of the process, and made additions, which he trusts will prove instructive, as well as useful to the student. The late publication of Mr. Accum's, is a convincing proof how readily persons may be led astray by a reliance on science instead of practical acquirement. In the observations I shall have occasion to make on that

Gentleman's work, I desire to be perfectly understood, they apply to the work itself, and nothing further. I must be permitted to regret, that Mr. A. has been induced to bring forward such violent accusations against the Brewery, in his publications, raising an alarm that has awakened the terrors, and excited the indignation of the multitude against that profession, and afterwards publish a work on a science, of which he appears to have but little marked; at least I shall endeavour to point out his want of that knowledge he presumes to display.

I have no observations to make on this Gentleman's remarks on other trades. If, indeed, his observations on Brewing are true, I must express my astonishment at finding myself, at the age of Sixty, in excellent health, and enjoying as much strength and vigour as most men of my

age; and wonderful to relate, consider London Bread and London Beer the best that is produced, and prefer them for food beyond any other viands, and have done so all my life.

The Edinburgh review has made this observation, which Mr. A. has given in his advertisements. "It is chiefly for the purpose of laying open the dishonest artifices of this class of dealers, that Mr. A. has published the present very interesting and popular work; and he gives a most fearful view of the various and extensive frauds which are daily practised on the unsuspecting public."

Certainly, to expose dishonest practices, is truly praise-worthy; but to throw such violent censures on all around, he must expect some will recoil. We have an account of a million and a half of barrels of beer and ale brewed in the year 1819

only; and the seizures made in public breweries, amount in *six years to thirty-four*. This is too much, to be told we are thus swallowing poison daily, and the discovery so lately made. Mr. A. says, “the intoxicating qualities of some *Porter* arises from stupifying ingredients used in it.” Will any one believe, when the penalty of the loss of the copper and utensils, perhaps worth ten thousand pounds, would be ventured to use drugs; and among all the convictions that has been made, has one *Porter House* been called in question, save that of *Reids and Co.* which is explained in the body of this work.

I would ask, who learned *Brewers* the use of *Drugs*? the answer must be, *Chemists*; *Brewers* were tempted, and have since completely discovered the fallacy of the experiment; and now the game is up, one of their own body comes forward to

expose the evils they have brought on the Brewery.

I have given an account of Drugs, and some, notwithstanding Mr. A's advice, I most strenuously recommend to private Brewers.

I must observe the complete alteration in the price of every article used in the Brewhouse; and in hoping for its continuance, I congratulate the public on the prospect of cheap and stronger beer which has taken place since the first publication of this work.

NAMES OF GENTLEMEN BREW-  
ERS who have become Purchasers of  
this Work, and with whose Approba-  
tion the Author is honoured.

---

Mr. Acton, .....	<i>Ipswich</i>
Messrs. Beer and Co. ....	<i>Margate</i>
Mr. Best, .....	<i>Chatham</i>
Messrs. Breed and Co. ....	<i>Hastings</i>
Mr. Barnes, .....	<i>Winchester</i>
Messrs. Cobb and Co. ....	<i>Margate</i>
Mr. Cobbold, .....	<i>Colchester</i>
Mr. Crump, .....	<i>Witham</i>
Mr. Chapman, .....	<i>Brighton</i>
Messrs. Chitty and Co. ....	<i>Lewis</i>
Mr. Dobel .....	<i>Cranbrook</i>
Messrs. Elliott and Co. . . .	<i>Pimlico</i>
Mr. Dickenson, .....	<i>Town Malling</i>
Mr. Dyson, .....	<i>Ipswich</i>
Mr. Garrad .....	<i>Portsmouth</i>
Mr. Goodwin, .....	<i>Billericay</i>
Mr. Harman, .....	<i>Croydon</i>
Messrs. Humphreys and Co. . . .	<i>Chichester</i>
Mr. Hewlett, .....	<i>Fareham</i>
Mr. Hunt, .....	<i>Abresford</i>
Messrs. Heath, .....	<i>Andover</i>
Messrs. Hurst, .....	<i>East Bourn</i>

Mr. Hunter, . . . . .	<i>Margate</i>
Messrs. Hopkins and Co. . . . .	<i>Cambridge</i>
Messrs. Langton, . . . . .	<i>Lewis</i>
Mr. Moody, . . . . .	<i>Winchester</i>
Mr. Millar, . . . . .	<i>Poole</i>
Messrs. Morrisson and Son, . . . . .	<i>Rye</i>
Mr. Wigyll, . . . . .	<i>Seven Oaks</i>
Mr. Mackenson, . . . . .	<i>Hythe</i>
Mr. Patrick, . . . . .	<i>Worthing</i>
Messrs. Plane and Co. . . . .	<i>Maidstone</i>
Mr. Plowman, . . . . .	<i>Rumsey</i>
Messrs. Robinson and Co. . . . .	<i>Canterbury</i>
Mr. Robinson, . . . . .	<i>Ditto</i>
Mr. Smith, . . . . .	<i>Alton</i>
Mr. Stewart, . . . . .	<i>Ipswich</i>
Mr. Sheriff . . . . .	<i>Ditto</i>
Sir Samuel Spicer, . . . . .	<i>Portsmouth</i>
Mr. Thomson, . . . . .	<i>Rochester</i>
Mr. Wait, . . . . .	<i>Winchester</i>
Mr. Wadham, . . . . .	<i>Poole</i>
Messrs. Wood and Co. . . . .	<i>Lewes</i>
Mr. Woodroffe, . . . . .	<i>Hastings</i>
Messrs. Wardell and Dodd . . . . .	<i>Tunbridge Wells</i>
Mr. Walker, . . . . .	<i>Dover</i>

## CONTENTS.



	PAGE.
Short View of the Brewery . . . . .	1
Hardships of Licensed Victuallers . . . . .	15
Technical Terms used in Breweries . . . . .	26
Utensils requisite for a Brewhouse . . . . .	34
Erecting a Brewhouse . . . . .	42
On Malt . . . . .	44
On Hops . . . . .	50
Dips . . . . .	56
Thermometer . . . . .	60
Saccharometer . . . . .	61
Grinding and crushing Malt . . . . .	64
Heats . . . . .	69
Lengths and waste of Liquor . . . . .	73
Setting Tap . . . . .	76
Mashing . . . . .	77
Boiling . . . . .	80
Cooling . . . . .	82
Pitching . . . . .	85
Cleansing . . . . .	93
Breaking in Stale Beer . . . . .	96
Capping on . . . . .	98
Raw Worts . . . . .	100
Finings and Headings . . . . .	101
Skimming . . . . .	111
On Cleanliness . . . . .	112
Art of Sweetening Casks . . . . .	114
Brewing Porter, &c. &c. . . . .	124
Expences attending Brewers . . . . .	186
Excise Laws, relative to Brewers . . . . .	194
On Drugs . . . . .	234
Excise Duties . . . . .	245
Directions for purchasing Wines, &c. . . . .	247
————— for making up Gin, &c. . . . .	256



THE  
**ART OF BREWING.**

---

INTRODUCTION.

IT has been long said, that “ Every old woman knows how to brew,” whilst the Breweries have been held almost in abhorrence, and even charged with dispensing poison to the public. The knowledge of the first position is easily appreciated, for, good or bad, foxed or sweet, thick or fine, still it is home-brewed beer, and it must be wholesome ; for the truth of the other, I can only appeal to the smooth-cheeked, full-bellied parties who smoke round an alehouse table, and to the appearance of those poor *emaciated* creatures, called brewer’s servants, who do

some trifling labour, such as laying down butts of porter, for sixteen and eighteen hours out of the twenty-four, which labour they bear, at least, without sinking under it.

In order to explain this matter in the best light, and take a fair view of the subject, it will be well to examine into the history of the Brewery for some time back.

It is nearly a century since brown beer, afterwards called porter, was first introduced. At that time public Brewhouses made no approach to the magnitude they now possess; indeed, I have a publication on brewing by me, printed in 1740, which speaks of the *great copper*, holding *thirty barrels*.—It is easy to conceive the extent of the concern.

Brown beer, or Porter, was introduced about the year 1720, chiefly on account of the aptitude of pale beer becoming stale. Brown beer was generally used among the

labouring class of men, and indeed, from the strength it was brewed, and the age it was kept, it was almost impossible for any but active and laborious people to drink and digest it.

I trust I shall be able to shew that the cause of so great a falling off in the quality of beer at the present day, does not rest with the brewery, but in the alteration of the times; and that there really requires more art and science to extract all the essential properties from the grain.

And notwithstanding that alteration, I assert, and will maintain, that in no part of the kingdom can you have a pleasanter, or more wholesome draught of beer, than in London.

The brewery being so heavily taxed with burdens and duties, the wonder will only remain, how the public have been served with so good a beverage, so well and so cheap, considering the burdens it has borne.

Let us then take a cursory view of the brewery for the last hundred and twenty years, about which time ale and beer were sold for two-pence a quart, the duty being then fifteen pence per barrel. In the year 1692, the duty on strong beer advanced to three shillings per barrel, with an impost of nine-pence per barrel on small beer. Beer then rose to two-pence halfpenny per quart. In Queen Ann's reign, duties on coals and hops were imposed, which caused a new rise on beer.

About this time much competition among the brewers appears to have taken place, and the introduction of brown beer became almost general. I must here observe, that in those days seldom more than a hogshead, or at most two barrels, were drawn from a quarter of malt. But many persons were so attached to the pale beer, particularly in the country, that the consumption of brown beer became confined to London; however, even then pale beer was drunk, as the brown was considered heavy and glutinous; a mixture of stale,

mild, and pale, which was called three-threads, was sold at four pence per quart as far back as 1720.

The Breweries now began to improve; the brown beer was started, well hopped, into butts, and was kept a considerable time to grow mellow. Being the beverage of labouring men, it obtained the name of **PORTER**, and was called **INTIRE BUTT BEER**, which was sold for three-pence per quart until about 1760, when it rose to three-pence halfpenny, and so continued until about 1800, when, in consequence of the great rise in malt and hops, it advanced to four-pence. In 1802, after one year's peace, war again breaking out, Mr. Addington laid on a war duty of two shillings per bushel on malt; the excise duty rose to ten shillings per barrel, on strong, and two shillings on table beer—porter became four-pence halfpenny, and afterwards five-pence per quart.

Let us now look back to former days, and compare them with the present. I do

not undertake to be the panegyrist of the brewers, yet as an old brewer, I cannot help feeling indignant at the obloquy thrown upon Public Breweries, to the proprietors of which the public stand greatly indebted; for whilst they were paying one shilling and ten-pence halfpenny for their quartern loaf, they obtained their porter at four-pence halfpenny per pot; and the gratitude expressed on this occasion was displayed by charging the brewer with poisoning them.

To return from this digression: the intire butt beer was brewed in good season, and the magnitude of brewhouses began to increase; not only did the respectable publican have his own cellar well filled, but every vault and cellar that could be appropriated, was hired for the purpose, for which was paid one shilling per butt per annum.

The mode adopted was to have the butts carefully coopered and made sweet, and properly arranged in the vault; the

beer, young from the stillon, was conveyed in barrels, started in the jigger-tub, then pumped through the hose, and each butt filled. The filling up and attendance were left to the broad-cooper, whose duty it was to attend each cellar, to ascertain that all was right. Thus was beer apportioned to each publican, and it was seldom moved for twelve months. In the present day the system is entirely altered. To say the truth, there is little of porter left but the name; and indeed the taste of the public is so changed, that very few would be found to fancy its original flavour.

The price of casks, horses, labour, corn, taxes, and every necessary appurtenance to a brewery, having of late years so much increased, there is no longer a chance of success to the laborious and industrious *little* brewer. All is swallowed up in capital. There are Brewers who never see the brewhouse, contenting themselves with receiving ten per cent. upon their capital.

A beer called amber, or two-penny, was much in vogue some years since. Of this great quantities were consumed early in the morning, warmed, under the name of purl; and though this liquor is at present sold in some houses, a very different beer is sent to the publican. I have known it cleansed in one day, and delivered out and drank perhaps in two.

The table beer, in the remembrance of the author, was most excellent. Fifty years since table beer was brewed, at the rate of four barrels from a quarter of malt, and was sold for twelve shillings per barrel. At that day it was the practice for persons to fetch the small beer from the brewhouse in pails, quite hot, and work it in their own cask at home. The barrel sent out by the brewer was stopped with clay in a conical form. So Shakespeare makes Hamlet say, "The body of Alexander being turned to clay, may be stopping a beer-barrel."

We have now to look at the amazing difference in the price of every utensil

used in the breweries, until within the last three years—in that of labour—rent and taxes—iron-work—horses—hay and corn—in short, every thing connected with them. I know of no better way to elucidate this subject than by giving Mr. Calvert's statement to the Police Committee of the House of Commons, in the year 1817.

Mr. Calvert, being asked his opinion why beer is not so good as formerly? answers, that it is owing to the price of beer not having kept pace with the raw material, and the articles of wear and tear. In the last twenty years porter had advanced sixty-four per cent. of which government received sixteen, the victualler about eleven, and the brewer thirty-seven; while the raw material, and the articles of wear and tear, have advanced in the following proportion :

	<i>Per cent.</i>
Malt and hops - - - -	£200
Cask - - - - -	100
Labour - - - - -	60
Millwright's work - - - -	100
Horses - - - - -	133
Harness - - - - -	140
Horse Corn - - - - -	100
Hay - - - - -	85
Coals - - - - -	53
Ropes - - - - -	125
Lighterage - - - - -	100
Leather pipe - - - - -	55
Poors' rate - - - - -	200
Bricks - - - - -	72
Timber - - - - -	275

Assessed and other taxes, most considerable.

Mr. Calvert also observes, that the advance of thirty-seven per cent. will not meet the above charges, and considering porter to be a necessary of life among the working class of people, and taking the pressure of the times into consideration,

the brewers have been induced to lower the strength instead of raising the price, which must have been seven-pence, or seven-pence halfpenny per pot.

In addition to the above, we subjoin the statement of Mr. Barclay, giving an account of the average price of malt, hops, and duty, for the last forty-eight years.

From 1769 to 1779, malt	31s. 6d. per qr.
1779 to 1789,	33s. 9d.
1789 to 1799,	41s. 8d.

*£. s. d.*

From 1769 to 1779, hops	4	9	8 per cwt.
1779 to 1789,	4	4	3
1789 to 1799,	5	4	2

During this period, the duty was five shillings and seven-pence halfpenny per barrel, and the price of porter three-pence halfpenny per pot.

From 1799 to 1809, malt	69s. 3d. per qr.
1809 to 1817,	81s. 1d.
1817,	86s.
1818,	80s.

*£. s. d.*

From 1799 to 1809, hops	6 16 7 per cwt.
1809 to 1817,	6 1 7
1817,	15 0 0
1818,	30 0 0

During this period, namely, in 1802, the duty rose to ten shillings per barrel.

Beer has risen during the latter period, to four-pence halfpenny—five-pence—five pence halfpenny—and, on account of the failure of two seasons of hops, porter rose to six-pence per pot; Hops having risen to thirty pounds per cwt.

A most wonderful change has taken place in the price of Malt and Hops; in the year 1820, Hops being down to Four Guineas per Cwt. and Malt reduced to Fifty Eight Shillings per Quarter. The price of Porter is reduced to five pence

per quart. The brewery has certainly a great turn in its favour, which it well deserves. At this time Malt has greatly declined in price; and as one shilling per bushel is to be taken from the duty on Malt, beer must be lower.

Having made these statements, I leave it to the public to judge, whether they have been overborne by the brewer; however, if there is any one incredulous enough not to afford belief, he may have the felicity of making a trial, as one half of the pale breweries in London at this moment (July 1818) are to let, or sold up; and notwithstanding the present turn, it will be seen that many cannot overcome the former difficulties, as the Gazette plainly evinces.

There are persons hardy or witty enough to say, that the price of malt and hops is of little moment to the brewer, as substitutes are generally used. From many years experience, I have not yet had the good fortune to discover the practice. If there is

one, it nearly equals, in value, the philosopher's stone.

In writing this short view of the brewery, it would be uncandid to deny that such attempts have been made; and as I shall give a list of the principal drugs used, or recommended to be used, it would be a contradiction to my own statement; but that any thing can supply the place of malt and hops, in effect, I most solemnly deny.

About twenty years since, when barley, as well as every other grain, rose to an immoderate height, and a real scarcity was felt by the country, the brewer, instead of raising beer in proportion with bread, was weak enough to listen to the futile persuasions of certain druggists, in recommending their drugs. They certainly imposed on the most ignorant, and I fear, many who ought to have known more of the *efficacy* of their nostrums; but as I shall give a description of their use

and application, I defer entering into any detail at present.

As this book is intended for the use of the Licensed Victualler, as well as the private brewer, more especially the one who brews his own beer, it will not, perhaps, be too intrusive to mention a few of the hardships and impositions that the publican labours under.

Whoever will look back for some time past, must acknowledge the increased respectability of the licensed victualler; and although it must be confessed, and indeed proved in the Police Committee of the House of Commons, that there are many bad characters, yet the principal houses in town are now occupied by highly respectable characters; this is accounted for by the alteration in the times, as many persons have, through misfortune, been driven from their original callings into the public trade. Now, when it is considered that the victualler is, in point of fact, the collector of an immense portion of the

revenue ; that he bears more than his proportion of the public burdens ; that in lieu of the income tax his licences were doubled ; it is curious that the Police Committee should observe, that these were the means of rendering him respectable. That was the first time I ever heard, that increasing a man's expences, and making him poorer, has a tendency to increase his respectability. How is it then, that the publican, being thus established in his *right* of respectability, should be exposed to the mercy of the report of every parish beadle, or vagabond constable or patrole, or spiteful vindictive neighbour, who has only to write a letter, perhaps anonymously, to the licensing magistrate ; when the publican, however large his property, or high his character, is at the mercy of an individual ? Does he not thus lose the privileges of an Englishman ? He is neither tried nor heard by his peers, nor ever faced to his accuser ; but such is his wretched and peculiar situation, that he may lose his whole property, and his family be reduced to beggary, at the nod of

an individual. Any other person for five shillings, may dispute, and even carry his cause before the king (as supposed) sitting on his bench; but a victualler may be despoiled and ruined—his family turned into the street, at the infamous and uninquired report of a scoundrel. Who are these reporters? The first, and most officious on the list, is the parish beadle. One observation on this description of gentry is sufficient. Shew me a beadle, and I will shew you a drunken fellow. The second is the patrole; of him I need only observe, refuse him drink, and then you get reported.

To complete the climax of misery of a licensed victualler, that should his landlord, or any other person, make him a present of a hare, or any description of game, he is liable to a penalty of ten pounds, for having such forbidden luxuries in his house.

To enumerate the different cases of victuallers being ruined, is not my present

purpose, but it is high time that they should unite together in every district throughout the kingdom, and petition parliament to be restored to the natural rights of Englishmen, which I recommend to be done humbly and respectfully. It is impossible sufficiently to thank the Hon. Mr. Grey Bennet, for his noble and generous endeavours in behalf of the public trade.

I must confess I greatly disapproved of the former petition to the House of Commons. Great men do not like to be told unpleasant truths, and it should have been remembered, that every gentleman of that honourable house is a magistrate. Let another petition be drawn out, with as many signatures as possible; let the prayer be cool and respectful, shewing that they have no desire to remove the power of magistrates in licensing; but that the individual shall not be deprived of his property or livelihood without the fiat of a jury of his countrymen.

Now let us look, by way of example, at the taxes and burdens of a house rated at forty pounds per annum, in the city of Westminster.

	£.	s.	d.
Beer licence - - -	4	4	0
Spirit ditto - - -	10	1	0
Wine ditto - - -	4	8	0
Tobacco ditto - - -	0	10	0
Additional duty on glass -	5	0	0
Quartering two soldiers, or paying them out, at 6s. each per month	7	16	0
Two newspapers - - -	19	15	6
Additional duty - - -	1	8	2
House tax by the rent -	4	10	0
Window tax - - -	10	1	1
Land tax - - -	2	10	0
Waiter - - -	2	2	0
Poor rate - - -	6	9	6
Paving, lighting, and watching	3	2	6
Water - - -	2	0	0
	<hr/>		
	£83	17	8
	<hr/>		

In addition to all this, the expence of coals and lights, whether candles, oil, or

gas, will amount to at least ninety pounds per annum.

Do individuals thus subscribing to the exigencies of the state, deserve to be put out of the pale and protection of the law, and rendered paupers at the will of any man, without a fair inquiry by a jury of their countrymen?

The case of the injured Mr. Meek is fresh in the remembrance of the public, and has made no small impression on the minds of the judges of the court of King's Bench. It is to be hoped that it will make an equal impression on the minds of magistrates, and cause them to act in a way, that not even a shade of suspicion shall attach to their conduct. At the same time it is but justice to pay the magistracy of the country in general, the highest respect and compliment. In this edition I have the satisfaction of observing an action was tried in the court of King's Bench, charging Thomas Collins, Esq. Sir Nathaniel Conant, and Samuel Mills,

Esq. with unlawfully conspiring to withhold a license from an alehouse, he, Meek, having ceased to deal with Messrs. Meux, Reid, and Co. when they were all found *guilty* of a corrupt refusal of the licence from the above motive. Feb. 27, 1822.

In the country towns, publicans have suffered most severely from the quartering of soldiers. It is a fact within my own knowledge, that a man who kept the Bull's Head, at East Grinstead, was obliged to sell his bed to purchase meat for soldiers billeted upon him.

Country publicans are also most grievously oppressed by their brewers. Not only are they obliged to pay whatever price these gentlemen demand, but the public and the hard-working labourer, are compelled to drink whatever trash they chuse to send them. On a journey into Devonshire, which the author took lately, he stopped at Bridport to dinner. On asking the waiter, what beverage he had to drink, he replied, "Very good porter, Sir;" on

tasting of which, it proved so bad no one could drink it—nothing like that wholesome beverage called **INTIRE BUTT BEER**. Upon enquiry, I understood, that out of twenty-one public houses in that town, twenty are in the hands of the brewer.

In Hertfordshire, in a town where a Baronet and Member of Parliament resides, three houses lately fell into the hands of a Brewer. The terms offered to the landlords were as follow :—The beer to be raised three shillings per barrel; to sell no other beer, not even London bottled porter; to quit the house at a day's notice, in case of giving offence, or making any breach in the agreement, of which only one copy was to be signed, and that to be held in the hands of the brewer. One publican out of the three signed it, and a clearance of his bottled porter immediately took place, which was allowed for. The other two had notice to quit.

Should these remarks meet the eye of any Member of Parliament, I trust they

will have that weight as to occasion his interference once more in the House of Commons, in behalf of the unfortunate publican.

To private brewers I trust I shall give no offence in disclaiming against the inordinate waste of malt in their brewings, and who may, by attending to the following instructions, be enabled to make a good and wholesome beverage upon moderate principles. I cannot help finding fault with the dreadful and abominable waste of grain in noblemen and gentlemen's families, in using from nine to twelve bushels of malt to a hogshead of ale. There can be no merit in having beer, a single horn of which will make a man drunk. The great strength of such beer renders it unfit for common drink, and those who drink wine cannot digest it. If the process be well conducted, two hogsheads instead of one may be obtained from the same quantity of malt, quite strong enough for any use.

At the time the Marquis of Lansdowne, then Lord Henry Petty, brought a bill into the House of Commons, to lay a tax on private brewers by assessment, I was surprized to hear Sir W. W. Wynne observe, that private brewers consumed more malt than public ones, consequently paid more malt duty, and therefore should be excused. Surely, it is a very poor argument, that private waste can at all contribute to public benefit. In the debate upon this question, it was stated by his lordship, that there were 750,000 quarters of malt annually consumed in private brewing. The Public Brewer would pay a million of money duty on this quantity.

I never could discover why, in times like the present, when all people are so oppressed with taxes, that the labourer should be obliged to pay a tax which his master escapes. This is certainly the case. The working mechanic, or common labourer, who has no means of erecting an apparatus, or time to use it, pays a duty of one penny for every quart of strong beer he

drinks, which his master avoids who brews his own. Thus the private brewer escapes the duty, as well as the expences incident to a public brewery, and supposes there is an amazing profit attached to the public one, whereas, in fact, this is a mere supposition, without the least foundation.

There never occurred a better opportunity for effecting the purpose of the tax on the private brewer, than when the Chancellor of the Exchequer thought proper to take off the duty on malt, in order that the lower ranks should be relieved in proportion with the higher ones, upon the abolition of the income tax. If the hon. gentleman had taken the duty off the X beer in the public breweries, then would the private brewer have had to pay a duty on malt, and the labouring man would have felt much benefit. As it now operates, the two millions per annum is mostly in the maltster's pocket. However, these are matters which I sincerely hope will occupy the attention of the legislature.

## TECHNICAL TERMS

USED IN

*THE BREWERIES.*

*Liquor.*—For water.

*Goods.*—So the malt is called in the mash tun.

*Charging the copper.*—Filling the copper with water, is called, charging the copper.

*Waste.*—Is the loss of liquor in the process, viz. on the goods, hops, evaporation from boiling, in the coolers, &c.

*Lengths.*—Are the quantity of barrels or gallons obtained in the brewing.

*Copper through.*—The copper is through when the first ebullition of boiling is perceived.

*Gyle.*—Is applied to a single brewing.

*Party Gyle.*—Is when table beer is brewed after strong, by capping on, or taking the last wort for table.

*Setting goods.*—So called when by turning on the liquor too hot, the goods become lumpy in balls, and fixed together like puddings.—There is no remedy for this; make the most of what you can get off, and fatten the pigs and poultry with the grist.

*Grist.*—Is the produce of the malt ground down.

*Capping on.*—After taking the first and second mashes for strong beer, you add a certain quantity of malt for table beer in the third mash.

*Off and on.*—This is used by the brewer to the man who stands by the copper-cock, who is generally the stoker of the copper-fire. When the brewer gets his liquor to a proper heat, and has ordered his fire to be stopped, he calls out, “Turn on;” the man answers, “Here’s on.” So when the brewer finds, by his float, as much liquor as is required has run into the mash tun, he calls “Off;” the answer must be instant, “Here’s off.”

*Float.*—Is an instrument composed of a rule, say thirty-six inches, regularly marked, with a large piece of cork, about an inch thick at the bottom; by dipping of which, and consulting the excise table, the quantity of liquor used is known to a gallon; so that the proper length is obtained; it also applies to all the vessels and utensils gauged. The exact quantity in each being thus discovered.

*Dips.*—Are the wet and dry inches in different utensils.

*Rousing.*—This is the act of beating up the liquor in the copper, or when the worts are turning out, so that the hops may not remain in the copper. Or, in beating up the yeast in the tun; this is called rousing the copper or the tun.

*Turning over.*—The hot liquor from the copper, used in the mashing, is called, turning over so many barrels in mashing.

*Mashing.*—The stirring the malt in the mash tun, either with oars or mashing machine.

*Oar.*—So called. A long pole, with a triangle at the bottom, and open bars.

*Worts.*—The mucilage from the malt. The first wort is called the hop wort; the second wort; and the third, the blues.

*Raw and returned worts.*—After the process of mashing for the first brewing is over, a quantity of liquor is turned over the goods. This is used in the next brewing.

*Letting down.*—After the worts are sufficiently cooled, they are let down into the working tuns.

*Pitching.*—Is the application of yeast in the working tun after letting down. Thus it is said, pitched at 60 degrees.

*Cleansing.*—After sufficient fermentation, the gyle is taken from the squares, and cleansed in casks on the stillons, where it further ferments until it becomes fine.

*Filling up.*—As the fob and yeast works out of the bung-hole, it is necessary to add fresh beer from the stillon, and fill up to supply the loss.

*Fæces of malt.*—The residium which is found at the bottom of the coolers,

great care should be taken to prevent it getting into the working tun.

*Fox.*—This of all things is to be avoided ; for when once he creeps in, it is difficult to hunt him out. It is an ill smell, and a worse taste, occasioned by neglect, uncleanness, and bad heats. It is too often tasted in private breweries, as the vessels are thrown aside uncleaned and unattended to. The best method of hunting him out will be hereafter given.

*Fermentation, or attenuation.*—This is one of the most necessary studies for a young brewer ; it is found by the action of the fixed air contained in the yeast upon the worts in the tun, the grosser and heavier qualities of the worts are broken ; the heat increases, and the worts themselves become lighter. It is essential to pay every attention to this part of

the process, and to attain a knowledge of the thermometer and sacchrometer.

*Breaking in.*—The art of mixing stale or returned beer with fresh brewed beer, in order to recover it, and make it saleable, and also to bring young beer forward.

*Thermometer.*—An instrument to mark the degrees of heat in the liquor, worts, working tuns, &c. Those made for breweries are of tin, and are marked with different degrees of heat to boiling  $212^{\circ}$  on which the quicksilver rises or recedes. Some thermometers are termed blind, having a metal scale, which the brewer carries in his pocket; by which means he conceals his process from those about him.

*Sacchrometer.*—Is an instrument to discover the weight of the extract or saccharine matter obtained from the malt above the weight of the

water. They are sold by Messrs. Dring and Fage, instrument makers, Tooley-street, Borough; and Mr. Long, Tower-street, London.

**X.**—Beer, marked X, is strong beer.

**T.**—Table beer, in a common brewhouse, must always be marked with a T, under a penalty of fifty pounds.

**Plant.**—The whole apparatus of a brewery, collectively, is termed a Plant.

## UTENSILS.



The first consideration for a Brewer, victualler, or a private brewer, is the erection of the utensils for the work; and here, I am well aware, I have to encounter strong and rooted prejudices. It will be said, "it was so in my father's time, and it shall so remain." Remember, in answer to this, every thing has changed and become dearer—and no waste can be afforded. Every person who brews with his copper near the ground, must know the waste in bailing and carrying away the worts in pails and buckets. Let him consider the value of his first wort, a single quart of which is equal to a gallon. Not

only this, but the saving of time and labour. Worts are not rendered better by being knocked about—they lose their regular heat, and fermentation is greatly impeded.

I beg leave now to refer the reader to a list of utensils really useful for a brew-house, they may be varied as to size. A liquor-back I should think unnecessary for any thing below a ten quarter plant.

*Utensils.*—The principal ones in a brew-house, are

Liquor back

Copper back

Copper

Hop back

Mash tun

Under back

Cooling backs

Squares, or working tuns

Stillons

Hose

Liquor pump and pipe

Wort pump and pipe

Jigger pump

Mill-work, or hand-mill, as described

Filling cans

Tasters (made of tin)

Yeast scoops

Scrapers, &c. &c.

The *Liquor-back* is erected at the top of the brewhouse, resting on the jams of the chimney; its size in proportion to the brewhouse. The liquor is pumped into the back, and if it should be hard, will soften and ameliorate in the sun and air; in case the liquor prove hard, it will also be necessary to throw large lumps of fine marley chalk into it, and change them at times.

The *Copper back* is fixed over the copper, and has two plugs. This back is to contain wort, or liquor, as required, so that the moment the wort or liquor is out of the copper, the plugs being removed, the copper becomes charged.

The *Copper* need not be described, but great care should be taken to have it set by a mechanic. I cannot too highly recommend the workmen employed by Mr. Peter Sherwood, near Waterloo-bridge, who will send them to any part of the kingdom.

*Hop back.*—This receives the wort after it is boiled; it has a false bottom, which the wort strains itself through from the hops, and which, when run into the coolers, leaves the hops to cool against they are wanted for the next wort.

*Mash tun.*—This vessel is for the mashing of the goods; it is also furnished with a false bottom, penetrated with holes to prevent the grain getting into the under-back; it has a shute under the copper-cock, which causes the liquor to wet the goods underneath, the liquor springing up through the holes.

*Under back.*—To receive the wort when it has stood its time after mashing.

*Cooling backs.*—Are the backs destined to receive the worts from the hop back, in which they are spread to cool, the worts should never exceed an inch deep: the more space allowed for cooling the better, as the work is accelerated thereby.

*Squares, or working tuns.*—Are for fermentation. It is always best to have two, particularly as strong and table beer may be wanting from the same gyle; also, in case the last wort should not come down so soon as might be expected.

*Stillons.*—Long troughs on feet, on which the cask is arranged for the purpose of getting out the yeast.

*Hose.*—Long leather pipes, for conveying worts from the squares to the cask on the stillons, or beer into cellars by the jigger-pump.

*Liquor pump, and lead pipe* to ditto.—This goes to the well, and pumps up to the liquor back.

*Wort pump, and lead pipes.*—This goes into the under-back. N. B. If the well is situate near the underback, a saving may be made of a pump and lead pipe, as a cock may be contrived to turn off liquor or worts as required.

*Filling cans.*—These should hold two or three gallons, and the nose of the can inverted for filling up.

*Taster.*—A long tin, with an aperture and wooden handle. This is to dip in the bung-hole, to taste the flavour and goodness of the articles before sending out.

Having thus given an account of the necessary utensils to a brewery, the author is able, from experience, justly to appreciate the merits of the following tradesmen, and can confidently recommend them to the notice of Gentlemen, Brewers, and Victuallers.

*Coppers.*—Brass cocks of every description, screws for pipes, and every article in the copper and brass way, at Messrs. Oaks and Son, copper-smiths, Houndsditch, near Bishopsgate-street.

*Copper setter, and brewer's bricklayer.*—Mr. Peter Sherwood, between Waterloo and Westminster Bridges, Southwark. The saving of time and fuel can only be known to those who have experienced the knowledge of having their brewing coppers properly set.

*Back-maker's work.*—Mr. Back, Compton-street, Clerkenwell.

*Also, Cooper's work, of every sort of cask.*

*Mill work, and mashing machine maker.*—Mr. Abraham Matterface, working engineer, near Christ Church, Blackfriars'-road, Southwark. This excellent mechanic has erected several steam-engines of a *two-man* power; his inventions are worthy the inspection of the curious.

*Leather hose and pipe maker.*—Mr. Mullins, No. 107, High Holborn.

Saccharometers, Thermometers, Floats, &c. may be had of Messrs. Dring and Fage, Tooley-street, near London-bridge; and Mr. Joseph Long, No. 20, Little Tower-street.

## BREWHOUSE.

---

Any shed or place will do for the brew-house, or external part, provided it is well covered in, and of sufficient height and expanse that air may be admitted or excluded as the cold or heat of the atmosphere requires. It is desirable to have the bottom paved either with stone or brick, to carry off the slops.

If a brewhouse is to be erected, care must be taken to build it in an open airy spot, away from drains, privies, or places emitting putrid smells.

The copper tap is the great criterion for getting a fall from all the vessels. If the

tap is sixteen feet from the floor, it will be sufficient in a small concern. Then comes the copper stage to the copper door. Next the mast tun stage. Below the under-back. The working tuns may be at least fixed on brick piers or wood, having a fall of six feet to the stillons. By erecting a brew-house upon this plan, the only pumping necessary will be into the liquor back, and into the copper-back, if you have one, and the worts from the under-back. If the working tuns are on the ground, then a jigger-pump must be used to pump the worts through the hose into the cask, which may be avoided by taking a sufficient height in the erection of the copper; the working tuns then being of such a height that the worts run through the hose without disturbing them.

I have said nothing about mill work, because hand-pumps are all that will be found necessary in a small concern now describing.

## MALT AND HOPS.

---

Having your brewhouse complete, the first consideration is the essentials, Malt and Hops. Malt is distinguished under three names, viz. Pale—Amber—and Blown. The pale malt, made from a fine well grown barley, is chiefly used in the country. To make a careful choice, you must observe that it is tender, a fine bright colour, and of good flavour, by biting it down; the nearer the colour is to a new guinea the better it is considered for ale. Observe, that the spire is grown nearly up; if overshot, the malt loses its substance; if not spired up, it is not malt. All that part of the grain to which the

spire has not grown, is only vegetable, and not malt, and will produce acidity in beer; however, you may obtain a good weight in the saccharometer. Break a good malt with your nail, rub it on your sleeve, and it will mark like chalk. Bite it down well, squeeze it between your finger and thumb, which will shew the colour, and the smell will acquaint you with its goodness. Fine pale well malted barley should weigh forty pounds per bushel. Amber malt is that which is rather higher dried, and gives a deeper colour; it should have all the properties of the pale, but from its receiving more fire, will of course be lighter, perhaps from thirty-five to thirty-seven pounds per bushel. This malt is much used in London beers, both for porter and table beer; indeed, from its good qualities beers are expected to stand better from its use, as well as obtaining colour. Brown, or blown malts, are used for porter. Chuse those which break easiest, and have a fine full flavour. They receive so much fire that only soft liquor will brew them, at least soft liquor is es-

essentially necessary to brew Porter in which this malt bears a great proportion.

The finest malt of this description is made at Bishop's Stortford, in Essex, and that neighbourhood, Ware, &c.

It may be here observed, that the Ware malts, as they are termed, on the London market, stand first in estimation of every description; but I have seen as fine pale malts from Suffolk as ever were used.

## BEANS MALTED.

---

Malting of beans is sometimes practised, and when good blown malts are not to be obtained, they may be ground down with the other malts. This malt must be used in small proportions; it gives colour and strength to the beer.—Observe: this is only intended for porter, and if too great a quantity be used, it will cause the worts to be very heavy and glutinous. The taste of the beer will also be fiery and pungent; however, sparingly used, it is a good substitute for blown malt.

## PATENT MALT.

---

This is a malt dried in a circular iron tube, and literally roasted till it becomes brown like coffee. It is intended to give colour to porter, but it frequently produces a fiery unpleasant flavour.

This malt has but latterly come into use; since the act of parliament passed for prohibiting the use of colour made from sugar. I cannot consider this malt a good substitute, as it is mere colour, without any of the saccharine substance remaining. It is, however, now generally used by the London Porter houses, who much discontinue blown malts, substi-

tuting amber, as by these means they procure a greater weight of saccharine matter ; about a 30th part of the whole grist will be sufficient for colour.

## HOPS.

---

Hops are the production of several counties, the chief ones are Kent, Sussex, Worcester, Essex, and Farnham, in Surrey, bordering on Hampshire, where some good hops are produced; also, the North Clays. To dilate on all their qualities would be foreign to my purpose; but it is necessary to say something of the different produce. The Farnham hop, which always stands highest in price, is seldom used except in noblemen's and gentlemen's families, and that chiefly in the west of England, where they are so highly esteemed, that all others are considered merely as substitutes; and so great does this prejudice prevail, that I heard a common brewer, one Weyhill

fair, assert, that Kent hops might be used, but the beer made from them was not fit, or wholesome to drink for twelve months. The Farnham hop is entirely of the white bine; great care is taken in the cultivation and poleing, and no pains are spared in the picking, to avoid leaves, stalks, or any thing but the fruit, which renders them truly valuable. The largest growth is produced in Kent, and this hop is for the most part really estimable and highest prized in the brewer's copper. No hop, in my opinion, can equal a fine East Kent, for its flavour, condition, and good quality for keeping beer. The Sussex are good, but not of that strength. However, every one has his favourite. The buyer should be led in his choice by the colour, ripeness, and condition; press a sample between your finger and thumb, and it will feel like silk, rub it down in your hand, and a most delightful oily fragrance will emit, and the leaves stick to your fingers. A sample that has these qualities, will never deceive you; but when they feel harsh and dry, if they crackle on breaking them,

and are without flavour, always avoid such, keeping in mind, that one pound of good hops in the copper, is worth two pounds and a half of indifferent ones, as well as having the advantage of flavour. Keep in mind, that the efficacy of the hop is in the fine oily and fragrant bitter, that readily yields its virtues in a decoction of liquor not quite boiling. The best mode of using them, in a small brewery, is thus :—first, get the hops weighed ; have a tub or vessel to hold them ; then pour liquor of the heat of 160 degrees over them ; mash similar to malt, till the whole are saturated or wet ; then cover them close down with cloth or sacks. The liquor or decoction of them strain off, and let it run into the first wort without boiling. The hops, after they have been strained, will go into the copper in the usual way.

This has been held a great secret. A person who sells printed directions for this process, pretends, at least 25 per cent. may be saved. However, the oily and most essential parts are thus preserved :

That no improvement may be withheld, I take it literally as printed, though I cannot vouch for the effect.—“ *Improved Method of treating Hops.*—The hops intended for the day’s brewing, should be weighed in the morning, after the fire is lighted under the copper, and well broken into a tub, or any other vessel, sufficiently large to admit of the expanding effect of the hot liquor, to be applied. To every pound of hops, use two gallons of liquor, at a heat of degrees, and let the whole be well pressed, and worked in the same manner as mashing for malt, until every part appears to be uniformly saturated, then it will be proper to cover them down with a few sacks, to prevent, as much as possible, the escape of the steam, which is the most active principle in forming the desired solution. This business should be done in the morning before mashing, by which means there may probably be near four hours for the hops to lay in this digesting state; during which time it would be well to uncover

“ them three or four times to press them  
“ down, for they will swell and rise above  
“ the liquor. When the tap is set for  
“ drawing off the first mash of the malt,  
“ the extract of the hop should be sepa-  
“ rated from the hops, as dry as can be  
“ conveniently; the extract to remain  
“ either in the hop-back or coolers, to  
“ meet the wort, and the hops conveyed  
“ to the copper, to be boiled in the first  
“ and following worts, the usual time and  
“ manner.

“ In the quality of hops there is found  
“ to be so great a difference that it is im-  
“ possible to recommend any specific quan-  
“ tity for any given kind of beer, as it often  
“ occurs, that one pound of rich high-con-  
“ ditioned hops, will go further than three  
“ pounds of some others of inferior quality,  
“ exclusive of the superior excellence of  
“ flavour they produce. In different coun-  
“ tries there is likewise found a great differ-  
“ ence in the habits and palates of the peo-  
“ ple; some are found that require their  
“ beer to taste of little else but hop, while

“ others again contend for the total extinction of its flavour ; all that is meant to be implied, as an advantage resulting from the improved mode of treatment, is, that from whatever quantity it was thought necessary to use for any kind of malt liquor by the old method, deduct one-fourth, or twenty-five per cent. by the new method for the like purposes.”

If the liquor you are brewing with is hard, by throwing into the copper a good handfull or two of salt, together with an ounce of salt of tartar, it will greatly assist in extracting the virtue of the hops, as well as in the spending of the malt.

## DIPS.

---

By the word dip you are to understand giving the contents of the vessels in use, as well as the copper. The exciseman having taken the gauge of every utensil, gives Tables of the same in wet and dry inches. A fair copy is then made out, pasted on a board, and hung up by the side of each utensil. For the copper, hop back, under back, and squares, or working tun, dip with the float; in the coolers, with a pocket rule. In a copper, say of twenty-four inches deep, by putting in the float, it is found eight inches dry; and this is done by nipping your thumb at the rim of the copper on the rule. There is of course sixteen inches liquor or wet.

Turn to your table, and it will give the exact number of barrels and gallons contained in the copper.

I should here state, that in coppers of four barrels and upwards, there is an offset, by which the copper-setter, or brick-layer, is said to hang the copper. In point of fact, the fire in a copper well set, comes up to the rim, and it is technically called, whether filled with liquor or worts, being up to *brass*. So that if the liquor or wort be not up to the rim, the copper will be in danger of being injured by the action of the fire.

## TABLING OF A COPPER.

Dry Inches.	Contents in.			Dry Inches.	Contents.		
	B.	F.	G.		B.	F.	G.
Full	9	2	4	19	4	0	1
1	9	1	1	20	3	3	1
2	8	3	8	21	3	2	1
3	8	2	5	22	3	1	1
4	8	1	3	23	3	0	1
5	8	0	1	24	2	3	0
6	7	2	7	25	2	2	0
7	7	1	6	26	2	1	0
8	7	0	4	27	2	0	2
9	6	3	3	28	1	3	4
10	6	2	1	29	1	2	6
11	6	1	0	30	1	1	8
12	5	3	7	31	1	1	1
13	5	2	3	32	1	1	3
14	5	1	4	33	0	3	5
15	5	0	2	34	0	2	7
16	4	3	1	35	0	2	0
17	4	2	1	*36	0	1	0
18	4	1	1				

\* The whole depth except the crown.

To elucidate the nature of dips, I give the tabling of a copper of 9 barrels, 2 firkins, and 3 gallons. You will observe, the contents of the utensils are gauged by the officer. By having a table of each put by the side of every utensil, the produce will be known throughout the process. For example: you want 8 barrels of liquor in the copper, the gauge as thus given. Hold the float in your hand, having made a chalk mark across the figure 5; when the rule of the float cuts with the rim of the copper at 5, you have 8-barrels and 1 gallon. When the float cuts at 10, you have 6 bar. 2 fir. and 1 gal. and so on. All the inches on the float above the liquor, are called dry inches; all below, of course, are wet inches. Suppose the copper full; 9 bar. 2 fir. 4 gal.—you intend to turn on your goods 5 bar.—call to the man “turn on;” having calculated to what mark the float will sink—let out 5 bar. as thus—look to the table, and at 17 you will find 4 bar. 2 fir. 1 gal.—your float must sink till it cuts 17. If the copper is up to 6 inch. you want to turn out 4 bar. having 7 bar. 2 fir. 7 gal.—let out until your float sinks to 21, you will find left 3 bar. 2 fir. 1 gal.

## THE THERMOMETER.

---

This instrument, so indispensable in brewing, is made for the brewery in a tin case, the quicksilver rising to  $212^{\circ}$ , or boiling heat. It is always necessary to have at least three—one for the copper—another for the cooling backs—and a third for the working tun or tuns. In some working tuns they are made as fixtures, which is a good method. They are also made blind, as it is termed, with a pocket scale, so the brewer orders his stoker to get the liquor to a certain heat, as marked by the index; or tells him to turn on in mashing when the heat rises to the mark. This is a good method, when the brewer wishes to avoid the impertinent prying of those about him. You will also, by the thermometer, mark down in your brewing journal, the heat of the atmosphere.

## THE SACCHAROMETER.

---

By this instrument you find the true value of the extract by the weight or density. You also discover the advantage and profit in procuring the best malts, and by which you may be enabled to run your length, perhaps a firkin in a quarter, longer by one sample than by another. A brewer, by making himself master of this instrument, will have a great advantage over the one who does not know the use of it, for he will discover at once the excellence of his malts, as also when they are wanting. Consider how different a gyle of beer will turn out, brewed the same length, when you have a weight in the first mash, one of thirty-nine or forty pounds, and in

the other thirty-one or thirty-two pounds, you are at a loss, without this knowledge, to find out how the difference can happen. In fact, this instrument furnishes you with a knowledge, whether the maltster has served you with a good article or not. The immediate directions for its use are given in a pamphlet in the purchase. It has become a fashion in modern books on Brewery, to swell the pages with the actual copy of the pamphlet *given* with the instrument, and to which it is only necessary to refer for its use and application.

## GRINDING, or CRUSHING.

---

Malts for ale are, or should be, of a fine pale tender texture, and do not require to be ground down so low as those which have received more fire. If the grain is merely broken, it is sufficient, whilst those used for porter or brown beers require to be ground down lower; but in each case the greatest attention must be paid that every grain is broke.\*

\* Mr. Accum tells us that malt, after it is ground, is to lay in a Bin four or five days to *Mellow*;—but where this is practised I am at a loss to discover;—he gives instructions for 30 and 50 quarters. What sort of a bin would be required for this quantity? The fact is, Malt in a porter house is ground while a brewing is going on; in some houses there is a receiver over the mash tun, in others, as in Messrs. Whitbread's, it is ground below the level of the mash tuns, and is carried up, through a tin tube, by means of an Archimedes' screw, turned by the steam engine.—It would not be well to use malt the moment it is ground, as it attains a heat in going through the stones—and the same heat, if it be suffered to lay long, will turn the grist musty.

The advantage to a country victualler, who brews at home, is without calculation in grinding his own malt. Having undertaken to give honest instructions, I trust the maltster will not suppose by this remark, that I mean any ill-tempered attack on him. By purchasing malt unground you see what you are using; it prevents any foreign matter being mixed or ground with the malt to fill up the sack. Observe that you have no hard or unmalted corn, that every malt is crushed, and above all, that unmalted you have full measure. The malt must be very close indeed if it will not yield nine bushels when ground, sometimes ten. The consumer will clearly discern the loss he sustains by having his malt ground, besides what he loses in unbroken corns. I have seen in the grain tub in the yards of public inns, where they brew at home, at least one grain in ten unbroken, and this to the great joy of the pigs, cocks and hens, &c.

A most nefarious custom prevails in the west of England, where the maltster never

treads or screens his malt, so that roots and shoots are all measured and ground in, not only to the loss of the brewer, but giving his article a most abominable hot flavour. I could not, for a long time, discover the cause of a strong sulphureous taste in ale brewed in the west of England, until the above very shameful practice presented itself, and which I must advise every brewer to be particular in avoiding.

I must also make some observations on the mode of making malt in the lower parts of the west of England. Perhaps, no part of the kingdom produces finer barleys than the counties of Devon and Cornwall. I appeal to any person, acquainted with these counties, if they can boast of the goodness of the malt liquor brewed there. The fact is, by the rapacity of the maltster, the substance is lost in the malting. The acrospire or shoot is suffered to grow to an enormous length, by which the vitality and substance of the malt is lost. It is neither

trod nor screened, so that this length of spire is measured into the bushel; and ground down with the remains of that which should be malt. I say remains, because both the saccharine and alcohol are thus destroyed, nothing will give the practitioner more knowledge in this particular, than learning the use of the saccharometer, by which he will find the difference of malts, well or ill malted, by the weight of the worts.

To persons, both in the public trade, as well as to private brewers, whose families consume a considerable quantity of beer, I earnestly recommend a mill for the purpose of breaking or crushing malt, by means of rollers. One or two persons may work it. They cost twelve guineas. I am persuaded that more than the cost price may be saved in twelve months by any publican or innkeeper, brewing at home, or private family whose consumption is considerable. It is made by Mr. Abraham Matterface, working engineer

and patent mashing machine maker, near  
Christ Church, Surrey.

This mill crushes malt by means of  
rollers, and far exceeds any other hand  
mill I have seen.

## HEATS IN TAKING LIQUOR.

---

This is one of the grand operations which a brewer has to study, and give what directions you may, it can only be ascertained by experience and great attention.

The heat to be taken depends on many circumstances, as the quantity of fire the malt has received, which may be known by the colour of the malt when bitten down; the flavour also will give you a good idea of the fire that is in the malt. The learned author of the *New Treatise* has thought proper to set up a novel practice, telling us that we may use a higher heat to malts that have received most fire, as they are less liable to *sett* than pale malts—thus in *theory* overturning all experience and

practice. The same malt, from not being used at a proper time, and becoming slack, will require a greater degree of heat, than if quite dry, and biting crisp, but tender. The heat must also depend on the state of the atmosphere, as well as the liquor you are using. Soft liquor will allow a higher heat than hard or spring liquor; and water containing any mineral less than either.

While we are speaking of liquor, it may be worthy of notice to enquire which is best.

The Thames liquor has always been considered the best for porter, and so strong has this prejudice been carried; that at one time it was thought porter could only be brewed in London. It certainly is excellent for that beer; none better. Porter, in old times, was brewed only with brown malts; from the hardness of which, and the fire they contained, Thames water seems better adapted than any other to solute the saccharine substance of those malts. It should be remembered, that the

Thames water at Kingston, and that at London-bridge, are very different articles. In high spring tides the Thames water at London-bridge is quite brackish ; at Greenwich it is salt. All the filth of London empties itself into this famous river, yet nature has so ordered it, that the Thames water purges itself from its filth, and keeps longer and better at sea than any known water in the world.

The water up the Thames, from the many springs, and from the putrid vegetation that falls into it from the trees and gardens on its banks, in the fall of the year, say October, I should not consider fit for the brewer. October beer has ever been famed. I prefer beer brewed in February and March, for not only is the water in a better state, and clearer from the putridity of vegetation, but then fine fresh-made malts that can be depended upon, may be obtained, while, in October, you are liable to imposition from the summer-made malts, which, probably may be slack, or even run over the kiln again, to impose upon the ignorant and unwary.

Observe then, heats depend on many contingencies—the goodness, clearness, and flavour, rest on the heats, and the utmost precaution must be taken. The first mash cannot safely be extended, at the highest, for pale malt, above  $190^{\circ}$ , nor can we descend lower, for brown malt, than  $150^{\circ}$ ; thus the heats vary  $40^{\circ}$  on the thermometer.

For Ale the heats are higher, but observe, if the liquor is hard, take a lower heat than might be turned over with softer river or pond water. In one instance, you may turn on the first liquor, from  $176^{\circ}$  to  $186^{\circ}$ , the other at  $168^{\circ}$  to  $174^{\circ}$ .

Amber brown malts, in proportion, say,  $168^{\circ}$  down to  $160^{\circ}$ .

Again, if the malt is slack, the heat should be taken a little higher. Observe, in taking low heats on pale malts, you are more likely to have your gyle turgid and thick, than when taken high, if the process be well followed up, you are sure

of a sparkling fine ale.—The taking of low heats will certainly produce most yeast, and this, in some places where it is scarce, it is an object to make two pounds per quarter of it.

In taking heats in the copper, I must warn you to be careful of cooling down: for instance: if a heat  $176^{\circ}$  is wanted, on dipping the thermometer, you find a heat of  $184^{\circ}$ , let cold liquor in to cool it down to the heat required; you will find the cold liquor fall to the bottom, cold being specifically heavier than heat; therefore, with a rouser, well mix the liquor, and make it all of one heat.

I have known a gyle of beer spoiled by not attending to this precaution.

## LENGTHS AND LOSS OF LIQUOR IN THE PROCESS.

---

By lengths we are to understand the quantity in barrels or gallons intended to be obtained from the malt about to be brewed. This is ascertained by first determining the quantity intended; and secondly, by the calculation of waste of liquor in the process.

In short lengths, some allowance must be made, as experience will teach the practitioner. The usual lengths of a brewhouse are as follow: For London ale, two barrels and a firkin to a quarter of malt; porter, three barrels and a half to the quarter; and table beer, seven barrels to the quarter.

The calculation to be made for waste is—  
in mashing—so much liquor being ab-

sorbed in the goods—so much in boiling ; in the hops—in the coolers\*—and in general waste by steam, &c.

Thus will be found, in brewing one or ten quarters, the liquor first turned on in the mash tun, only produces about half in the underback. For instance, if I turn on two barrels on a quarter of malt, after it has spent in the underback, I shall get little more than half. In the second and third mashes, all that has been turned over may be expected in the underback. Perhaps, the following table may be found useful ; but experience will be the best guide.

	<i>Bar.</i>	<i>Fir.</i>	<i>Gal.</i>
Liquor lost in mashing, per quarter - - - - -	1	0	0
<hr style="width: 20%; margin-left: 0;"/> in hops and boil- ing - - - - -	0	3	0
<hr style="width: 20%; margin-left: 0;"/> in coolers, and fermentation - - - - -	0	3	0
	<hr style="width: 20%; margin-left: 0;"/>	<hr style="width: 20%; margin-left: 0;"/>	<hr style="width: 20%; margin-left: 0;"/>
	2	2	0
	<hr style="width: 20%; margin-left: 0;"/>	<hr style="width: 20%; margin-left: 0;"/>	<hr style="width: 20%; margin-left: 0;"/>

\* Mr. Accum says, "more than 1-8th of the wort evaporates in the coolers," see page 78.—How this agrees with the liquor he turns over, I cannot discover.

If three and a half barrels are required for porter, you must turn over six barrels of liquor; and the same in proportion for ale and table beer.

A steady attention to these particulars, after having obtained an accurate knowledge of the dips, and the quantity of liquor necessary to turn over, will enable the learner to ascertain nearly the exact quantity to be drawn from the brewing.

We shall further elucidate this matter in the practical lessons of day's brewings, which will be given hereafter.

## SETTING TAP.

---

After the liquor on the malt has remained its time, set the taps, by turning on the cocks, at first gently, under the mash tun, increasing as the wort becomes finer. Much attention should be paid to this part of the process. Observe not to turn on the taps too flush, as from the weight above, a great quantity of the finer part of the goods will come through. Always dip your underback, and keep an exact account of the quantity yielded from each mash. It is very desirable to maintain the heat in the underback; if situated in a cold place, have a cover which will fold up while cleaned out. I once saw, at the Bow Brewery of Messrs. Lawrence and Co. a pipe running through from the steam engine. I much admired the contrivance.

### MASHING.

Having the liquor ready, and taken a proper heat, call out "turn on." Your assistants now begin to turn over the goods with oars, unless there is a mashing-machine. The time for the first mash should not exceed one hour; cover your tun down close, as well to prevent the finer parts evaporating as to preserve the heat. Let the mash stand one hour—set taps—all down. Mash the second time three quarters of an hour—cover down as before—stand one hour—set tap—all down. Mash the third time half an hour—stand one hour. It is the custom in some breweries to make a fourth mash. I dislike it. The wort produced may have a weight in the

saccharometer, it is true ; but it will also have a faintness that will do no good. I recommend turning *over* or *on* the goods a quantity of cold liquor, to stand half an hour without stirring, and then run off, which may go in the table beer, or be preserved for a *raw wort*. The purport of mashing is to melt the saccharine and the alcohol of the malt, and in this process you will discover the quality of your goods. If there be unmalted corn, there will be white specks of meal all over the grains, which is termed *ricey*. In this case, be assured, either the malt or the process is bad, most probably the first, unless you have *set* your goods by improper heat.

Let this process be carried on with all convenient speed. Make a point never to have the worts lagging, or laying about ; from carelessness they will become ropy in the underback, and all your hopes crushed at the outset.

The mashes ought always to be completed in eight or nine hours at the farthest.

Perhaps, in summer, it would be well to shorten the mashes ; say, the first mash a quarter of an hour less than in winter, the others in proportion. I should never advise a *raw wort* in summer.

I consider stiff mashing best. You may mash thus, for the first mash. Suppose you mean to turn over eight barrels of liquor on four quarters of malt, and the heat 168°, turn on six barrels, and mash for a quarter of an hour, and then turn over two more at 174°. Thus you enliven the tun, and get the goods well broken. Always keep in mind, that *two long mashing*, and *too long standing*, cool the goods, and perhaps produce an acid which can never be got rid of.

## BOILING.

---

A great difference of opinion subsists on this part of the process. Some are for boiling a long time, others consider a short time better.

According to my experience, it should appear, as soon as the wort is well broke, the operation is complete for the first wort.

It certainly cannot be controverted, that in long boiling, the essentials will waste, more particularly the oily particles of the hops. For the first wort three quarters of an hour I should consider quite sufficient, from the time the copper is through. It must be observed, at the same time, that

the copper must be in full ebullition. Always avoid simmering; it is waste of time, and a great chance of spoiling your gyle. Therefore, while you are boiling, drive her to the full extremity.

For the second wort, perhaps an hour and a half is necessary; and for the third, or blues, as long as you please; or until there is room in the coolers to turn the copper out. Always make a point in boiling, and I cannot too much impress it on your mind, ever to keep the copper in full ebullition.

## COOLING

---

As the worts become ready to be turned out of the copper, they will go into the hop back, and take care that you rouse at the copper-door with the rake, in order that the hops may pass through with the wort. After laying a quarter of an hour to settle, turn the cocks on very gently into the first cooler. These will be running while you are employed either in charging the copper with liquor for the next mash, or getting up the wort. After which spread the worts. Suppose there are three coolers, which I strongly recommend; that cooler which is first to be let down, to be spread very thin, so that being down in a short time, you will have all the room to spread the rest. Now,

as getting over the whole process quickly is essentially necessary, I would advise a contrivance of a sort of canvass sail, which, by fastening weights at the bottom, can by means of cords, be impelled backwards and forwards. A boy may do this; and the operation of cooling would be greatly accelerated in warm weather.

The improvement in the London brew-houses in this particular has been very considerable. They have fixed in their large coolers, an horizontal wheel, with large inverted flyers. These are impelled, by the steam-engine, into constant motion, which raises a very considerable current of air, shortens the operation of cooling, and consequently avoids much mischief. Observe, when brewing in warm weather, and your worts lay about, they will hang round the sides of the coolers, put on a sort of fretty appearance, and get what a brewer calls, a *turn in the coolers*. This is a sure forerunner of a bad gyle, as it paves the way for acidity and forwardness in the beer.

In all this process, you perceive the necessity of the strictest attention to get the work as forward as the state of the atmosphere, and your own exertions, will permit.

In country brewing, from want of room, I have seen the worts lay two or three inches deep in the coolers ; this is a very bad way ; they never should be more than one inch in depth. When the wort lies so thick, it too frequently gets into a sort of previous fermentation.

I perceive Mr. Accum considers *washing tubs* good things for cooling. I should consider them the worst ; the greasy, soapy matter will, at a certainty, ruin your gyle. In private families, a butt saw'd in four ; two pieces of which the cooper must put bottoms, by which you will have four ; these will readily stow away. Keep them filled with water and lime when out of use. He also says, page 73, that " the wort should be laid in the coolers, that it will cool in seven or eight hours." The best practice is to cool fast as possible.

C of Malt, as Brew'd by the

9.	
ER.	TABLE BEER.
	Barrels.
	7 to 8.

mmended.

d.	REMARKS.
.	Fermented well—good Head.
.	Turn'd out a fine Gyle.

n Malt. H. O.—Old Hops.  
rrels turned over.

To face page 85.

application, form a judgment and become  
Worts in the variations of the Atmosphere.

## TABLE II.

to let down Worts according to the Atmosphere.

ALE.	PORTER.	TABLE BEER.
64° . . . . .	67° . . . . .	72°.
63° . . . . .	66° . . . . .	71°.
60° . . . . .	65° . . . . .	70°.
58° . . . . .	63° . . . . .	66°.

BEER, according to the Heat of Atmosphere.

BEER.	N. B. The quantity to one Quarter Malt.
3½ Quarts.	
3 Ditto	
2¼ Ditto	
2½ Ditto	
1½ Ditto	

ation are a White Streak round the edge of the Tun :—  
will then get to its greatest height. Many Brewers will

try, as directed.

## PITCHING.



The next operation is pitching, or getting the worts, when sufficiently cooled, into the squares or working tuns, to go through the process of Fermentation, or, according to the modern term, Attenuation. The heat at which you will add the yeast to the worts, must depend on the atmospheric heat, if low enough to make a choice; the nature and strength of the gyle; and also on the quantity brewed. You may venture on a higher heat with a quarter of malt than with a larger quantity, also in longer lengths, as well in table beer. Fermentation will begin, perhaps, at 50 degrees, but the process will be very

slow. Very strong beer may be pitched at 58 degrees with a quart of good fresh yeast to a quarter of malt. Supposing the brewing to be one quarter, or eight bushels, I would take it at 61 degrees in moderate weather. And here let me remark, that fermentation is considerably excited by windy weather, and retarded by great cold. Of course, every means must be watched to assist the process. For porter, in moderate cold weather, I would pitch at 66 degrees ; for table beer, six or seven barrels to a quarter, at 70 degrees. Be sure the yeast is fresh and good. If you find it does not bite, or there are no signs of fermentation, add a small quantity more, and rouse the tun well up. You will sometimes find the worts get colder, and fermentation very slack. In this case take a cask, according to the quantity of your gyle, and fill it with boiling liquor ; bung in down tight, and throw it into the working tun ; by this process a gentle heat will be diffused, and the fermentation go on. A steam pipe running round the working tun from the dome copper or

steam engine, is an excellent contrivance to assist a sluggish fermentation. You will perceive small white curly matter over the surface; after which it will rise with a large white surface, with small blibs, and then put on a yeasty head. Try, by the thermometer, how the heat advances, and by the saccharometer how the attenuation or thinning goes on. By these regulations you will discover the time to cleanse. Suppose a brewing of ale, pitched at 60 degrees, by the increase of heat in the fermentation, you will find the heat increased to 70, 72, or 74 degrees. Then take the saccharomer, having first weighed the worts in the process, you will find the loss of weight in the attenuation or fermentation. In strong beer, perhaps, it will bear thinning to ten pounds weight by the saccharometer, which will prove quite sufficient for fixed air and sparkling. In porter and ales, of greater lengths, as three barrels, or three barrels and a half, the attenuation must be less. A good criterion I have made, is to take the exact weight of all my worts,

and having averaged them, I take the attenuation at half the original weight. By this method I have found sufficient power for all the purposes of the cleanse. *Table* beer run six or seven barrels to a quarter; cleanse next day if it has a good white head; rouse it well. Also, rouse or beat in the head in porter and thin beers, but in strong ale skim off the head, and rouse, as the head rises after it has put on a yeasty appearance. A great deal, indeed, depends on the fermentation, and requires all the skill and attention of the brewer to manage it. Fermentation puts on a variety of appearances, and is, as I said before, liable to the alterations of the atmosphere, and particularly by heats well or ill taken. If it is too slow, I have recommended one method to assist it; add to which, in brewing a quarter of malt, four ounces of flour, and two of salt; dry them till they will powder; sprinkle this mixture over the tun, and rouse all well. You will sometimes perceive a fiery bladdery head, with the whole surface of the

tun looking black, or at least of a dark colour; in this case it were better to skim the tun quite clean, and rouse it well, adding flour and salt. After which, generally, the head will rise well in about two hours; then cleanse immediately, and keep it filled up with unremitting attention.

It frequently occurs, in erecting a brewery, that the workmen will persuade the owner to have larger utensils than are necessary, to provide for increase of business.—I advise the increase of trade should provide for itself. I have seen working tuns of 38 barrels to a six quarter mash tun. The gyle laying over such a space with the pressure of atmospheric air, prevents fermentation.

I have yet said nothing of close fermentation, a system I greatly approve of. The working squares or tuns must be formed to shut close up, so as to exclude all atmospheric air. If it should be a family brewing, where the fermentation is

carried on in open vessels, place boards across, and cover close down with sacks; but in a brewery, however small, nothing can be easier than for the carpenter to fit up a covering for the tuns. I once had a momentary opportunity of seeing the mode of fermentation used at Burton-upon-Trent, but I must confess, I never saw so wild an apparatus. Under the large cooler were placed three rounds; in these was let down the wort at a proper time; the rounds were furnished with covers of wood, divided in the middle, and shut up completely close. Thus the process went on till it became time to cleanse.—This was done by means of a jigger-pump.—No skimming.—In casks of perhaps three or four barrels, when full, a large wooden funnel was put on each, a bung placed in the hole, a tap cork is then taken out of the cask, and the yeast begins to make its way into vessels placed to receive it, as required; so the filling up takes place through the funnel, and the bung replaced immediately until the fermentation ceases. The ale is then drawn off carefully into

such casks as is required to send it out, and bunged down for use. I need not praise the Burton ale: its celebrity requires no comment.

Beers that are immediately to be consumed, particularly brown beers, may be work'd high, as they will come forward sooner.

I saw a working tun at the Anchor at Newport-Pagnel; perhaps the best adapted for a victualler or private brewer I can imagine. There was a pipe or tube, about six inches, above the level of the bottom of the tun; when the gyle was ready for cleansing, it was neither roused or scum, but the cock turned on; the yeasty head sunk down to the bottom of the vessel without mixing or injuring the gyle. I must add, this was the clearest and pleasantest ale I drank in the whole country, and the only brewhouse fitted up on the principle which I have recommended.

Upon the process of Fermentation, I expected much improvement from so able a Chemist as Mr. Accum;—all however that he seems to have discovered, is, that a heavy wort will bear more attenuation than a weak one, and “*ceteris paribus.*” that small beer requires less fermentation than strong.

## CLEANSING.



The next operation is cleansing. Take care to have the casks well scalded, and perfectly dry ; lay them on the stillons, the bung-holes a little inclined, so that the yeast may run readily down, and no waste accrue by running over. If there is sufficient level, let the pipe be screwed on under the square ; the other end in the bung-hole. After having roused the tun, turn on, and thus fill all the casks. If there is not a level, then put a jigger-pump into the square, and jig through the hose. After having thus filled the cask, take a tin can, the nosle of which must be inclined downwards, and fill all up ; the fob will soon come over, and in a short time yeast ;

keep your cask well filled up. This must by no means be neglected. If you cleanse in the evening, the tun-man must sit up all night to attend the filling up. Towards the latter end of the process, fill up with fine beer. I have found it a good method, to have a vessel or cask, the size depending on the quantity brewed, or on the other utensils; this cask to be so fixed, that it can be filled from the square at the time of cleansing. Let a tap be placed some inches from the bottom, and draw off for filling up. This mode does away with much of the yeasty matter, and the gyle will work finer. If Ale—when all is quiet, scald some hops, if you want your beer for early use put two or three handfulls of hops, a little warm, and bung them down, if for keeping, let them be quite cold. Stow away the cask in a cool cellar.

There cannot be a better way of cleansing in a victualler's or private brewing, than the use of butts or pipes of three barrels; when filled, put down the bung slightly, bore a tap-hole at the upper hoop,

and out of which, over a tin or bit of leather, the yeast will run in a receiver. It is always best, if possible, to let ale stand in the place you first cleansed in, without moving.

It has become a very general custom with country victualling brewers, to be fond of large casks or vats. I greatly disapprove of it. First, because the brewer cannot fill them at one brewing; and secondly, because they are a long while drawing. They lay on the ullage till they become hard and stale. A cask, containing three barrels, is quite large enough, and if the draught is not quick, hogsheads are better.

It has become a fashion in country Brewhouses to erect vats, and as the custom lessens in London, it increases in the country. Country publicans dealing at the brewhouse, are desirous always to have *Vat Beer*. The Brewer should ever be careful to have sufficient cask scalded and ready to receive the *whole* of the vat when it is opened; it must never lay upon ullage.

BREAKING IN.

---

The object of breaking is to save stale and returned beers by mixing with new brewed beers. This is a very nice operation, and requires much care. It must never be practised with ale, as it is a liquor of too delicate a nature to bear acids of any kind, and too apt of itself to get forward.

The incorporation of the old or forward beer with the new, to prevent its having *two tastes*, as it is termed, is the desirable object in this operation. The following method I have always found to succeed best. Having determined on the quantity

to be *broke in*, if a public brewery, give notice to the officer ; start your stale beer into the square ; and let him gauge it ; then let in as much first wort at a heat that will bring the whole to 70 degrees. By which means the stale beer will go into a new fermentation with a new wort. Then go on with your process as usual. The gyle will be in an immediate state to go out. This can only be done with safety in winter ; at least, it is a dangerous operation in warm weather, and applies only to porter and table beer ; if indeed it is tried with ale, a very small quantity at a time must be used, and that put into immediate use. In London all the running gyles have stale beer broke in to bring them forward for immediate use. They break their stale beer into an immense reservoir, and then turn the new gyle, quite young, into it. By this mode the whole gets into a new fermentation.

## CAPPING ON.

---

Suppose a brewing of Ale. Having taken the two first worts for ale, take the third liquor, perhaps at 160 degrees, first having capt on as much malt as is necessary; then mash and go on as usual for table beer. I advise, that after the taps have run off from this mashing, to *throw over*, not under, the goods, cold liquor, as much as appears necessary, and according to the quantity wanted. This must not be stirred up or mash'd; it will run through, and wash much of the gluten that remains in the goods, as may be found by the weight.

In private Brewing, and in small Public Breweries, there exists a custom of reserving a quantity of malt to spread over the tun after the first mash, to keep in the heat. I must maintain it is an excellent custom, although Mr. Accum finds fault with it; there can be neither loss or waste.

## RAW WORTS.

---

A raw wort is one saved for the next brewing. Suppose you do not want table beer, and only wish to take two worts for ale; then mash the third time at 140 degrees. After your boilings of ale are over, get your raw wort through the copper into the hop back, where it will lay on the hops till next morning; then use the raw wort in the second mashing of the next brewing, which should follow immediately, and be particular in this, for I have observed, when raw wort has been used in the first mash, the wort has a sickly and faint smell. The goods may be washed as before, and the whole become raw wort. In order to get the wort into the copper, a pipe with a Rose to it, must be fixed in the hop back, leading to the under back, by which means the wort is pumped up to the copper back.

## FININGS AND HEADINGS.

---

These are both requisites in a brew-house. Many Brewings will be obstinate, and will not fall fine. Art must therefore be resorted to. Take a quantity of Isinglass, of which there are several sorts—fine staple—staple—pickings—and book. For ales, I recommend the fine or staple. I have known it 30s. per lb. Still it must be had ; but for ale, never go lower than pickings ; for porter and table beer, book isinglass will serve. Take two pounds of glass, or according to your consumption ; throw it into a cask, covered with the stalest and sourest table beer you can get. After two or three days, the glass will dissolve in part ; when it becomes tolerably soluble, take a cane seive,

and lay it on another open cask ; take out your glass, and rub it with a hardish brush on the seive. Those parts that will not go through, put back into the first cask for further dissolving ; add as much more sours as may be required, and in the second cask you will find the whole dissolved. Do not make it too thin ; a quart of this will fine a barrel of beer. The first cask will finish as before directed. For headings, however, the penalties are as severe as any other drugs. They are necessary, in as much as every body is fond of seeing a foaming and frothy head. The mode is very simple. Take roach allum, and green refined copperas, of each equal quantities, and pound them to a powder ; mix them, and put as much 'as will lay on a shilling to a barrel ; or perhaps, it is better to mix a quantity in the finings. This will procure you a good head. The mode of fining is—put in your finings, and rouse well in the bung-hole with a mop-stick ; leave out the bung for a few hours, and your beer will go down fine as wine.

In the Beer Committee of the House of Commons, Mr. Beaumont undertakes to expose the brewery. How little does he understand his subject! Mr. B. takes his data from 1801 to 1818. His ideas of malt and hops, as to price, are formed from a newspaper. The malts there quoted are ship malts, not Ware or Hertfordshire. He begins his complaints by stating, that in the year 1801, porter was four-pence half-penny per pot; and in 1803, five-pence halfpenny; again, in 1804, to six-pence, which price only took place for a few weeks, being opposed by two houses, one of which failed, and the other has long since given up. Now this gentleman neglected to inform himself, that between 1801, and the end of July, 1803, a new war duty was laid on malt of 16s. per quarter, and a further duty of 5s. per barrel of thirty-six gallons on all X beer brewed. He goes on to give an account of the cost of a barrel of X beer, taking his data, malt at 75s. hops at 28l. 10s. duty at 9s. 2d. allowing two bushels and a half of malt, and three lbs. of hops to a barrel. Thus he says,

Malt	-	-	-	19s.	6d.
Hops	-	-	-	15s.	2½d.
Duty	-	-	-	9s.	2d.
				<hr/>	
				£2	3 10½
				<hr/>	

These are the prices for May, 1818.

He has entirely left out expences ; but that is supplied by another gentleman of the name of Wamsley. He allows them at my own stating, viz. tennshillings per barrel. This, added, will make two pounds, thirteen shillings, and ten-pence halfpenny ; and at this very time the brewer was sending out beer at 55s. per barrel. This, I trust, will convince any reasonable man how little the gentleman knew of the subject he undertook to expose. However, I should hope his labours will not be entirely lost, for he states, and brings evidence to prove, there is a “ complete and literal” monopoly in many parts of the country, and this, I fear, cannot be denied.

He also refers to a competition in 1812.

This was between the Golden-lane brewery and Messrs. Dickensons, against the whole of the other Porter breweries. I believe, they sold 5s. per barrel under price. See the result. In 1819, the shares of £50 were selling for less than £10; and I am sorry to add, the other house has failed.

With regard to drugs, through the whole of the examinations, there was only one of the principal porter breweries implicated. It so happened, that during the year 1813, the beers were greatly out of order in the house of Meux, Reid, and Co.; they tried every method to obviate this misfortune, without succeeding. And why? I defy any one to tell. It will be so; once get out of order in a brewery, and long it is before it will be right. Now it happened that a Mr. Wheeler, a colour-maker to the house, talking with Mr. T. Meux, who was complaining of the acetous quality of their beers, both young and old, when Mr. W. recommended the use of a liquor made of salt of tartar, as an alkali, to stop the acetous fermentation. He explained there

was nothing deleterious in its quality or effect, nor any thing to be feared from it ; in fact, is it not in the hands of every family, when their beer is stale, to take a small quantity, and draw their beer upon it? For this offence the house was fined £100, for using ingredients other than malt and hops.

This is the only conviction among the twelve great breweries. Will any person believe, that in manufactories so extensive, where such quantities must be consumed, if used at all; where the penalties are so heavy, and the informer so well paid, these Brewers could escape?

In this instance, Mr. Accum has made his grand attack on the Breweries, see XIX advertisements. He is pleased to say, that spoiled or stale beer is made saleable by the use of alkali—admitted;—can the calcined powder of oyster shells, the sub-carbonate of pot-ash or soda, be unwholesome.—Mr. A. if he really were acquainted with the system of the Brewery, might

know such things were not resorted to—such beers are broke into new beers, and are fresh fermented, and actually assist in bringing new beers forward.—As to the story of green copperas—it is well known it is the sulphit of iron, which mix'd with allum and salt, as much as is described, will give heading to a butt of porter; and without a good head, nobody would give it drinking; and I see in page 245, he actually recommends it, as in another place he recommends certain drugs to private Brewers.

I wish I could as well enter into the defence of the country Brewers; but it is certain, the more ignorant the man the easier he is imposed upon. I know of a circumstance that has lately occurred: A large property fell unexpectedly to a very ignorant man brought up in the country. Among this property was a brewery, which his deceased relation had carried on to a considerable extent. Notwithstanding every advice given him, he persisted in carrying on the concern; he employed a

person to teach him to Brew ; he expected to learn wonders ; for it was not the art of brewing he looked for, but how to brew without malt and hops. He had made up his mind that such an art existed, and when the person so employed, assured him, this was really nonsense, he would not believe it. It so happened one day, that an itinerant Irishman called in, and offered to teach him great secrets. This he eagerly caught at, and as hops were £30 per cwt. was as readily persuaded. The fellow instructed him to buy a quantity of quassia, and boil it in table beer in his kitchen washing copper. After a certain time he was to take it out, and put it into a half barrel, and use the decoction, as required, in the *square*, after the beer was brewed. By this he spoiled a gyle, in which seven pounds of hops to a quarter of malt had been used. The next day the cask was found by the officers on his private cellar stairs, with the contents, no doubt, by the direction of the honest instructor. For this and other matters it cost him several hundred pounds.

In the examination of the several persons in the Committee of the House of Commons, called the Beer Committee, much was said of the deleterious effects of the green vitriol or coperas ; when it was proved by a chemist of the first respectability, that this substance is the produce of iron, and not of copper. He likewise spoke of its general effects ; from the inconsiderable portion used, in proportion to the quantity of beer, the effect could scarcely be any ; but if it had effect, it must be in the shape of a tonic, and most medicinally excellent to females, and persons who require strengthening medicines. Hence the recommendation of physicians to drink London porter is accounted for.

After all the abuse of the London breweries, there is no part of the kingdom where beer, so generally good, can be found as a London draught of porter.

There is, no doubt, excellent beer brewed in Staffordshire, and the northern parts of England ; these beers are brewed by

licensed victuallers. I am well persuaded that nothing will, or can tend to check the country monopolist so much, as to grant licences to men who have capital to brew their own beer.

A gentleman of the name of Adams, of Reading, in Berks, giving his evidence to the Committee, states the necessity of granting licences to persons who would brew their beer at home; for so shamefully bad is brewer's beer in Reading, the people will not drink it, and thus is the revenue most seriously injured. The poor families get a quantity of molasses; they pour hot liquor upon it till the whole will beat up and mix; they then add cold liquor, as may be needful; boiling some hops in a tea-kettle. It stands until milk-warm. Adding a little yeast; it is then put into a cask, and next day is a good and wholesome drink.

## SKIMMING.



It is the practice of the best ale brewers to skim their tuns when the tun assumes a yeasty head ; they skim it quite clean, and rouse well ; as soon as a new coat of yeast arises, that is also taken off, and so on, trying the weight by the saccharometer, that they may not too much attenuate. Before cleansing, it is usual to throw in some salt and flour ; bean flour is infinitely best ; and rouse it well with the last head roused in ; then *cleanse*. This will give a little yeast upon the stillions, and is called, just *saving itself*, or shewing it is alive.

## CLEANLINESS.



Having thus, I hope, tolerably and minutely gone through the part I call introductory and necessary to be known to a learner, I must now call his attention to cleanliness. In all cases, but most so in a brewhouse, it may truly be said to be next to holiness. Let all your utensils be well washed, and scrubbed with birch brooms in every angle of the backs, &c. Always keep liquor in them, with *unslacked lime* thrown in. I mean lumps of lime. I cannot speak too highly of this strong and excellent alkaline; it prevents ill smells—fox—in short, all the disagreeables that is to be apprehended from dirt drying and accumulating, and thus becoming putrid.

After brewing, the false bottoms of the mash tun and hop back are to be taken up and well scrubbed, liquor and lime your vessels, throw in the boards of the false bottoms, and there let them swim. Not only are they kept clean, but all the vessels are prevented from leaking. Avoid all grease and oils about a brewery. Country carpenters, who are employed to do back-maker's work, mostly fill up their joints with oil and white lead. This is complete ruin to the brewer. A friend of the author's was employed in a brewery of some magnitude near London, when, in spite of every care he could not succeed. He came, full of anxiety, and shewed me his process. I was sure he was right. I went to see him, and made every inquiry. I could see nothing wrong. At length I discovered a new square; after examining it, as I saw some irregularity, I enquired who put it up? the answer was, a very ingenious man, a *carpenter* in the neighbourhood, who *understands* back-maker's work. I immediately sent for him, and after a little conversation, asked him, how he had

closed his joints? he answered, without hesitation, with *white-lead* and *oil*. The secret was out; no wonder the head dropt; no wonder my friend, though an excellent brewer, was in disgrace. The consequence was, a back-maker was sent for, a new one put up, and no house had better beer. A matter of this sort once happened to myself. I was teaching the master of a brew-house, when a young man desirous of looking over me, and which I would not suffer, determined to be revenged. This he did by dropping a candle into the tun as soon as I had pitched it. I was sadly plagued to get my head up, and could not conceive the cause. It occurred again; and then, having another tun at leisure, I pumped the one into the other, and found at the bottom, half a candle, partly melted. I have related these two anecdotes to shew what trifles will overset all the art and care of the brewer; and how necessary it is to keep every thing in exact order and cleanliness.

We will now go on to make observations on unclean casks—a negligence, which

will destroy all the labour of the brewer. First, unhead them from time to time, and scrub them out ; if a stinkard, even after unheading, it will retain an ill smell ; in that case, if you are not provided, let your stinking cask go to a brewhouse, where there is a dome copper. These generally have a steam pipe for cleansing casks. This will effectually cleanse them. If no convenience of this nature is at hand, then pursue the following method: first, unhead your cask, then scrub it well out, afterwards head it again—then take some pounded charcoal—put a quantity into the bung-hole—pour on a small quantity of *oil of vitriol*, and some cold water, say two quarts, or in proportion to the size—bung down tight—then roll and turn the cask in all directions. This operation causes a most powerful effervescence, and by these means penetration is made in the little cests that form in the joints. This simple remedy has been held a most wonderful secret ; however, for the excellence of its application, I am ready to vouch. After the operation, great care must be

taken to wash the cask well out. Always remember to have your cask drained, and thoroughly dry, before you use them for cleansing.

The following is from a work published at five guineas.

*“Instructions for sweetening Casks, &c.—*  
“ An effectual and speedy method of clean-  
“ ing and sweetening the most foul and  
“ stinking cask.—The casks should be  
“ clean washed, and allowed to stand till  
“ they are dried. Should the filth have  
“ penetrated the wood, let the heads be  
“ taken out. Then take a little oil of vi-  
“ triol in a glass measure, and with a brush  
“ of middle size brush the whole of the  
“ inside of the cask or vat with the oil of  
“ vitriol. Afterwards wash them out clean  
“ when dry. Take a few slips of brown  
“ paper, properly prepared, after the fol-  
“ lowing manner. Take common brown  
“ paper and cut it into slips lengthways  
“ two inches broad; steep the slips of  
“ paper in stone brimstone, after being

“ melted over a fire in a pan for that pur-  
“ pose, and put these slips of paper into  
“ the cask or vat, proportioning the quan-  
“ tity of paper to the size of the vessel  
“ under operation, lighting them with a  
“ candle, and stop the cask or vat up  
“ close for two hours. At the expiration  
“ of that time, wash them clean out with  
“ hot water. After this operation, if they  
“ are casks, fill them half full of water at  
“ 65 degrees of heat, and add to this half  
“ a bushel of spent hops hot from the  
“ copper, and a little yeast, that a good  
“ fermentation may take place. Should  
“ it be a vat that is under operation, put  
“ a proportionate quantity of water, hops,  
“ and yeast; whether cask or vat, let  
“ them stand fermenting twelve hours,  
“ afterwards wash them clean out, when  
“ they will be perfectly sweet, and ready  
“ for immediate use; but should the cask  
“ or vat be only a little foul, in that case  
“ it will not be necessary to brush them  
“ over with the oil of vitriol, but only

“ proceed on with the process of the in-  
“ fusion of brimstone, as before detailed.

“ CHAP. II.—A quick and certain me-  
“ thod of seasoning new casks, &c.—If  
“ the wood is green and full of sap, brush  
“ the cask or vat over with the oil of vi-  
“ triol in the manner as before laid down,  
“ and carry on the process of fermentation  
“ in the cask or vat in the same manner as  
“ before detailed, afterwards wash them  
“ out, and they will be in a good state for  
“ use; but should the wood be well sea-  
“ soned, and free from sap, it will not be  
“ necessary to use the voil of vitriol, only  
“ the infusion of brimstone and ferment-  
“ ing them after the same manner as in  
“ sweetening of the casks, &c. In case  
“ of open vessels, they must be brushed  
“ over with the oil of vitriol, and a strong  
“ fermentation carried on in them in the  
“ usual way. By attending to the above  
“ rules as laid down, the brewer will not  
“ only be relieved from unpleasant com-  
“ plaints, but from great loss he sustains

“ by the liquor being spoiled from foul  
“ casks or vats.”

As we are now to enter into the main business, it will, perhaps, not be improper to notice the best time for beginning the operation. This will depend on the season and state of the atmosphere. In winter, and during the season the thermometer is from 50 to 60 degrees of atmospheric heat, the early part of the morning is the best time ; but in farm-houses, and others who have to brew for immediate use, later hours are better. I must impress on the mind of the learner, that the longer the worts are lying about for cooling, the less chance he has of getting a good gyle. It can be of no use to have the worts waiting during the heat of the sun. During hot seasons, and indeed at all seasons, the coldest part of the 24 hours is about an hour before sun-rise. I of course advise every advantage to be taken of the best hours for cooling.

We will now go through the process of a brewing, say four quarters. At four o'clock in the morning ; atmosphere 50 degrees ; rain and wind ; found the liquor in the copper at 180 degrees. The malt of course ground, and in the mash tun over night. Called to the man, " stop the fire," or " *bank up.*" This is done by wetting the ashes, and filling up the fire with them, and a few coals at top, first closing the valves. In the mean time I cool down my liquor to 173 degrees, by letting in cold liquor from the copper-back—all the time keeping the liquor in the copper well roused, that the heat shall be the same all over. I now call out " *turn on ;*" answer, " *here's on.*" I hold the float in my hand, and when I find five barrels out, I call, " *off ;*" answer, " *here's off.*" The goods are now mashing. After ten minutes, I order the cock again to be turned on, and then turn over three barrels more at 175 degrees. I then charge my copper full for next mash, and for hot liquor for washing utensils, backs, &c. Mash one hour—

cover all down close—stand an hour—during which time I see the different backs well wash'd and mop'd out, the false bottom all right in the hop back—get my hops weighed ready, thirty-two pounds—the hour being up. Set tap—get the first wort pump'd into the copper-back—turned out of the copper all the liquor saving ten barrels, which I want for second mash. Taps spent—turn off taps—all up in copper-back—heat 184 degrees—turn on ten barrels—copper out—let in wort—man mashing—get in hops—close and batten up copper-door—put forward fire—mashing and close attention to the fire—mash three quarters of an hour—cover down the mash tun—copper through—mark the time—keep her in full ebullition three quarters of an hour—examine wort—well broke—stop fire—turn out into hop-back after boiling fifty minutes hard—rouse the copper well, to get all the hops out with the wort—charge the copper for third wort. Second mash, stand an hour—set tap—get third liquor forward fast—tap spent—get up second wort into copper-

back—turn over third liquor at 140 degrees ten barrels for table beer—mash—get second wort in copper—get up hops—shut all close—put on fire—mash half an hour—copper through, boil as before, hard as possible. Third mash, stand three quarters of an hour—set tap—spread first wort in coolers—tap spent—throw *over the tun*, without disturbing the goods, a barrel of cold liquor. Get up third liquor, for table beer, into the copper-back—boil second wort an hour and half—turn out into hop-back—get in third wort—boil two hours or more—attend at times to coolers—judge what heat the wort may lose going down into square—get into square at 60 degrees—take one scoop of fine strong fresh yeast—rouse well. Attend second wort in coolers—get down all second wort at 60 degrees—add as much yeast as wanted; rouse well—cover all down close. Attend third wort—let it down in another square at 70 degrees—add yeast—rouse well—and cover down close—see copper charged as soon as last wort is out. All done by nine

o'clock in the evening. If not tired, take a walk.

This lesson of the process of a brewing is perhaps well worth the attention of a learner. He will find time to get his breakfast and dinner between whiles; and if the exciseman be a good fellow, be sure to tell him the time the first wort will be out, and get him a handsome lunch and a cup of ale.

## PORTER BREWING.



It has been well remarked, that out of the innumerable tribe of *home brewers*, there is not one that knows any thing of brewing porter, and hence they conclude there is some impenetrable secret; and although these brewers do sometimes produce a good gyle of beer, yet it is from strength and chance they succeed, and not by any settled rule, either as to strength or length.

I have already observed, that the real flavour of porter, as originally drank, is completely lost; and this by pale malts being introduced. As the old practice will hardly again be taken up, suffice it to say, our ancestors brewed porter en-

tirely with high dried malt ; while, in the present day, in many houses, high dried or blown malts are entirely omitted. And I confess, the finest gyle of beer I ever turned out, was from a grist of fifty quarters of fine Ware amber, with the first liquor taken at 160 degrees. However, I advise the young brewer to make a mixture of blown, amber, and pale, in equal quantities, always remembering to grind into his tun the pale first, the amber next, and then the brown, as he may venture on two or three degrees of heat more, by his liquor first wetting the pale. Having the goods ready, the next consideration is *heat*, to be applied in the liquor. Suppose then, the malts to be averaged ; the pale will bear 178 degrees, the amber 160° ; and the brown 156°. The whole added will amount to 500° ; this divided by 3, will give 166°, without attending to the fraction. Thus will the first heat be 166°, the second may be taken at 174°, and the third at 140°. This process may be followed for such a grist as above. Suppose you have a mind for a gyle of

real brown beer, take half brown and half amber; then taking the heat of the brown at  $154^{\circ}$ , and the amber at  $164^{\circ}$ , having no pale to assuage the heat, I would advise the first mash at  $158^{\circ}$ , rather giving way to the blown malt, for fear of setting the goods; the second at  $164^{\circ}$ ; and the last at  $140^{\circ}$ . If this is brewed in a private family, two barrels and a half are sufficient from a quarter; if by a brewer or victualer, three barrels, as the length is lost in the absence of the pale malts.

It must not be forgotten, in the present day, 1818, that when malt and hops bear so great a price, that science is necessary to make these things go as far as possible.

Let us suppose a third grist—amber and pale—leaving out the blown. Suppose, two-thirds amber, and one-third pale—Take the pale at  $178^{\circ}$ ; the amber at  $166^{\circ}$ ; cast them thus,

Pale - - - - 178

Amber - - - - 166

Ditto - - - - 166

Divide by 3 | 510

---

170 degrees

---

Will be the first heat; the second 174 degrees; and the third 140 degrees.

Let us now take a brewing of brown beer with all amber. Take the first heat at 164°, the second at 168°, and the third at 140°.

The hops necessary for the above brewing should be good strong ripe brown hops, with the seeds in them full and dry.

The brewer must be very attentive to his heats in these mixed gyles, as there is more danger than in gyles brewed with one sort of malt.

Having thus given the heats necessary to be taken in porter brewing; and these

heats being, perhaps, in the *mean* higher than is used by some ; yet I have reason to be satisfied with them from long experience, and which I advise my readers strictly to attend to ; for if a man do not become a good brewer, after being instructed in the rudiments, by his own experience he never must expect to excel.

We will now proceed to some practical lessons in porter brewings. I will suppose three quarters for a country victualler.

1 quarter fine pale,	
1 ditto	amber,
1 ditto	brown, blown.

First mash turned over six barrels of liquor at 166 degrees. Mash one hour—stand one hour—set tap. Second liquor ready—tap off—turn over five barrels at 174 degrees—pump up from under-back three barrels first wort—men mashing—get into copper 24 pounds of good mellow brown hops, first having saturated them—shut copper up close—fire well on—

mash three quarters of an hour—stand three quarters—turn out first wort after fast boiling 50 minutes—get in third liquor to copper seven barrels—push fire—get second wort in copper—back—five barrels—turn over third liquor—seven barrels at 140 degrees—men mashing—get second wort in copper—hops drained, get them into copper—door closed up—mash one hour—stand one hour—turn out copper after boiling one hour and twenty minutes—get up third wort, seven barrels, get in hops—boil fast two hours—turn out.

The weight by the saccharometer :

		<i>lbs.</i>	<i>lbs.</i>
First wort,	3 bar.	36	108
Second do.	5 bar.	22	110
Third do.	7 bar.	13	91
		—	—
		15	309
		—	—

Thus divide 309 by 15, and the weight of your gyle will be 20 (9-15ths) per barrel.

Now get you three worts into the square at 64 degrees, with a gallon of fresh yeast ; rouse it well, and cover all in close ; in the course of next day, you will have a good head—rouse it well again. On the second day, take some wort in the assay jar, and weigh it with the saccharometer, you will perceive the attenuation has thinned it to about fifteen pounds—next day try again, and if you have a good yeasty head, and your weight comes down to ten or eleven pounds, rouse her well and cleanse—use flour and salt.

As we are now on Porter Brewing, it will be as well to enter on Mr. Accum's system ; in page 124 he tells us, that the proportion of water to grist in the London Breweries is as follows :

		B.	F.	G.
1st.	Mash -	1	2	0
2nd.	do. -	1	1	0
3rd.	do. -	1	0	0
4th.	do. -	0	2	0
		<hr/>		
		4	1	0
		<hr/>		

Thus are we instructed to turn over, in four mashes, four barrels and one firkin of liquor to one quarter of malt; and in page 127, two barrels and a half to three barrels is given as the length of London porter. It is a fact, the brewer cannot live at less than three barrels and a half; the specific gravity or weigh is from 18 to 20lbs. per barrel.

In page 126, the mean temperature of the water is said to be from  $175^{\circ}$  to  $180^{\circ}$ . In page 156, in a lesson of a brewing of 30 quarter of malt, thirty-six barrels is turned over at  $165^{\circ}$ ; the second mash at  $145^{\circ}$ ; the third at  $140^{\circ}$ ; the fourth at  $140^{\circ}$ . His operation is as under:

Grist 30 quarter malt.—240lb. hops.

1st. Mash 36 bar.	at. $165^{\circ}$	} 38 bar. un-
say at. 18		
2nd. Mash 25	at. $145^{\circ}$	} 30 do. do.
ad. 6		
3rd. Mash 28	at. $140^{\circ}$	24 do. do.
4th. Mash 12	at. $140^{\circ}$	16 do. do.
<hr/>		
Turn'dov. 125 barrels		<hr/> 108 in underback. <hr/>

We have next an account of the boilings, and are at last informed the officer gauged the whole at ninety-seven barrels. In the underback is found 108 barrels. This is boiled at three times, with 240lb. of hops. The absorption by hops alone must be considerable—the evaporation by steam in boiling in the three worts  $4\frac{1}{2}$  hours must be great, although the last wort is boiled but one hour. The evaporation in the coolers is made (see page 73) at 1-8th, which would be 12 barrels, and yet we find 97 barrels in the square. We find the gravity of the 3rd. wort to be 9,50lb. per barrel, and the weight of the 4th wort to be 15lb. per barrel. In such a brewing I should expect to lose seventy-five barrels of liquor; as above, only twenty-eight barrels is lost in the whole process. To produce ninety-seven barrels, would require at least one hundred and seventy-two barrels of liquor. In a quotation as follows, from another author, it will be seen he turns over 149 bar. 3 fir. 4 gal. upon 25 quarters of malt. I shall make another observation, or two, upon

Mr. Accum's Ale Brewing, and then leave it to the judgment of the public.

For a private brewing of porter in a gentleman's family :

Say, 1 quarter of pale,  
1 quarter of brown and amber,  
mixed.

Turn on 1st mash four bar. at 166 deg.  
2d mash three bar. at 170 deg.  
3d mash four bar. at 140 deg.

Carry on this process exactly as the last, only that you may throw into the copper a quarter of a pound of porter extract, if you can procure it ; if not, two pounds of fine Italian juice, two ounces of grated ginger, and half an ounce of Coriander seed, powdered. Observe to put these into the first wort while in full ebullition.

These lessons may be multiplied or lessened as the apparatus will permit ; but with strict attention, with good malt and hops, duly followed, rely on good porter.

As I wish to give every information, take the following extracts from a publication that has been honoured by being copied into the Encyclopedia Britannica. I will be content to say, that I do not think the copyist was ever a brewer.

“ Example I. Brewed for porter ; commenced at five o'clock in the morning ; thermometer in the air 34 degrees.

“ Kinds of malt :

“ 3 West country pale

“ 6 Herts pale

“ 8 Herts brown

“ 8 Herts amber

“ 25 quarters

	<i>Cwt.</i>	<i>qrs.</i>	<i>lbs.</i>
“ Malt - - - - -	25	0	0
“ Hops - - - - -	1	2	0
“ Cocculus Indicus Berry	0	0	6
“ Leghorn Juice - -	0	0	30
“ Porter Extract - -	0	0	4

“ First great copper charged thirty-six inches, i. e. fifty-two barrels and seven gallons.

“ First liquor 155 degrees, all turned  
“ down: mash one hour. Set tap at  
“ seven o'clock. Tap, 137 degrees; gra-  
“ vity, twenty-one pounds and a half per  
“ barrel.

“ Second great copper charged forty-  
“ eight inches, i. e. thirty-eight barrels,  
“ two firkins, and six gallons.

“ Second liquor 164 degrees, all turned  
“ down. Tap, 148 degrees; gravity, ten  
“ pounds (70-100ths) per barrel.

“ First wort in the copper thirty-two  
“ inches; boiled one hour, and came out  
“ thirty-six inches; gravity, nineteen  
“ pounds (1-10th) per barrel.

“ Third liquor charged small copper  
“ full, i. e. fifty-nine barrels and one  
“ gallon.

“ Third liquor 154 degrees, all over.  
“ Tap, 133 degrees; gravity, four pounds  
“ (1-5th) per barrel.

“ Second wort in the copper twenty-seven inches ; boiled two hours, and  
“ came out thirty-six inches ; gravity,  
“ nine pounds (1-10th) per barrel.

“ Pitched tun at 64 degrees ; cleansed  
“ at 70 degrees of heat. Gravity of the  
“ beer, in that state, fourteen pounds  
“ (1-4th, per barrel.

“ Cleansed on the 28th, eighty-seven  
“ barrels and one firkin. Started into  
“ twenty-nine butts.”

I cannot consider a student would profit much by this ; a brewer, I am certain, could not.

**BROWN STOUT.**

---

There is no difference in the process, saving that you should be careful that the malts are very fine, and a third brown or blown malt is required—the length to be drawn is, from two barrels and a half, to three barrels, from a quarter of malt. I should recommend the use of eight pounds of hops to a quarter.

Mr. A. gives a brewing of Brown Stout of 24 qrs. of malt, 1-5th Pale, 1-5th Amber, and 3-5ths Brown. I should reverse it, and make 1-5th Pale, 3-5ths Amber, and 1-5th Brown. It is astonishing to see

how this gentleman has been imposed upon. He says 38 barrels was turned on 24 quarters of malt, 3-5ths of which was brown, and 31 barrels was gauged in the underback, bearing a gravity of upwards of 28lbs. per barrel. I should doubt even 18 barrels could be obtained. It is impossible such a weight from 3-5ths of Blown malt can be obtained. The whole liquor turn'd on is said to be 96 barrels in 3 mashes, and the length obtained is 64 barrels, so that only 32 barrels is lost in the process. I forbear going into the tabular view of the process, as it is founded on false data.

## ALE BREWING.



We now come to the produce of a very delicate liquor, as ale brewers well know ; they cannot, at all times, produce an equally good article. All that can be done is, for the brewer to observe great care and attention.

First, he should see that his goods are of the first quality, and of the sort I have described ; if he is brewing in winter, and for immediate use, pale malt will answer alone ; if for keeping, or, in warm weather, at least take a third of fine amber. First then, take a brewing of pale in cold weather, for a victualler, and for imme-

diate use, say a month, with four quarters of fine pale malt, and twenty-four pounds of fine bright East Kents. The first liquor turn over seven barrels at 178°—the second liquor six barrels at 186°—the third at 160 degrees seven barrels. Carry on the process as before directed, always keeping the copper in full ebullition. You should weigh the worts, and if the malt is good

	<i>Bar.</i>	<i>lbs.</i>	<i>lbs.</i>
First wort produces	$3\frac{1}{2}$	40	140
Second do. - - -	6	27	152
Third do. - - -	7	14	98
	<hr style="width: 100%;"/>		
Divide by	16	390	24 <sup>(6-16 lbs)</sup>
	<hr style="width: 100%;"/>		

After you have boiled your worts, the oily part of the hops will cause a difference in your weights ; but you have five barrels and a half to lose of the aqueous parts, in boiling, cooling, &c. so that you may safely take this gyle at twenty-seven pounds, saccharometer weight, per barrel ; Ale strong enough for any use.

This gyle is to be got into the tun at 60 degrees of heat, well covered down, and remain untouched, only seeing it comes properly forward, weighing it every day. This you may attenuate to twelve pounds weight—then skim every particle off clean—take one pound of flour, and a quarter of a pound of salt, and throw all over the tun—rousing it well—cover it down two hours; then cleanse with the head on it, and keep your casks well filled up. You will find the heat about 72 degrees.

Another way of conducting the fermentation of a gyle of ale is, by skimming as soon as the head bears a yeasty appearance, and the heat advances. Skim and rouse as soon as another head arises; again skim and rouse, proceeding until the whole tun is smooth, without throwing up a head at all.

Other Brewers will watch their tun, until the head begins to fall, then cleanse their ale without skimming, or beating in the head. They are very particular in

keeping the casks well filled up, as long as they throw up the least symptom of fermentation.

This is the longest length I would advise to brew ale, but there is a weaker ale you may call *Hock*. Take of this three barrels to a quarter. Thus, in your first mash you will turn on eight barrels, on the second eight, and last seven; you will find more evaporation in so much liquor.

I consider ale brewed two barrels to a quarter, or seventy-two gallons from eight bushels of malt, all sufficient, and as strong as it ought to be drank, either public or private.

Suppose a victualler wishes to brew a gyle of such ale, say four quarters—three quarters pale, and one quarter fine light amber—turn over first five barrels at 175 degrees—mash one quarter of an hour—turn on four barrels more at 177 degrees—mash one hour—cover down and stand one hour. Set tap, and weight your wort—if

your malt is fine, you may look for thirty-seven pounds—three barrels and a half down in under-back. Second mash, turn over eight barrels at 160 degrees—mash one hour, and stand an hour—boil this at twice down to eight barrels. This will be a very fine gyle.

You will have used hops according to the time you mean to keep it; if for direct use, six pounds; if for keeping a short time, eight pounds; if for old beer, ten or twelve. So you will vary according to your intentions for stock. The weight of this gyle will prove about thirty-one or thirty-two pounds.

If you are brewing for keeping beer, the slower your fermentation and cooler your pitching. In your tun there are two ways of fermenting—as soon as the tun presents a yeasty head, skim it clean—rouse it well—next day skim again, and so on until the tun presents a pure flat surface—in this case, rouse at last with flour and salt, so as just to save a head in your cleanse.

Some will let the yeasty head remain quiet, and cleanse without moving or stirring it. Those who practice in this way, will do well to have a pipe or tube at the bottom of the working tun about six inches above the level, so the main body of the yeast will settle without getting into the cleanse. In this mode you must watch till your thermometer rises from 60 degrees at which you cleanse till it rises to 70, 72, or 74 degrees. In brewing hock, beat in the head the same as brewing porter.

Always have a thermometer in your gyle tun; as the heat increases, so will your attenuation or thinning also increase.

We must look back to the third liquor of this last brewing. Having taken two worts for strong ale, cap on two bushels of new malt, and turn on ten barrels of liquor at 150 degrees. From this you are to expect eight barrels of good table beer.

A victualler will thus vary his brewings according to his apparatus; and whether

his utensils are for one or twenty quarters, his process will be the same, and require the same care and more labour in the small quantity, in getting lengths, although I have given the common waste; yet some coppers will evaporate more than others. This must be remedied by attention. Bean flour is far superior to wheat flour in the tun; also recollect to keep back, when brewing ale, some hops after boiling the first wort. These, when cool, are excellent to put into ale you are about to bung down.

We now come to the use of the raw wort. Suppose you wish to brew a gyle of porter after the ale—in this case, take the third wort of such a brewing as the last—having turned over four barrels at 140 degrees without capping on—when the tap is spent, throw *over* or *on* the goods two barrels more of cold liquor without mashing or stirring the goods, and let it, after standing ten minutes, run through the taps and mix with the rest. Thus you will have six barrels of raw wort. This will be

pumped into the copper, and from thence let out into the hop-back, after the second wort of the ale is run off, where it will remain on the hops all night. I have before stated, that a pipe is requisite from the hop-back to the under-back, with a rose to prevent the hops running through. This is to be done in order to get this raw wort into the *copper-back* when wanting. Now this wort I consider of the value of a quarter of malt. Supposing then you were to brew porter as before directed, of course you save a quarter. There would be required five bushels of pale, five bushels of amber, and six bushels of brown or blown. In the first mash, you would turn over only four barrels of *fresh liquor*, for the second, turn over the six barrels of raw wort, and for the third six barrels of fresh liquor, conducting your process as before. My reason for directing the raw wort to be used in the second mash is, that I have found it give a faintness to the gyle when used in the first mash.

In page 160 of Mr. Accum's Instructions for Brewing thirty quarters of malt

for London Ales, we find the following. The first mash with twenty barrels of water—the mashing machine set at work for half an hour. An additional ten barrels is then turned on, and mash'd for half an hour longer.—This stood an hour and a half—and when the taps were spent, he found twenty barrels in the underback!!!—Such a process, perhaps, was never offer'd seriously to the public. In the first place, no machine with thirty quarter of malt, wetted with twenty barrels of liquor, would move, the whole would be absorb'd in the grist. If the engine or horse-wheel was exerted, it would break the rakes to atoms; it would be difficult to move it, even after the ten barrels should be added—and then gravely to tell us, twenty barrels of wort was found in the underback!—I should scarce believe two would drain through—but let us follow this gyle. The second mash was made with twenty-four barrels of liquor, and yielded twenty-four in the underback. The third and fourth mashes comprised fourteen barrels of liquor. The mashing

machine performing three quarters of an hour, the mashes stood half an hour, and produced thirteen barrels in the under-back. Thus are we told two mashes were made with seven barrels of liquor, each upon thirty quarters of malt!—What became of the first wort we are not inform'd — but the first part of the second wort it seems was boiled an hour and a half—the remainder of the second wort, and the third and fourth, was boiled three hours. The produce of this was declared by the officer *forty-four barrels*.

The first mash - - - 30 Barrels

The second do. - - - 24 do.

The third and fourth do. 14 do.

---

68

Produce - - - 44 Barrels

---

Allowed for waste 24 do.

---

Now it must be evident to any man who understands his business, that in the

four mashes and boilings, at least sixty barrels must be absorb'd or evaporated; surely some wag has been hoaxing Mr. A. for amusement.

The next is an account of Brewing, Keeping Ale (see page 165) with 16 quarters pale, and four quarters of amber malt. The first mash is 36 barrels, at 160°, with an addition of 15 more, at 156°. Here is 51 barrels of liquor drowning 20 quarters of malt for *keeping ale*, obtaining 42 barrels in the underback, with a weight of 25, 3lbs. per barrel. Turning back to page 147, in a brewing of stout with 3-5ths brown or blown malts, an extract is obtained of 25, 25lb: per barrel, with a heat of 165°, and the pale at only 160°. I will not take up time in going through the process, but observe, in this brewing, 95 barrels of liquor is consumed, and 34 barrels in length is obtained. Now compare this with the porter brewing of 30 quarters (page 156) 125 barrels of liquor is turn'd over, and from that quantity Ninety Seven barrels is obtained.

To pursue Mr. Accum's system of brewing further, would be a waste of time; he says (page 142) that the flavor of porter is evidently from *pale* malt, and not from brown malt—this last only giving the *empyrheumatic* taste—which taste is certainly the porter flavor.

I am desirous to give every information, although I will not attempt to appreciate the merits of the following extracts: I give them as I find it in the same work that the porter brewing is extracted from; but it is some time since Reading beer was celebrated.

---

“ READING BEER.

“ This is a beer much praised by many persons; I shall therefore describe the nature and process of brewing it.

“ Kinds of malt :

“ 20 quarters, all pale.

“ Malt, 20 quarters	<i>Cwt.</i>	<i>qrs.</i>	<i>lbs.</i>
“ Hops - - - - -	1	3	0
“ Grains of Paradise - - - - -	0	0	6
“ Coriander Seed, ground - - - - -	0	0	10
“ Sugar - - - - -	0	0	28
“ Indian Bark - - - - -	0	0	3

L 4

“ Take your first liquor at 175 degrees.  
“ Be careful that you do not set your  
“ goods ; and let it on gently, using your  
“ rakes. It may remain on the goods two  
“ hours. Set tap, making your observa-  
“ tions. Charge your copper for your  
“ second liquor, which turn over at 178  
“ degrees. Let it stand one hour and a  
“ half. Set tap, &c. Get your two raw  
“ worts into your copper-back, or as much  
“ as is convenient of it. I will suppose  
“ your third liquor ready. By knowing  
“ the quantity of wort you already have,  
“ you will know how much to turn over ;  
“ but be sure to have enough, as you can  
“ always boil it away till you obtain your  
“ quantity. Let your third liquor be  
“ turned down at 158 degrees ; remain on  
“ the goods three quarters of an hour.  
“ Set tap. Weigh your hops, which must  
“ be the best Kent. Boil your first wort  
“ one hour and a quarter ; then turn out.  
“ Get the remainder of your second, and  
“ the whole of your third worts into the  
“ copper ; boil them together with the  
“ unused ingredients two hours, hard.

“ Pitch your tun at 64 degrees, using about  
“ a gallon of yeast. When you see the  
“ head much up, skim it, and beat the  
“ remainder well in : when it rises again,  
“ just before it falls, skim it as before,  
“ rousing the tun well.

“ Use, at cleansing, half a pound of bay  
“ salt, and rather more than half a peck  
“ of malted bean flour ; rousing your tun  
“ well.

“ Keep your casks well filled, and top  
“ latterly with fine beer. Put some scalded  
“ hops into every cask, on which the beer  
“ will feed.”

**“ LONDON ALE.”**

---

“ Ale, of all malt liquors, is the most  
“ delicate in its nature, and will bear less  
“ tampering with than any other ; it will,  
“ therefore, require your nicest care  
“ throughout every part of the process.

“ As brightness or transparency is a  
“ great recommendation to ale, and as it  
“ is sometimes kept for a series of years,  
“ I shall recommend hard water, as the  
“ peculiar qualities it possesses, assist in  
“ preventing acidity, as well as in the pre-  
“ servation of the beer.

“ I shall give you some examples, and  
“ endeavour to assist you with some ob-  
“ servations on this subject.

“ Commenced brewing at five o'clock  
 “ in the morning ; thermometer 60 deg.

“ Kinds of malt :

“ 23 quarters Herts white, good

“ 2 ditto Herts amber, do.

“ 25 quarters.

*Cwt. qrs. lbs.*

“ Malt, 25 quarters

“ Hops . . . . . 1 3 10

“ Grains of Paradise 0 0 4

“ Coriander - - - - 0 0 4

“ Orange Powder - 0 0 4

“ First great copper thirty-eight inches,  
 “ or forty-nine barrels, three firkins, and  
 “ six gallons. Liquor in the copper 168  
 “ degrees, but gained 5 degrees, and was  
 “ all turned over on the goods at 173 deg.  
 “ Mashed one hour : stood upon the  
 “ goods as long. When the tap was set,  
 “ it was near 150 degrees ; when nearly  
 “ spent, 140 degrees. My jar case being  
 “ full of cold liquor, I took a sample of  
 “ the wort from the under-back, and filled

“ my assay jar, which I placed in the jar  
“ case till it had cooled to 80 degrees,  
“ when the gravity was thirty-two pounds  
“ (29-100ths) per barrel.

“ Second copper was charged forty-  
“ eight inches, or thirty-eight barrels, two  
“ firkins, and six gallons. Liquor in the  
“ copper 167 degrees; all turned over at  
“ 172 degrees. Tap, when set, was 153  
“ degrees, and the then gravity was  
“ twenty-two pounds. I filled a jar with  
“ the wort, and placed it in the case till it  
“ had attained 70 degrees of heat; when  
“ the gravity was twenty-two pounds  
“ (73-100ths) per barrel.

“ First wort, when in, thirty-six inches,  
“ boiled one hour: when out, forty inches.

“ Third liquor charged in the small  
“ copper, full, or fifty-nine barrels and  
“ one gallon. All turned over at 149 de-  
“ grees. Mashed a quarter of an hour.  
“ Set tap at two o'clock. Tap, 139 de-  
“ grees.

“ Second wort, when in, thirty inches ;  
“ when out, thirty-six inches ; having  
“ boiled two hours.

“ Pitched the tun at 62 degrees. Cleans-  
“ ed on the fourth day, at 74 degree ;  
“ using four pounds of ginger, half a pound  
“ of salt, and half a peck of flour.

“ TO BRING SEVERAL SORTS OF BEERS  
“ MIXED TOGETHER IN ONE VAT, TO  
“ ONE TASTE AND PALATE.

---

“ For every one hundred barrels in your  
“ vat take six pounds of porter extract ;  
“ six pounds of orange pea, ground ; one  
“ pound of alum, ground ; one pound of  
“ heading ; and six pounds of Indian bark.  
“ Mix them well with one butt of finings,  
“ and rouse it thoroughly at the time. Let  
“ it continue open three days ; then cover  
“ it, and sand it over. It will be fit for  
“ use in a fortnight.”

This may be very excellent ; but I protest I know nothing of it by experience.

The following directions for brewing one quarter of malt, are from memoranda, made many years since. The student, by varying his process, will discover the best mode—any instructions for brewing ales of different counties, I consider idle, as the flavour will depend on the soil on which the barley is grown, also from the liquor with which it is brewed.

---

### PORTER.

Brewing one quarter malt, 4 bushels amber, 2 bushels pale, and 2 bushels brown; hops 6 pounds, 3 pounds of new, and 3 of old. Turn over three liquors, and divide in two worts. First wort boil for three quarters of any hour; second wort boil for three hours.

First liquor turn over at 160 degrees, with two barrels of liquor turned over. Mash one hour, stand on goods one hour and a quarter.

Second liquor turn over at 180 degrees. with two barrels of liquor turned over. Mash three quarters, and stand one hour.

Third liquor turned over at 150 degrees, with two barrels of liquor turned over. Mash half an hour, stand three quarters.

After each tap standing the time on the goods, set tap, or run off the wort from the goods to go into the copper for boiling as above—divide the three liquors into two worts.

Let the worts down into the square or tun, to ferment—in winter at 67, and in summer at 66 degrees, well rousing to mix them together.

Cleanse from the square into casks, at 80 deg. well rousing the head in at the cleansing three or four times.

Start from the casks into butts or puncheons; fourteen hours after cleansing, scrape the heads off, and fill them up every day.

I was once told by a friend, that he had practiced a mode of brewing brown malt, by turning on his first liquor quite cold—the second liquor boiling, and the third at 120°—he asserted that it answered extremely well.

I have heard of fermenting without boiling—and boiling without fermenting—starting the worts into cask directly they were out of the copper. I confess myself unacquainted with these experiments.

## BROWN STOUT.

---

Brewing one quarter malt, 4 bushels pale, and 4 bushels of brown; hops four pounds new, four pounds old. Turn over three liquors, and make two worts.

First wort boil three quarters.

Second ditto, three hours and a half.

	1st	2d.	3d.
Heat of Liquors - - -	166	170	170 <sup>o</sup>
Quantity of barrels over - - -	2	2	2
Quantity of barrels tap - - -	1	2	2

Mashing and standing, as in porter brewing, and the same in the following brewings.

N. B. In setting the tap, always first, clear the cocks of the underback by drawing a pail full off.

Worts let down into the square at 67 deg. in the winter, and 66 in summer With one quart of good yeast, rouse them well together to mix them.

Cleanse from the square into casks at 80 deg.—rouse the head three or four times in cleansing the gyle.

Start it from the casks into butts or puncheons fourteen hours after cleansing.

## LONDON ALE.

Brewing one quarter malt, one quarter new pale ; hops, eight pounds of new pale Kent. Three liquors, and two worts.

First wort boil half an hour.

Second wort boil for four hours ; use in the copper half a pound of hartshorn shavings.

	1st.	2d.	3d.
Heat of liquor turned over - - -	175	190	170°
Quantity of barrels over - - -	1½	2	2
Quantity of ditto, tap - - -	½	2	2

Worts in the square at 60 deg.—one quartyeast .

Cleanse from the square into casks at 76 deg. ; skim the head clean off, and use, mixed, two ounces of salt, four ounces of flour, two ounces of ground ginger, and two of ground stick liquorice root—well mixed, and rouse in, and cleanse.

WINDSOR ALE.

Brewing one quarter malt, one quarter of white Ware ; hops nine pounds of new pale Kent. Three liquors, and two worts.

First wort boil three quarters of an hour.

Second wort boil for four hours.

Use in the copper, when boiling, two ounces of salt, four pounds honey, and half a pound of hartshorn shavings.

	1st.	2d.	3d.
Heat of liquors	180	196	170°
Quantity of barrels over	1½	2	2
Ditto, tap	½	1½	2

M 3

Worts in the square at 60 deg. ; one quart yeast.

Skim the head clean off, and cleanse at 78 deg. Use in the square, well mixed up, two ounces salt, four ounces of flour, two ounces of ground ginger, with two ounces of ground carraway seed, roused.

This must only be supposed an imitation of Windsor Ale.

## AMBER.

---

Brewing one quarter malt, six bushels amber, and two bushels pale; hops four pounds, two pounds of old, and two of new. Three liquors, and two worts.

First wort boil half an hour.

Second wort boil two hours.

Use in the copper, when boiling, four pounds molasses, and one pound Spanish juice.

		1st.	2d.	3d.	
Heat of liquor	-	175	188	178	80 for com. small
Quantity over	-	3	2	2	1 ditto
Quantity	-	2	2	2	1 ditto

Let the worts down into the square at 62 deg. with one quart of good solid yeast roused well.

M 4

Skim the head off clean, and use, well mixed up, two ounces salt, four ounces flour, two ounces ground ginger, and two ounces ground liquorice root.

This will be nearly the beverage, called, in old times,\* Amber, from which *Purl* was made.

Modern purl is made of mild porter with sugar and gin—when made in former days, it consisted of amber as above described, with a quantity of bitters put into it. Amber ale is brewed as before described, with a rather more amber malt than pale. It has not so much of the sweet or saccharine upon it—but will stand better.

\* Mr. A. favours us with a Brewing of Fifty Quarters of Malt, for a liquor which he acknowledges to be out of use. The drugs and molasses, &c. are left out; he says he takes it from a *Brewers Journal*.—There is some consistency in this, as 237 Barrels of Liquor are turned over to obtain 137 Barrels in length.

## TABLE BEER.

---

Brewing one quarter malt, 4 bushels of pale, and 4 bushels of brown; hops six pounds, 3 pounds of new, and 3 of old. Three liquors, and two worts.

First wort boil half an hour.

Second wort boil two hours.

Use in the copper four pounds molasses, and one pound Spanish juice.

	1st.	2d.	3d.
Heat of liquor, over	170	180	140 <sup>o</sup>
Quantity of barrels over	4	3	4
Ditto	3	3	4

Let the worts down at 68 deg. with one quart of yeast.

Rouse the head well in, and cleanse the next day at 68 deg.; use in the square, well mixed up, two ounces salt, four ounces flour, two ounces ground ginger, and two ounces ground liquorice..

## PORTER.

---

Brewing twenty quarters malt, 10 quarters amber, 5 quarters pale, and 5 quarters brown; hops 150 pounds, half new and half old. Turn over three liquors, and make three worts.

First wort boil three quarters of an hour.

Second wort boil one hour and a half.

Third wort boil three hours.

Heat	-	-	160	170	150	80°	vi
Quantity of barrels	-	-	40	30	35	20	or
Tap	-	-	25	30	30	20	small

Worts in the square at 66 deg. with four scoops of yeast, roused well three or four times.

Cleanse at 80 deg.; rouse well at cleansing. Starting 12 or 14 hours after into butts.

## BROWN STOUT.

---

Brewing twenty quarters malt, 10 quarters pale, and 10 quarters brown; hops 160 pounds, half new, and half old. Turn over three liquors, and make two worts.

First wort boil three quarters of an hour.

Second wort boil three hours and a half.

Heat	-	-	-	166	170	150°
Quantity of barrels	-	-	-	35	30	36
Tap	-	-	-	20	30	36

Worts in the square at 66 deg. with four scoops of yeast.

Cleanse at 80 deg.; well rouse the head in. Start it into butts 14 hours after cleansing.

---

The learner will know if his heats have been well taken by observing the fermentation—if too high, the head will appear with large blibs—if too low, small blibs,

and sluggish—if well taken the blibs will be rather above the size of a sixpence.

I trust these lessons will be found amply sufficient as examples. The student, by practice, and keeping a distinct and particular account of every brewing, and its proceeds, will be soon competent to form a correct judgment to produce an excellent article.

In books published on **Brewing**, it has been usual to give an account of the method of producing different country ales; but the most ignorant of brewing must perceive, that using the same malts, the same liquor, in short, the same every thing, together with the same atmosphere, cannot produce, by a trifling change of heats, Ringwood beer—Windsor ale—Dorchester and Burton ales. I have elsewhere observed, that the different flavours depend on the various soils in which the barley is produced, the liquor it is malted with, and that used in the brewing. It might as well be said, that a brewer from Burton or Nottingham, can produce these ales in London.

The following instructions are taken from the work, for which five guineas are charged, before quoted.

---

### “ INSTRUCTIONS

“ *For brewing of Five Quarters of Malt, to*  
 “ *produce Twenty Barrels of excellent*  
 “ *Porter, of the Gravity of 18lb. per Barrel,*  
 “ *upon Dring and Fage’s Instrument, viz.*

“ 14 bushels of brown malt

“ 13 ditto          amber ditto

“ 13 ditto          pale    ditto

“ 5 pounds of Spanish Juice

“ 2 ditto, *Cocculus Indicus*, ground

“ 50 ditto, Kent hops

“ The above articles put into the cop-  
 “ per after the worts have boiled a quarter  
 “ of an hour ; afterwards proceed on with  
 “ the brewing agreeable with the rules  
 “ as detailed.

There are times of scarcity of grain, when the legislature allows the use of sugar. I have taken the following from the same work.

---

### “ INSTRUCTIONS

“ *For using Sugar to the greatest Advantage*  
“ *in the brewing of Ales and Porter.*

“ The proper proportion of malt and  
“ sugar is fifty bushels of malt to six hun-  
“ dred pounds of sugar, and so in propor-  
“ tion for a greater or less quantity. It is  
“ well ascertained that twelve pounds of  
“ moist brown sugar is equal to a bushel of  
“ malt.

“ It must be observed, that in brewing  
“ the fifty bushels of malt, the brewer will  
“ make the same quantity of worts, and  
“ use the same proportion of hops, as if  
“ the brewing was made from one hundred  
“ bushels of malt. During the time the  
“ process of brewing is going on, put the

“ six hundred pounds of sugar into the  
“ round or square ; afterwards let as much  
“ of the worts from the coolers into the  
“ round or square that will dissolve the  
“ sugar ; taking care to stir the whole well  
“ up together, that the sugar is properly  
“ dissolved. Afterwards, when the other  
“ worts that are upon the coolers are  
“ brought down to the proper degree of  
“ heat, pitch them down into the round  
“ or square, to the preparation of sugar,  
“ stirring them well up together : after-  
“ wards proceed on with the brewing as  
“ in common, by which practice the ales  
“ and porter will be of equal quality and  
“ flavour as if brewed from malt only.

## “ INSTRUCTIONS

“ *For preparing old Stale Ales and Porter to  
“ mix with new-brewed Ales and Porter.*

“ First dissolve three pounds of molasses  
“ in one gallon of boiling water, when dis-  
“ solved, put this preparation, together  
“ with a peck of hops, hot from the cop-  
“ per, to thirty-six gallons of old ales or  
“ porter, and so in proportion for a greater  
“ or less quantity, by which practice the  
“ old ales and porter are put into a state  
“ of vinous fermentation; afterwards, when  
“ mixed with new ales and porter, they  
“ unite together, and become one and the  
“ same body; afterwards let the liquor so  
“ mixed, stand for any length of time, and  
“ it will retain one and the same flavour,  
“ becomes brisk, and will be in a high  
“ state for use.”

---

It may be very well to give directions  
for two pounds of *Cocculus Indicus Ber-*

ries, but I declare I should not like to drink the mixture.

The proportion of sugar is very fair—about eighteen pounds in proportion to a bushel of malt. I should brew it in a different way, namely, suppose I meant to use one quarter of malt, and one hundred and forty-four pounds of sugar. Mash the malt as usual. After wetting with two barrels of liquor, and the time of standing nearly up, turn on two more, shoot the sugar into the copper-back. As soon as the tap is set, pump up wort, and wet the sugar by degrees, turning it over with the rake, and see every particle melted; it will naturally form into lumps without this care. Then let the wort, strengthened with the sugar, into the copper, boiling, and adding hops as for two quarters of malt, the same as if brewing with malt only. In private families, brewing for porter, good coarse brown sugar will be found very useful; or when malt is fifteen shillings per bushel, and good strong sugar can be bought for eight-pence per pound, the

saving will be an object. I should only recommend sugar for present use.

- In brewing table beer, you may reckon a quarter of malt to be the value of the last wort, of four quarter—of such an ale brewing as before described; and here you have an advantage if brewing table beer the next day, one quarter of good malt, half pale, and half amber, with such a raw wort, should produce fourteen barrels of good table beer. In this gyle you may use the hops that you brewed the ale with.

To brew a whole gyle of table beer, say, two quarters, half pale, half amber; or six bushels pale, and two bushels brown, and twelve pounds of hops. Turn over first liquor, eight barrels, at 160 degrees; second liquor, seven barrels, at 170 deg.; third liquor, six barrels, at 140 deg. Pitch, if in summer, at 66 deg.; in winter, from 68 deg.; if very cold, at 70 deg. Cleanse as soon as you have a good head, which will be within twenty-four hours. An in-

dustrious victualler might thus serve a little country.

I now come to a gentleman's or private brewing—and here let me seriously call upon noblemen and gentlemen to put an end to the dreadful waste of malt by following the old custom. When malt is at one hundred shillings per quarter. Let me call upon them, in mercy to their fellow men, to consider what possible good it can be to have beer brewed they themselves never drink, and only serves to make a set of idlers drunk, while the poor labourers in their fields are sweating with some miserable swipes, or sour cyder. Eight bushels to a hogshead is quite sufficient for the strongest beer that should be drunk, if the malt is well chosen and properly ground; taken with the appropriate heats, it will go as far as most of their's—ten bushels to a hogshead. As I have before given the necessary instructions for brewing ale, where there is a proper apparatus, it is only necessary to advise those who have not—working with open vessels of

various descriptions. Let them be sure their malts are well broken. Suppose a brewing of a quarter, or eight bushels—for this the copper should contain seventy-two gallons. Having all ready, the copper boiling, if no tap or cock, bail the boiling liquor into the mash tun. The copper will have wasted in the boiling, and will cool in the running or bailing. When all out, try with a thermometer the heat, and cool down to 170 deg.—then shoot on the malt, and mash for an hour; let it stand an hour, and draw off. The same quantity for second mash at 180°; this you must cool down in the copper, if too hot. These two mashes will make good ale. For your third mash add half a bushel of fresh malt, and turn over a copper full as before. This will make a hogshead of good table beer, and better if, when boiling *this last*, you throw into the copper, or put into a clean net, and let it hang in the copper, half a pound of good Spanish juice. In the boiling your ale, as private brewers may do as they please, throw in just as your last wort is ready to turn out,

a pound of fine honey, or a small quantity of any the flavours I have given you. In private brewing, I should use a quarter of a pound of fine hartshorn shavings—they tend greatly to the fining of your ale. When you *set*, or pitch your gyle, let it be at 64°; as the quantity is smaller, and your work is generally carried on in a cold wash-house, it requires a greater heat. Your table beer at 70°. Be careful of your tunning and stowing away.

These processes might be multiplied *ad infinitum*. It is sufficient to give the foregoing specimens, which the learner will, by experience, teach himself to vary as occasion may occur. I must recommend that he will never make a brewing without keeping a correct account of his day's work in the outset, and of the continued process, even to the account of the goodness of the article in the consumption, whether consumed at home, or sent out to customers. From these accounts and observations, the brewer will learn to regulate his work; and every new observation, and

many will arise, will more and more serve to convince him his attention and labour is not ill bestowed. In short, a brewer is never *too well* informed—the science is delightful—the more it is studied, the pleasanter it appears—and it will amply repay, both in profit and pleasure, the attentive student.

I would wish to preserve the following as a specimen, how easy a task it is to impose upon the credulous.

Some years since, a man of the name of Child, sent forth a pamphlet, inviting the public of every class to brew for themselves. A lodger was to boil in the porridge pot—mash in a pail, with a hole bored at the bottom—and the washing tub was to be used for the working tun.—I think Mr. A's recommendation of washing tubs is a plagiarism on Mr. Child, who adopts the following motto in his title page:

“ Some coopers attempt to extend their art so far as to add strength to the beer ; but let it be remembered, that the principal constituent parts of beer should be malt and hops ; when strength is given to the liquor by any other means, its nature is altered, and it is no more beer that we drink.”—*Combrune's Theory of Brewing.*

He opens his work by a description of Porter Brewing, and gives the following receipt for brewing a quarter of malt for Porter.

One quarter of malt

8 lb. hops

9 lb. treacle

8 lb. liquorice root

8 lb. essentia bina

8 lb. colour

Capsicum  $\frac{1}{2}$  oz.

Spanish liquorice 2 oz

Cocculus Indicus, commonly called oc-  
lus India berries,  $\frac{3}{4}$  oz.

Salt of tartar 2 drachms

Heading  $\frac{1}{4}$  oz.

Ginger 3 oz.

Lime 4 oz. slacked ; and the water, after having received the spirit of the lime, poured into the *essentia bina*, or colour, in the making

Linseed 1 oz.

Cinnamon 2 drachms

This farago of filth, we are told, is actually necessary for porter—and from this is to be obtained five barrels—the length he tells us the Public Brewer gets from a quarter of malt.—We are then indulged with directions for brewing a peck of malt ; and that such excellence may not be lost to the world, I beg permission to insert it.

1 Peck of malt

$\frac{1}{4}$  lb. of liquorice-root

$\frac{1}{4}$  lb. of Spanish liquorice\*

$\frac{1}{4}$  lb. of *essentia*

$\frac{1}{4}$  lb. of colour

$\frac{1}{2}$  lb. of treacle

$\frac{1}{4}$  lb. of hops

Capsicum and ginger

Coals

\* Two ounces on the other side is recommended to 8 bushels—to a peck a quarter of a pound.

This will produce six gallons of good beer.

Every age will produce quacks—but that such excessive ignorance could so impose on the public to cause this pamphlet to pass through eleven editions, is astonishing.

## EXPENCES ATTENDING BREWERS.

---

It is a lamentable circumstance, that many persons, ignorant of the brewing concern, are led into it by the idea of the large profits attending that trade. If any one attempts to contradict this position, immediately you are answered, "Look at this man, and look at the other—see how they live—their carriages, establishments, &c." without considering that these gentlemen embark a fortune as a necessary capital, from which, at 5 per cent. they could live in the same splendid style. It may be relied on as a fact, as much money is required in a brewery for capital as is returned in a year. See then, what a capital is required of a porter house, brewing 100,000 barrels per annum. They must have in the concern between two and three hundred thousand pounds, and be content to get 10 per cent. for their money. How

then is the little brewer to exist with a capital of two or three thousand? They are daily swallowed up. The apparent profits of a private brewer has tempted many into the public brewery to their destruction. In 1811, the author of this little work made a bet, that in the preceding year, he would prove that there was a brewer bankrupt—called his creditors together—or sold up—for every week in that year—which wager he won, and found many over. Thus much is said to prevent persons unacquainted with the trade going into that of which they are entirely ignorant.

A victualler, brewing his own beer, is a profitable trade, and I cannot too often recommend the granting licences to such persons; as their expences are less, they can afford a good article, and houses of this description, sprinkled about the town, would always keep the great breweries upon the alert.

A private brewer, who has taken a large establishment, and been at expence in fitting up a brewery, should always take in the cost. Thus, suppose his apparatus and cask cost £200, his wear and tear will not be less than seven and half per cent. There will be the carpenter, the plumber, the cooper, and he will seldom find his bills on an average less than £15 per annum, besides the natural wear of the plant. We will suppose this family consumes forty barrels of strong or X beer, and sixty of table beer. Well then, allowing eight bushels to a hogshead, or barrel and half, of fifty-four gallons, there will require twenty-seven quarters of malt, to avoid a fraction, and I will allow nine pounds of hops per quarter, as some will be wanted in bunging down. These twenty-seven quarters should at least produce twenty-seven barrels of table beer. Then you will require malt and hops for thirty-three barrels of table beer to make up the sixty; say five barrels to a quarter, you will further require six and half quarters, and fifty-two pounds of hops. Your expences will stand thus :

## EXPENCES.

*Brewing 40 Bar. strong Ale, and 60 Bar. Table Beer, in 1818.*

<i>Dr.</i>	<i>£. s. d.</i>	<i>Cr.</i>	<i>£. s. d.</i>
To malt for ale, 27 qrs. @ £5. 13s. 0	0 0	By 40 bar. ale, @ £5 . .	200 0 0
To hops for do. 243 lbs. @ 2s. 24	6 0	By 27 bar. T. B. @ £1 4s. .	32 8 0
To malt for T. B. 6½ qr. @ £5 3s. 0	0 0	By 33 bar. T. B. @ £1 4s. .	39 12 0
To hops for do. 52 lb. @ 2s. . . . .	5 4 0		
To wear and tear . . . . .	15 0 0		
	<hr/>		<hr/>
	£212 10 0		£272 0 0
	<hr/>		<hr/>

In private families, the grains and yeast is presumed to pay for coals and labour; if they do not, add them to the expences.

This and the other calculations must be varied at present prices.

## A VICTUALLER MAY CALCULATE THUS:

*Brewing Four Quarters of Malt.*

<i>Dr.</i>	<i>Cr.</i>
To 4 quarters malt . . .	£20 0 0
To 32lb. hops . . . . .	3 4 0
To duty on 8 bar. X. B. . . .	4 0 0
To duty on 4 bar. T. B. . . .	0 8 0
To wear & tear, labor & coals	1 0 0
	£28 12 0

The value will be at the price he sells it.

Next comes the common brewer: I will suppose him to be an industrious man, and his capital £2000. His first charge must be on that capital. He will keep his account thus :

*Dr.*

To capital, wear and tear @ 10 per cent.  
on £2000.

To wages, two men, and a boy, supposing  
he brews, and is his own clerk.

To keep of two horses.

To coals, say 12 chaldron.

To candle and oil.

To loss of casks.

To tradesmen's bills, bad debts, &c. and  
out-door expences.

Thus it will be seen, on so small a capital, the expences will amount as follows :

Int. on capital, and wear and tear	200	0	0
Wages, two men with beer,			
@ £2 8s. per week	-	-	124 16 0
boy, @ 12s. per week	-		31 4 0
Keep of horses	-	-	100 0 0
Coals, candles, and oil	-	-	50 0 0
Loss, debts, casks, &c. say	-		40 0 0
Bills and out-door expences	-		40 0 0
			<hr/>
			£586 0 0

Since the above was written, the fall in every article is astonishing, and brewing, at the present moment, April, 1822, is an excellent business; but as every good must be met by evil, the consumption from the hardness of the times is greatly lessened.

So it may be seen, that the little common brewer is destroyed by expences, and excise—neither of which the private brewer is troubled with; and hence has arisen the mistake that brewing is such an advantageous business.

The brewer, both public and private, will take the price of the essentials for the time being, there must be some good times in the brewers' favor, the charges are very great. When the author first began this work, malt was 90s. to 100s. per quarter, hops thirty to thirty-three pounds per hundred; at the first publication malt was about 80s. hops four pounds per hundred; and at present, malt, the best Ware, at 50s. hops at four pounds per hundred, with 8s. per quarter duty on malt taken of—August 1822.

## STORE-HOUSE DUTIES.

---

Having produced a good brewing, the next care must be to store it away well for keeping. The first endeavour is to find a store, or cellar, for stowing away your beer, more particularly ale. The store should be as to the general heat it bears by the thermometer—could a choice be made, at about 50 degrees of heat, all weathers. If your store-house is above ground, a northern aspect is best; however, a cellar is infinitely preferable.

## EXCISE LAWS RELATIVE TO BREWERS.

---

Every person who becomes either a common brewer, or victualler brewing his own beer, should at least have some knowledge of the excise laws relating thereto ; I give a brief abstract of the most useful and prominent, and really necessary to be known.

Every person becoming a common brewer, must enter the same at the next excise office, and pay thirty shillings for a licence ; he must also in this entry, enter his utensils, brewhouse, store-rooms, &c. He must not alter or erect other utensils without notice to the officer, under a penalty of £200, and forfeiture of the utensils. The same applies to a victualler.

Keeping table beer in any vessel larger than three barrels, £200 penalty.

N. B. If he has a larger vessel or vat he may wish to sweeten, he is allowed to put in sours by giving notice to the officer, for a certain time.

Strong or X beer, to be kept separate from table; if found in the same room or store, £50 for each and every barrel.

Table beer to have a Roman T on the cask, on pain of having it charged X beer, and forfeiting £50.

Mixing T B with X, or strong beer. Penalty £50 for each offence.

Increasing the quantity of a gyle after declaration\* £150 penalty.

Increasing the tun after declaration, either with weaker worts or liquor, £200 penalty.

\* Declaring—is when the Exciseman calls upon you to say which is strong, and which is table beer.

May break in stale beer, or return, giving notice to the officer.

Charging more for T B than regularly allowed, or for carriage of T B; penalty £100.

Private pipes, or conveyances of any sort, not shewn to the officer; penalty £200.

Not to use molasses, sugar, or honey; penalty £100.

Any substitute used for hops, £20.

Using any drug or drugs, or using other than malt and hops; penalties £100, and forfeit all the utensils.

Not to disturb the officer in his duty; penalty £50.

Officers are to give the guage and charge, if required.

Overcharge by the officer may be remedied by next justice of the peace.

Private persons, without licence, must not brew for any other family, where there is a common brewhouse, on pain of penalty £50.

Private persons not to lend their utensils to other private persons; penalty £50.

Victuallers not to use molasses, honey, or other matter than malt and hops; nor to have more than ten pounds of such ingredients on their premises; penalty £100 and three months' imprisonment.

Victuallers not to move any part of the gyle till the whole is worked off; penalty 40s. per barrel.

Victuallers are to sell ale and beer in stamped vessels; penalty not less than 10s. or more than 40s.

Victuallers cannot detain persons for their reckoning if they have been served with beer or ale in unstamped vessels.

By the 58 Geo. III. which repeals the act licensing the use of colour, there is a sweeping clause, which puts on penalties of £200 on every different drug found on the premises, and imposes a penalty of £500 on the druggist who may have sold such drug or drugs.

*The following ACT was passed in consequence of the many FRAUDS practised by FRAUDULENT BREWERS.*

An Act for altering and amending the Laws of Excise for securing the Payment of the Duties on Beer and Ale brewed in *Great Britain*.

[19th April, 1821.]

WHEREAS the Laws made for securing the Duties of Excise upon and in respect of Beer have been found insufficient for the Purposes thereby intended; be it therefore enacted, &c. &c. That from and after the Fifth Day of *July*, One thousand eight hundred and twenty-one, every Brewer of Beer for Sale shall and is hereby required to enter, or cause to be entered, in a Book or Paper to be delivered to him by the Officer of Excise for that Purpose, and at

all Times kept by such Brewer in some public and open Part of his entered Premises ready for the Inspection of the Officers of Excise, the Quantity of Malt which he or she shall intend to use in his or her next Brewing, together with the Day when such Brewing is intended to be made, and that such Entry shall be so made before any Part of such Malt shall be mashed, or any Water or other Liquor put thereto, or mixed therewith ; and that every such Brewer shall at the Time of making such Entry write, or cause to be written, in such Book or Paper, opposite such Entry as aforesaid, the Date when such Entry was so made as aforesaid ; and that if any such Brewer shall refuse or neglect to make such Entry as aforesaid, or shall cancel, obliterate, or alter, or cause or suffer or permit to be cancelled, obliterated, or altered, any such Entry, or shall make any untrue Entry therein, or shall not at all Times keep such Book or Paper in some public and open Part of his entered Premises ready for the Inspection of the Officers of Excise, or shall mash, or

put to or mix any Malt with Water or other Liquor before such Entry shall be made as aforesaid, he or she shall, for every such Offence, forfeit and lose the Sum of Two hundred Pounds.

II. And be it further enacted, That no such Brewer as aforesaid shall remove or cause to be removed his or her Malt which has been mashed, or any Part thereof, from the Tun or Vessel in which the same has been mashed, until the proper Officer shall have gauged and taken an Account of the Quantity of such Malt, or use, cause, permit, or suffer to be used, any Means whatever to prevent or hinder such Officer or Officers of Excise from taking an accurate Gauge and Account thereof; and that if any Person or Persons shall remove, or cause, suffer, or permit to be removed, any Part of such Malt as aforesaid, before such Officer shall have gauged and taken an Account of the same, or shall use any Means as aforesaid, or obstruct, hinder, molest, or prevent any such Officer or Officers in or from so doing, or

in Execution of any of the Powers and Authorities given or granted to him or them by this Act, every such Person or Persons shall severally forfeit and lose for every such Offence the Sum of Two hundred Pounds: Provided always, that no such Brewer or other Person shall incur the Penalty aforesaid, for removing any such Malt as aforesaid, after all the worts have been drawn off from such Malt without any Officer having gauged and taken an Account thereof as aforesaid, if such Brewer shall at the Time of making such Entry as aforesaid have specified in such Book or Paper and Entry as aforesaid the Time for such Officer to attend to take such Gauge and Account as aforesaid, and such Officer or Officers shall not attend for that Purpose within an Hour after the Time so specified.

III. And be it further enacted, That it shall and may be lawful for any Officer or Officers of Excise to take a Sample or Samples, not exceeding One Pint at each Time, of any Wort or Worts at or on the

entered Premises of any such Brewer as aforesaid, at any Time or Times after the same shall have been drawn from the Mash Tun, as often as may be necessary for the Purpose of ascertaining the specific Gravity thereof; returning such Sample and Samples to such Brewer after the specific Gravity thereof has been ascertained, or paying him or her for the same at and after the Rate of the current Price of Beer made from such Wort or Worts; and that no such Brewer shall ferment or mix, or cause, permit, or suffer to be fermented or mixed, any Wort or Worts with any Yeast or other Matter or Thing for or occasioning Fermentation, until the proper Officer or Officers has or have taken such Sample and Samples as aforesaid; and that if any such Brewer as aforesaid shall ferment or mix, or cause, permit, or suffer to be fermented or mixed, any of his or her Wort or Worts with any Yeast or other Matter or Thing for or occasioning Fermentation, until such Officer or Officers has or have taken such Sample and Samples as aforesaid, he, she, or they shall forfeit and lose

for every such Offence the Sum of Two hundred Pounds: Provided always, that no such Brewer as aforesaid shall incur the Penalty last aforesaid, for fermenting or mixing any of his or her Wort or Worts with Yeast, or any other Matter or Thing occasioning Fermentation, after the Expiration of One Hour after such Wort or Worts has or have been run or drawn off from the Copper in which the same has or have been boiled with Hops, without any Sample being thereof taken as aforesaid, if such Brewer shall at the Time of making such Entry as aforesaid have specified in such Book and Paper and Entry as aforesaid the Time for such Officer or Officers to attend to take and draw such Sample and Samples as aforesaid, and such Officer and Officers shall not attend for that Purpose within an Hour after the Time so specified.

IV. And be it further enacted, That there shall be delivered by the proper Officer of Excise to every such Brewer as aforesaid, and to every Dealer in Beer or

Ale, a Book or Books to be prepared with proper printed Forms and Titles for the Purpose herein-after mentioned, and kept by every such Brewer and Dealer in some public and open Part of his or her entered Premises ; and that from and after the said Fifth Day of *July*, no Beer or Ale shall be sold, sent out, or delivered by the Brewer thereof, or by any Dealer therein, to any Brewer, Victualler, Dealer in or Retailer of Beer or Ale, or other Person or Persons, without a Certificate filled up and cut out progressively from the printed Forms for such Certificates contained in such Book as aforesaid, to be left therewith, signed by such Brewer or Dealer selling, sending out, or delivering the same, or some Person on his Behalf, certifying the Date, Quantity, and Quality of such Beer or Ale, to whom sold, and that the Duty has been duly charged thereon, and at what Place, at what Rate, and upon what Person such Charge was made ; and that the Brewer or Dealer selling, sending out, or delivering any such Beer or Ale as aforesaid, shall at the same Time

make a correspondent Entry thereof, containing the same Particulars, in such Book as aforesaid; and that such Book, with such Entries so made therein as aforesaid, shall at all times be open and exposed in the entered Premises of such Brewer or Dealer as aforesaid, to the Perusal of any Officer or Officers of Excise surveying the said Premises, and shall be delivered by such Brewer or Dealer to any Officer or Officers of Excise upon Demand; and if any such Brewer or Dealer as aforesaid, shall at any Time sell, send out, or deliver any Beer or Ale to any Brewer, Victualler, Dealer in or Retailer of Beer, or other Person or Persons as aforesaid, without delivering such Certificate as aforesaid, or making such Entry in such Book as aforesaid, or shall convey away or conceal any such Book or Books, or cancel, obliterate, destroy, or tear out any Leaf or Leaves therefrom, or Entry or Entries therein, or shall make any false Entry or Entries therein, or shall oppose, molest, obstruct, or hinder any Officer or Officers of Excise in inspecting any such Book, or any such

Entry or Entries therein as aforesaid, or shall at any Time neglect or refuse, when required, to give up to any Officer or Officers such Book or Books as aforesaid, every such Brewer or Dealer as aforesaid so offending shall for every such Offence severally forfeit and lose the Sum of Two hundred Pounds.

V. And be it further enacted, That from and after the said Fifth Day of *July*, if any Officer or Officers of Excise shall discover and find any Increase in the Stock of any Brewer, Victualler, Dealer, or Retailer, over and above the Quantity of Beer or Ale which the Officer found in such Brewer, Victualler, Dealer, or Retailer's Custody at the Time of the last preceding Survey upon such Brewer, Victualler, Dealer, or Retailer, and which Increase such Brewer, Victualler, Dealer, or Retailer shall not thereupon satisfactorily account for, as arising from Beer duly received with such Certificate as aforesaid, or brewed by himself or herself, and on which the Duty has been duly

charged, such Increase, or a Quantity of Beer or Ale equal thereto, shall be deemed and taken to be Beer or Ale brewed without Payment of Duty, and shall be forfeited and lost; and a Quantity equal to the increased Quantity shall and may be seized and taken by the Officer or Officers of Excise who shall discover the same, from and out of such Stock; and the Person or Persons, in whose Stock such Increase shall be discovered and found, shall for each and every such Offence forfeit and lose the Sum of Two hundred Pounds.

*We have now to congratulate the Public Trade, that some Amelioration has taken Place in regard to Licensing, by the following Act, the Abstract of which is here given.*

---

An Act for amending the Laws for regulating the Manner of licensing Alehouses in that Part of the United Kingdom called *England*, and for the more effectually preventing Disorders therein.  
[26th July, 1822.]

WHEREAS the several Statutes now in force for regulating the Manner of licensing Persons to keep Alehouses, &c. &c. All Persons to whom a Licence is granted, shall enter into a Recognizance for the Sum of Thirty Pounds, with One sufficient Surety in the Sum of Twenty Pounds, or Two sufficient Sureties in the Sum of Ten Pounds each. Provided al-

ways, that no Police Officer, Patrole, Constable, or Headborough shall be Surety for any Innkeeper, Alehouse Keeper, or Victualler under this Act.

And for the better preventing the granting of Licences or Authorities to unfit and improper Persons, to keep Alehouses or Victualling Houses, or to sell Ale, Beer, or other exciseable Liquors by Retail, and the Occurrence of disorderly Conduct in such Houses; be it further enacted, That no Licence or Authority for such Purposes shall be granted to any Person not thereunto licensed or authorized the Year preceding, unless such Person shall produce, at the General Annual Meeting of the Justices or Magistrates to be held for that Purpose, a Certificate under the Hands of the Parson, Vicar, or Curate, or of the major Part of the Churchwardens, Chapelwardens, and Overseers of the Poor, and of Four reputable and substantial Householders and Inhabitants, or under the Hands of Eight respectable and substantial Householders

and Inhabitants of the Parish or Place where the Person applying for such Licence or Authority shall have last inhabited or dwelt for a Space of Six Months ; which Certificate shall set forth the Number of the House, and the Name of the Street, or other true Description of the House where such Person so dwelt, and also whether he or she was there a House-keeper or an Inmate, and whether such Person, in such last-mentioned Parish or Place, kept an Alehouse or Victualling House, and if so, the Sign of such House ; and shall also set forth, that such Person is of good Fame, sober Life and Conversation, and a fit and proper Person to be entrusted with a Licence for the Purposes aforesaid ; and it shall be mentioned in every such Licence or Authority, to be granted to any Person not licensed at the last General Licensing Day, that such Certificate was produced ; and in case such Certificate, in the Form and signed in the Manner aforesaid, shall not, on the Occasions aforesaid, be produced, or the Licence to be granted in such last-mention-

ed Cases shall omit to state that such Certificate was so produced, such Licence or Authority shall be null and void.

That the Recognizance, in the Form and with the Surety and Sureties hereby required to be entered into on granting Licences or Authorities to Persons to keep Alehouses or Victualling Houses, or to sell Ale, Beer, or other exciseable Liquors by Retail, and the Certificate in the Form and with the Signatures hereby required to be produced, by Persons not licensed for those Purposes the preceding Year, shall also be entered into and produced by Persons applying for and obtaining such Licences or Authorities, at any Special Meetings of the Justices to be holden for those Purposes, pursuant to the Directions of the Statute made and passed in the Thirty-second Year of the Reign of His late Majesty King *George* the Third.

That the Register or Calendar required by Law to be kept by Clerks of the Peace, of Recognizances to be taken and return-

ed by Justices of the Peace, on granting such Licences as aforesaid, shall contain the Names and Places of Abode of the several Sureties who shall so enter into such Recognizances; and that as well the Entries of the Names of such Sureties, as of the other Particulars of such Recognizances already required to be registered, shall and they are hereby required to be entered by the respective Clerks of the Peace, or other Persons acting as such, to whom such Recognizances shall be returned; and that for every Recognizance there shall be paid, by the Clerk or Clerks to the Justices taking such Recognizances, to the said Clerk of the Peace, as their Fee for filing or recording the said Recognizances and for making such Entry thereof, and of the Names or Name of the Sureties or Surety to be thereby bound, and for making and delivering Copies of the said Register, as by Law required, the Sum of Two Shillings and no more, which shall be paid to the Clerks of the said Justices by the Persons licensed, over and above the Fees payable by Law to the

said Justices' Clerks ; and it shall be lawful for any Person or Persons on Application, at all seasonable Times, to see, inspect, and examine every such Register, so to be kept by the said Clerks of the Peace, on Payment or Tender made by the Person or Persons requiring the same, to such Clerks of the Peace, of the Sum of One Shilling for every such Inspection or Examination.

Clerks to Justices to be paid 5s. for filling up the Licence, &c.

Executors of licensed Persons may continue the Licence, on entering into the same Recognizances.

All General Meetings to be in September.

Provided always, That all Persons who hold Licences to sell Ale, Beer, and other Liquors by Retail, which would expire at a different Period of the Year from that at which they will expire after the passing

of this Act, shall be allowed in the Payment of their Duties, upon the first Renewal of their Licences under this Act, for so much of their current Year as shall not have then expired.

That from and after the passing of this Act, every licensed Person selling Ale, Beer, or other exciseable Liquors by Retail, in that Part of the United Kingdom called *England*, who shall be lawfully convicted of any Offence against the Condition of any subsisting Recognizance entered into by such licensed Person, or against the Tenor of any Licence granted and now subsisting, or hereafter to be granted, or against the Condition of the Recognizance by this Act required to be entered into by such licensed Person, or against the Tenor of the Licence to be granted by virtue of this Act, shall for every such Offence forfeit and undergo the several Penalties and Punishments and Disabilities herein-after mentioned, and provided in that Behalf, instead and in lieu of the several pecuniary and other

Punishments and Disabilities which they are now or immediately before the passing of this Act were liable or subject to by any Law then in force; (that is to say), for the First Offence a Sum not exceeding Five Pounds, with the Costs and Expences of convicting such Offender; and in case the said Penalty, with the Costs and Expences of convicting such Offender, shall not be paid within the Space of Fourteen Days next after such Conviction, that then the Offender shall suffer Imprisonment for the Space of One Month, in the Common Gaol or House of Correction for the County, Riding, City, Liberty, Town Corporate, or Place where such Conviction shall take place, unless he or she shall sooner pay such Penalty, and the Costs, Charges, and Expences of such Conviction, and executing the same; and for the Second Offence a Sum not exceeding Ten Pounds, and also the Costs and Expences of convicting such Offender; and in case such Penalty, with the Charges and Expences of convicting such Offender the Second Time, shall not be paid with-

in the Space of Seven Days next after such Second Conviction, that then the Offender shall suffer Imprisonment for the Space of Two Calendar Months, in such Common Gaol or House of Correction as aforesaid, unless he or she shall sooner pay such Second Penalty, and the Costs, Charges, and Expences of such Second Conviction, and executing the same ; and for the Third Offence against the Tenor of such Licence or Recognizance, it shall be lawful for any One Justice of the Peace of any County, Riding, City, Liberty, or Town Corporate, or Place wherein such Licence shall be granted, and it is hereby required of him, upon Complaint or Information on Oath that such licensed Person hath committed such Third Offence, to issue a Summons under his Hand and Seal, requiring such Person so complained of or informed against for such last-mentioned Offence to appear at the next General or Quarter Sessions of the Peace for the County, Riding, City, Liberty, Town Corporate or Place wherein the Person so complained of or informed against shall

reside, then and there to answer to the Matter of such Complaint or Information, and also to bind the Person or Persons who shall make such Complaint or Information, or any other Person or Persons, in a Recognizance to appear at such General or Quarter Session, and give Evidence against such Person so complained of or informed against; and the Justices of the Peace in their General or Quarter Sessions of the Peace shall have Power to direct the Jury which shall attend at such Sessions for the Trial of Traverses, or some other Jury of Twelve honest and substantial Men, to be then and there impannelled by the Sheriff, Bailiff, or other Chief Officer, without Fee or Reward, to inquire of the Misdemeanor charged in the said last-mentioned Complaint or Information; and if such Jury shall find that the Person so complained of or informed against hath committed any Act against the Tenor of the said Recognizance, such Act being specified in the said Complaint or Information, and such Person so complained of or informed against having been

Twice previously convicted for Offences against the Tenor of the said Licence and Recognizance, it shall and may be lawful for the Court at such General or Quarter Sessions to adjudge such Person guilty of a Third Offence against the Tenor of and a Breach of the said Recognizance, which Verdict and Adjudication shall be final to all Intents and Purposes ; and thereupon the said Justices shall have Power and Authority to punish the Party so to be convicted by Fine, not exceeding the Sum of One hundred Pounds, or at the Discretion of the said Court to declare the said Recognizance so entered into by the said Offender to be forfeited, or immediately to adjudge the Licence or Authority granted to such Offender to be forfeited and void ; and on such last-mentioned Adjudication on such Verdict, such Licence shall from thenceforth be void accordingly, and every Licence then held by such Offender to sell Spirituous Liquors, Cyder, Perry, or *British* Sweets, shall thereupon also be void ; and the said Person, the Condition of whose Recognizance

shall be so adjudged to be broken and forfeited, shall from and after such last-mentioned Adjudication be utterly disabled to sell Ale, Beer, Cyder, Perry, Spirituous Liquors, or Strong Waters; for the Space of Three Years, to be computed from the Time of the Offence committed for which such Adjudication shall be pronounced; and any Licence or Licences granted or to be granted to such Person during such Term, to be computed as aforesaid, shall be void and of none effect; provided, that the said Justices may, at the Request of the Prosecutor or Party so complained of or informed against, or either of his or her Sureties, and upon sufficient Cause shewn, adjourn the Hearing and Trial of the said Complaint or Information to the then next General or Quarter Sessions of the Peace, when the same shall be finally determined: Provided always, that no Recognizance under this Act shall be declared to be forfeited, unless upon being directed so to be by the said Court of General or Quarter Sessions, upon such Third Conviction as aforesaid; and provided also,

that if such licensed Person or Persons so complained of or informed against for such last-mentioned Offence shall not appear at the next General or Quarter Sessions of the Peace pursuant to the Summons, it shall and may be lawful for the Justices in their General or Quarter Sessions assembled, on Proof of the Service of such Summons, to inquire into the Matter alledged, and on Proof thereof to proceed against the Person or Persons so summoned and not appearing, in the same Manner as if such Person or Persons had appeared pursuant to his, her, or their Recognizance.

That it shall and may be lawful to and for Two Justices of the Peace for the Time being of the County or Place where any of the Offences against this Act for the Commission of which pecuniary Penalties are imposed shall be committed, to hear and determine the same Offences in a summary Way, which same Justices of the Peace are hereby authorized and required, upon any Information exhibited or Complaint made in that Behalf to or before

them, to summon the Party or Parties accused, and also the Witnesses on either Side (if they shall be required to summon any such Witnesses), and upon the Appearance or Contempt of the Party or Parties accused by not appearing, to proceed to examine and hear the Matter in a summary Way, and also to examine such Witnesses upon Oath as shall be produced therein, (which Oath the said Justices are hereby empowered to give and administer), and to give their Judgment thereon; and in case they shall convict the Party or Parties so accused or complained against of the Offence laid to his, her, or their Charge, and such Party or Parties so convicted shall refuse or neglect to pay the Penalty or Penalties for which he, she, or they shall stand convicted within the Time herein-before mentioned for that Purpose, together with the Costs of such Conviction or Convictions, to be assessed, settled, and ascertained as aforesaid, that then, and in every such Case it shall and may be lawful for such Justices, and they are hereby authorized and required, to issue

their Warrant or Warrants under their Hands and Seals for the apprehending and committing to the Common Gaol or House of Correction as aforesaid every such Offender, for such Time and in such Manner as the Nature of the Offence shall require, according to the Provisions aforesaid and the true Intent and Meaning of this Act.

Persons summoned as Witnesses not attending, shall be fined 40s.

That if any Person or Persons shall think himself, herself, or themselves aggrieved by the Judgment or Conviction of any Justices of the Peace for any of the Offences aforesaid, for the Commission of which a pecuniary Penalty is annexed, and shall give Security to the Satisfaction of such Justices of the Peace for the Payment of the Penalty, Costs, and Expences to be expressed in the said Conviction, within Twenty-four Hours after the same shall be made, that then and in every such Case after such Security given, and

not otherwise, it shall and may be lawful to and for such Offender or Offenders to appeal from and against such Conviction or Convictions to the Justices of the Peace assembled at the next General or Quarter Sessions of the Peace to be held for such County, Riding, Division, Liberty, City, Town, or Place, unless such Sessions of the Peace shall be held within Six Days or less next after such Conviction or Convictions shall be so had or made, and in that Case to the Justices of the Peace to be assembled at the next Sessions after such first-mentioned Sessions, and not afterwards ; and that the Justices of the Peace assembled at such Sessions shall thereupon proceed to hear and determine the Matter of every such Appeal, and their Judgment thereon shall be final and conclusive to all Intents and Purposes whatsoever ; and the Justices of the Peace so assembled at such Sessions are hereby authorized and required to award such Costs as to them shall appear just and reasonable to be paid by either Party, not exceeding in the whole the Sum of Five Pounds on any one Appeal.

Convictions to be registered and stated as first, second, or third offence.

That from and after the Tenth Day of *October* One thousand eight hundred and twenty-three, no Licence or Authority shall be granted to any Person whatever in that Part of the United Kingdom called *England*, by the Justices of the Peace, or Persons acting as such, to retail Ale, Beer, or other exciseable Liquors, in any House or Place which shall not have been used for such Purpose or Purposes by virtue of a Licence which shall have been granted at a preceding General Annual Meeting of the Justices, unless the Person intending to apply for such Licence or Authority shall give Notice in Writing to the Clerk or Clerks to the Justices at such General Meetings, Three Calendar Months prior to the General Annual Meeting of the Justices of the Peace for granting Licences for the Place in which the House shall be situated, for which such Licence shall be applied for, and shall affix or cause to be affixed Three Copies of such

Notice, written in a fair and legible Hand, on the principal Door or most conspicuous Part of the House for which such Licence is intended to be applied for, and on the Door of the Church of the Parish in which such House shall be situated, on Three several Days within the Months of *May* or *June*, between the Hours of Ten of the Clock in the Forenoon and of Four of the Clock in the Afternoon, and between each of which Days of affixing such Notices the Space of Seven Days shall elapse; which Notice, and the Copies thereof so to be affixed, shall be signed by the Party interested in such House, and intending to make such Application as aforesaid, or his, her, or their Agent thereunto authorized; and every such Notice shall state and set forth the Situation of the said House in a true and particular Manner, together with the Rate of Building thereof, where any such Rate of Building exists or is prescribed, and the Name, Place of Abode, and Description of the Party so applying, and also the Name and Place of Abode of the Person proposed to

be licensed therein ; and every Licence to be granted to sell Ale, Beer, or other Liquors by Retail in such new House or other Place, not having been used for any of the Purposes aforesaid by virtue of a Licence granted the preceding Year, without such previous Notice having been given as aforesaid, shall be void to all Intents and Purposes.

No Person being Brewer, Distiller, or any way Interested, shall Act as a Justice of the Peace under this Act, on Penalty of £100.

No Person shall hold a Licence who is a Constable, Headborough, Police Officer or Patrole.—Penalty on a licensed Victualler for serving such Offices, £10.

That from and after the Tenth Day of *October* One thousand eight hundred and twenty-two, all Persons keeping Common Inns, Alehouses, or Victualling Houses, and retailing Ale and Beer, shall sell the same in and from their Houses by a full

Ale Quart, Pint, or Half-pint, made of Pewter, sized to the Standard, and stamped or marked to be of due Size according to the Standard, either from the Exchequer or from some City, Town Corporate, Borough, or Market Town, where an Ale Quart, Pint, or Half-pint, made from the said Standard, shall be kept for that Purpose, and shall not retail any Ale or Beer in any other Vessels than such stamped Pewter Ale Quarts, Pints, and Half-pints, unless such Ale or Beer shall have been first measured in and by such stamped Pewter Ale Quart, Pint, or Half-pint, in the Presence of the Guest or Customer purchasing the same, under pain of forfeiting for every Offence a Sum not exceeding Forty Shillings (together with the Costs of Conviction), to be recovered within Thirty Days next after the committing of such Offence, before any Two Justices of the Peace acting for the County or Place in which such Offence shall have been committed, the One Half to be paid to the Person who shall prosecute or sue for the same, and the other Half to

the Poor of the Parish or Place where such Offence shall have been committed ; and in case of the Nonpayment thereof, they shall cause the same to be levied upon Goods and Chattels of the Offender, by Warrant of Distress under their Hands and Seals.

That from and after the passing of this Act, if any Brewer or Wholesale Dealer in Ale or Beer, in that Part of the United Kingdom called *England*, shall sell and deliver to any Innkeeper, Alehouse Keeper, Victualler, or other Person whomsoever, any Ale or Beer, in Barrels, Casks, or other Vessels which shall not be able to contain the full Quantity of Ale or Beer, for which the said Brewer or Wholesale Dealer in Ale or Beer shall charge the Purchaser thereof, such Brewer or Wholesale Dealer in Ale or Beer shall forfeit and pay a Sum not exceeding Five Pounds for every such Barrel, Cask, or other Vessel so deficient in Size as aforesaid, together with the Costs of Conviction, to be recovered by Information before One Jus-

tice of the Peace, within Thirty Days next after the making of such Charge, who, in case of the Nonpayment thereof, shall cause the same to be levied upon the Goods and Chattels of the Party so offending.

Provided always, That nothing herein contained shall extend or be construed to extend to alter the Time or Times of granting Licences for keeping Common Inns or Alehouses in the City of *London*.

Provided always, That nothing in this Act contained shall extend to alter or in any manner to affect any of the Rights or Privileges of the Universities of *Oxford* or *Cambridge*, or the Powers of the Chancellors or Vice Chancellors of the same, as by Law possessed under the respective Charters of the said Universities.

This Act shall commence and take place from the passing thereof, and from thence shall continue and be in force for and during the Term of Three Years, and from thence to the End of the then next Session of Parliament.

We have now to reason a little on these, I must say, violent penalties. Malt and hops are vegetables, and there are many other vegetable extracts and decoctions that may be made greatly to the addition, at least of flavour. There is no penalty on a private brewer using any thing he pleases, and surely it has been a mortifying circumstance to see a chemist at Exeter, employing persons all through the west and north districts, posting bills, offering a substitute for hops (they being at thirty guineas per cwt.) at 1s. per pound. The composition was readily known—a mixture of quassia, powdered, a small portion of gentian root, and the remainder camomile flowers. Nothing can be more wholesome. But why should the public brewery be thus shut out, while the public itself is abusing the brewer, and stigmatising every individual concerned—shall have the liberty of running to that very subterfuge they so loudly condemn? I have said before, and I now repeat it, that there are no substitutes in reality for malt and hops that a brewer

can make any advantage of—saving in such times as the two years 1817 and 1818; and then in the running gyles which were to be consumed in a month, he ought to have shared in the benefit of a substitute, or it ought not to have been allowed to others. I will fairly state, that if I were a private man brewing for my family, I would not exclude Spanish juice—ginger—coriander seed—cardamon—carraway seed—dried orange peel, powdered—and other stimulants and flavours—but that any of these will become succedaneum for malt, I utterly deny.

All the drugs that can be used, must appear in their true shapes, namely, stimulants—flavours—and narcotics. The last are unwholesome, and should be driven with every care from the public breweries—they are opiates in various shapes—they cause a false drunkenness, or rather a true delirium—they are impositions on the public that ought not to be endured, and the law should, to its utmost force,

be exercised to prevent their use in the common breweries. I shall now proceed to point out such drugs as are said to be used, observing on their several qualities.

## ON DRUGS.

*The Porter Extract.*

This I consider a most excellent and desirable composition—it is the Spanish Juice, concentrated to a very considerable degree of real strength, combined with various stimulatives, and gives both colour and flavour to porter. It is only to be bought at certain chemists, whose charge is very high.

*Sugar.*

This can hardly be called a drug; but as it is a great assistant from its saccharine qualities, it may be used as before directed, in private families when malt is very dear. Indeed, the legislature has at times permitted the use in public breweries.

*Spanish Juice.*

This is of two sorts, the one grown in this country, and the other imported from Spain and Italy. There is no comparison between them, the foreign juice being so eminently superior; it gives flavour and colour to porter; and in the absence of the extract, I would, if brewing privately for my family, a brown beer, or for table beer, always use a portion of juice; say, a pound to a quarter of malt, and so in proportion.

*Coriander Seed.*

This is an excellent flavour; not to be used too freely. The seed should be ground or pounded. It is a very excellent stomachic, and one of the stimulants I would use in private brewing, both for flavour and real excellence.

*Carraway Seed.*

This is a fine aromatic—warm and stomachic—gives a beautiful flavour to ale. At the moment you are about to cleanse,

take half an ounce, finely powdered, in proportion to one quarter of malt—mix it up with your flour and salt, and rouse it well in your tun. This quantity, however small, will give a most delightful flavour to your ale.

#### *Orange Pea.*

This is ground orange peel, dried. A small quantity used in the copper before turning out, gives a very fine flavour to the gyle. There can be nothing pernicious in its use.

#### *Ginger.*

This common and useful stimulant is used either in the copper or the tun. It is said, when used in the copper, to cause a flatness in the gyle. However, as a stomachic, its well known qualities stand in no need of my recommendation.

#### *Liquorice Root.*

This is the root grown in this country, and known by the name of stick liquorice. It is dried, and ground to a

powder, and is used in ale brewings to give a sweet flavour. After all, it is useless.

*Salt of Tartar.*

This is used in many families when beer grows too forward or stale. You put a small quantity at the bottom of your jug, and draw your beer upon it. This serves in a measure to correct the acidity.

*Calcined Oyster Shells.*

A very powerful alkali, and is sometimes used to recover beer that has got too stale. You will procure the powder at the chemists. Mix it up in balls with treacle and flour, well dried, and put two or three of these balls as large as the bung-hole will admit; after a day bung down your beer. I have heard this highly extolled, but I confess I know but little of it.

*Cocculus Indicus.*

One of the class of drugs said to be used in the brewery, and certainly highly deleterious; its qualities are narcotic, and

create a false stimulus, by which drunkenness is produced without any real strength from the beer—it creates the most violent head-aches, and other diseases. Indeed, it deserves the reprobation of the public, and the just punishment of the legislature, whenever discovered in a brewery.

*Opiates.*

Have been made up by certain drug people, in various shapes, and recommended by them as substitutes for malt ; they are justly prohibited, and cannot be too much condemned.

*Grains of Paradise.*

Are of a warm and stimulating nature, creating an unnatural heat in the mouth and throat ; giving a false strength to your drink, and causing a continual drought.

*Capsicum.*

Another stimulative, very hot, and pungent ; much better left out.

*Tobacco.*

I have heard this much extolled, but

never tried it ; it is of course hot and pungent, giving colour to your gyle, though, I should présume, a very unpleasant flavour. This is one of the stimulants I should avoid.

*Quassia.*

A most excellent bitter. It is said by *Quincey*, in his Dispensatory, to have been discovered by a negro slave, in the island of Surinam, during the time of a malignant fever. The decoction of this wood proved almost a specific, and brought it into universal practice. When used in the brewery it can only serve for beers to be immediately used. However wholesome the bitter, yet that oily glutinous flavour, so well known in the quality of the hops, is entirely wanting in this wood, and no dependence can be placed in the keeping of the beer.

*Gentian Root.*

Another fine aromatic bitter ; and when necessity drives the private brewer to find a substitute for hops, these two, properly mixed and ground, are an excellent succedaneum.

*Ginseng.*

A root imported from the East—a most powerful tonic, and excellent bitter—may always be used to advantage.

*Calomus Aramaticus.*

Is also another excellent bitter, very wholesome, and stomachic. These are the bitters that private brewers may resort to when hops become six shillings per pound.

*Hartshorn Shavings.*

About a quarter of a pound to a quarter of malt, thrown into the copper when full boiling, serves to make the beer very fine ; or ivory dust will answer the same, and is cheaper.

*Salt.*

Every experienced brewer knows the value of salt. It is cleansing, detergent, and assists to soften hard liquor ; if brewing with spring water, throw into the copper a handful or more of salt, according to the quantity.

*Colouring.*

Formerly the *essentia binæ*, or burnt sugar, was used in most porter breweries; afterwards colour was allowed by the excise; but the act was repealed in 1817. Colouring is made from boiling sugar in an iron pot to a certain consistence, and is certainly desirable in brewing brown beers, and gives both colour and flavour. Private persons may still use colour. About a pint to a quarter of malt, thrown into the copper in full ebullition just before you turn out. Elderberry juice, boiled down with strong coarse sugar, makes excellent colouring.

There are many other drugs said to be used in the brewery; however, I have given you a very fair sample, and I give you my word, I consider little of them. Those I consider of some value, I have remarked as I went on, and I fairly say, that if I were brewing as a private brewer, I would use the Spanish juice in brown beers; in ales I would use a little flavour,

as I have recommended ; but avoid all deleterious matters, and false strength. I had forgot to say, that honey is an excellent assistant in ale, say two pounds to a quarter of malt ; put it into the copper just before you turn out the wort, only long enough to melt and incorporate with the mass ; the same by every thing you use in the copper, thrown in when it is in full ebullition ; by this means nothing adheres to the bottom. Thus I have exposed, before the young brewer, both the bane and antidote, and beg leave again to assure him, that he will ever find honesty the best policy.

---

I have thus given general and plain directions to the learner—to the practical victualler, brewing his own beer (a class of men that cannot be too much encouraged) —and to the private gentleman, in the lessons of brewings I have given, I trust much saving will be made—as a hogshead from eight bushels of malt is as little, if

fairly brewed, as ever ought to be taken ; the runs of beer shorter than this I look upon as absolute waste.

Licensed victuallers pay the full excise upon the beer they brew, namely, ten shillings per barrel on table beer ; while the common brewer is allowed a drawback on the duty of ten pence in ten shillings on strong beer, and two pence in two shillings on table beer. I am very fearful the country victualler, who brews his own beer, too often neglects his gauge, and in many instances does not understand it at all, but wholly relies upon the exciseman. This is wrong, because every brewer should count his costs before he sets to work ; for instance, malt this month may be at eight shillings per bushel, and shortly after at ten ; thus, he should say, I am about to brew eight bushels, more or less, so many hops, and so much duty. Now these will cost me so much, therefore I must draw a length from them for profit to meet my other expences. This is a matter of the utmost consequence to the brewer.

I have thus endeavoured by plain directions to give instructions, which, if fairly followed, cannot but be serviceable; and whoever will make himself master of these lessons, will not be at a great loss if put into a larger concern.

I conclude by giving you the excise-man's charge for twenty barrels—in the common brewery, and the victualler—you should observe, that the officer has a right to take the length where he can best find it.

## BARRELS X BEER.

*Common Brewer.**Victualler.*

<i>£. s. d.</i>			<i>£. s. d.</i>		
1 bar.	. .	9 2	1 bar.	. .	10 0
2 do.	. .	18 4	2 do.	. .	1 0 0
3 do.	. .	1 7 6	3 do.	. .	1 10 0
4 do.	. .	1 16 8	4 do.	. .	2 0 0
5 do.	. .	2 5 10	5 do.	. .	2 10 0
6 do.	. .	2 15 0	6 do.	. .	3 0 0
7 do.	. .	3 4 2	7 do.	. .	3 10 0
8 do.	. .	3 13 4	8 do.	. .	4 0 0
9 do.	. .	4 2 6	9 do.	. .	4 10 0
10 do.	. .	4 11 8	10 do.	. .	5 0 0
11 do.	. .	5 0 10	11 do.	. .	5 10 0
12 do.	. .	5 10 0	12 do.	. .	6 0 0
13 do.	. .	5 19 2	13 do.	. .	6 10 0
14 do.	. .	6 8 4	14 do.	. .	7 0 0
15 do.	. .	6 17 6	15 do.	. .	7 10 0
16 do.	. .	7 6 8	16 do.	. .	8 0 0
17 do.	. .	7 15 10	17 do.	. .	8 10 0
18 do.	. .	8 5 0	18 do.	. .	9 0 0
19 do.	. .	8 14 2	19 do.	. .	9 10 0
20 do.	. .	9 3 4	20 do.	. .	10 0 0

## BARRELS T B

<i>Common Brewer.</i>			<i>Victualler.</i>		
	<i>£.</i>	<i>s. d.</i>		<i>£.</i>	<i>s. d.</i>
1 bar. . .	1	10	1 bar. . .	2	0
2 do. . .	3	8	2 do. . .	4	0
3 do. . .	5	6	3 do. . .	6	0
4 do. . .	7	4	4 do. . .	8	0
5 do. . .	9	2	5 do. . .	10	0
6 do. . .	11	0	6 do. . .	12	0
7 do. . .	12	10	7 do. . .	14	0
8 do. . .	14	8	8 do. . .	16	0
9 do. . .	16	6	9 do. . .	18	0
10 do. . .	18	4	10 do. . .	1	0 0
11 do. . .	1	0 2	11 do. . .	1	2 0
12 do. . .	1	2 0	12 do. . .	1	4 0
13 do. . .	1	8 10	13 do. . .	1	6 0
14 do. . .	1	5 8	14 do. . .	1	8 0
15 do. . .	1	7 6	15 do. . .	1	10 0
16 do. . .	1	9 4	16 do. . .	1	12 0
17 do. . .	1	11 2	17 do. . .	1	14 0
18 do. . .	1	13 0	18 do. . .	1	16 0
19 do. . .	1	14 10	19 do. . .	1	18 0
20 do. . .	1	16 8	20 do. . .	2	0 0

As I profess to give instructions generally to country victuallers, as well as private gentlemen, some plain directions in purchasing of Wines, Brandy, and Rum, &c. together with making up Gin and Cordials, come within my province.

---

## WINES.

To country victuallers and innkeepers, the choice of wines is very material—directions or rather advice how to go to market may not only be useful to them, but acceptable to the private gentleman.

It may be observed, that almost all the Red Ports drank in the *country*, have a purple or mulberry-coloured cast; admitting they are as pure as imported, be assured they are—to use the term of the trade—green or young, and by no means the best runs from the fruit, but consist.

of the fruit being washed with an inferior grape in the first making. There are wines that may be bought at thirteen pounds per pipe, short price, paying the duty of 7s. 7d. per gallon; these, mixed with a quarter of a pipe of good full wine, are mostly the wines sent to country victuallers, and readily accounts for wine being offered for 36s. per dozen. These wines may be kept for years in the bottles, but will never be of a fine flavour; and here observe, wines bottled young will never obtain flavour, or fine taste. No time will ameliorate, or render them good. Port wines, to be really fine, should at least be four years in the cask, before they are bottled.

It is not my purpose to speak of the various frauds practised in making up wines, but to advise the best methods of avoiding them. I trust I may be forgiven, when I warn the innkeeper and the private gentleman to avoid the advertising puffs of dealers, who presume to supply the public with fine Red Port at 30s. and 32s. per dozen; fine Sherry at 36s.; Sherries

may be bought almost at any price, from twenty guineas to sixty-five pounds, short price, and so on in proportion. They advertise the best Spirits cheaper than a dealer can go to market for real fine goods. British Spirits the same. They offer gin—fine Old Tom—at 9s. 6d. per gallon, &c. I only condescend to notice them that they may be avoided.

The mode I recommend to the private gentleman, and the respectable innkeeper, is this—for Wines, Port and Sherry, go to the London Docks, applying to a respectable merchant, who, by the bye, should be a real importer. After enquiring for the best vintage on hand—at this moment, 1815 is the best,\* and now becoming very scarce and valuable. He will taste and chuse his Wines, and purchase at what is called *short price*. This is for the Wine itself—138 gallons. If it runs by the excise gauge, 141 gallons, the overplus is the profit; but the duties must be paid on the whole.

\* We have had two incomparable Vintages—namely, 1820 and 1821—the 1820 Wines bear a very high price if genuine.

At this moment, 1821, merchants are asking, short price, for fine (1815) sixty guineas—so that with the custom and excise dues, will make the prime cost, adding expences, at least £120, for a pipe of prime wine.

Suppose a respectable innkeeper is desirous of making purchase of three pipes of Port—if he pay money he will deal accordingly—the usual credit is four months—he has an opportunity of taking one pipe home for which he must pay the duties—the others may lay in bond until it may be convenient to take them home, either as his stock, or his pocket may dictate. The dock dues for rent, &c. are about seven pence per week for a pipe.

For Sherries, the same mode is practised. Fine Sherries, at this time, are very high—seventy guineas I have known asked for a butt of Gordon's Sherry. A butt of real fine Sherry cannot be obtained under sixty pounds—the duty both on Port and Sherry is seven shillings and seven pence per gal-

lon. There is one thing I must not omit—whether innkeeper or gentleman purchaser, living in the country, never to omit ordering a *cradle* for the pipe of wine; it secures the contents from all deprecation, both by land and water, and will fetch near the cost from the country cooper.

Madeiras are very low, and since the introduction of Cape wines, have not been so generally drunk, except in families of the first consequence. A pipe of real East India Madeira may be purchased for sixty pounds, short price. The term, East India Madeira takes its name from captains and officers of Indiamen taking wines from the island of Madeira, and selling them in India, where they are purchased by other officers coming home, after laying perhaps twelve months or more in that hot climate, by which they become ameliorated, and fitted for London consumption. The East India Maderas are to be found in the vaults, Nos. 1 and 2, in the London Docks—the heads painted a deep

red. For other Wines I forbear to mention, as the principal consumption is the above.

N. B. Always have your wines permitted home with a dock permit, without going to the wine merchant's cellar.

## BRANDY AND RUM.



The innkeeper will find great advantage in purchasing these spirits of the first merchant, or real importer. A buyer can only be deceived by his taste. In the same docks, on the right hand, are the depots for brandy. There is no deceit practised; the Cogniac—the Bourdeaux—and Spanish brandies, are all separated—with the name at length branded on the head of each, and also that of the merchant. The samples are offered for taste—the strength of spirit never altered. All above actual proof is charged in the duties. Fine Cogniac at this time is about 4s. 3d. per gallon—the duties about 19s. with the expences. They may be left in bond the same as wine.

## RUM.

---

Rum is landed and stowed away in the West India Docks, where purchasers will have an opportunity of tasting samples, or at the merchant's counting-house. There are proofs—firsts—seconds—and thirds, above proof. You purchase at proof price, and all above proof the duty is paid upon. Very fine rum at this time is about 4s. 6d. per gallon; the duty and expences nearly 11s. per gallon.

These directions can only be of service to men who are able to go to market. I need not observe upon the immense advantage to be obtained by it.

The mode of fining port wine, is by breaking eight fresh eggs, and carefully

taking the whites, which are to be put either into a pan or fining tub—draw off a little wine from the pipe—beat this well up for half an hour with a whisp, adding a little more wine—pour it into the bung-hole, and rouse it well up with a clean mop stick. Sherry seldom requires fining, but if wanted immediately, take some of the finest isinglass, dissolve it in some good sharp cyder. Two quarts of this will bring down a butt of sherry. Brandies and rums will fall fine ; but when you have a fresh puncheon of rum, draw out two gallons, and put in instead two gallons of good strong ale or porter grounds, and rouse well up. This will precipitate, and be a good feeder to the rum. A couple of ripe pine apples, or the kernels of ripe wall fruit, pounded and put in, will be found to give an excellent flavour.

## MAKING UP GIN.



Unless there be a large demand, I should always advise a country publican to have it from the rectifiers, sweetened. In the first place, they make it up in quantities—their apparatus for operating so convenient—their choice of spirit—in short, habit and knowledge—that I defy any person to make up any thing equal to the cordial gin of Burnett's of Vauxhall, or Nicholson's of Clerkenwell. Another reason I do not recommend country publicans to make up their gin is, the increase of stock, and getting into the danger of the excise—perhaps both in increase and strength. However, as I well know the country in general is very shamefully supplied with gin, to those who wish to make up their own,

may use the following method :—Suppose you have a pipe of strong gin—one in five you may increase—first prepare your water, which should be soft, and having boiled it (say nine gallons) let it stand till it becomes quite clear to be drawn off for use. Your large cask, or gin vat, being ready, you start in your strong spirit, which should be perfectly fine and clear. In the mean time, you will have the following ingredients ready made up, to put in: take a quarter of an ounce of oil of vitriol, half an ounce of the oil of almonds, a quarter of an ounce of the oil of turpentine, one ounce of the oil of Juniper berries, half a pint of rectified spirit of wine, and half a pound of lump sugar. Rub the whole of these ingredients down in a mortar, adding another half pint of spirit of wine. Prepare a gallon of lime water, and mix the whole of this in a pail or tub. Add thirty-five pounds of loaf sugar, and stir the whole till every particle is broken and incorporated together—put this into the strong gin, and add your water, rousing the whole well together. To make

this fine, you must boil seven ounces of alum in two quarts of water for half an hour—dissolve gently in this six ounces of salt of tartar—when cool, pour into the gin, and rouse it up well with a mop-stick. It will be fit for use in a few days.

---

*To make Cherry Brandy.*

Take a cask, according to your consumption, fill it about half with black-cherries—pour on the mass half the quantity you mean to make, of strong fine malt spirit—let it stand a month—draw it off into another cask—then pour on the same quantity of brandy; add an ounce of cloves, another of cinnamon, with two or three pounds of fine sugar, according to the quantity you are making. You must calculate as you can sell. Let this stand a month. Draw it off, and put the whole together. You will press your cherries of course to get out the spirit.

*Raspberry Brandy*

In the same way. Also,

*Cherry Gin, or Raspberry Gin.*

---

*To make up five Gallons of Usquebaugh.*

For this you must have a small still. Take nutmegs, cinnamon, cloves, of each once ounce; carraway seeds and coriander, of each two ounces; cardamoms, one ounce; half a pound of liquorice root—bruise and pound the whole, and put them in your still, with six gallons of malt spirits, and a gallon of clear water—get on with a good fire—get a bag, some saffron tied up in it, through which let your distilled liquor run for colour. Afterwards sweeten it as you please with fine sugar.

*Ratifa.*

Take of bitter almonds, twelve pounds ; sugar-loaf, eight pounds ; nutmegs, grated, eight ounces—infuse these in ten gallons of pure proof spirit for six days—then filter through your flannel straining bag, and put away for service.

---

*Anniseed Cordial.*

This may be made of the seeds, or as most other cordials are, made from the essential oils, to be purchased at Apothecaries' Hall. If you use the oil about an ounce to a gallon of pure rectified spirit—the oil must in all cases be rubbed down in a mortar, so that it will mix and incorporate with the spirit—sweetening it with loaf-sugar to your palate, and lowering it with liquor that has boiled and filtered. This applies to all cordials, as

*Cloves,*

*Peppermint,*

*Cinnamon, &c.*

*Bitters.*

Take of gentian root two ounces, bitter almonds two ounces, dried orange peel one ounce, cardamon seed, one ounce, —pour on them one quart of pure proof spirit. After keeping close for three days, add a gallon of common gin. Your bitters will be excellent.

---

*Brandy Bitters.*

These are made up the same way, only using brandy. In this way they are very fine.

---

*Brandy Shrub.*

Take a gallon or five quarts of brandy, —orange and lemon juice, strained, each a pint—the rinds of three oranges and three lemons—try two pounds fine sugar, and

add more, if not sweet enough. Make up with clear fine water. This should make two gallons very fine, or ten quarts very good. Let it stand, and draw off without shaking.

---

*Rum Shrub.*

Exactly the same, only substituting rum, full proof.

FINIS.