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AN ESSAY
ON THE
INVENTIONS AND CUSTOMS
OF
BOTH ANCIENTS AND MODERNS
IN THE USE OF
INEBRIATING LIQUORS.

INTERSPERSED WITH
Interesting Anecdotes,
ILLUSTRATIVE OF THE MANNERS AND HABITS OF THE
PRINCIPAL NATIONS OF THE WORLD.
WITH
AN HISTORICAL VIEW OF THE EXTENT AND PRACTICE
OF
DISTILLATION,
BOTH AS IT RELATES TO COMMERCE AND AS A SOURCE
OF NATIONAL INCOME:

COMPRISING
MUCH CURIOUS INFORMATION RESPECTING THE APPLICATION
AND PROPERTIES OF SEVERAL PARTS OF THE
VEGETABLE KINGDOM.

By **SAMUEL MOREWOOD,**
SURVEYOR OF EXCISE.

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TO

THE RIGHT HONOURABLE

FREDERICK JOHN ROBINSON,

CHANCELLOR OF THE EXCHEQUER, &c.

SIR,

To be permitted to dedicate my work to a gentleman of your exalted rank, talents, and information, is an honour of which I am fully sensible.

I feel this honour the more deeply, since it is well known to every man who is able to form a just estimate of the respective characters of our most eminent statesmen, that you are intimately acquainted with the subject of the present essay; and that the British Empire is, in a great measure, indebted to your persevering research, extensive knowledge, and patriotic liberality, for the establishment of that wise system of commercial regulations,

which has already so greatly augmented the resources, diminished the debt, and increased the power of the United Kingdom.

As I am aware that you will find many defects in the subsequent pages, I humbly hope that the novelty and the difficulty of the undertaking, in which I have had neither guide nor precursor, may plead my excuse for any errors or inaccuracies into which I may have inadvertently fallen; and that the information now laid before the public may not appear wholly devoid of interest or of utility.

I have the honour to be,

Sir,

With the highest respect,

Your much obliged,

and very obedient humble Servant,

SAMUEL MOREWOOD.

BELFAST,

12th September, 1823.

PREFACE.

THE Treatise now offered to the public was originally intended and arranged for the author's own private gratification; but having shown it to several eminent literary characters, they encouraged him to publish it in a more extended form, as a work likely to claim attention, and prove of interest to merchants and others connected with the revenue. The title page so fully expresses the nature and object of the Essay, that little need be said in further explanation; but it may be proper to observe, that in presenting it to the world, the writer has been solicitous to give it all the interest which his researches and the nature of the subject could furnish. Though in many places it may exhibit dry details, yet it is presumed, that this heaviness is often relieved by various anecdotes and historical sketches, which, while they give pleasure, convey much information respecting men and manners, in different parts of the globe.

In pursuing a path, hitherto untrodden, it would be vain to expect that some deviations have not been made, but great care has been taken to make

the observations and selections as relevant as possible.

The man of business, particularly he who is connected with the wine and spirit trade, will see in the course of this Essay a tolerably correct estimate of the extent of our dealings with those countries with which we hold commercial intercourse, and he will thence be enabled to judge of its value; while the man of taste and reading may find his curiosity gratified, and the time occupied in its perusal not perhaps unprofitably employed.

From an inspection of the whole, it must appear that great labour and industry have been used in drawing to a focus so much matter on a subject so diversified and complicated; but the writer will find his toil amply compensated, should his views appear correct, and his intentions be fairly estimated. The design of this publication was not to magnify the errors of mankind, occasioned by the inordinate use of intoxicating liquors, a theme that would occupy volumes, but to disclose, in a clear and comprehensive manner, the prevalence of drinking, and its influence on society.

Notwithstanding all that was wished and intended may not have been realized, the author flatters himself that he has not been unsuccessful in settling some doubtful points, and of rendering the subject more luminous, and worthy of further investigation by such as possess more leisure, talents, and information. During his long prac-

tical experience as a revenue officer, he had frequent opportunities of observing the policy of the changes which, from time to time, were made by the legislature in the distillery laws. It was, therefore, his intention to offer some suggestions, which he conceives would have been useful; but finding that an analysis of our ponderous excise code had been placed in the hands of commissioners appointed for that purpose, the design was abandoned, and the book closed with a few remarks on the probable effects of the law recommended and adopted. In the present stage of the operation of that law, it might be deemed injudicious to offer a comment; but had a less complicated system been introduced, it may with safety be affirmed, that legal distillation, particularly in Ireland, would have increased in a fourfold proportion.

Since this book was put to press, the saccharometer of Mr. Allan, (see page 358,) which is the one mentioned in the act of 4 Geo. 4. cap. 94., has been laid aside, and a new one substituted in its place, by an order of the Lords of the Treasury, dated 17th October, 1823. It is called Bate's saccharometer, from the name of the maker, Robert Brettell Bate, of London; and appears to be an instrument well calculated to answer all the purposes intended.

It is also necessary to observe, that the calculation in page 355, respecting the cost of manufacturing spirits in Ireland, was made out during the operation of the late distillery laws, and is therefore inapplicable to the new system, which is essentially different in duties, &c. ; but the principle of that calculation, when applied to the present law, will be found perfectly correct. The cost of manufacture, therefore, in January, 1824, may be fairly estimated at the following proportions: viz. one-fourth of malt, as required by law, at 32s. per barrel of ground grain, two-fourths of barley, at 18s. per barrel, and one-fourth of oats, at 12s. per barrel, shows the cost for grain to be 2s. 8d. per gallon; and, allowing for manufacture, 4d., and for the duty on spirits at 25 per cent. over proof, 2s. 8½d., makes spirits stand the distiller 5s. 8½d. per gallon.

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ERRATA.

Page 195. note, *for* Burgoing's State of Spain, &c. *read* Anderson's
Commerce, vol. i. p. 200.
— 330. line 10. *for* that island, *read* although that island.

AN
ESSAY.

WHEN man was driven from that peaceful asylum originally assigned to him by his Creator, and condemned to earn his bread by the labour of his hands *, his attention was no doubt powerfully exerted in procuring the necessaries of life; such as food, clothing, and habitation. As a cultivator of the earth, he must have been constantly employed, and as his occupation varied with the varying seasons, his mind was continually exercised in contrivances to diminish and sweeten his toil. — His activity, when thus excited, soon extended its influence to every department of life, and having procured its necessaries, he was no doubt early led to the exercise of his ingenuity in the attainment of its luxuries. The preservation of fruit, and their juices, however rudely practised, might have led to the use of inebriating drink; a beverage, which,

* Gen. iii. 23.

as will hereafter be shown, has been discovered by some of the most savage nations, and deemed a luxury by the almost universal testimony of mankind.

Whether the use, or knowledge of fermenting the grape was known before the flood is now uncertain. We are told * that Cain built a city, which he called after his son Enoch, and that one of his early descendants, Jubal, invented the harp and organ, while another, Tubal Cain, was an instructor of every artificer in brass and iron. From the perfection to which the latter had attained in the fabrication of instruments from these metals, we may conclude that the use of them was long known before, for as Cain and Adam were "tillers of the ground," they could not have cultivated it without implements of this nature; yet there is nothing to guide us even at this advanced state of the arts, in the supposition that mankind had any knowledge of inebriating liquors: at what period therefore, and in what manner, their wine was first made and used is now unknown. Noah, it appears from Genesis ix. 21., became drunk with the produce of his own vineyard; and as it is reasonable to suppose he was well acquainted with all the discoveries of his progenitors, and their different methods of cultivating the ground, we may infer that it was not the first instance in which the cultivation of the vine was practised, and the intoxicating quality of the grape

* Gen. iv. 17.

experienced.* Whether, however, the drink which had that effect was the simple expressed juice of the grape, or had undergone any fermenting process, we are not told. It is, indeed, generally admitted that the simple juice of the grape has no inebriating quality, and that to produce intoxication it must undergo a certain degree of fermentation; but as the ripe juice possesses in itself all the principles essential to such a change, it would very soon ferment, particularly in warm climates, so that the period would be but short between its mild and intoxicating state. Milton seems to have entertained the opinion, that the fruit of which our first parents had eaten

— “ Whose mortal taste
Brought death into the world, and all our woe.”

was of an intoxicating nature, when he says,

“ Soon as the force of that fallacious fruit,
That with exhilarating vapour bland
About their spirits had played, and inmost powers
Made err, was now exhaled ;” —

The rabbins, or Jewish doctors, were of the same belief; the vine being considered by them as the tree so strictly prohibited by the Almighty. Doc-

* The learned Doctor Kennicott says, the text ought to have been translated, “ And Noah continued to be a husbandman,” instead of, “ And Noah began to be an husbandman.”

tor Lightfoot and many eminent theologians were impressed with the like opinion ; but all conjectures on this subject, however respectably supported, are unsatisfactory, obscured as it is by the lapse of ages and the silence of the grave.

Noah must be admitted to have been certainly the first, on record, who planted a vineyard and experienced the inebriating quality of the grape. The honour of this discovery the Pagans afterwards attributed to Bacchus, whom they worshipped as the sensual encourager of feast and jollity.

In following the course of scripture narrative, we perceive that as the descendants of Noah increased, the vine, as supplying the means of a more comfortable subsistence, was cultivated by them to considerable extent, and that persons were purposely set apart for the manufacture of wine, as presses were erected, and the juice expressed from the grape as soon as the fruit was ripe. Palestine, it is said, early abounded in excellent vineyards. So great was their number, that of the single inheritance belonging to the tribe of Judah alone, in order to denote the superabundant produce, it was metaphorically said, that he washed his garments in wine, and his clothes in the blood of the grape. So many and various are the notices of the prophets respecting this species of liquor, that it would be tedious to quote them. Two kinds are particularly mentioned, as of an excellent and superior description ; the wine of Eldon and that of Lebanon. The

wine of Eldon became an article of traffic, and was transported to Tyre and to more distant places, where, with a variety of other valuable merchandize, described by Ezekiel, and evincing the advanced state of the arts at the time, it was eagerly purchased. This wine was said to be well known to the ancients, and, under the name of Chalibonian wine, was noted for its peculiar excellence. It was made at Damascus, where the Persians planted vineyards in order to obtain it in greater perfection and in larger quantities. Its quality is said to have been that of a fat or generous wine. The wine of Lebanon is described as sweet scented, and to have been much admired; its excellence was ascribed to the great luxuriance of the vines which grew on the sides of mount Lebanon, where they had a good aspect or favourable exposure to the sun.

From the testimony of ancient writers, we find that it early became the practice to mix certain perfumes or sweet-scented herbs in the wine to improve its flavour. With these odoriferous wines the Hebrews are said to have been well acquainted. Of the composition of these, and the preparation of the different ingredients, we are not informed; there can, however, be but little doubt that by means of these mixtures there would be a much greater variety of wines formerly than at present. Having but one kind of liquor, they would, no doubt, modify and improve it as much as possible; accordingly we find

particular mention made of vinegar wine, medicated wine, spiced wine, and wine mixed with perfumes ; but what particular kinds or variety of spicery or perfumes were infused, we can only conjecture.

The scripture also informs us, that strong drink, or strong liquors, were administered to criminals before execution, to stupefy their senses, or deaden their feeling of pain : this, says the Talmud, was given immediately before the execution began, and consisted of a cup of wine mingled with a quantity of frankincense. For the purpose of preparing or qualifying this intoxicating draught, certain charitable or compassionate women at Jerusalem were engaged, who made it their business to mingle a portion of drugs or bitter herbs in the wine for the above purpose, to inspire them with a false courage to meet their approaching fate with fortitude.* The foundation of this custom appears to have been laid in the command of Solomon, “ Give strong drink to him that is ready to perish, and wine to those that be of heavy heart.”† Allusion is made to the same species of drink in the book of the prophet Jeremiah‡, written near four hundred years afterwards. Perhaps, of a similar nature was the bowl of wine which Homer tells us Helen

* A practice somewhat similar prevailed in England ; it being customary to present to malefactors, on their way to the gallows, in ancient times, a great bowl of ale, as the last refreshment they were to receive in this life. — Pennant's *London*.

† Proverbs, xxxi. 6.

‡ Jeremiah, xxv. 16.

presented to her guests, when oppressed with grief, to raise their spirits; the composition of which she had learned from the Egyptians.

“Meanwhile, with genial joy to warm the soul,
Bright Helen mix’d a mirth-inspiring bowl;
Tempered with drugs of sovereign use, t’ assuage
The boiling bosom of tumultuous rage;
Charm’d with that virtuous draught, the exalted mind
All sense of woe delivers to the wind.”

The practice so prevalent amongst the Hebrews of mixing their wine, was always with a view to make it stronger and more inebriating, by the addition of more powerful ingredients. The prophets have in numerous instances reprobated this practice; but, like the tipplers of our own day, too many of the Jews appreciated the pleasures of the bottle, by the strength of the liquor.

Some have asserted that the *strong drink*, so often mentioned in scripture, means palm or date wine: of this opinion were Theodoret and Chrysostom.

Judea, it is well known, was famous for the abundance and excellence of its palm-trees*; and that the Jews were acquainted with the making of this wine, there is little reason to doubt; but that

* The palm trees, says Fleury, in his *Manners and Customs* of the ancient Israelites, that grew about Jericho, yielded a considerable profit. — Clarke’s Edition, London, 1821, page 39.

it was of a stronger body than that made from the juice of the grape, we are not informed.

The word *shecer*, from *shakar* in the Hebrew, to inebriate, signifies any kind of fermented liquors, or strong drink. "Any intoxicating liquor," says St. Jerome, "is called sikera, from the Greek word σικερα, whether made of corn, apples, honey, dates, or any other fruits." * One of the four prohibited liquors among the Mahommedans in India is called sakar, which signifies inebriating drink in general, but especially date wine. From the original word, Dr. Clarke observes, we have probably borrowed our term cider, which among us exclusively implies the fermented juice of apples.

Thus, from a review of the sacred writers, it does not appear that the people in their day had any knowledge of the art of extracting an intoxicating spirit by evaporation. Had that discovery been known, it is likely they would have noticed it, as well as the other arts of which they have given us an account. Indeed the free use of wine, which was then generally practised, may be said to have prevented a search after any other kind of liquor; for it is only in those places where the vine was not cultivated, that the first notice of any other beverage is found.

Among the Egyptians, whose country was fa-

* Vide Epis. ad Nepot.

mous for its corn, Herodotus tells us, that beer, or a wine drawn from barley, was the liquor principally used *; and that in the time of Cambyses, 529 years before the Christian era, the Syrians were well skilled in the manufacture of palm wine. † The same writer informs us, that the Lotophagi, a people of Africa, who chiefly subsisted on the produce of the lotos plant, made a species of wine from its berries. ‡ And Xenophon relates, in his history of the retreat of the ten thousand Greeks after the battle of Cunaxa, that in that part of Armenia next to Curdistan, the inhabitants had a method of preparing a potent liquor from what appears to have been barley. "The soil," says he, "is good for arable and pasture, and the produce abundant; yet the people inhabit caves, with their cattle, poultry, &c. They fill open vessels with barley and water up to the brim." The time for the fermentation and other parts of the process is not told, but the liquor is described as very strong, if not mixed with water, and pleasant to those who

* Herodotus, b. ii. sect. 77.

† Herodotus, b. iii. cap. 1. sect. 20.

‡ According to Scylax, the lotos served these people both for meat and drink, and from that circumstance they derived their name. Strabo observes, that the Lotophagi were not sensible of the want of water in the burning and sandy region they inhabited, as the root, stalks, &c. of the lotos supplied them with rich liquor, as well as delicious food. Ulysses and his companions were said to have been enchanted with it, as it made those who ate of it forget their country and relations. For a description of its virtues and properties, vide Pliny, b. xiii. chap. 17.

are accustomed to it. Beside the vessels lie hollow canes or reeds, of various sizes, through which they drink by suction; but in token of great hospitality, as it is supposed, they allowed their Grecian guests to drink out of the vessels "after the manner of oxen." * Probably this is the liquor called *zythem*, made in some of the provinces of Asia Minor, mentioned by Diodorus Siculus upwards of 300 years afterwards.

The invention of these beverages is attributed to Isis or Osiris, who are said to have reigned jointly in Egypt, and are deified in ancient mythology; but to whom they really owe their origin it would be now impossible to determine. The Egyptians and Hebrews, as we find from Moses, who was versed in all their learning †, understood the art of dyeing, with the smelting and mixing of metals, and the preservation of the dead by antiseptic substances; the making of glass of various colours may be added as a discovery known to the Egyptians from a very remote antiquity, as well as the art of rendering gold potable, as appears from *Exod. xxxii. 20.*; but we nowhere read that they ever attained a higher knowledge in the secrets of chemistry.

In the practice of the medical art the most ancient physicians appear ignorant of the mode of extracting any of the essential oils by steams or vapours. Hippocrates, justly called the father of physic, who flourished between the 80th and 88th

* Xen. *Anab.* p. 332., edit. Lond.

† Acts, vii. 22.

Olympiad, or about 400 years before Christ, is the oldest author whose writings expressly on the medical art are preserved; and in the whole of his works there is not a single expression which could warrant the idea of a retort, or alembic, having ever been used by him.

Some have maintained, from a passage in Matthew's gospel, that the use of the still was partially known in our Lord's time, as they intimate that he alluded to the distillation of herbs for medicinal purposes, when he used the word κλιβανον, (klibanon,) where he said, speaking of the grass of the field, "which to-day is, and to-morrow is cast
"into the oven*," *eis ton klibanon*, "into the oven,"
"into the still," according to others; but as there does not appear a vestige of evidence in any ancient author that the art of distillation was then known, such a translation may be said to have more of fancy than of learning in it.

Pliny the elder, who was nearly a contemporary with our Saviour, and who, in his natural history, has shown himself so curious and so judicious a master in the compilation of facts and observations, appears to be altogether ignorant of any stronger liquor than that produced by fermentation. He notices the various drinks of the Egyptians in use in his day, which were manufactured from grain steeped in water, and assures us, that they were very strong, and drunk by them without any mix-

* Matthew, vi. 30.

ture whatever. These beverages were distinguished by various names, such as *zythum*, *cælia*, *ceria*, *ceris vinum*, or wine of *ceres*, *curmi*, *cervisia*, &c., all literally meaning ale or beer. The making of them, he says, was known to all the several nations who inhabited the west of Europe. The mode of manufacture was somewhat different in different countries, as in France and Spain, but its nature and properties were every where the same. The people of Spain in particular, he informs us, had arrived to such perfection in the art, that the drink made by them could be kept to a great age.* Some think, that by the invention which he mentions, after the enumeration of these beverages as an extraordinary discovery, "that water was made "to intoxicate," is meant distillation. It would certainly appear to be something very different from the ordinary mode of obtaining liquors by fermentation, if we read the passage as unconnected with his preceding observations; but as this cannot be done with propriety, it means nothing more than the intoxicating power or strength acquired by the water in the fermenting process of the grain. "Heu, mira vitiorum solertia! inventum est quæmadmodum aqua quoque inebriaret." — 'Oh wondrous craft of the vices! by some mode or other it was discovered that water also might be made to inebriate.† In the 33d book, chap. 8., he de-

* Plin. b. xiv. chap. 22.

† Ibid. b. xiv. s. 29. Mr. Murphy, in one of his notes on Tacitus, like some other writers, understood Pliny as if he

scribes the mode of obtaining an artificial quicksilver by distillation. The apparatus employed was two earthen pots and an iron pan ; but he does not in any other part of his work describe the application of a like apparatus to the extracting of the juices of vegetable matter, if we except his account of the manner in which oil was obtained from pitch, in book xv. chap. 7., where he says, “ the vapour
 “ arising from the boiling pitch was collected on
 “ fleeces of wool spread over the pots, and afterwards
 “ extracted from them by expression.” This was evidently distillation in its infancy, clearly proving however, that it was not known in his time in a more improved state.

In treating of the wine of his own country, he details with wonderful minuteness the progress of its manufacture and the perfection to which it had arrived. It was not, however, until about 600 years after the foundation of the Roman empire, that vines were cultivated, and that wine came into general use ; before that period wines were so scarce that in the sacrifices the libations to the gods were made only with milk * : Numa, the successor of Romulus, who had enacted this observ-

spoke of distillation in the above passage. “ Pliny the elder,” says he, “ observes that the Egyptians had their intoxicating
 “ liquors distilled from grain, which their country produced
 “ in great abundance.” De Morib. German. vol. iv. p. 268.

*. Pliny, b. xiv. chap. 12.

ance, directed, from the great scarcity of wine that prevailed, that no man should besprinkle the funeral fire with it; and when the offer of wine to the gods in sacrifice was permitted, it was decreed, with a view to encourage the plantation of vineyards, that all wine so offered should be the produce of such vine plants as had been cut and pruned.

It was in these times of simplicity that women were forbidden to drink it; and for that reason their near relations were permitted to salute them when they came to their houses, in order to smell whether they had tasted any *Temetum*, for so they termed wine, which, if discovered, gave their husbands a right to punish them. According to Dionysius Halicarnassensis, Romulus was the author of the law which permitted a husband to kill his wife for drinking wine, as well as for the crime of adultery. It is related that Ignatius Mecennius, having killed his wife with a cudgel because he found her drinking wine out of a cask, was acquitted by Romulus of the murder.* Fabius Pictor, in his annals, says, that a Roman lady was starved to death by her own relations for having picked the lock of a chest in which were the keys of the wine cellar.† We are assured by Pliny, that Cneius Domitius, a judge in Rome, in the like case pronounced sentence judicially against a woman who was defendant, in this form, “that it

* Pliny, b. xiv. chap. 13.

† Ibid.

“seemed she had drank more wine without her husband’s knowledge than was needful for the preservation of her health,” and therefore that she should lose the benefit of her dowry.

We read, that Lucius Papyrius, general of the Roman armies, when at the point of engaging the Samnites, made no other vow than that he would offer to Jupiter a little cup or goblet of wine in case he gained the victory.

Men in those days were also forbidden to drink it till the age of thirty. Towards the declension of the commonwealth, and under the first emperors, the women were not only accustomed to drink wine, but carried the excess of it as far as the men, which, if we credit Pliny, far exceeded any thing of the kind in modern times.* Theophrastus says, that great drunkards, when they drank for a wager, used to take the powder of pumice-stone before setting to.† This probably gave rise to the

* It was to prevent females from committing excessive crimes, that the lawgivers in ancient times prohibited the free use of wine. Seneca complains bitterly that in his day the custom of prohibition was almost universally violated. The weak and delicate complexion of the women, says he, is not changed, but their manners are changed and no longer the same; they value themselves upon carrying excess of wine to as great a height as the most robust men; like them they pass whole nights at table, and with a full glass of unmixed wine in their hands, they glory in vieing with them, and, if they can, in overcoming them.

† Pliny, b. xxxvi. chap. 21.

invention of "*devils*," those choice and whetting *tit bits* so much resorted to after dinner by the toppers of the present day. Some of the Romans even went so far as to take hemlock in order to make them drink.* Tiberius Claudius, who was fond of a goblet himself, knighted Novellius Torquatus, by the title of Tricongius, or the three-gallon knight, for drinking three gallons of wine at a draught, and without taking breath.† It was generally believed at Rome, that Caius Piso owed his advancement at the court of Tiberius to his extraordinary powers in that way, as it is said, he would sit for two days and two nights drinking without intermission or even stirring from the table.‡ Tergilla, who challenged Marcus Cicero, son of the famous orator, to a drinking bout, boasted that he ordinarily drank two gallons at a draught.§ And in later times we read, that the emperor Maximin, who was no less extraordinary for his gigantic stature than his great strength, would drink six gallons of wine without committing any debauch.||

* Pliny, b. xiv. chap. 22.

† Ibid. The Roman gallon is equal to seven pints of our measure.

‡ Pliny, b. xiv. chap. 22.

§ Ibid.

|| Maximin is said to have been eight and a half feet high, made in proportion; and if, agreeably to the old adage, "Good eating requires good drinking," we need scarcely be surprised at his powers in that way, when it is asserted he ate forty pounds of flesh every day. Sinclair, in his Code of Health,

Pliny exhibits a strong proof of the great fondness which the Romans, as well as other nations, had for this liquor, in stating that no less than 195 sorts were in general use; but of the wines most esteemed, he reduces the number to eighty, two-thirds of which he reckons the produce of Italy.

Those wines which took their name from Opimius, in whose consulate they were made, some of which were preserved to Pliny's time, that is, nearly 200 years, were not, from their great excellence, to be purchased for money. If a small quantity of any of them were mixed with others, it is said, they communicated a surprising strength and flavour. The empress Julia Augusta often said that she was indebted to the goodness of the Pucine wine for living to the age of eighty-two. This wine was the produce of the grape planted along the Adriatic sea, or gulf of Venice, upon a stony and rugged hill, not far from the source of the river Timavus, and was thought to have received some of its valuable qualities from the vapours of the sea.

The wine Cæcubum was much sought after before the time of Augustus Cæsar, but from the

tells us, that a Mr. Vanhorn, of modern notoriety, drank in the course of three and twenty years, 35,688 bottles or 59 pipes of red port; a quantity, perhaps, not exceeded by any of the drunkards of antiquity. What a prodigious stomach and constitution this man must have had!

preference given to Setine by that emperor, it fell into disuse, and the latter was preferred by his successors for its various medicinal virtues. Amongst all the wines of Italy, the Falernian, so much celebrated by Horace, was in the greatest repute. It was very strong and rough, and was not drank till it had been kept ten years. To correct its roughness it was either mixed with honey, or wine of a weaker nature, by which means it was rendered delicious. The Faustian wine, a species of the Falernian, was of so spirituous a nature, that it would burn with a pure and light flame. The Albane, Calene, or wines of Alba, made near the city of Rome; the Surrentine, said by Tiberius Cæsar to be so much recommended by physicians, and so well liked by Caligula; the Massic; the Fundane, the wine of Signia; the Mamertine, from about Messina, in Sicily, ordered by Julius Cæsar to be used in the feasts of the city, and the Potulane wines, so called from the first planters of the vine from which they were produced. The wines of Tuscany, the Prætutian, the Ancone; the Palmesian, from the vines growing up the palm or date tree; Cesenatian and Mecænatian wines; the Rhetian, within the territory of Verona, spoken of by Virgil, and ranked by him next to the Falernian; the Latiniensian; the Gravisane and Statonian wines; the wines made between the Pyrenean hills and the Alps, were, with various others, celebrated, and many of them in great demand in Pliny's day.

Among the Greeks, wine was also the favourite beverage. Homer mentions a very famous wine of Maronæa in Thrace, which would bear mixing with twenty times as much water, but it was common for the natives to drink it unmixed. The wines of Cyprus, Lesbos, (now Mytilene,) and Chio, were much celebrated. Those of Cyprus, and the wines of many of the other Greek islands, as will be noticed in another place, are in great esteem to this day. Horace often mentions the wines of Lesbos, and represents them as very wholesome and agreeable; but Chio carried it from all the other countries, and surpassed them so much that the inhabitants of that island were thought to be the first who planted the vine, and taught the use of it to other nations. * All these wines were in such esteem at Rome, according to Marcus Varro, quoted by Pliny, that in the year 675 after the foundation of that city, Publius Lucinius Crassus and Lucius Julius Cæsar, the then censors, published an edict, and proclaimed "that no man should sell any Greek wine or Arminean, but after eight *asses* the amphor or quadratum. †" From the great price and estimation of Chios wine, no person was indulged with more than one draught of it at a meal; a proof of this is given by Varro in the instance of Lucius Lucullus, who, when a

* Rollin.

† The amphora contained a little less than 26 quarts.

boy, never saw more than a cup served up at his father's table after dinner.* It is said of Caius Sentius the pretor, that he never used it on account of its dearness, before it was prescribed to him by the physicians as useful for the *cardiaca passio*, or trembling of the heart, to which he was subject; on the contrary, such was the love of Hortensius, the famous orator, for it, that when he died he left to his heir about 10,000 barrels, which he had stored in his cellar. The prevailing quality of this as well as of the other wines just mentioned, was sweetness and a delicious flavour. The wine of Corcyra and of Mende were remarkable for their good qualities; those also of Naxos and Thasos, though generally considered inferior to Chios, were compared to nectar.

Among the Greeks it appears sweet and odorous wines were always in great estimation. In many instances, they sweetened their wine by putting flour kneaded with honey into the vessels. Origanum, aromatics, fruits, and flowers were also infused. The wine of Byblos in Phœnicia was much esteemed for the strength of the perfumes with which it was impregnated. But of all the mixtures and infusions which were common among them, that of salt water was the most

* This same Lucullus, when he returned out of Asia, in an entertainment which he gave to the citizens of Rome, distributed among the people more than 100,000 gallons of wine. Pliny, b. xiv. chap. 14.

singular. It was done, it appears, with a view to promote digestion, and prevent the wine from flying to the head. One measure of sea-water was considered sufficient for fifty of wine.* This mixture, which is was called Bizeon, was first practised by a servant in Greece, who, to deceive his master, poured sea-water into the vessel out of which he had stolen and drank some wine. In Rhodes and Cos, a considerable quantity of this wine was made, which the Romans and others imitated.

If we credit some authors, wine was not the only beverage known to the Greeks; for although Homer is silent on the matter, they knew from a remote period how to compose with water and barley a liquor, which for strength and goodness, approached to wine.† Ovid, speaking of the meeting that Ceres, exhausted with weariness, had with an old woman named Baubo, says, that the goddess having demanded some water, the old woman presented her with a liquor manufactured from dried grain.‡ This was their *oinos krithinos cerevisia*, or wine made from barley. They also understood the making of Palm wine, called *oinos epsetos*, sometimes termed *oxos epseton*, for *oxos* was a general name

* See the Travels of Anacharsis the younger, by the Abbé Barthelemi.

† Diod. l. iv. p. 248.

‡ Vide Metam. l. v. v. 449, &c. also Bayle, article Thesmophoria.

for all made wines. * The ease, however, with which the juice of the vine was obtained, rendered the use of these wines less common, and almost unnecessary.

As the ancient Greeks had a particular method of making their wine, it may not be uninteresting to describe it. Having gathered the grapes, they exposed them ten days to the sun and to the coolness of the night. They then put them into the shade for five days, and on the sixth stamped or bruised them in the vat; but as this process was found tedious and troublesome, they put the ripe grapes immediately from the vine itself, into a cistern, in which was a hole or vent near the bottom, and a vessel beneath to receive the liquor. In this cistern a man with his bare feet and legs pressed out the juice or must; but to relieve them from this labour, a press of machinery was afterwards substituted. The practice, however, of treading out the juice with the feet seems still to prevail in most eastern countries. †

The Greeks did not keep their wine in casks of wood as we do, for the use of vessels of that sort was unknown to them, as appears from Herodotus, who informs us that wine was exported from different parts of Greece to Egypt in earthen jars, which, when emptied, were afterwards sent into the Syrian deserts to preserve the water of the Nile. ‡

* *Archæologia Græca*, vol. ii. p. 360.

† *Chandler's Travels*, p. 2.

‡ *Herodotus*, b. iii. chap. 1. § 6.

The Athenians, we are informed, were famous for making these and other great vessels of earthenware. The skins of beasts were also used for the same purpose, a custom which continues to this day, where wood is not plenty. The leathern bags, or *borachios*, thus used, were generally made out of the skins of goats, stripped off without being cut, the places from which the legs, &c. had been extracted, sewed up, and the top either tied or sealed. The bottles mentioned in Scripture were of this description *, the use of glass being then unknown. The Spaniards and Portuguese at present make use of the same vehicle for the conveyance of their wines from the interior, as they are found more portable and more easily procured. It is believed that we are indebted to the Gauls who settled on the banks of the Po, for the useful invention of preserving wine in casks or vessels of wood.†

As chemistry may be said to have formed no part of the general knowledge of the ancient Greeks, it would be vain to look for any thing like distillation among them; for although an ingenious, enlightened, and polished people, they do not appear to have known that art. Medicine was much studied by them, but their pharmacopœia scarcely ever extended, until a late period, beyond the list of the simples used by Hippocrates.‡

* Matthew ix. and xvii.

† Rollin.

‡ For a list of these simples see Le Clerc's Hist. de la Med. part i. b. iii. cap. 23.

Their early intercourse with the Egyptians made them familiar with the working of metals; but none of their writers, whose works have descended to us, of an earlier period than that of Pliny, incline us to believe that they were acquainted with the raising of steam or vapour to the same extent or in the manner described by that ingenious Roman.* Dioscorides, who was physician to Cleopatra, and contemporary with Pliny, was obliged to collect essential oil on the fleece of a sheep in a similar way; a proof that he knew of no other mode of distillation. One hundred and thirty one years subsequent to this, Galen, a celebrated physician of Pergamus, who wrote many books not only upon medical, but philosophical subjects, speaks of distillation *per descensum*; but it is conceived he meant nothing more by this than what regarded the melting and liquefying of metals. In the 12th chapter and 20th verse of St. Paul's Epistle to the Romans, there is a metaphorical allusion to the same practice, which is thus beautifully expressed by one of our poets:

So artists melt the sullen ore of lead,
By heaping coals of fire upon its head;
In the kind warmth the metals learn to glow,
And pure from dross the silver runs below.

In like manner Caligula, according to Pliny, en-

* See page 13 of this Essay

deavoured to collect gold from orpiment, a mineral substance found in different parts of the world.*

In the reign of Dioclesian, who succeeded Numerian in the year 284, we find the Egyptians had carried their speculations in chemistry so far as to induce that emperor to publish an edict for the suppression of all the ancient books that treated of the art of making gold and silver, and which he barbarously committed to the flames, apprehensive, as we are assured, lest the opulence of the Egyptians should inspire them with confidence to rebel against his empire.†

But although this branch of speculative knowledge gave rise to many useful experiments, and was carried to a great height, we learn from the commentary on the second book of Aristotle's *Meteors*, written by Olympidorus, a peripatetic philosopher, who flourished under the second Theodosius, that distillation was not then known, at least in a more improved state than it was 400 years before; for he says, that "sailors, when they labour under a scarcity of fresh water at sea, boil the sea-water, and suspend large sponges from the mouth of a brazen vessel, to imbibe what is evaporated, and in drawing this off from the sponges, they find it to be sweet water."

It is said, that Zosimus, the Panopolite, who lived at the close of the fourth or beginning of the fifth

* Pliny, b. xxxiii. c. 4.

† Vide Suidas in Voce *Χημεία*. Gibbon, vol. ii. p. 137.

century, has given some figures of a distilling apparatus, which Olaus Borrichius, the learned Danish professor, has exhibited in his *Hermetis et Egyptiorum Sapia*, page 156. This Zosimus was the first who used the word *chemia*, which in the Arabic signifies concealment, and from which Boerhaave and others have derived the term Chemistry. Zosimus was a man of considerable attainments, and wrote twenty-four books of Imouth, or Chemistry, addressed to his sister Theosebia : most if not all of these treatises are preserved in the king's library at Paris, but have not yet been translated. From the specimen and account, however, which Borrichius gives of them, they seem to have been mystical and enthusiastic. * Some time previous to that age, and for a long period afterwards, chemistry was cultivated with great eagerness by several Grecian ecclesiastics, but their efforts and attention were principally directed to the art of making gold and silver. In the mean time medicine received considerable improvements from the labours of Oribasius, Actius, Alexander, Paulus, and others.

But whilst these pursuits and studies were in progress, the Saracens, then an ignorant and barbarous race, under the caliph Omar's general, Amru, possessed themselves of Alexandria, and in the madness of their zeal destroyed the famous library in that city ; the caliph assigning to his

* Shaw's Boerhaave.

general as a reason, that if the books it contained agreed with the Koran, they were useless ; and if they differed from it, they were pernicious, and ought to be destroyed. The loss of so many of the monuments of human learning, which the Ptolemies had laboured many years to accumulate, must ever be lamented, inasmuch as it robbed mankind, in a great measure, of the discoveries of the ancients which might have served posterity, as materials of literature and rudiments of science. But as the progress of their arms introduced the Saracens to a more general knowledge of other nations, a taste for civilisation and the cultivation of literature gradually gained ground. Colleges and seminaries of education were erected and endowed, and learned and ingenious men were encouraged and sought after. Some of the caliphs themselves excelled in the learning of the day. Almamun in particular, it appears, who ascended the Moslem throne, in the 198th year of the Hegira, 813th of the Christian era, had attained to great perfection in various branches of science. He not only employed learned men to translate the books he had purchased, at an enormous expense, from the Christians of various nations, but likewise promoted by all possible means the study of every branch of literature on which they were written, and even studied them himself with an almost unparalleled ardour.

As might be expected from the nature and pursuits of the nations from which the Saracens im-

bibed their taste for literature, alchemy and medicine early became their favourite study. The works on these subjects are so various and abundant, that the enumeration of them, if practicable, would be both unnecessary and foreign to the design of this Essay.

Under the caliph Almoktader Billah, who ascended the Moslem throne in the 908th year of the Christian era, flourished the celebrated physician Rhazes, whom Abul-Faraj styles the phoenix of his age. He excelled in every branch of knowledge then extant, but principally in physic, in which he became so bold and successful a practitioner, that he was called the Experimenter, and the Arabian Galen.* He is said to have first introduced chemical preparations into medicine, for, not to mention mercury extinct and sublimate, he notices the oil of eggs, a chemical medicine; besides, he gives us the first account of the *oleum benedictum*, or *philosophorum*, (philosophers' blessed oil,) and is very particular in explaining the manner of making it in a glass retort, such as will bear the fire, and is well luted, (*luto sapientiæ*, says the interpreter), the fire being increased by gentle degrees, till a red oil comes off by distillation.

Whether the retort, alembic, or any regular distilling apparatus was earlier employed, we have no exact account; for what we find from the old Greek

* *Historia Crit. Philosophiæ*. de Herbelot. Leo Africanus, &c.

chemists, as they are called, relates only to the fusion or transmutation of metals.

It is said that Almokanna, the veiled prophet, whose life and actions are so beautifully detailed by Moore, in his *Lalla Rookh*, when likely to be taken by the troops, under the command of Almohdis' general, in the year of the Hegira 163, or 780 of our era, to avoid falling into the hands of his enemies, after poisoning his whole family and followers, threw himself into a vessel of aqua fortis, a preparation which it is well known could not be otherwise obtained than by distillation.

In the works of Geber, commonly called the Arab, there are some useful directions concerning the manner of conducting the process of distillation, and in one of his tracts in particular he has given much curious matter relative, not only to the nature and formation of aqua fortis, but of salts and acids in general. At what period this writer lived authors seem not to agree. According to Leo Africanus, he was a Greek, and flourished in the seventh century.* Others say that he was born at Seville in Spain, but of Saracen origin, and place him in the eighth, while Blancanus maintains that he wrote in the ninth century.† If, however, he lived

* Leo Africanus, l. iii. p. 136.

† It is greatly to be regretted that the history of this great man is so obscure. In a copy of his works, printed at Dantzic in 1682, he is stiled *rex Arabum*, and *Indiæ rex*; but for what reason he has been thus termed seems difficult to account.

in the seventh, which is generally supposed to be the true period of his existence, we may the more readily give credit to the curious means employed by the veiled prophet to elude the vigilance of his enemies.

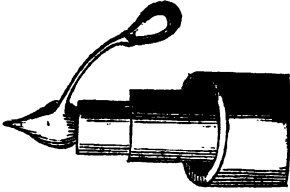
The following is a translation of the twelfth chapter of the second book of Geber's *Liber Investigationis Magisterii*. The perusal of it will afford the reader an idea of the correct views entertained by this author concerning the nature of distillation. His observations run thus: "Distillation is the
 "raising of aqueous vapour in any vessel in which
 "it is placed. There are various modes of distillation. Sometimes it is performed by means of fire,
 "sometimes without it. By means of fire the vapour either ascends into a vessel, or descends;
 "such as when oil is extracted from vegetables. The object of distillation is to free liquors from
 "drugs, and to preserve them fresh; since every
 "thing distilled possesses greater purity and is less
 "liable to putrescency. The object of distillation by
 "a still is to get water free from earthy substances,
 "by which both medicines and spirits are injured. The motive for discovering distillation by descent
 "was to obtain pure oil, as it cannot be raised by
 "heat into a still. The motive for distilling by
 "a filtre, is to obtain pure water. There are two
 "modes of distilling by fire; the one is performed
 "in an earthen vessel, full of coals or embers; the
 "other with water in a vessel, with herbs on wool,

“ arranged in order, lest the cucurbit, or still, be
 “ burst before it is completed. The first is con-
 “ ducted by a strong, the latter by a gentle and
 “ equal fire. Thus it happens that the heavy and
 “ grosser parts are raised by the first means, whilst by
 “ the latter we obtain a more subtile spirit, approach-
 “ ing nearly to the nature of common water. It is
 “ well known that when we distil oil by embers,
 “ that we obtain oil without any alteration; but
 “ when we distil oil by means of water, we obtain
 “ fair and clear oil from what appeared excessively
 “ red at first. By means of water, then, we must
 “ proceed with every vegetable, and things of the
 “ same nature, to ascertain their elementary parts.
 “ By the descensive mode must we proceed with
 “ every kind of oil. The arrangement of that
 “ which is performed by embers, is this: take a
 “ strong earthen pot, and fit it to a furnace of the
 “ same shape as that which is used for sublimation;
 “ around its bottom let sifted embers be placed,
 “ and covered with them up to the neck; then put
 “ in the substance to be distilled; finally, let the
 “ cucurbit, or receiving vessel, be attached and luted
 “ to the neck of the still, that nothing may escape.
 “ Let the still and receiver be of glass, and in-
 “ crease the fire as circumstances may require, un-
 “ til the whole is distilled. The second mode is like
 “ the first both in vessel and still, but differs in re-
 “ quiring an iron or brazen pot, fitted to the furnace
 “ as the former, and then upon the bottom of the

“ pot must be placed two or three inches of herbs on
 “ wool, to prevent the receiver from being broken,
 “ and let the receiver be covered with the same
 “ herbs in something similar, up to the neck of the
 “ still, and upon these herbs let flexible twigs be
 “ strewed, and on them let heavy stones be placed
 “ that may compass the still, receiver, and herbs, to
 “ prevent the contents from rising, which would
 “ break the vessel and destroy the distillation.
 “ Fill the pot with water, and apply the fire until
 “ the operation is completed. The arrangement
 “ of that which is performed by descent, is this :
 “ take a glass vessel, having a proper descent, with
 “ a lid, which must be luted to the descending
 “ vessel, put in what is to be distilled, and place
 “ the fire upon the lid. The arrangement of that
 “ which is performed by a filtre is this : place what is
 “ to be distilled in a hollow stone, and let the
 “ broad part of the filtre be well washed, and
 “ water be placed in the hollow part ; let the slender
 “ part project over the edge of the stone, under
 “ which let a vessel be placed to receive the filtered
 “ substance. If not pure at first, put it back until
 “ it becomes sufficiently pure. N. B. At first it
 “ will send over only the water with which it was
 “ moistened, then the liquor to be distilled.”

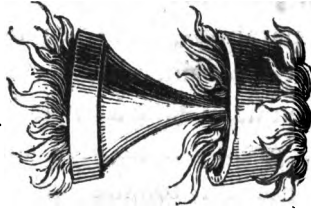
The better to elucidate the foregoing observations, a representation of the vessels used by him is subjoined, being curious when compared with those in use at present.

Ampulla recipiens.

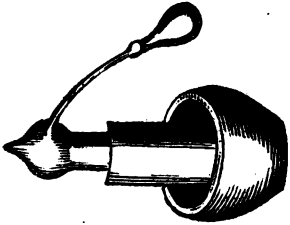


Secundus Distillationis Modus.

Ignis Receptaculum.

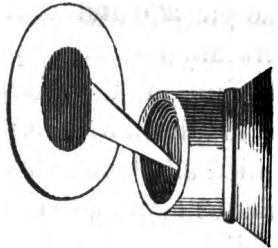


Quartus Distillationis Modus.



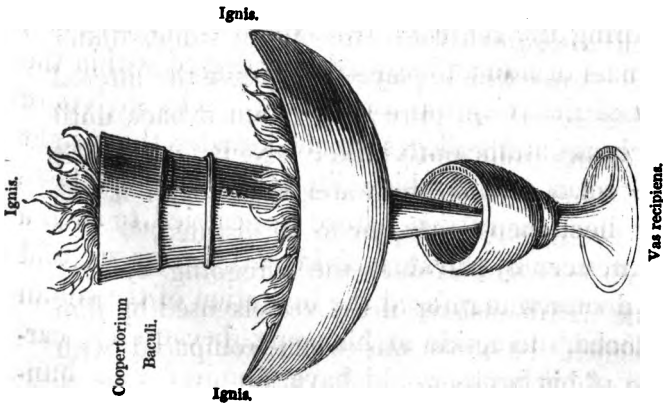
Primus Distillationis Modus.

Alembicus Lapideus.



Tertius Distillationis Modus.

Concha vas recipiens.



It is clear from the style and manner of Geber, that distillation was well understood in his time, and that the mode of conducting pharmaceutical preparations, both vegetable and mineral, had attained considerable perfection. About the period when he lived, a knowledge of the arts and sciences was greatly cultivated, and continued to extend in proportion to the conquests of the caliphs, the example and influence of whom diffused a love of literature over an empire that spread in Asia from the Gulf of Persia and the confines of Tartary to the Mediterranean and Indian seas, and comprehended all the habitable part of Africa, from the Isthmus of Suez to the Atlantic Ocean. Even after the dismemberment of that empire, and its division into caliphates in Asia, Africa, and Europe, the triumphs of the Saracens still disseminated the light of science and of the arts through the greater part of the world.

During the reign of the Abassides at Bagdad, the mass of human knowledge collected within the walls of that city was astonishing. The shelves of its schools and colleges groaned under the weight of Grecian and Arabian literature, and the taste for collections of that nature was carried to such a height, even by private individuals, that we are told of a doctor who refused the invitation of the sultan of Bochara to reside at his court, because the carriage of his books would have required four hundred camels. At Cairo in Egypt, the caliph's library consisted of 100,000 volumes, which were

elegantly transcribed and bound ; these were cheerfully lent, without any pecuniary consideration, to the students of the city. In Spain the caliphs had formed a library of 600,000 volumes, forty-four of which were employed in the mere catalogue. Cordova, the capital of the Spanish caliphs, with the adjacent towns of Malaga, Almeria, and Murcia, gave birth to more than three hundred writers, and above seventy public libraries were opened in the Andalusian kingdom.

Amidst such a profusion of information and knowledge, we need not be surprised at the discoveries of the Saracens. In chemistry they certainly excelled all the nations which had gone before them ; that comprehensive branch of human research was greatly illustrated and enlarged by their discoveries, and although it may be lamented that a great portion of their knowledge lay concealed under the occult mysteries of alchymy, yet, it may be said, the real science of chemistry owes its origin and improvement to the industry of this people. They first invented and named the Alembic, for the purposes of distillation ; analysed the substances of the three kingdoms of nature ; tried the distinctions and affinities of alkalis and acids, and converted the poisonous minerals into soft and salutary medicines.* Their speculation and vi-

* To the luminous and elegant pen of Mr. Gibbon I am indebted for some of the foregoing observations ; but he who has deserved the praises of Hume and Robertson can receive no accession of fame from any compliment of mine.

sionary hope of finding an elixir of immortal health led them to the discovery of alcohol, and entailed upon posterity the manufacture of a beverage, which, under the more modern name of *aqua vitæ*, has since proved to many a blessing, but to millions a curse.

We shall now proceed to consider the cause of the prohibition of wine and intoxicating liquors among the followers of Mahomet, illustrating the remarks with such anecdotes as shew that the prophet could not entirely eradicate that part of human imbecility which renders their use or pleasing qualities in some shape or other desirable. The great extent of Islamism renders this no easy task, as the imposture of Mahomet prevailed, with the exception of a few pagan nations, over an extent of territory from the shores of West Barbary to the most eastern part of Chinese Tartary, and from the Mediterranean Sea to the Cape of Good Hope.*

* Mr. Bayle in his Dictionary, under the article Mahomet, vol. 4. page 26, says, "that if we divide the known countries of the earth into 30 equal parts, five of them are Christian, six Mahometan, and nineteen pagan. Thus the Mahometan religion is of much larger extent than the Christian; for it exceeds it by one-thirtieth part of the known world; but Dr. Richardson, a recent traveller, computes the whole Islamitic world at 150 millions, and the pagan idolaters at 600 millions, while the number of Christians is estimated at 170 millions. See *Travels along the Mediterranean and parts adjacent*, in company with the Earl of Belmore, during the years 1816, 17, and 18, vol ii. page 494.

It has been asserted on the authority of Spanheim and Reland, according to a writer in the *Universal History*, from a MS. of Levinus Warnerus, formerly in the public library at Leyden, that the ancient Arabs abstained from wine long before the birth of Mahomet; but it appears from Strabo, that in Arabia Felix, besides the husbandmen, there were many who made palm wine, which he says was much used by the inhabitants of that country, proving that intoxicating liquors were not generally, if at all, forbidden before the time of that prophet.

As to the causes which induced Mahomet to prohibit the use of inebriating drink, they have been stated as various. The *Sieur de Ryer*, in his life of the prophet, attached to his translation of the *Koran*, page 39, says, that in the 4th year of the *Hegira*, while his army was engaged in expeditions against the neighbouring tribes, some of his principal men betaking themselves to play and drink, in the heat of their cups fell to quarrel, and raised such disturbances among his followers, that they had like to have come to an open rupture, and to the overthrow of all his designs. To prevent such mischiefs in future, he forbade the use of wine and all games of hazard for ever. To render this prohibition of more influence, he supported it with a fable of two angels, called *Arut* and *Marut*, who in ancient times, he said, were sent down from heaven to adminis-

ter and teach to men righteousness in the districts of Babylon, when a certain woman coming to them for justice, invited them to dine with her, on which occasion she set wine before them, which God had forbidden them to drink ; but the pleasantness of the liquor tempting them to transgress the divine command, they became so drunk, that they tempted the woman to lewdness, but it was on condition that one of them should first carry her to heaven, and the other bring her back : that when the woman got to heaven she would not come back, but declared to God the whole matter, who, to reward her chastity, made her the morning star ; and the angels having their choice, whether they would be punished for their wickedness now or hereafter, they chose the former ; in consequence of which, they were hung up by the feet, by an iron grate, in a certain pit near Babylon, where they are to continue until the day of judgment ; and that for this reason God forbade the use of wine to all his servants ever after. * The prophet seems to refer the reason of the prohibition in the Koran altogether to the quarrel which wine and games of chance had caused among his followers ; for in the 5th chapter of that book, he says, “ The devil desires “ to sow dissensions and hatred among you through “ wine and games of chance ; be obedient to God

* This fable, which is given here on the authority of the *Sieur De Ryer*, may be found, with little variation, in the *Abbé Mariti's Travels*, vol. i. p. 336.

“and the prophet, his apostle, and take heed to yourselves.” The learned Mr. Sale seems to agree with the *Sieur de Ryer*, that it was the quarrels and disturbances in company, and the neglect, or at least indecencies in the performance of religious duties occasioned by inebriety, which induced the prophet to pass so severe a prohibition.*

The priests, under the Mosaic law, were forbidden to drink wine or strong drink when they entered upon any of the sacred duties of their office. “Do not drink wine,” says the sacred writer, “nor strong drink, thou, nor thy sons with thee, when ye go into the tabernacle of the congregation, lest ye die: it shall be a statute for ever through your generations.”† The Nazarites and Rechabites‡, as well as many pious persons among the Jews and primitive Christians, abstained altogether from wine; and we find injunctions of a prohibitory nature observed among the Egyptians, Carthaginians, and Greeks: so that the mandate of Mahomet in this respect is not without a precedent.§

Abulfeda, in his account of the prophet’s night journey to heaven, observes, that the angel Gabriel brought him three cups, one full of wine, another of milk, and a third of honey; upon which he took the milk and drank it, as the most proper of the three,

* Sale’s Koran, chap. ii. p. 39. — Chap. iv. & v.

† Levit. x. 9.

‡ Numbers, vi. 2. Jerem. xxxv. 5, 6.

§ Ælian, b. ii. Hist. vii. Sap. Plato de Legibus.

after which he heard a voice, saying, "Thou hast made a lucky choice, Mahomet, since hadst thou drank of the wine, thy nation would have deviated from the right path, and consequently in their enterprises have proved unsuccessful."* The fact is, that previous to, and at the time of the prophet's pretended mission, the Arabians were given to drink wine to great excess whenever they could get it, and being of a hot constitution, as most of them lived within the torrid zone, they were the more liable to be inflamed by it, and to commit great irregularities; in consideration of which, Mahomet, as already quoted from the Koran, very prudently provided against the mischiefs which might ensue from it. But although there is little doubt that the prophet intended by his prohibition a strict abstinence from all intoxicating liquors, yet some have imagined, as Mr. Sale remarks, that excess in the use of wine or inebriating beverages is alone forbidden in the Koran, and that their moderate use is allowed by two passages in the same book. The words are in vol. i. chap. ii. p. 37. "They will ask you concerning wine and lots; answer, in both there is great sin, and also some things of use unto men; but their sinfulness is greater than their use." Again, in vol. ii. chap. xvi. p. 81. "And of the fruit of palm-trees, and of grapes, ye obtain an inebriating liquor and also good nourishment." Such is the weakness

* Abulfeda de vit. Mohammed.

of man, that it is easy to give a bias to that which suits our inclinations. The more received and general opinion is, that to drink any kind of strong liquors, either in a less or greater quantity, is absolutely unlawful; and though libertines may indulge themselves in the contrary practice, the more conscientious are so strict, especially if they have performed the Pilgrimage to Mecca, that they hold it unlawful, not only to taste wine, but to press grapes for the making of it, to buy or to sell it, or even to maintain themselves with the money arising from that liquor.* Herbelot, the well known French writer, in his *Bibliothèque Orientale*, says, that there were some Mussulmans so strict that they would not call wine by its true name, for fear of offending against the laws of their prophet; while some of the Arabian princes went so far as to forbid the bare mention of it.

We have an early and striking instance of the strenuous observance of the prophet's interdictory decree, in the treatment of the soldiers under Abu Obeidah, in the reign of the caliph Omar, who on hearing from that general that the Mussulmans had learned to drink wine during their invasion of Syria, ordered, that whoever was guilty of this practice should have fourscore stripes upon the soles of his feet; the punishment was accordingly inflicted, and many were so infatuated, although they had no accusers but their own conscience, as

* Sale's Koran, Preliminary Discourse.

voluntarily to confess their crime, and undergo the same punishment. *

That the drinking of wine was not so obnoxious to some of the successors of Mahomet, we have several examples among the caliphs. The following story is related of Almohdi, the father of Haroun Alrachid, the hero of the Arabian Nights' Entertainments. That monarch being one day engaged in a hunting excursion, strayed from his attendants, and being pressed with hunger and thirst, was obliged to betake himself to an Arab's tent, in order to get some refreshment. The poor man immediately brought out some coarse brown bread and a pot of milk to the caliph. Almohdi asked him if he had nothing else to give him, upon which the Arab went directly to fetch a jug of wine, and presented it to him. After the caliph had drunk a good draught, he demanded of the Arab whether he did not know him? The other having answered that he did not; "I would have you know then," replied Almohdi, "that I am one of the principal lords of the caliph's court." After he had taken another draught, he put the same question to the Arab as before, who answering, "Have not I already told you that I know you not?" Almohdi returned, "I am a much greater person than I have made you believe." Then he drank again, and asked his host the third time, whether he did not know him? to which the other replied, "That he could depend upon the truth of the answer

* Ockley's History of the Saracens, vol. i. pages 171 and 324.

“ he had already given him.” “ I am then,” said Almohdi, “ no less a personage than the caliph, before whom all the world prostrate themselves.” The Arab no sooner heard these words, than he tremblingly carried off the pitcher, and would not suffer his guest to drink any more. Almohdi being surprised at his behaviour, asked him why he took away his wine. The Arab replied, “ Because I am afraid that if you take a fourth draught you will tell me you are the prophet Mahomet, and if by chance a fifth, that you are God Almighty himself.” This gentle rebuke so pleased the caliph, that he could not forbear laughing; and being soon rejoined by his people, he ordered a purse of silver and a fine vest to be given to the poor man, who had entertained him so hospitably. The Arab, in a transport of joy for the good fortune he had experienced, exclaimed, “ I shall henceforth take you for what you pretend to be, even though you should make yourself three times more considerable than in this instance.”

Time, which unhappily too often destroys the best resolutions and propensities of our nature, has rendered the crime of inebriety less uncommon among the Mahometans of the present day than formerly; but since their intemperance cannot be induced by social hilarity, it is always, with them, a solitary vice, and consequently, to use the language of a modern writer, though not more hurtful, is much more odious than when it arises from the desire of promoting the exercise of the

social feelings. There is an anecdote told by Russel in his History of Aleppo, which, as corroborative of what is here advanced, the writer of this essay thinks an apology for its insertion scarcely necessary. It relates to a Sirdar of high rank at Aleppo, who was fond of indulging in the pleasures of the bottle. This man, says our author, was in the habit of retiring to one of the gardens near the town, to enjoy his wine more luxuriously in a kiosk. Returning one summer's evening from a debauch of this kind, he observed as he passed near the Christian burial-ground, a Maronite sitting on a grave-stone, and smoking his pipe, who on seeing him approach at some distance, rose up, laid down his pipe, and at the same time attempted hastily to conceal something in his pocket. This, the Sirdar suspected, and justly, to be arrack; therefore, stopping his horse, he despatched one of his attendants to bring the culprit before him. The Christian was not only reproached for drinking thus publicly, but threatened with instant punishment, for having aggravated the crime by drinking on a tombstone. Upon his swearing by the Gospel that he had tasted no strong liquor for a week, orders were given to search his pockets; but he had taken care that no testimony should appear against him from that quarter, by dropping the empty bottle before he was seized. The Sirdar then commanded another of his attendants to try whether the charge might not be proved from the criminal's breath. "Breathe ye, Giaour," exclaims the Jani-

zary, "breathe full in my face." The trembling culprit at first hesitated, but knowing the consequence of refusal, was at last obliged to comply. "I knew very well," said the Sirdar, "I should detect this Jew of a damned Christian. Does he not smell abominably, Mustafa? Bring him nearer me. Don't you perceive his breath?" "Why, really," replies the half-drunken Janizary, "that there is a strong smell of arrack among us cannot be doubted, but whether it proceeds from yourself, Sir, from me, or from this damned infidel, may I perish if I can justly determine."

All the necessary apparatus for distilling has been found in possession of rich individuals in various parts of the Turkish dominions. In the capital of Syria, the distillation of an ardent spirit from raisins, with a mixture of aniseed, is carried on extensively in an establishment fitted up for that purpose. The privilege of this manufacture, on payment of a certain duty, is alone granted to the Christian and Jewish subjects of the Grand Seignior. According to Baumgarten and others *, large quantities of beer, or zythum, are brewed by the Syrians from the grain of the country; and we have the testimony of Brown, a late traveller, that wine is produced in great abundance throughout Syria. To improve its quality, it is prepared by boiling immediately after the juice is expressed

* In Churchill's Collection.

from the grape; and to preserve it for use, it is put in jars or large glass bottles. This mode of boiling wine is not peculiar to the inhabitants of that country: it was in general use among the ancients. The Lacedæmonians were famous for it*, and it is still retained in some parts of Provence, where it is called the *Vin Cuit*, or cooked wine; but there the method is to lodge the wine in a large room, receiving all the smoke arising from several fires on the ground floors; an operation more slow, but answering the same purpose. The Spanish *Vino Tinto*, or tent wine, is prepared in the same way.† The most valued wine in this quarter is the *Vino de Oro*, or golden wine of Mount Libanus; this, however, is not boiled, but left to purify itself by keeping.‡ The higher classes of inhabitants in Syria often indulge in the luxury of these wines. The wandering hordes of Turcomans, Curdes, and Bedouins, that occupy many of the deserted and mountainous tracts of this region, are too poor to merit attention in an essay of this description; and since nature is easily satisfied where the temptations to enjoyment are few, what could be expected from those who shelter themselves under the frail tent, in the cavities of rocks, or under the

* Archæologia Græca, vol. ii. p. 360.

† The Romans, as appears from Columella, were in the habit of giving to some of their wines a rich and precocious maturity, by a particular effect of smoke. Vide *Columella*, L. i. c. 6.

‡ Brown's Travels in Africa, Syria, &c. *passim*.

shade of trees, and delight in the simple repast which their flocks afford.

The Egyptians, it appears, still make a fermented liquor of maize, millet, barley, or rice, but it bears little resemblance to our ale. It is of a light colour, and in the hot season will not keep above 24 hours, but it is sufficiently pleasant to the taste. It is drank in considerable quantities in Kahira, and in Said, the ancient Sidon. The native Christians mostly distil for themselves from dates a liquor called by the general name *Araki*; it is also made from currants, or the small grapes imported from the Seven Islands. At the time when the French were in Egypt, under Bonaparte, the want of wine was supplied by a spirit extracted from dates. The native Egyptians are now so degraded that they seem to have lost that taste for improvement or elegant refinement, either in the arts or comforts of life, which distinguished their ancestors from the most remote period.

The Nubians make bouza in abundance, in which they indulge to excess. It is a liquor somewhat like beer, and is extracted from *dhourra*, or barley.* Although they profess the Mahometan faith, they are characterised as great drunkards. Burckhardt, who visited Nubia in 1816, remarked, that during the fortnight he remained at Berber he heard of half a dozen quarrels occasioned by drink.

* Burckhardt's Travels in Nubia, 4to. 1819, p. 143, 144.

ing, all of which ended in knife or sword wounds. In the larger villages of Nubia palm wine is common ; it is not unpleasant to the taste, though too sweet and thick to be drank in any considerable quantity. It is obtained by the following process : as soon as the dates have come to maturity they are thrown into large earthen boilers with water, and the whole is boiled for two days without intermission ; the liquid is then strained, and the clear juice is poured into earthen jars, which after being well closed are buried under ground ; here they are allowed to remain for ten or twelve days, during which the liquor ferments ; the jars are then taken up, and their contents are fit to drink ; but the wine will not keep longer than a year, or beyond the next date harvest ; if kept longer it turns sour. The Nubians are industrious, and in most parts of Upper Egypt keep the shops for the sale of bouza. Great quantities, both of the wine and of the spirits which they distil from dates, are drunk at Derr, and are sold in houses kept for the purpose, to which many of the upper classes resort in the evening to intoxicate themselves. Burckhardt observed, that from *Siout* southward through the whole of Upper Egypt, date spirits were made and publicly sold, and that the pasha levied a tax upon the venders. A similar liquor is manufactured in Sennaar, a country bordering on Nubia ; it is, however, much less palatable to Europeans from its thick and glutinous quality, and from the burned flavour contracted in the

preparation of the dhourra, which is roasted previous to the short fermentation which it undergoes.

Poncet tells us, that in many parts of Ethiopia there are excellent grapes, but that no wine is manufactured: mead is the chief drink. In the making of this, several ingredients are employed; the barley which forms the basis of it is malted to a certain degree, and then dried, as we do coffee, and pounded fine; while an indigenous root called taddo is bruised and mixed with the barley. These are put with water into a well varnished vessel, and mixed with a fourth part of honey; and to ten pounds of this water are put two ounces of barley, and two ounces of taddo. The whole is blended together, and left in a warm place to ferment; it is stirred occasionally, and in three or four days it becomes excellent mead, pure and clear, of the colour of Spanish white wine.* It is said to be a delightful beverage, and of great strength. In Abyssinia, brandy, not inferior to that of France, is distilled from it. According to Bruce, their beer is of an inferior description, drawn from teff, a grain common in Abyssinia, or from barley. One or other of these grains being ground, is first baked into cakes, and then broken into small particles in a large well covered jar, which is set by the fire, and stirred frequently for several days. After being allowed to settle for three or four days more, it

* Lockman's Travels of the Jesuits.

acquires a sourish taste, and is what the Abyssinians call Bouza.* Of this, as well of the mead already mentioned, they drink largely when they visit one another; and, if Lobo is to be credited, there cannot be a greater offence against good manners than to let the guests go away sober. The liquor on such occasions is always presented by a servant, who drinks first himself, and then gives the cup to the company, in order, and agreeably to their rank or station.

The inebriating drinks used by the other rude tribes of the African continent, whether Mahometan or pagan, are so much alike, that to describe them all would be tedious, and, were it possible, useless: a few of the most interesting may suffice.

The beverages of the Negroes are, according to Park, beer and mead: the latter we find to be a species of drink very common in Africa, owing to the great abundance of honey, while the former is made wherever any farinaceous grain is cultivated.† When Dalzel was at the coast of Dahomy, he observed a species of liquor called Pitto, manufactured by the ladies of the palace, of an agreeable flavour and heady quality. It was prepared from grain regularly fermented, and very much resembled the liquor drawn from the date-tree by the people of

* Bruce's Travels to discover the Source of the Nile, vol. vi. p. 94.

† Park's Travels, p. 284. Lond. Edit. 1807.

Fezzan. From the latter a revenue of some consequence arises, which, Ben Ali says, his Fezzanic majesty has collected by a tax on the trees, and not on the quantity produced.

The practice of drinking buza, or bouza, prevails to a considerable extent in Sudan, or Dar Fur. The Sultan Abdelrahman, a rigid Mahometan, published an ordinance in 1795, prohibiting the use of it altogether under pain of death. Even the unfortunate women who made it had their heads shaved, and were exposed to every possible degradation; but as the habit of using it was of older standing than the profession of Islamism, companies are yet known to sit from sun-rise to sun-set, drinking and conversing, till a single man will sometimes carry off with him two gallons of this liquor.* The bouza having a diuretic and diaphoretic tendency, precludes the danger usually attendant on such excesses.

In Congo, the inhabitants are equally prone to the pleasures of inebriation. They cultivate the palm for the love of its juice, and shew considerable expertness in the manufacture of their wine, which they obtain as follows:—At certain times of the year they ascend the trees, by the help of a hoop, and when they perceive a flower blown, they cut it off with a knife, and fasten the point of the cut stalk into a calabash, called a *capasso*. It re-

* Brown's Travels, 4to. p. 222. 248. 333.

mains suspended in that way for a short time, and on being taken down is found full of a liquor as white as whey. This they ferment, and having racked off, give it the name of *Milaffo*. The whole, however large the brewing, must be consumed in three days, otherwise it would turn sour and become rancid. In such parts of Congo as do not produce palm wine, a substitute for it is procured from Indian wheat soaked in water, pounded and fermented in the usual way: this is called *Guallo*. In the entertainments of the Congoese, the master of the ceremonies, after having served the company with meat in the most exact manner, holds the moringo, or flask, to the person's mouth that drinks; and when he thinks he has got sufficient, he pulls it away, and observes the same practice with all the other guests to the end of the feast; for they never use cups or glasses. *

The people of Loango, Gabon, Calbongas, Biafra, Benin, and Ashantee, are all skilled in the making of these beverages. Bowdich, who visited the latter country in 1817, found its inhabitants well supplied with palm wine, of which they are very fond. One of the lords of the council, on one occasion, seemed quite astonished at an English gentleman drinking only half a bumper; and remarked, that he would drink three pots (about

* Voyage to Congo, part i. p. 564. apud Churchill.

fifteen gallons) before he went to bed.* Among the privations that superstition imposes on them, one day of the week is considered fetish, or sacred, on which they are exempt from labour and their favourite beverage.

When Bosman visited the coast of Guinea, he found the inhabitants willing to barter every thing they had for brandy. If any of them, he observed, in some places, happened to get a mouthful more than another from any of the ship's company, they fell to fight without either respect to king, prince, or priest. Some joined in the scuffle through envy, and lest they might be accused of being idle spectators. It is said of one of the dukes of Bamba, that he refused the crown, in order to be near the Portuguese, that through their means he might the more readily indulge in wine and brandy.†

The Caffres and Tambookies prepare an intoxicating drink from millet, or Guinea corn, which they call Pombie. It is manufactured much in the same way as the liquors already described, and in large quantities; for the longer it remains so as to become tart or sour, the better they reckon it, and the more eagerly do they covet it, as possessing great virtues.‡

* Bowdich's Ashantee, p. 386.

† Bosman's Voyage. Adamson's Voyage to Senegal.

‡ Joao Dos Santos's Hist. Patterson's Travels in Caffraria, 4to. p. 92.

Leaving these barbarous countries in the enjoyment of their luxuries, and passing others, perhaps equally barbarous, let us proceed to those more immediately connected with the object of our inquiry, the Barbary and other states.

In Morocco, Jackson assures us that the Jews are extremely active in preparing intoxicating liquors, and that in the province of Suse and Tetuan they not only make wine, which, in Windhus's opinion, is equal to the sherry of Spain*, but distil brandy from the grape as well as from the raisin.† An ardent spirit is also extracted by them from figs, called Mahayah, which they drink almost immediately from the alembic. When it is kept for a year or two it resembles Irish whiskey, and is preferred to European brandy or rum, because, as they pretend, it does not heat the blood. A glass of it is generally taken before meals.‡ Cider is made in many parts of Barbary, and affords an excellent drink. Usuph is common, but consists of little more than the water in which raisins are steeped.

Sherbet has been long a favorite with the professors of the Koran; it is much used in the Levant; and in Algiers, is made of sugar, juice of lemons, apricots, plumbs, violets, or other fruits. The Deys,

* Journey to Mequinez.

† Jackson's Account of Morocco, 44o. p. 18.

‡ Ibid. pp. 77. 92.

though possessing one of the most fertile states in Barbary, do not encourage the manufacture of inebriating liquors; yet Jamaica rum, as well as good wine, is among the merchandize always in demand. Grapes of a superior quality grow in different parts of Algiers, and, according to Shaw, some wine is made not inferior to the best Hermitage, both in taste and flavour; but the locusts are so destructive that they frequently destroy whole vineyards.* Rosolio, an Italian cordial, is in great repute both at Tunis and Tripoli.

Niebuhr observed, that in many parts of Arabia the Jews made wine and distilled brandy to considerable extent, and that at Sana†, in the district of Yemen, large quantities of these articles were manufactured; while in other places a sort of beer, something like the Egyptian curmi, was brewed, which received an agreeable taste from an infusion of a grey herb called *Schæbe*‡, that served as leaven in the fermentation. From the berry of the cebatha shrub§ a very strong kind of spirit was extracted, the acid taste of which he thought was much improved by sugar. Arrack is sometimes imported into Mokha from India, as well as into many of the other parts of the Arabian Gulf.

* Shaw's Travels in Barbary and the Levant.

† Niebuhr's Travels, 8vo. vol. i. p. 250.

‡ Ibid. vol. ii. p. 347. The lichen of the plum-tree, a native of the isles of the Archipelago.

§ Ibid. vol. ii. p. 355.

Since the duty was laid on wine at Constantinople it has proved a more productive source of revenue than that arising from all the other articles in demand. The annual consumption of the city is calculated at 20,000,000 of okes*, a prodigious quantity; but when we consider that there are several thousand taverns licensed in various parts of this immense capital, which comprises a population of from 4 to 500,000, including a portion of almost every nation in the world, it need scarcely be a matter of surprise. The grand vizier derives a considerable emolument from these houses, which under various frivolous pretences he often causes to be shut, in order that he may get a present on their being re-opened. Besides wine, various liquors are common; amongst these, boza, or bouza, is greatly esteemed, and it is of a much superior quality to that prepared in Egypt. The brandy distilled in the islands of the Archipelago, and from the figs of the Morea, is used to some extent.

In many of the provinces the Turks are uncommonly attached to a preparation of mint and pimento, dissolved and digested in water. This liquor is remarkably strong: the person who drinks it, for the first time, supposes that he has swallowed the most ardent alcohol. Sherbets, prepared like those at Algiers, from a confection of raspberries, strawberries, or apricots, diluted in water, are in

* Walpole's Travels, p. 154.

great requisition. Large quantities of these conserves are made and sold in solid lozenges, and in the hot season are considered delicious when dissolved in mountain snow. Cherries, gooseberries, currants, &c., steeped in rose water, with a slight infusion of musk or aromatics, form a beverage much used in various parts of the Turkish empire. Were beer, such as we have in Great Britain, brewed in the principal cities of Turkey, there is little doubt that the brewers would raise rapid fortunes from the sale of it; for as the Mahometans at present rather regard the letter than the spirit of their law, they would not be very scrupulous in drinking a liquor which is not prohibited by name. Aaron Hill, in his Account of the Ottoman Empire, first published in 1709, recommends a speculation of this nature; his observations being much in point, we shall not abridge them.

“The love of brandy, wine, and other strong liquors, so much evinced throughout the Ottoman empire, proceeds,” says he, “from nothing else but their ignorance in brewing other beverages; for I frequently observed, that when an English ship had brought some bottles of our country beer or ale to Turkey, and presented them to such as would afterwards compliment the noted Turks of their acquaintance with a share in drinking them, they constantly express a wonderful esteem and eager inclination to obtain a quantity, assuring us *repeatedly*, that could they

“ make such *drink* themselves, they never should
 “ be tempted to commit a sin, by breaking through
 “ their prophet’s order to forbear the use of wine
 “ and brandy.

“ Nothing can be possibly more easily accom-
 “ plished than the universal wish of Turks and Gre-
 “ cians upon this occasion, would some English
 “ brewer, skilled in his profession, make a voyage
 “ into Turkey, purposely to use his best endeavours
 “ for the introducing of beer or ale into common
 “ use instead of water.

“ For first, I have sufficiently explained my rea-
 “ sons, to believe that the natives of that country
 “ would with pleasure drink it, and the price by no
 “ means could retard the practice, for so cheap is
 “ malt throughout their empire, that they feed
 “ their poorest horses with the best of barley; and
 “ with so much ease might he expect to thrive
 “ therein, that though he sold the liquor he should
 “ brew at no greater price than a penny per quart,
 “ he must soon grow rich by more than cent, per
 “ cent. of clear profit. But so far beyond this lowest
 “ computation may he reckon his advantage, that
 “ I can experimentally assure him, he might sell
 “ it (and be never thought too dear), at full the
 “ price it bears in London; nor would the Turks
 “ think more too much, or if they should, the very
 “ factory itself, excluding all the other Christians
 “ there residing, would enrich him speedily, pro-

“ vided he took care to manage well the brewing
 “ of all his liquors.

“ If any timorous man,” continues our author,
 “ objects the inconvenience of so long a voyage,
 “ his being altogether unacquainted with the coun-
 “ try and its language, and his want of friends to
 “ help on his design, those difficulties will soon
 “ vanish, when I tell him that he may bargain for his
 “ passage in an English ship, and be supplied with
 “ all provisions, even to Constantinople, for consider-
 “ ably less than £20; that he will land within a few
 “ stones’ throw of the ambassador’s house, to whom
 “ the captain must of course present him, if designed
 “ to settle there; that he is bound to grant him his
 “ protection and encouragement; that he may have
 “ a drougoman, or ar interpreter, to wait upon him
 “ for a little charge, and still conversing with his
 “ countrymen, maintain a trade almost as free and
 “ uncontrolled as if in England.” * A late traveller
 observes, that it has often been a matter of surprise
 to him, that among the trading speculations of his
 countrymen no man has ever thought of trying a
 project of this nature. I have at times, says he,
 questioned merchants on the subject, who have urged
 as an objection, the difficulty of preserving it in such
 a climate; yet beer is made in England for export-
 ation to the East Indies. †

* See Aaron Hill’s Account of the Ottoman Emp. 4to. p. 90, 91.

† Turner’s Journal of a Tour in the Levant, 3 vols. vol. iii.
 p. 488.

The only plausible objection which appears to such a speculation, is certainly the heat of the climate. It is, however, probable, that by brewing at particular seasons of the year, or conducting the process in cool cellars, beer might be made of tolerably good quality, though not equal to the best British.

In the Persian empire, as well as in the Turkish, the Mahometan faith precludes an indulgence in inebriating liquors ; but in few countries, perhaps, is there less attention paid to the prohibitory mandate of the prophet. Sherbet is the fashionable drink at meals, but wine is the favourite in private. The love of the Persians for this liquor is well known from the earliest antiquity. It often led them into the most extravagant excesses. Herodotus tells us, that they were accustomed to debate on matters of the highest moment when heated with wine* ; and Strabo says, they considered their counsels and decrees firmer if made at that time than when sober.† Their beautiful and favourite poet Hafiz, though he may have indulged his imagination to the extreme of fiction, has strongly marked in the following verses his attachment to the popular beverage of his country.

“ I am,” says he, “ neither a judge, nor a priest,
 “ nor a censor, nor a lawyer ; why should I forbid
 “ the use of wine ?

* Herod, vol. i. § 133. p. 137.

† Strabo. Geo. cha. 15.

“ Do not be vexed at the trifles of the world ;
 “ drink, for it is a folly for a wise man to be af-
 “ flicted.

“ That poignant liquor which the zealot calls
 “ the mother of sins is pleasanter and sweeter to
 “ me than the kisses of a maiden.

“ The only friends who are free from care are
 “ a goblet of wine and a book of odes.

“ The tulip is acquainted with the faithlessness
 “ of the world ; for, from the time that it blows
 “ till it dies, it holds the cup in its hand.

“ Give me wine ! wine that shall subdue the
 “ strongest ; that I may for a time forget the cares
 “ and troubles of the world.*

“ The roses have come, nor can any thing afford
 “ so much pleasure as a goblet of wine.

“ The enjoyments of life are vain ; bring wine,
 “ for the trappings of the world are perishable.”

Travellers assure us, that intoxication is not un-
 common in Persia†, and that the laws of moder-
 ation are frequently as little regarded as those of
 religion.

The Jews and Armenian Christians are the prin-
 cipal manufacturers of wine ; and though there is
 scarce a province in the empire which does not
 afford it, yet the wine of some is much more

* Johnson called brandy, “ *drink for heroes.*” Hafiz distin-
 guishes his liquor by an uncommon epithet, “ *the leveller of*
men.”

† Morier's Journey, &c., 4to. p. 127. Hanway, &c.

esteemed than that of others. Shiraz is universally allowed to produce the best. Tavernier states, that 4125 tons of this wine were annually made in his time.* It has so strong a body, that it will keep from 80 to 100 years without diminution of colour or flavour. To eat the bread of Yezd, and drink the wine of Shiraz, is proverbially, in Persia, to be happy. Brandy is distilled of excellent quality, which, with the wine, is carefully put up in thin flasks or bottles, in chests containing about twelve English gallons each, and sent to Teheran, the present metropolis, Ispahan, Gombroon, Bassora, the East Indies, &c.

When Sir Robert Ker Porter visited Persia in 1819 and 1820, a strict prohibition against the use of this liquor was enforced by the reigning monarch, who not only abstained from it himself, but ordered the officers of police, on the discovery of any jars containing it, to have them broken. This strictness did not, however, extend to foreigners, who it appears are allowed the most liberal indulgence in the use of it, and a shop is even licensed in the metropolis for the special accommodation of the Russians, or other foreigners, who may be in the service of the Sultan. Age and infirmity serve as an excuse to many of the natives who secretly apply to this cordial; but no such indulgence is

* Tavernier, p. 428. Waring's Tour to Shiraz.

allowed in public, under pain of severe punishment. *

The same prohibition has been more or less observed in several reigns since the conquest of the empire by the Saracens in the first century of the Hegira; but, as already observed, the morality of the Persians has never been strictly regulated by the precepts of the Koran, and old habits always in a great degree prevail. †

At what time the use of the still was introduced into Persia is not known, but the export of its distilled waters formed an early item in its trade with India. Whatever may have been the knowledge of this people, previous to their submission to the Arabs, it is generally allowed that medical science was soon afterwards cultivated among them with considerable success; and to the preparations which that art required, may, perhaps, be attributed the early celebrity of their rose water, in the distilling of which they excelled all other nations.

No country on earth, it is thought, can boast of a greater variety of fruits and flowers than Persia. There are no less than twelve or fourteen species of grapes; the most esteemed are the violet, the red, and the black, a bunch of which weighs twelve or thirteen pounds; and they are so large, that one

* *Travels in Georgia, Persia, Armenia, &c.* 2 vols. 4to. Edin. Rev. Oct. 1821.

† *Krusinski's Memoirs, with Ducerceau's Hist. of the Sophies.* 8vo. p. 54—56.

single grape is a good mouthful. These they often pickle, or preserve through the winter, by securing them in paper-bags on the vines.

The dates are of the richest and best kind, and the syrup they yield is considered sweeter and pleasanter than virgin honey. All the European fruits are found growing in great luxuriance, with apricots, nectarines, and peaches that weigh sometimes sixteen or eighteen ounces each. Oranges, pomegranates, melons, pistachios, almonds and figs abound. Sir John Chardin saw fifty different kinds of fruit produced at an entertainment near Ispahan.

The mild and temperate heat of the climate has covered, as with a carpet, a great portion of the country with flowers of the most gorgeous and brilliant hue. Neither those of Europe, nor those of India, can vie with them. Their roses are celebrated for uncommon beauty, the bushes bearing often three different sorts on one branch, such as yellow, yellow and black, and red.* From the neighbourhood of Shiraz they can yearly export 2000 chests of rose water, while ten times that quantity is spent in Persia, Arabia, and Hindostan.†

Various kinds of grain are cultivated, but few undergo the fermenting process. Wheat, barley,

* Univ. Hist. vol. iv. p. 539. Morier's Journey, &c.

† Hamilton's Account of the East Indies. Bernier, &c. Franklin's Tour.

rice, oats, rye, and millet, are reared with much care and success. It may be proper to remark, that they sell wine and brandy in Persia by weight, and not by measure; and store those commodities at Shiraz, as well as in most other cities of the empire, in large well-glazed earthen jars, or in glass bottles, called carabas, which are a finger-breadth in thickness, and hold near thirty quarts. These are arranged in spacious well-built cellars, constructed for coolness, with fountains, or overrunning waters, and provided with seats: in these retreats of shadowy delight, the wearied visitants are often made to forget their cares.

Among the inhabitants of that extensive region, known by the name of Tartary, a variety of intoxicating liquors is found to prevail. To point out the quality of each, with their shades of difference, would be extremely difficult, particularly as the tribes are so thinly and remotely scattered through a territory 460,000 miles* in extent, of which the greater part remains as yet but imperfectly known. Koumiss, or the vinous liquor prepared by fermentation from mares' milk, seems to be the great and leading beverage of the Tartar hordes. Of its origin we know little; but that it was familiar to many of the nations of Asia, long before they had any intercourse with Europeans, is unquestionable. De Rubruquis, a monk, who was sent by Louis

* Malte Brun, vol. ii. p. 36.

the IX. of France, in 1253, as an ambassador into different parts of the East, describes its preparation with tolerable accuracy, and says, it was so plentiful in his time, that he knew one person alone who was served daily from his farms, with a superior kind of it, made from the milk of 100 mares, and that a number of his acquaintance together received the produce of 3000 mares. This, however, is not to be wondered at, when we consider that the riches of a Tartar consist in the multitude of his cattle, and that some individuals, according to Pallas, have been known to possess 10,000 horses, 300 camels, 3 or 400 sheep, and more than 2000 goats. Marco Polo, who passed through a great part of Asia in the middle of the thirteenth century, speaks also of koumiss as a common drink. Late writers describe it as a wholesome, nutritious beverage, and allow that it possesses important medicinal qualities.*

It is prepared by mixing a sixth part of warm water with any given quantity of warm milk, which in summer must have previously stood twenty-four hours, and in winter three or four days: to this is added either a little old koumiss, sour cows' milk, or a small piece of the stomach of a colt or calf, by way of barm, when with a slight agitation, by

* Edin. Phil. Trans. vol. i. p. 178, &c. Guthrie's Tour, 4to. pp. 227, 8, and 9. Whittington's Journey, in 1816, through Little Tartary, &c. published in Walpole's Travels, pp. 463 and 468.

means of a stick resembling a churn staff, the mass becomes fermented. Sometimes artificial heat is applied to produce the vinous fermentation. The taste is a pleasant mixture of sweet and sour. This liquor is fermented mostly in leathern bags, formed like a stone jar, wide at bottom and narrow at top, and containing about an anker each. These are usually made of the hides of cows, goats, or horses, fresh skinned; they are steeped in water till the hair rubs off, and where no astringent herbage is to be found, they are soaked thoroughly in blood and dried in the most warm and smoky parts of the huts. By this means the bags are rendered water-proof, and even made to retain oil.

The well known hospitality of the Tartars renders the accumulation of these bags, particularly among the chiefs, sometimes incredible, since 500 ankers of koumiss is considered no uncommon stock. At marriage ceremonies, a time of peculiar rejoicing, it is not unusual to see from two to four gallons of that liquor swallowed at three draughts.*

The Usbecks, Mandshurs, Mongols, Kalmucs, &c., are not only in general expert in the making of koumiss, but distil a very strong spirit from it, which they call *araka*, conjectured by some, from its high antiquity, to be the true source from whence the Indian arrack derives its name. The distillation is generally effected by means of two

* Billing's Travels, abridged by Sauer, 4to. p. 128.

earthen pots closely stopped, from which the liquor slowly runs through a small wooden pipe into a receiver, which is usually covered with a coating of wet clay. The spirit, at first, is weak, but after two or three times distilling, it becomes extremely intoxicating. Doctor Edward Clarke saw this process performed by means of a still constructed of mud, or very coarse clay, having for the neck of the retort, a piece of cane. The simplicity of the operation, and the rudeness of the machinery, are, indeed, very characteristic of antiquity. In general, the affairs of the distillery, as well as the other domestic labours of the Tartars, are committed to their women.*

It is not unworthy of remark that these tribes were the first who discovered the fermenting quality of milk, and shewed it to be capable of affording a liquor, when separated by distillation, equal to alcohol. Scheele, the Swedish chemist, made himself early acquainted with the fermenting powers of this liquid, but he never seemed to suspect the possibility of producing a spirit from it. It has been the practice in Iceland to put whey in barrels, where it is allowed to ferment, and in six months is fit for drinking.† Among many of the northern Tartars, koumiss in the winter is made from the milk of the cow, but it is seldom preferred to the

* Doctor Clarke's Travels in Russia, Turkey, and Asia.

† Vide Mackenzie's Iceland, 4to. p. 156 & 277.

other, as only yielding on distillation one thirtieth, while mare gives one fifteenth part of its whole quantity. This species of koumiss is called *aïren*, and the spirit extracted from it *arika*.

Such of the tribes as profess the Mahometan faith, particularly those of Great and Little Bukharia, are forbidden the use of inebriating drinks; but with them, as with their more enlightened neighbours, a want of attachment to the prophet's precept occasions excesses, rendered odious by the hypocrisy employed to conceal them.

In those parts of Tartary where rice and other kinds of grain are cultivated, the fermenting process is not unknown. Wine from the grape is sometimes made; and among the Mandshurs, who conquered China, and whose descendants still hold the sovereignty of that empire, a wine of a very peculiar nature is said to be prepared either by fermenting the flesh of lambs, reduced to a kind of paste, with the milk of their domestic animals, or bruised to a pulpy substance with the rice; it is drawn off after fermentation, into jars, out of which they regale themselves, and export the remainder into Corea and China, under the name of Lamb wine.*

In extending our views to India we are led to contemplate an immense portion of our species as

* Richards, Hist. Tonquin. Bentink, &c. Mod. Univ. Hist. vol. iv. p. 67 & 68.

existing at a remote period, in a very advanced state of civilization, successfully cultivating the arts and sciences, and spreading their renown to distant nations. We see some of the wisest philosophers of Greece, viz. Pythagóras, Anaxarchus, Pyrrho, and others, visit that country, and return enriched by the wisdom of its sages*, yet the early arts of these nations still remain unknown to modern Europeans. Since, however, we are assured that they were proficient in metallurgy, and in the manufacture of sugar, indigo, dyeing†, it is natural to infer that they must have been early acquainted with the composition of some kind of intoxicating beverage, drink being so indispensable in tropical climates. Quintus Curtius, in his life of Alexander the Great, states that at the time of the invasion of that monarch, the Indians made use of a sort of wine which is supposed to have been no other than toddy, or the unfermented juice of the cocoa-nut. From the Institutes of Menu, we learn that the “ inebriating liquors of the Hindoos “ may be considered as of three principal sorts: “ one extracted from dregs of sugar, another from “ bruised rice, and the third from the flowers of “ the Madhuca.”‡ But, that distillation was known to them before their conquest by the Sara-

* Hist. Phil. vol. i. p. 51.

† Asiatic Researches, vol. iv. p. 33 & 34.

‡ Chap. xi. Inst. 95.

cens, we have no proof: these extracts, therefore, must have been procured by compression and fermentation. The trade of India, which had continued long in the hands of the Egyptians, was, in 640, transferred to the Saracens by the Caliph Omar. Wine being a prohibited article among the Mussulmans, no commerce could be carried on by them in that commodity. The Indians, however, continued to manufacture wines from various substances, and under different names. The chief of these was the Tári, or fermented juice of the palmira tree, procured from the *Borassus flabelliformis* of Linnæus, the *Tal* or *Tar* of Bengal, and *Pannamaram*, of the Tamuls.

In many parts of India this tree grows spontaneously; in others it is cultivated with great care. When planted in a fertile soil, and of 30 years' growth, it yields, according to Buchanan, *callu* or *palm wine*, from the 11th of January, to the 11th of June. One active man is considered competent to manage forty trees. Previous to the bursting of the membrane which covers the flowering branch, called by botanists, the *spatha* or *spadix*, the workman mounts the tree by means of a strap passed round his back, and a rope round his feet, and bruises the part between two flat pieces of stick; this is done for three successive mornings, and on each of the four following he cuts a thin slice from the top to prevent the *spatha* from bursting. On the eighth morning a clear sweet liquor begins to

flow from the wound, which is collected in a pot suspended for that purpose. A good tree will discharge daily about three quarts of juice, which, if intended for drinking, will keep three days. On the fourth it becomes sour, and what is not sold or drank, is distilled into arrack. This exudation, if continued for three years, will kill the tree; which, however, is generally considered as yielding more profit in this way, than it would if preserved for the sake of its nuts, or for any other purpose. As there are different species of palm-trees there is a diversity of quality in their respective produce, each of which has accordingly distinct appellations among the natives, but to all of which the English apply the general name of *Toddy*, a corruption of the Mussulman common term *Tári*. The wild date (*Elate Sylvestris*) the Mahometans call *Sin-day*; in the Karnatic language, *Hinda*; and in the Telinga and Zamul dialects, *callu*. The Sinday is never drank till after fermentation, which is soon effected by the influence of the sun, and then the liquor is exceedingly intoxicating. When distilled and rectified, it affords a good spirit. Toddy is considered as a cooling and extremely wholesome beverage, operating on some constitutions as a gentle cathartic. European soldiers use it in large quantities when they cannot get arrack. In Ceylon whole woods of the cocoa-tree are set apart for the purpose of procuring toddy, from which all the arrack of that island is distilled, and the sac-

charine quality of the fluid is so great as to produce a yeast or barm, similar to that obtained from our malt worts.

In the pots intended to receive juice, that is to be boiled to jaggory (a kind of sugar to which it is sometimes converted), a little quick lime is put to prevent fermentation, by absorbing any acidity which might arise, and the juice must be boiled on the same day on which it is taken from the tree. Twelve trees on an average daily fill a pot, which when boiled down gives six balls of jaggory. In some places the *tári* is used for drinking only, but where it is plentiful it is made into jaggory, which the poor use as a substitute for that extracted from the sugar cane. Forbes says, that three quarts of the *tári*, when boiled down, produce a pound of sugar.*

It is reported, says Buchanan, that the wild date tree, from which toddy is extracted, was formerly very abundant in the dominions of the late Tippoo Sultan, who observing that his subjects frequently debased themselves with the *tári*, commanded all the trees to be cut down, and in places near the capital the order was strictly executed.† This prince is even said to have attempted the absolute prohibition of spiritous liquors.

The sugar cane is cultivated in India to great

* Forbes's Oriental Memoirs, vol. ii. p. 452.

† Buchanan's Journey through the Mysore, &c. vol. i. p. 56.

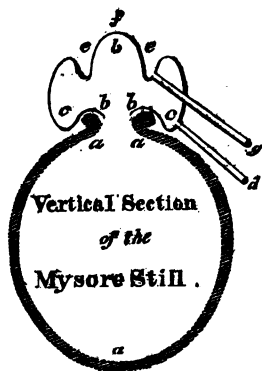
extent, and the jaggory which it yields, and from which the greater part of the native rum is manufactured, is thus procured. The canes are cut into pieces six inches long and bruised in a mill; the juice which flows from them is strained through a cotton cloth into a boiler, to which is added a certain quantity of lime water. When the evaporation has reduced it to a proper consistence, it is put into a large pot to cool, then poured into a mould containing an hundred holes, each in shape of a quadrilateral inverted pyramid. The frame being turned over, the balls fall out, and after being placed on leaves for a day, are exposed to sale, at a price varying from six to twelve shillings the cwt. Thus jaggory appears to contain both the sugar and molasses, and resembles the product, which in Jamaica comes out of the cooler before it is taken to the curing house, being only a little more inspissated, and requiring about 37 gallons to the cwt. The profit is equally divided between the farmer and the government, and a considerable revenue is raised from palms, the regulations for which differ in different districts. In one place when a person plants a garden, the trees are considered as his property, paying one half of the produce to the state; in another, they are let in lots at the rate of forty pounds per annum. These again are farmed to some of the inferior villagers, who extract and distil the juices. Could the jaggory from the sugar cane, observes Buchanan, be generally converted

into either a palatable spirituous liquor, or into sugar, the barren plains of the Carnatic might be rendered productive. The former suggestion appears to be not impracticable, and deserves attention in the way of experiment. If it should answer, the whole of the grain distilled in Europe might be saved for food.* The process observed in some of the provinces in the distillation of rum, is described as follows. From the *mimosa leucophlea*, a tree common to the country, the bark is taken, dried, and cut into chips, of which about four pounds are added to the twenty-four pounds and quarter of sugar-cane jaggory, with a quantity of water equal to twice the bulk of this sweet substance. The mixture is made in an earthen jar kept in the shade; the fermentation, commencing in about twenty-four hours, is completed on the twelfth day, when the liquor is distilled by the following apparatus. The body of the still (*aaa*) is a strong earthen jar, capable of containing three times the bulk of the materials. On this is luted with cow-dung a copper head (*bbb*), having on the inside a gutter (*cc*) for collecting the vapour that has been condensed into spirit by a constant small stream of water, which falls on the head at (*f*). This water is conveyed away by the pipe (*g*), while the spirit is conducted into a jar by the pipe (*d*). The mode of condensing the spirit is very rude; and the liquor, which is never rectified

* Buchanan, vol. i. p. 6.

by a second distillation, is execrable. The natives allege that the bark, which is very insipid to the taste, is useful, by diminishing the too great sweetness of the jaggory. "To me, however," observes Buchanan, "it appears to be rather of use, by regulating the fermentation, which in such a warm climate would be apt to run suddenly into the acetous."*

In the first volume of the Asiatic Researches occurs the description of a method of distillation practised at Chatra, in Ramgur, and other provinces in India, differing but little from that now described. Through the kindness of a gentleman for some years resident in this quarter, we are favoured with the drawing of a still, which, with the section of that used in the Mysore district, as above described, is subjoined.



* Buchanan, vol. i. p. 39.

When the material for distilling, whether rice, jaggory, molasses, or the simple fermenting juice of the cocoa-nut tree is ready, a hole is dug in the earth suited to the size of the still or jar to be employed; and level with the bottom of this hole there is an underground communication made for the purpose of feeding the fire with atmospheric air; near the edge of the hole a chimney is erected, which serves as well for the supply of fuel, as for the discharge of the smoke. A fire of dry wood is first kindled in the pit, and when the ground is thoroughly heated *, the still is fixed in it, and so bound round with earth, that no heat can escape. When the jar begins to boil, and the steam to ascend, an Indian, with a pot or kettle, pours a gentle stream of water, which he takes from an adjoining reservoir, upon the head of the still already described, or on the broad and thin surface of a plate of tin or copper (with a gutter for the water to run off, as represented above), which is fixed on a pan, with a hole in the bottom, luted to the neck of the still, and serving as a condenser. The extreme cold excited by the evaporation of the water on so broad a surface occasions the vapour from the still to be immediately condensed, and to run in a trickling stream to the receiver.

* This idea was probably taken from the ancient mode of baking bread in the East. Instead of what we call ovens, they dug a hole in the ground, in which they inserted a kind of earthen pot, and to its interior surface, when sufficiently heated, their cakes were stuck, and were speedily done. — See Clarke.

In 1782, two gentlemen, of the name of Crofts and Lennox, constructed a distillery at Sooksagur, near Calcutta, at which spirituous liquors were distilled in the European manner. As these spirits were applied to all the purposes of Batavia arrack, the establishment was found to be of much benefit to the province of Bengal. * If such undertakings were encouraged by the East India Company, they would not only be a means of enriching individuals, but a source of considerable revenue, particularly in a country where there are such abundance of fruits and grain of every description, and where the population, exclusive of Europeans, is estimated at 110,000,000; only ten of which are Mahometans, who are not more strict in the observance of their religious duties than their brethren of the Ottoman empire. The Hindoos, it is well known, although forbidden to use ardent spirits, are not more abstemious in that respect than the natives of other countries. Even the Bramins, whose ordinary drink should be water, sometimes run the risk of a loss of caste for an indulgence in the use of them. Like the Turks, they drink in secret, and like them take every precaution to avoid detection; but their hypocrisy is sometimes discovered, to the no small amusement of their neighbours. Dubois † relates an anecdote of a Bramin in the village of Tanjore,

* Forster's Journey from Bengal to England, 2 vols. 8vo. 1808.

† Manners and Customs of the People of India, 4to. 1817.

whose house took fire, and he being the only person of that caste in the place, the inhabitants flocked from all quarters to assist in the removal of his effects; but what was their astonishment when, among other things, they discovered a large jar half full of arrack, in which this luxurious disciple of Vishnou had been in the habit of regaling!*

An idea of the extent to which the arrack trade is carried in India, may be formed from the following account of the imports and exports of that article from part of the territory of the late Tippoo Sultan, and other districts.

	In 1797.		In 1798.		In 1799.	
	Leagers.	Gallons.	Leagers.	Gallons.	Leagers.	Gallons.
Imported from						
Columbo	16	75	210	10	75½	
Batavia	73		32	11		
Cochin	42		97	12	25	43½
Anjengo	25		11		23	128
Canara	2		3			
Exported } in 1797 }	20		18	25	28	12

* It is a curious fact, that amidst the numerous class of gods in the Indian mythology, there is none to correspond with Bacchus, except Suradéri, the goddess of wine, who arose, say the Hindoos, from the ocean when it was churned with the mountain Mandar; a notion which seems to indicate that the Indians came from a country in which wine was anciently made, and considered as a blessing; though the dangerous effects of intemperance induced their early legislators to prohibit the use of all spirituous liquors. See an Essay on the Gods of Greece, Italy, and India, in the Asiatic Researches, vol. i. p. 250.

Imported by sea from 1st January to 31st December 1799,
into the Pye Nada District, viz.

Arrack 485 canad.	Cochin arrack 4 leag.	Country arrack 4 leag.
96½ leagers.	4 pipes	110 pipes.
31 casks	2 casks	392 canad.
15 kegs	99 bottles	
17½ cases	Columbo arrack 16½ leagers	Rum 2 chests
5 jars	5 casks	20 cases
21 pipes	4 kegs	Gin 37 do
Brandy 14 dozen	7 pipes	
2 casks	15,000 bottles	
29 cases		

Exported by sea in the above year, from said district; and in
1800 there were exported,

Arrack 36½ leag.	Rum 4 pipes	4 casks arrack
16 kegs	1 chest	2 chests brandy
150 bottles	Rum shrub. 2 boxes	Col. arrack 15 leagers
Brandy 7 chests		50 gallons
Gin 53 cases		Gin 10 chests.

The value of the wine and spirits imported from the eastward islands into the ports of Bengal, Port St. George, and Bombay, from 1814 to 1818, amounted to 1,359,884 rupees.* And of the same articles it has been computed that a quantity, valued at not less than 9,196,221 rupees, had been imported into these places from the United Kingdom.† In the six years ending 5th January 1820, the free trading ships appear to have imported into all parts of India, of beer and ale 6,282,214 gallons.

* Parliamentary Report, No. 476. p. 316. The intrinsic value of the Bengal sicca rupee is 24d. 566; Madras rupee 23d. 247; and of the Bombay rupee 23d. 004, the common or average value of which is 23d. 606, but to avoid the fraction; say 2s. per rupee.

† Vide Report, p. 238 and 239.

valued at 535,358*l.* 8*s.* 5*d.* ; of British spirits, 24,808½ gallons, valued at 16,997*l.* 5*s.* ; of foreign spirits, 907,255 gallons, valued at 195,937*l.* 1*s.* 1*d.* ; and of wines, 1,351,365 gallons, valued at 375,379*l.* 9*s.* 1*d.* * The reader is referred for further information to the table of imports given in this work at the conclusion of the observations on the spirit trade of China. The Company's ships imported of beer and ale from 1814 to March 1818, 291 hogsheads, valued at 2,057*l.* † From China, 98,099 rupees worth of wine and spirits, exclusive of the Company's trade, were also imported into Bengal, Fort St. George, and Bombay during that time‡ ; while the export of wine and spirits from those places to the eastward islands, &c. in the same period stand as follows :

In 1814—15, to the value of 425,436 rupees.

1815—16, do. 293,720 do.

1816—17, do. 217,354 do.

1817—18, do. 267,654 do.

From 1815 to 1818, 79½ pipes of Madeira wine, valued at 19,290 sicca rupees, and liquors to the amount of 4840 rupees, were brought from this quarter by American traders. ||

Jaggory is imported and exported to some extent in the Mysore, &c., as well as through different parts of India.¶ The average quantity of

* Parliamentary Report, p. 322—25. † Ibid. p. 336.

‡ Ibid. p. 240. § Ibid. p. 318, 319. || Ibid. p. 345.

¶ For a more particular account of these matters, the reader is referred to Buchanan's Journey through the countries of Mysore, Canara, and Malabar, in 3 vols. 4to. 1807.

arrack annually exported from Ceylon may be estimated at 5200 leagers, of 150 gallons each: the great markets for this article have hitherto been Madras and Bombay, with the Malabar and Coromandel coasts. During the years 1815, 1816, and 1817, some hundred of leagers were brought to England, and sold from 5*s.* 6*d.* to 6*s.* 6*d.* per gallon.* The people of Bahar distil from the flowers of the mahwah or madhúca tree a strong spirit, which is sold so very cheap, that for one halfpenny may be purchased upwards of an English pint, a quantity sufficient to produce intoxication.† Were the sale of this liquor, says Sir William Jones, duly restrained by law, it might be applied to good purposes.‡ The Bengalese distil a spirit from the flowers of the plant called bassia, of which the inflated corollas are esculent and nutritious; an oil expressed from its seeds is commonly used in the mountainous districts, as a substitute for butter.

In the Nepaul territory, a liquor of good quality is distilled from rice and other grain. Here also is

* In Great Britain, arrack is made subject to the same restrictions as all other kinds of foreign spirits. The following are the laws relating to it: viz. 2 Geo. 1. c. 30.; 6 Geo. 1. c. 21.; 9 Geo. 2. c. 35.; 5 Geo. 3. c. 43.; 19 Geo. 3. c. 69.; 21 Geo. 3. c. 39.; and 24 Geo. 3. c. 47.

† Asiatic Researches, vol. i. p. 303. The flowers of the madhuca (bassia butryacea) when dried are used to great extent. They are rich, and taste like Malaga raisins: by way of distinction, the natives call the spirit "mahwah arrack." See Oriental Memoirs, vol. ii. p. 452.

‡ Asiatic Researches.

made from wheat, mumma, or rice, a beverage called by the natives *phaur*, very much resembling our ale, and procured nearly in the same manner. The people at the foot of the Himalá mountains, according to Sir James Baillie Fraser, procure from the grapes which they cultivate two sorts of strong liquor. One, of a superior kind, from the first juice called *sihee*, fermented in the common way, used by the higher classes; another, prepared by pouring hot water on the residue of the fruit*; and at Cursalee, on the Jumna, in the Sirmore country, they intoxicate themselves with a sort of beer brewed from grain and particular roots, sharpened by pepper.† The people inhabiting the Garrow hills north-east of Bengal, though extremely rude and uncultivated, have, according to Mr. Elliott, various sorts of drink; but that most in use is drawn from rice soaked in water three or four days. From the kebul, a tree resembling the palmira, a fine spirit might be made, as it possesses much saccharine matter; but the inhabitants are too ignorant to appreciate its intrinsic value in that way, and turn it to good account. ‡

The natives of Cashmere make a wine resembling Madeira, and distil from the grape a spirituous li-

* Tour to the Sources of the rivers Jumna and Ganges, &c. Lond. 1820.

† Ibid. p. 422.

‡ Asiatic Researches, vol. iii. p. 22.

quor of which they all freely partake * ; while the Afghanistans prepare a strong drink from the milk of sheep, which is said to possess a very invigorating property. † Although the laws of the Birmans and Siamese forbid them to drink wine or other intoxicating liquors, they draw toddy from the palm, and make brandy, or, as they term it, *lau*, from rice and other grain. ‡ In the Nicobar islands, the use of inebriating beverages is very prevalent : the inhabitants are said to drink bumpers of arrack at their feasts till they can no longer see ; but their principal and common beverage is the milk of the cocoa-nut, and a liquor called *soura* (in some of the islands, *taury*), which is nothing more than the fermented juice of the palm, rendered highly intoxicating by their method of sucking it through a quill.

In Java, ardent spirits are manufactured in greater quantities than in any other island in the Indian ocean ; this may be accounted for by the great industry of the Dutch, and the celebrity which the arrack of Batavia so early acquired under their auspices. According to Sir Thomas Raffles, the manner of making it is as follows : — about 70lbs. of ketan, or glutinous rice, is heaped up in a small vat ; round this heap or pile a hundred cans of water are poured, and on the top

* Forster's Journey, &c. vol. ii. p. 21.

† Elphinstone's Account of Caubul, &c. 4to. p. 236.

‡ Symes' Emchaumont Voy. de Siam. Kæmpfer. Hist. Japan, vol. i. b. i. p. 46.

twenty cans of molasses ; after remaining two days in this vat, the ingredients are removed to a larger vat adjoining, when they receive the addition of four hundred cans of water and a hundred cans of molasses. Thus far the process is carried on in the open air. In a separate vat within doors forty cans of palm wine or toddy are immediately mixed with 900 cans of water and 150 cans of molasses, both preparations being allowed to remain in this state for two days. The first of these preparations is carried to a still larger vat within doors, and the latter being contained in a vat placed above, is poured upon it through a hole bored for the purpose near the bottom. In this state the entire preparation is allowed to ferment for two days, when it is poured into small earthen jars, containing about 20 cans each, in which it remains for the further period of two days, and is then distilled. The proof of sufficient fermentation is obtained by placing a lighted taper about six inches above the surface of the liquor in the fermenting vat ; if the process be sufficiently advanced, the fixed air rises and extinguishes the light. The stills are made of copper, and are much like those used in the West Indies ; the worms consist of about nine turns of Banka tin. The spirit runs into a tin vessel under ground, from whence it is poured into receiving vessels, and is called the third or common sort of arrack, which by a second distillation in a smaller still, with the addition of a small quantity

of water, becomes the second sort, and by a third is what is called the first sort. To ascertain the strength of the spirit, a small quantity of it is burned in a saucer, and the residuum measured; the difference between the original quantity and the residuum gives the measure of the alcohol lost. The completion of the first sort does not require more than ten days, six hours being sufficient for the original preparation to pass through the first still. The Chinese residents, who conduct the whole of this process, call the third or common sort *sichew*, the second *tanpo*, and the first *kiji*. The two latter are distinguished as arrack api. When cooled it is poured into large vats in the storehouses, where it remains until put into casks. In 1795, the receipts on arrack at home and in India, exclusively of the trade to China, 140 leagers in quantity, amounted to 46,000 florins. The export duty on arrack from Batavia rates as follows: on the leager (of 388 jugs) of first quality, 10f.; on the second, at 8f.; and on the third, or lowest quality, 6f.

Two kinds of fermented liquor are prepared from rice by the natives. In making the first, called *bádek*, the rice is first boiled and stewed with a ferment called *razi*, consisting of onions, black pepper, and capsicum, and mixed up into small cakes, which are daily sold in the markets. After frequent stirring, the mixture is rolled into balls, which are piled upon each other in a high earthen vessel, and when fermentation has com-

menced the bádek exudes, and is collected at the bottom. The remainder, after fermentation is completed, has a sweet taste, and is sold as a dainty in the markets under the name of *tápé*. *Brom* is the second kind, and is made from *ketan*, or glutinous rice: it is boiled in large quantities, and being stirred with *razi*, remains exposed in open tubs till fermentation takes place, when the liquor is poured off into close earthen vessels. It is generally buried for several months in the earth, by which means the fermentation is checked, and the strength of the liquor increased. It is sometimes made strong by boiling. The colour varies from brown to red, and yellow, according to the *ketan* employed. *Brom*, kept for several years, is considered excellent by the natives, and is very intoxicating. It is ardent, and apt to give a headache.*

Sugar is manufactured in Java by the Chinese, but no rum is made; the process followed is much like that observed in the West Indies. The quality is considered equal to that made at Manilla or the Antilles, although the machinery is rude. Considerable quantities are sent to the Malabar coast, but the principal exportation is to Japan and Europe.

As the great proportion of the population of Java, computed at 5,000,000, as well as of Borneo,

* Raffles' Hist. of Java, vol. i. pp. 176, 177.

are Mahometans, an indulgence in intoxicating liquors is not prevalent, though the people of the latter place often barter gold and diamonds, with which their country abounds, for the produce of the Javan still.

The inhabitants of Sumatra import immense quantities both of sugar and arrack from Java ; but as the former island produces sugar-canes in abundance, and is stocked with great plenty of the *anou*, an excellent species of palm, together with rice and other grain, it was expected, in Marsden's time, to rival Java in the manufacture of these great articles of trade. The expense of employing slaves in the labour of the field was found at one time to exceed the advantages ; but it was plainly seen, while the management of the plantations and of the works were under the care of an English gentleman of the name of Botham, that the end was to be attained by employing the Chinese, and allowing them a proportion of the produce. From the liquor of the *onou*, called *neeroo* or toddy, a description of drink is made called *brum*, which from the process and taste is much the same as the Javan *brom*.*

A rude species of distillation has been known to the Sumatrans from a remote period, and is supposed to be of their own invention. It is only practised in the preparation of the oil of Benjamin,

* Marsden's Hist. of Sumatra, 4to. p. 150.

with which they perfume their hair. The still consists of a preeoo, or earthen rice-pot, covered close, in the side of which is inserted a small bambo, well luted with clay and ashes, through which the oil drops into a receiver. What is brought over in this way is empyreumatic, and is valued among them at so high a price, that it can only be used by the superior rank of people.*

In the foregoing review, we have seen that among a number of the nations and tribes professing the Mahometan faith, liquors of an intoxicating nature are familiar, and in pretty general use. But as they are *publicly prohibited*, the more strict and religious Mussulmen have in most places adopted other means to procure or induce the pleasures of intoxication. Hence the general use of opium and other exhilarating substances, which we shall now proceed to describe.

The poppy (*papaver*, in botany)†, so called because it was commonly mixed with the *pap*, *papa*, given to children in order to ease pain and procure sleep. Its juice is called by the Persians *afoun*, and by the Arabians *aphium*, from whence, says a learned writer, is derived our word opium.

This plant, it is well known, is indigenous to most countries, and the method employed to procure the drug is almost every where the same. It

* Marsden's Hist. of Sumatra, 4to. p. 146.

† Class and ord. *Polyandria Monogynia*, Nat. ord. *Rhæadææ*.

is cultivated to a great extent in several of the Eastern kingdoms. The poppy of Persia is esteemed the finest in the world, not only in respect to its beauty, but because its juice is much stronger than the juice of the same plant elsewhere. In India it is also reared to great perfection, and opium is the staple commodity of many of the provinces. In the district of Oojein the following method of cultivating the plant and preparing the juice is observed. If the seed happen to be sown too thick, some of the young plants are pulled and used as potherbs; but when grown a foot and half in length, they are considered unfit for that use, from their intoxicating nature. The plant flowers in February, and the opium is extracted in March or April, according to the time of sowing. The white kind yields a larger quantity of opium than the red, but the quality of both is the same. When the flowers fall, and the capsules assume a whitish colour, they are wounded with an instrument having three teeth, at a distance of about half a line from each other, which is drawn from the top to the bottom of the capsule so as to penetrate its skin. This is done in the evening, and the opium gathered next morning. The wounds on each capsule are repeated for three successive days. The whole capsules in a field are wounded, and the opium gathered in fifteen days. The juice having exuded and thickened by exposure to the air, is scraped off with a shell or

a little iron instrument, previously dipped in oil. It is afterwards worked in an iron pot in the sun's heat till it is of a consistence to be formed into thick cakes of about four pounds weight. These are covered over with leaves of poppy, tobacco, or some other vegetable, to prevent their sticking together, and in that condition they are dried. It brings in India about 15s. a pound. The revenue arising from the sale of opium to the government of Bengal in 1809 and 1810 amounted to 580,000*l*. The exports of this article from Bombay, Fort St. George, and Bengal, respectively, to the Eastward islands from 1814 to 1818, have been valued at 8,057,357 rupees.* To China, were sent by country ships from Patna and Benares in 1817 and 1818, 485 chests, valued at 611,100 dollars, besides 1950 chests of Bengal opium, valued at 2,340,000 dollars, imported into Macao. In 1818 and 1819, 4978 chests, valued at 4,393,000 dollars, were sent to Macao, from Bengal, Malwah, Patna, and Benares.† From 1804 and 1805 to 1817 and 1818, 1780 peculs were carried by American ships to Canton‡; and the whole quantity sent thither by the same traders from 1815 to 1819 appears to be 1834 peculs, which, at 550 dollars the pecul, amounts to 1,008,700 dollars.¶ The opium exported from 1814 and 1815 to 1818 from the

* Parliamentary Report of 7th May, 1821, p. 319.

† Ibid. pp. 326, 327.

‡ Ibid. p. 44.

¶ Ibid. p. 181.

United Kingdom to Bengal, Fort St. George, and Bombay, exclusive of the trade of the East India Company, has been valued at 122,815 rupees, or 12,281*l.* 10*s.* *

This drug is taken in different ways, and its effects are found to vary, according to the constitution and temperament of the individuals by whom it is used. Some it inspires with grand and sublime ideas. The ambitious man beholds at his feet monarchs and slaves in chains; the bilious man is seized with visions of horror and dismay; the mild and benevolent man sees all the world applaud him, while the timid is endowed with courage, the lover with tenderness, and the vindictive with ferocity. In some places it is taken in pills, and in others smoked with tobacco. In the Ottoman dominions, travellers carry it in the form of lozenges, or cakes, upon which is stamped in Turkish as a legend, "Mash Allah," the gift of God.† The Persians take pills of opium, which some of them gradually increase to such a dose as would destroy half a dozen Europeans. Within half an hour or an hour after being taken, the drug begins to operate, presenting a thousand pleasing scenes to their imagination, and causing them to appear exceedingly joyful. When the effect has ceased, their spirits are exhausted, and

* Parliamentary Report, 7th May 1821, p. 238.

† Griffith's Travels in Europe, Asia, &c. 4to. pp. 86, 87.

they grow pensive and melancholy till they repeat the dose ; habit rendering it so necessary to many, that they cannot live without a regular supply. Coffee-houses in the cities of Persia sell a decoction of poppy-seeds, which they call *kokemaar* : it is commonly drank scalding hot. There are other houses called *kokemaar kroné*, where people engaged in drinking this liquor afford a great deal of amusement to those who see the ridiculous postures which it causes them to perform. Before it begins to operate, they quarrel with one another, and give abusive language, without coming to blows ; afterwards, as the drug takes effect, they proceed to make peace. One utters high-flown compliments, another tells stories, but all are extremely ridiculous both in their words and actions.*

In Siam the sale of opium is contraband, and many have suffered death for importing it, as its use in that empire has been productive of the worst consequences ; yet such is the fondness of the inhabitants for it, that it sells for its weight in silver : this, however, is not surprising among a people who believe that dreams are books in which the fates are written.†

The Borneans smoke opium with tobacco in the manner of the Sumatrans. The mode of preparing it for use is as follows : the raw opium is first

* Tavernier, vol. i. b. 5. chap. 17.

† Chaumont Voy. de Siam. Turpin, &c.

boiled in a copper vessel, and strained through a cloth, and then boiled a second time ; the leaf of the tobacco is cut fine and mixed with it, in a quantity sufficient to absorb the whole, when it is made up into small pills about the size of a pea for smoking. At convivial parties, a dish of this is brought in with a lamp, when the host, taking a large pipe, puts into it one of these pillets, blowing the smoke through the nostrils, and if he be an adept, through the passage of the ears and eyes. He seldom takes more than three or four whiffs, ere he passes it round to the rest of the company, (one pipe serving them all), who act in the same manner, and so continue smoking until completely intoxicated. They are sensible that it shortens life, but that does not cause them to abstain from it, and their women encourage the use of it because it heightens the love of their husbands. *

About 150 chests, or 20,000 lbs. weight, are consumed annually on the west coast of Sumatra, where it is purchased on an average at 300 dollars the chest, and sold again at 500 or 600 ; but on occasions of extraordinary scarcity, it has been known to sell for its weight in silver, one single chest bringing upwards of 3000 dollars.† It is sold in Borneo and Sumatra by persons authorised to deal

* Marsden's Hist. of Sumatra, p. 238. Pink. Voy., &c. vol. xi. p. 124.

† Marsden, p. 239.

in it, and a fine of 50 dollars is imposed on any person found selling illicitly.

The people of Java indulge to excess in the use of this drug. Upon such of them, as well natives as slaves, as have been rendered desperate by the pressure of misfortune or disappointment, it operates in a frightful manner, giving them an artificial courage, and rendering them frantic, in which state they sally forth in all the horrors of despair, to attack the object of their hatred, crying *amok ! amok !* which signifies *kill ! kill !* Thus infuriated they indiscriminately stab every person they meet, till self-preservation at length renders it necessary to destroy them. This is what is termed *running a muck*. Captain Beeckman was told of a Javanese who *run a muck* at Batavia and had killed several, but being met by a soldier who run him through with his pike, such was the desperation of the wretch, that he pressed himself forward on the instrument of death, until he got near enough to stab his adversary with a dagger, when both expired on the spot.

It is a curious law in Java, that any one crying *amok* may be destroyed ; but, in the event of its being a false alarm, if any one be killed by the crowd, the person that exclaimed *amok* is only liable to be fined.

The sale of opium in this quarter brought a revenue to the Dutch of 1,120,000 rix dollars ; but the commissioners who sat at the Hague, and ex-

amined into the affairs of this island in 1803, limited the sale of it to 1200 chests. Latterly it has been confined to less than 300.

The Rajpoots, Gracias, and other Hindoo tribes, present opium at their visits and entertainments, with the same familiarity as the snuff-box in Europe.* To all classes, whether it is smoked, eaten, or drunk, it affords recreation and enjoyment. The Halcarras, a description of persons who carry letters and run messages through the provinces of India, with a small piece of this luxury, a bag of rice, and a pot to draw water from the wells of the charitable, perform incredible journeys; while the messengers of Turkey in like manner, with a few dates, or a lump of coarse bread, traverse the trackless desert, amidst privations and hardships only supportable under the influence of this fascinating drug.

Great quantities are consumed all over the Levant; and in the coffee-houses at Constantinople, the Theriakis are striking examples of its baneful influence when taken to excess. Doctor Pouqueville, in his travels in the Morea, gives the following account of those persons, and their manner of taking opium.

“They begin,” says he, “with only half a grain, and increase the dose as they may find it to produce the desired effect. They take care not to drink water

* Forbes' Oriental Memoirs.

after it, as that would bring on violent colics ; but the man who, at the age of twenty, takes to opium, seldom lives beyond the age of thirty or thirty-six. In the course of a few years the dose is increased to upwards of a drachm, or sixty grains. At this time a pallid countenance and extreme leanness announce a state of cachexia, which is only the preludè to a general marasmus, or consumption of flesh. The infatuation is so great, that the certainty of death, and of all the infirmities which lead to it, is incapable of correcting a theriaki, or person addicted to the use of opium : he coldly answers any one who apprizes him of his danger, that his happiness is incomparable when he has absorbed his pill of opium. If he be asked to define this supernatural felicity, he only says, that it is impossible to describe it, as it is a pleasure not to be explained. These miserable beings, however, towards the close of their life, or rather of that state of stupefaction into which they are plunged, experience the most severe pains, and a continual hunger ; they are tormented by a desperate satyriasis, without the capability of satisfying their desires ; in short, they experience pains, which even their delicious paregoric cannot assuage ; and having become hideous, deformed by numerous periostoses, deprived of their teeth, their eyes sunk into their head, and afflicted with an incessant trembling, they cease

to exist a long time before their life is at an end.*

Illustrative of these observations, the following anecdote will be read with interest :

An English ambassador, lately sent to a Mahometan prince, was conducted, upon his arrival at the palace, through several richly decorated and spacious apartments, crowded with officers, arrayed in superb dresses, to a room, small in dimensions, but ornamented with the most splendid and costly furniture. The attendants withdrew. After a short interval, two persons, of superior mien, entered the saloon, followed by state bearers, carrying under a lofty canopy a litter covered with delicate silks, and the richest Cashmere shawls, upon which lay a human form to all appearance dead, except that its head was dangling loosely from side to side, as the bearers moved into the room. Two officers, holding rich filagree salvers, carried each a chalice, and a vial containing a black fluid. The ambassador, considering the spectacle to be connected with some court ceremony of mourning, endeavoured to retire : but he was soon undeceived by seeing the officers hold up the head of the apparent corpse, and, after gently chafing the throat, and returning the tongue, which hung from a mouth relaxed and gaping, they poured some of the black liquor into the throat,

* Doctor Pouqueville's Travels through the Morea, Albania, &c., 8vo. p. 132. Lond. 1806.

and closed the jaws until it sank down the passage. After six or seven times repeating this ceremony, the figure opened its eyes, and closed its mouth voluntarily; it then swallowed a large portion of the black fluid, and, within the hour, an animated being sat on the couch, with blood returning into his lips, and a feeble power of articulation. In the Persian language he addressed his visitor, and inquired the particulars of his mission. Within two hours this extraordinary person became alert, and his mind capable of arduous business. The ambassador, after apologizing for the liberty, ventured to inquire into the cause of the scene which he had just witnessed.

“Sir,” said he, “I am an inveterate opium-taker; “I have by slow degrees fallen into this melancholy “excess. Out of the diurnal twenty-four periods “of time I continually pass eighteen in this reverie. “Unable to move, or to speak, I am yet conscious, “and the time passes away amid these pleasing “phantasies; nor should I ever awake from the “wanderings of this state, had I not the most “faithful and attached servants, whose regard “and religious duty impel them to watch my “pulse. As soon as my heart begins to falter “and my breathing is imperceptible except on a “mirror, they immediately pour the solution of “opium into my throat, and restore me as you “have seen. Within four hours I shall have “swallowed many ounces, and much time will

“ not pass away ere I relapse into my ordinary
“ torpor.”

The effects of opium might be instanced in many ways, but we do not recollect a more singular one than the following, mentioned by Mrs. Guthrie, who, writing to her husband from Eupatoria, remarks that she observed at a Tartar mosque a sort of holy wheel, composed of whirling fanatics, who, having indulged in the use of opium, kept flying round in a circle, more like the votaries of Bacchus than the disciples of Mahomet. In the middle of the circle an aged dervise turned round like a top, muttering all the while, in concert with his brethren in the circle, the following maxim from the Koran : “ This life is precarious ; but it is here (pointing to “ the earth) that we must take up our abode.” The centre of this curious group is always the place of honour, and of danger, as the reverend father, who occupies it, in right of his years and wisdom, keeps spinning round till he turns his brain, and if he expires on the spot, which sometimes happens, he becomes a martyr saint of the Mahometan church, and the envy of his surviving stronger-headed companions. *

The leaves of the hemp plant, known by the name of *beng* or *bangue*, the *cannabis sativa*†, is often

* Tour in the Crimea, 4to. Letter 18. p. 65.

† Ray says, this drug is the produce of a different plant that grows in Hindostan, and other parts of the East Indies ; perhaps he alludes to the *datura stramonium*, as the natives in many parts

substituted for opium, with the same familiarity and effect. The people of the East use it differently; some take it in an electuary, while others either smoke or chew it. The *kief*, which includes the flower and seeds of the plant, is the strongest; and a pipe of it, half the size of a common English tobacco pipe, is sufficient to intoxicate. Among the Moors it is usually pounded and mixed with *el mogin*, an invigorating confection, which is sold at an enormous price; a piece of this as big as a walnut will for a time entirely deprive a man of all reason and intellect.* Many of the Indian nobles and military officers take it in the powdered state, and add to it an areca or green hazel nut, with a little opium and sugar†; and to make the visions which it occasions the more lively, they mix with it some camphor, cloves, nutmegs, and mace, and not unfrequently ambergris and musk. In the Barbary states it is preferred to opium, from the voluptuous sensations which it never fails to produce. The hashisha, or leaves of the plant, are mostly dried and cut like tobacco, with which they are smoked, but the luxurious generally smoke it pure. The drug called *chirs*‡, so much used among the peo-

of India are well acquainted with its inebriating powers. In some parts of Hindostan, hemp is alike known by the name *datūra* and *cannabis sativa*.

* Jackson's Account of Morocco, p. 78, 79.

† Vide Acosta.

‡ Elphinstone's Account of the Kingdom of Caubul, 4to. p. 263.

ple of Caubul, to excite intoxication, is made from this plant ; and the practice of chewing it is carried to some extent, according to Pottinger, in Beloochistan and Sinde.* As in the case of opium, the quantity taken at a time varies in proportion to the habits or constitution of the individuals. A drachm is a moderate dose ; but when we consider that this quantity is sufficient for twenty persons unaccustomed to its use, we may conclude that its effects must be powerful. Gracias mentions one individual who took ten drachms of opium daily ; and though he appeared heavy and sleepy, he could dispute learnedly on any subject. It is a remarkable property both of opium and bangué, that while they give a heaviness to the look, they are productive of great watchfulness. Doctor Edward Smith, while at Smyrna, took pains to observe what were the doses of opium taken by the Turks in general, and he found that three drachms were a common quantity among the larger takers of it, but that they could take six drachms a day without danger. A Turk ate this quantity in his presence, three drachms in the morning and three in the evening, which had no other effect than that of producing great cheerfulness. Besides opium and bangué, are used *peganum harmala*, or the seeds of *Syrian rue*, with which, as Belonius relates, the Turkish emperor Solyman kept himself intoxicated. The seed of the *datura stramonium*, or thorny ap-

* Pottinger's Travels, 4to. p. 63.

ple, is greatly employed by the mountain villagers in the province of Sirinagur and other parts of India, to increase the intoxicating powers of their common spirituous liquors.* *Pinang*, or *betel*, is in great demand all over the East. The Indians chew it at all times of the day and night ; like tobacco, it has rather an enlivening quality ; it has of itself a bitter taste, but when wrapped round an areca nut, or mixed with *chinam*, a species of burnt lime made of shells, the taste is not so disagreeable. The rich and sensual frequently add perfumes, conceiving it a powerful incentive to love.† The roots of black henbane, or *hyoscyamus*, is a strong inebriant ; three grains of the extract are about equal to one of opium ; it is considered not so certain in its operation as that drug, but there are many well-attested instances on record of its amazing effects.‡ The berries of the *belladonna*, or deadly nightshade, hold, if possible, a more intense controul over the mind of its victim, producing symptoms of the most sottish drunkenness. A dose of the dried leaves reduced to powder is usually limited to a few grains ; but if taken under the form of infusion, in

* Asiatic Researches, vol. vi. p. 375.

† Betel is cultivated in India like the vine : as it is a climbing plant, like ivy, the common practice is to support it against the areca-nut-tree. The leaves resemble those of the citron.

‡ *Hyoscyamus* is to be found in various countries, and grows spontaneously on road-sides, and among rubbish. It is cultivated at present, on account of its medicinal virtues, in the garden of the Belfast fever hospital.

a considerable quantity of water, a scruple has been swallowed in the course of the day. Ray tells us of a mendicant friar, who, having drank a glass of wine in which some of this herb was infused, was seized with delirium and a grinning laughter, accompanied by wild and irregular movements, that would have ended in death, had not an immediate and counteracting remedy been applied.* It is stated on the authority of Buchanan the historian, that the destruction of the Danish army commanded by Sweno king of Norway, when he invaded Scotland, was owing to the intoxicating quality of the berries of this plant, which the Scots mixed with the drink that they were obliged to furnish their invaders; for while the Danish soldiers lay under its soporific influence, the Scotch fell upon them, and destroyed so many, that there were scarcely men sufficient left to carry the king on board the only ship that returned to Norway.

The leaves and flowers of milfoil, or yarrow, inebriate, and are used by the Dalecarlians, to render their beer intoxicating. Clary and saffron have the same effect. The last exhilarates the spirits to such a degree, that when taken in large doses, it occasions immoderate mirth and involuntary laughter. Darnel, or *lolium timulentum*, which is vulgarly known under the name of *sturdy*, when malted with barley, a process which the seeds of it often undergo,

* A glass of warm vinegar is said to counteract the effects of the belladonna.

causes the ale brewed from it to be speedily intoxicating. It produces the same effect when mixed with bread and eaten hot. Many stories are told of its effects, some of which are sufficiently amusing, but not exactly suited to the nature of this essay. Among these inebriants, the inspissated milky juice of the common garden lettuce is considered as powerful in its operation as opium itself.

In Great Britain, opium has been more used as a medicine than as an exciter of the spirits, although its infatuating influence is not altogether unknown in these countries, since the reveries of Asiatic luxury and effeminacy have in too many instances infected the manners and habits of the British people. To what extent an Englishman may be brought to take this opiate, is exemplified in the admirable and well-written "Confessions of an Opium Eater," published in the London Magazine for October 1821, to which the reader is referred. In that essay, the writer, speaking from the result of a large and profound personal experience, assures us that he had by regular gradation brought himself to take no less a quantity than 8,000 drops of laudanum, or 320 grains of opium, per day. The description of his pains and pleasures for the space of seventeen years, and the struggles he underwent to break the charm which kept him spell-bound for such a length of time, are highly interesting and

curious. Doctor Jones, in his book on "The Mysteries of Opium revealed," assures us, that he knew several persons in England who were in the practice of taking two, three, four, five, and six drachms daily, and that he heard of one that could take two ounces in a day, a quantity not exceeded, perhaps, in the history of man.* The writer of this essay knows something of the habits of a young lady, who being prevented by her friends from an excessive indulgence in ardent spirits, has for a considerable time substituted opium, and from its constant use can now swallow an ounce of it in the crude state, with as much ease and indifference as a boy would eat liquorice ball. A gentleman of good fortune, in a provincial town in the north of Ireland, has likewise allowed this propensity to gain upon him to such extent, that he regularly retires in the evening to the solitude of his apartment to enjoy the luxury and grandeur of the visions which this favourite paregoric occasions.

The quantity of opium imported into England from Bengal and other places, from the year 1786 to 1801, amounted to 286,271 lbs., and the consumption to 247,619 lbs. At the East India company's sale in 1809, 1991 lbs. of this drug sold for the immense sum of £2249.

Having thus detailed the extent, use, and effects

* Vide "Mysteries of Opium revealed," 8vo. p. 308; by John Jones, M. D.

of some of the principal natural inebriants, we shall again turn our attention to the artificial or chemical part of the subject.

In China, a country which has preserved its civil polity for so many thousand years, the art of distillation was known far beyond the date of any of its authentic records. The period of its introduction into that country, in common with the rise and progress of other chemical arts, is, however, concealed amidst the darkness of ages : But taking dates as we find them, sanctioned by respectable authority, and leaving the assumed antiquity of the nation as a point for the discussion of chronologists, we are certainly led to attribute to the people of this empire the merit of an invention which seems to have eluded the grasp of the human intellect in the rest of Asia, Africa, and Europe, until a more advanced period in the history of the world.

There is no doubt whatever, that from the earliest ages the Chinese were acquainted with many of those useful and ingenious preparations, which are still considered as indispensable in the practice of the arts and manufactures of every civilized country. Their knowledge of gunpowder, before it was discovered in Europe, seems to be a fact undisputed, and appears coeval with that of their most distant historic events. Shut up within the bosom of a country, yielding in abundance all the necessaries and even luxuries of life, and satis-

fied with the articles which it afforded, they felt no desire to seek or encourage an intercourse with foreign nations.* Their inventions, therefore, appear to be entirely their own; the annals of the empire, in the language of Staunton, bear testimony to the fact, and it is confirmed by the consideration of the natural progress of those inventions, and of the state of the Chinese arts at this time.† That they were versed in all the secrets of alchymy, or rather in that branch of it which had for its object a universal *panacea*, long before this fancy engaged the speculations of European practitioners, we have abundant proof‡, since some of their empiricks have from an early period boasted of a specific among their drugs, which insures an immortality like that conferred on Godwin's St. Leon. § The search after this *elixir vitæ* originated, it appears, among the disciples of the philosopher Lao-kiun, who flourished six hundred years before Christ. Not content with the tranquillity of mind which that teacher of wisdom endeavoured to inculcate, and considering death as too great a barrier to its attainment, they betook themselves to chemistry, and after the labour of ages in a vain endeavour to prevent the dissolution of our species, and after

* Barrow's Travels in China, 4to. p. 276 and 434, &c.

† Embassy to China, vol. ii. p. 160 and 162, 8vo. edit.

‡ Du Halde, Le Compte, Martini, Osbeck, Grosier, &c. &c.

§ Du Halde.

the destruction of three of their emperors, who felt victims to the immortal draught*, they, like the alchemists of Europe, ended their researches under the pretence of discoveries which were never made, and of remedies which could only be administered under all the extravagancies of magic. Indeed, in any country where medicine has not been established as a regular study, it can scarcely be expected, that the profession of a chemist could be supported with dignity or respectability. But, whether to this search, or to other circumstances, the early knowledge of the Chinese in distillation is to be ascribed, it would be no easy matter to determine. Their acquirements in medicine are so limited, that Navarette says, the greatest part

* *Hyen-Tsong*, in the year 820 of the Christian era, procured some of this liquor, with which it is thought his eunuchs had mixed poison, as he died immediately after drinking it, at the age of forty-three. Du Halde, *Annals of the Monarchs*, vol. i. p. 200.—*Swen-Tsong*, it appears, had no sooner taken it, in the year 859, than he became a prey to worms, which swarmed in his body, and killed him in a few days, at the age of fifty. *Ibid.* vol. i. p. 202.—*Shi-Tsong*, or *Kya-Tsing*, also died of this liquor, in 1556, at the age of fifty-eight. *Ibid.* vol. i. p. 223.—It is said of the emperor *Vu-Ti*, who reigned in China in the year 177 before Christ, that when about to put one of his ministers to death for drinking a cup of this liquor, which had been prepared for himself, he was convinced of his weakness and folly by the following wise and sensible remonstrance of his minister: “If this “drink, Sir, hath made me immortal, how can you put me to “death? but if you can, how does such a frivolous theft deserve “it?” Du Halde, vol. i. p. 177.

of their physicians are mere farriers; that they know nothing of potions, and that their chief care and skill consists in little more than the recommendation and observance of a regular diet.*

From this unimproved state of an art so important to human existence, it is clear they owe nothing to foreign or factitious aid; and although it might be urged that the Arabians, at an early period, advanced as far as Canton, where they might have communicated some of the discoveries of their physicians and philosophers, it ought to be recollected that it was the spirit of commerce which carried the Mussulmans to the confines of this remote region †, and that the power of the still, if known to them at that time, was altogether applied to the improvement and advancement of medical knowledge; a use, to which, as far as we can learn, it has never yet been devoted in China. The love of literature, as learning leads to the highest posts of honour, has long prevailed amongst this people; and their progress in moral philosophy and the belles lettres has been by no means inconsiderable. To this advancement the knowledge of printing has greatly contributed; but although that art, according to Trigaucius and others, has been known

* Vide Navarette's Account of China. Barrow's Travels in China, 4to. p. 344. Abel's Journey. Staunton, &c.

† Robertson's Historical Disquisition concerning India, 12mo. pp. 92, 93.

to them above 1776 years, it has remained comparatively stationary, doubtless from the nature of the language, which one would think must render the printing of books troublesome and tedious. The printer or rather engraver of a book has to trace the characters of each leaf on a piece of plank or block of hard wood *, so that for a work of any extent a store of some magnitude is required. What must have been the room requisite for the materials of one of their dictionaries, consisting of 120 large volumes, or for the ancient and modern laws of the country, which the emperor *Tay-tsu* † ordered to be printed in 1380, in 300 volumes! But, notwithstanding this apparent difficulty, books

* Pear-tree is mostly used. Mr. Abel, who visited China in the train of Lord Amherst's embassy to the court of Peking, in 1816 and 1817, says, "Nothing could be more simple than the method of printing which I have seen practised. On a piece of wood about two feet square, carved into the necessary characters, and covered with ink, a thin paper was laid, which, being pressed down by the hand, received the desired impression. The use of moveable types in wood is confined to the printing of the Peking Gazette, and a few other periodical works. All others are printed in stereotype. The use of moveable metallic types may, perhaps, at no distant period, become general in the empire, as a manufactory of them in block tin is already established at Macao for the use of the British factory. The founders and cutters are Chinese, who execute their work with great precision and dispatch." See Abel's Narrative of a Journey in China, 4to. p. 229.

† Du Halde, vol. i. p. 218, Reign of *Tay-tsu*. It was a whole age before this work appeared.

are said to be numerous.* The emperor *Tay-Tsong* is represented to have had a library of 80,000 volumes, the composition of native authors, which was neatly distributed in three large rooms richly adorned; and so addicted to reading was that monarch, that he daily turned over one or two volumes himself†; and the famous library of *Ywen-ti*, which was burned in 552, consisted of 140,000 volumes.‡

The whole nation, says a Jesuit missionary, who had a good opportunity of observation, is much addicted to learning and inclined to reading. In one province, we are told§, there are sometimes upwards of 10,000 licentiates and bachelors, and the number of candidates for degrees at a moderate computation amounts to 2,000,000. In the southern provinces of the empire there is scarce a Chinese that cannot read and write.|| I have met, says Navarette, men on the road in sedans, or palankins on men's shoulders, with a book in their hands. In cities I have often seen Mandarins occupied in

* Books are printed only on one side, and stitched in thin white paper: their size answers generally to that of our royal octavo. Vide Osbeck's *Voyage to China*, 8vo. vol. i. p. 277.

† Du Halde, *Annals of the Monarchs*, vol. i. p. 207. This emperor lived in 982.

‡ Ibid. *Reign of Ywen-ti*, vol. i. p. 192.

§ Ibid. vol. i. p. 394.

|| Ibid.

the same manner; and to induce their children to learn, the tradesmen and shop-keepers might be seen sitting behind their counters with books before them. For the encouragement of students, says the same writer, the example is related of a poor young man who herded cows, and rode upon one of them, as is usual in the country; his love of study was such that he kept a book placed on her horns in such a manner that it served him as a desk, and enabled him to read all the day, by which means he attained to a high station in the state. Another instance is mentioned of a youth, who, being so poor that he could not buy oil for his lamp, studied at night by the light of the moon and the stars: his erudition procured him equally honourable advancement. But, although the application of the Chinese has been sufficiently diligent and laborious, we have no account of any of their publications on the useful or speculative arts. To this circumstance, combined with a constant jealousy and fear of imparting to others a knowledge of these inventions which they consider purely their own, are, perhaps, to be attributed the very brief and unsatisfactory accounts which writers have been able to collect, of the nature and extent of their inebriating beverages. We read that under the government of the emperor *Yu* or *Ta-yu*, before Christ 2207*, the making of ale, or wine, from

* Du Halde, vol. i. p. 145.

rice was invented by an ingenious agriculturist named *I-tye* * ; and that as the use of this liquor was likely to be attended with evil consequences, the emperor expressly forbid the manufacture or drinking of it, under the severest penalties. He even renounced it himself, and dismissed his cup-bearer, lest, as he said, the princes his successors might suffer their hearts to be effeminated with so delicious a beverage.† This, however, had not the desired effect, for having once tasted it, the people could never afterwards entirely abstain from the bewitching draught. It was, even at a very early period, carried to such excess, and consumed in such abundance, that the emperor *Kya*, the Nero of China, in 1836 before Christ, ordered 3000 of his subjects to jump into a large lake which he had prepared and filled with it; while *Chin-vang*, in 1120, thought it prudent to assemble the princes to suppress its manufacture, as the source of infinite misfortune in his dominions.‡ The produce of the grape, it should seem from this, was not so early

* Might not this be one of the immediate descendants of Noah? Doctor Hales, in his *Analysis of Chronology*, is of opinion that it was the family of Shem that peopled China; but the writers of the *Universal History* think that Noah himself, being discontented with the party that had been formed to build the tower of Babel, separated from the main body, and, with some followers, travelling eastwards, at last entered China, and laid the foundation of that vast empire.

† Du Halde, vol. i. p. 433.

‡ Ibid. p. 150. 159.

attended to, although the cultivation of the vine has been known and practised in China from the most remote period. Indeed, all the songs which remain of the early dynasties down to that of *Han*, which commenced 206 years before the Christian era, confirm this opinion, and give us reason to believe that the Chinese have always been fond of wine made from grapes. Grosier says that the emperor *Ouenti*, of the dynasty of *Ouei*, celebrates it with a lyric enthusiasm worthy of Horace or Anacreon; and we find in the large Chinese herbal, book 133, that wine made from grapes was the wine of honour, which several cities presented to their governors and viceroys, and even to the emperor. In 1373, the emperor *Tay-tsu*, who ascended the throne five years before, accepted some of it for the last time from *Tai-yuen*, a city in the province of *Chen-si*, and forbade any more to be presented. "I drink little wine," said the prince; "and I am unwilling that what I do drink should occasion any burden to my people." It appears, according to the same writer, that the vine has undergone many revolutions in China. It has never been left out, when orders were issued for rooting up all those trees that encumbered the fields destined for agriculture. The extirpation of the vine has been even carried so far in most of the provinces, during certain reigns, that even the remembrance of it has been entirely forgotten. When it was afterwards allowed to be planted, it

would appear, from the manner in which some historians express themselves, that grapes and the vine began then to be known for the first time. This probably has given rise to the opinion that the vine has not been long introduced into China. It is, however, certain, without speaking of remote ages, that the vine and grapes are expressly mentioned in the Chinese annals, under the reign of the emperor *Vou-ty*, who came to the throne in the year 140 before the Christian era; and that, since his time, the use of wine may be traced from dynasty to dynasty, or, as we may say, from reign to reign, even to the fifteenth century. With regard to the present state of the culture of vines in China, Grosier states as a well known fact, that the two last emperors, with *Kien-long*, who was on the throne when Lord Macartney visited the country, caused a number of new plants to be brought from foreign countries, and that three of the provinces in particular, viz. *Honan*, *Shan-tong*, and *Shan-si*, have repaired their former losses by the cultivation of them. * Barrow remarked, that in his time no wine was made from the juice of the grape, except by the missionaries near the capital. †

Of rice wine there are different sorts, but none of them have any resemblance to the wines of Europe, either as to taste or quality, being variously com-

* Grosier's Description of China, vol. i. chap. v.

† Barrow's Travels in China, 4to. p. 304.

pounded, and never allowed in the manufacture to preserve the mere flavour of the original material. That called *mandarin*, being considered of a superior class, is drawn from rice of a particular description, different from that which is eaten. * The grain is steeped for twenty or thirty days in water, and then gently boiled. When it is quite soft and pulpy, and completely diluted and dissolved by the heat, it is allowed a considerable time to ferment, in proper vats prepared for the purpose, generally of glazed earthenware. Several wholesome ingredients are added during the process, mostly simples, and consisting of such fruits and flowers as impart an agreeable flavour and pleasing colour.† At the end of several days, when the motion or agitation occasioned by the fermenting process has subsided, and when the liquor has thrown up all the scum or dross, it is drawn off into glazed vessels, where, by a second species of fermentation, it clears itself, and develops, by the taste and smell, its good or bad qualities. When sufficiently fined, so as to shew, by standing for some time, its body and colour, it is put into small jars, in which way it is commonly sold, and sent through the empire, or to Tonquin and Corea. This wine is usually so strong that it will keep for a great many years, or, as some say, for ages. Within the empire it is prin-

* Du Halde, vol. i. p. 303.

† The Chinese rice wines are in general of a *yellow, red, white, or pale* colour.

cipally consumed among the higher orders, who can afford to buy it; and when exported, it sells very dear.* The lees are distilled, and yield a strong and agreeable kind of spirit like brandy; this they call *show-choo*, *sau-tchoo*, *sam-tchoo*, (literally burnt) or hot wine. The city of *Kyen-chang*, in the province of *Kyang-li*, is noted for making a fine species of this wine, while that of *Vú-si-hyen*, in *Kyang-nan*, is in great esteem, owing its excellence to the goodness of the water to be found there.† Navarette, in his journey to the imperial residence, remarks, that in the district of the city of *Kian-hoa*, the liquor of this class was made so good that he felt no regret for the wines of Europe. He represents it as exceedingly wholesome, and gives a proof of it, in the instance of a person of rank above seventy years of age with whom he was acquainted, and who had been in the habit of drinking at breakfast, for the greater part of his life, a pint and a half of this wine. Some of the rice wines are so highly perfumed, and so odoriferous, that on opening a bottle, the air of an apartment assumes an agreeable fragrantcy; such is the state of perfection to which these people have arrived in the making of this intoxicating luxury.

In many of the provinces an excellent description of wine is made from the palm-tree, called *cha*,

* Richards' Hist. Tonquin. Du Halde, vol. i. p. 303.

† Ibid.

a term that is also given to tea ; but the process differs little from that already described as being practised in India, to which we refer the reader. In a country so extensive as China, abounding in all the species of fruit that grow in other parts of the world, such as apples, pears, plums, quinces *, apricots, peaches, figs, pomegranates, mulberries, nectarines, grapes, oranges, lemons, citrons, melons, walnuts, chesnuts, pine-apples, and other fruits peculiar to the soil, with a vast variety of grain and esculent substances, that contain saccharine matter, what, it may be asked, in the hands of so ingenious a people, must be the variety of wines or vinous liquors that daily sparkle on the tables of the luxurious in this remote and secluded region.

The following mode of making beer is observed in China. The liquor is called *tar-asun*, and is extracted from barley or wheat. The grain from which it is produced undergoes a certain degree of malting, after which it is coarsely ground, and put into a kieve; where it is moistened lightly with warm water and closely covered ; after it has stood for some time, boiling water is again poured upon it, and the whole is stirred until it appears completely wetted and mixed : this operation being performed, they cover the kieve a third time, letting it stand as before ; they then open it again, stirring

* Navarette describes the wine made in China from this fruit as of a very delicate and superior kind.

the whole contents and pouring in boiling water, until the lighter materials rise to the top, and the liquor assumes the strong flavour of grain, &c., which they know by its having gained a deep colour and an adhesive or glutinous consistency. When the liquid has become lukewarm, they pour it into a narrower vessel than the kieve; and after having mixed a small portion of Chinese hops, they put this vessel, with the liquor, down into the earth, for the purpose of fermentation. The Chinese hop is a prepared one, which bears its leaven with itself, and which excites fermentation. As soon as the working has ceased, and the liquor has begun to subside, they fill large bags with it, or rather coarse sacks, made of a suitable thickness for the purpose, which are put into a press. The liquor being extracted, is poured into barrels, which are bunged up with care, and immediately placed in a cellar.* In the distilleries the same process is observed for the preparation of the wort or wash from wheat, rye, or millet, except that no hops are used when the liquor from the grain is intended to be distilled. Before this extract is submitted to any kind of fermentation, it is mixed with a preparation called *pe-ka*, consisting of rice-flour, liquorice-root, anniseed, and garlic; this, it appears, not only accelerates fermentation, but is supposed to impart a peculiar favour. The whole of the mixture being

* Vide French Dictionary of Arts and Sciences.

duly fermented, undergoes distillation; and the *Sau-tchoo* thus prepared may, as Barrow remarks, be considered as the basis of the best arrack, which in Java, as already noticed, is exclusively the manufacture of Chinese, and is nothing more than a rectification of the above spirit, with the addition of molasses and juice of the cocoa-nut tree.* Before distillation, the liquor is simply called *tchoo*, or wine; after that the word *show*, *sau*, or *sam*, is added, to express its hot, burning, or fiery nature. The great materials of distillation throughout all China are rice and millet, the former of which, according to Sir George Staunton, is produced in great abundance in the middle and southern provinces of the empire, while the latter supplies its place in the northern. Of the great extent of the culture of those articles of human food we can scarcely form an idea, even on learning that the mere tribute paid from the different provinces into the royal treasury yearly, as a duty on the lands, amounts in these different kinds of grain to 40,155,490 sacks.† But when the steepest hills and mountains are brought into cultivation, we need scarcely wonder at the agricultural riches of China. The water

* Barrow, p. 304.

† According to the Chinese geography, *Daisin-y-tundshi*, the tribute of wheat, in Chinese *dân*, or bushels, amounts to 6,396,286. The *dân* is equal to 12,070 cubic inches French. Vide Neuhoﬀ, Embassy, Staunton, &c.

which runs through the level of the valley is there taught to flow across the mountain, and, from terrace to terrace, to give nourishment to vegetable matter, and assist the hardy labours of the husbandman. One of the missionaries tells us, that in the year 1664 he bought the very best wheat for three ryals (eighteen-pence); and rice of the first quality, "every grain as big as the kernel of a pine-apple," at five ryals (half-a-crown) the bushel. In the province of Shan-tong *, the same year, wheat was sold for one ryal, or sixpence, the bushel. The nature of this empire being so little liable to change, unless from unfavourable seasons, we are inclined to think that the prices are still the same.† As there does not appear any regulation confining distillation to particular individuals, all the makers of wine distil from the lees, while others manufacture from the grain direct. The produce is distinguished in Europe under the general appellation of *rack*, *raki*, or *arrack*. ‡ The manufacture of this liquor, Grosier tells us, is carried on to a great extent through the whole of the Chinese dominions. Its strength generally exceeds the common proof, and is free from that empyreumatic odour so often perceptible in

* The wheat sent to the treasury yearly from this province is upwards of 1,271,494 dâns.

† When Barrow was at Pekin, rice sold from $1\frac{1}{2}d.$ to $2d.$ per lb., bread $4d.$, and wheat-flour from $2\frac{1}{2}d.$ to $3d.$

‡ The word arrack, according to Osbeck, appears to take its name from the areca-nut. The Portuguese call this tree *Araquero*.

European spirits. Numbers of carts loaded with it enter Pekin daily. The duty is paid at the gates*, and it is sold publicly in more than a thousand shops that are dispersed throughout the city and suburbs. The sale of this attractive article is conducted in the same way through the whole of the cities, towns, and villages in the fifteen provinces; and it is not a little surprising, that amidst a population of 333,000,000†, the consumption of so dangerous a beverage should be attended with so few fatal consequences, as we are assured on the testimony of some of the most respectable writers‡, that a quarrel or murder occasioned by intoxication is rarely if ever heard of: but we apprehend that to the strictness of the police, and to a regulation rendering every tenth housekeeper accountable for the conduct of the nine neighbouring families§, more than to the steadiness of the Chinese, must be attributed this forbearance, since human nature is much the same in every region of the world.

* These are nine in number, three on the south front, and two on the other three sides. Vide Grosier, vol. i. pp. 396 and 7.

† Respecting the population of China, writers seem not to agree. Lord Macartney and Staunton rate it as above, while the Abbe Grosier makes it 200 millions, and Father Allerstein 198,213,713; others, again, make it only 150 millions. It is, however, generally agreed, that "there seems to be no other bounds to Chinese populousness than those which the necessity of subsistence may put to it."

‡ De Guignes, Barrow, Osbeck, &c. &c.

§ Staunton's Embassy, vol. ii. p. 56.

Mr. Abel gives the following picture of the public houses he had an opportunity of visiting while the embassy stopped at the city of *Tungchow*, on its return from Peking. These, says he, were large open sheds, fitted up with tables and benches, and affording means of gambling and drinking to the lower orders of the people; they were generally filled with players at dominos or cards, who seemed to enter with intense earnestness into their game. The cards were small pieces of pasteboard, about two inches in length and half an inch in width, having black and red characters painted upon them. The beverage most largely partaken of in these houses was tea, wine, and *sam-su*. All the guests were smoking from pipes of various length, from two to five feet, formed of the young and tender twigs of bamboo, fitted with bowls of white copper about the size of a thimble.* Such houses, however, are seldom frequented for the mere love of drinking; and although intoxication is not unfrequent, that vice, it appears, forms no part of the general character of the people.† The rice wines are all drunk warm, for reasons which it would perhaps be difficult to assign, except upon the principle that so powerfully impels the Japanese to follow a similar

* Abel's Narrative, p. 117.

† Osbeck, vol. i. p. 234, &c.

practice, as noticed in treating of their beverages.* When scarcity or famine is dreaded, distillation is prohibited, as in Great Britain, by proclamation. Where stills are found afterwards at work, the still-houses are destroyed, the workmen thrown into prison, whipped, and condemned to carry the cangue, a degrading frame of wood, that renders the culprit unable to do any thing for himself as long as he is obliged to wear it. What greatly tends to the encouragement of distillation, is the facility with which coals are procured, and sent by canals through the provinces, while in other parts of the empire less accessible, wood is a substitute of equal value and importance. The skill of the Chinese in distillation is not confined to the manufacture of brandy from rice or millet alone. Besides the quantities that are distilled from the produce of the palm and other fruits, a very ardent spirit, said not to be unworthy of the emperors, is produced from the flesh of sheep.† The nature of the process seems to be as yet a secret to Europeans. Some indeed have stated, that several

* Martini and Navarette observe that the Chinese mostly take their wines very hot; and as they like their flavour, they sometimes drink to excess, although they are the reverse of a drunken people. Intoxication, when it occurs, is not considered as a shame, but treated as a jest. The cups used for the drinking of wine are generally made of silver, porcelain, or precious wood, and are of a small size.

† Du Halde, vol. i. p. 303.

vegetable substances are employed, but that assertion appears to rest on mere conjecture. The use of this liquor was first introduced by the Tartars, whose fondness for the repasts which the flocks and herds of their native wilds afforded, induced them to subject to the action of the still, the flesh of an animal that had long formed the basis of a more simple, though perhaps not less intoxicating, beverage; we allude to their *lamb-wine* *, already mentioned as a favourite drink amongst them. *Kang-hi*, who was of Tartar origin, and wielded the Chinese sceptre for sixty years, encouraged the manufacture of this spirit by the use he made of it himself. † It has, however, never been a favourite in China, and we have little reason to expect that its admirers, should any of them visit Europe, will ever be regaled with a cup of this exhilarating draught. The inhabitants of the province of Quang-tong distil a very pleasant liquor from the flowers of a species of lemon-tree, which are said to possess an exquisite odour, and, like those of the Mahwah or Madhuca of Bahar in India ‡, have a strong saccharine quality. The fruit of the tree is almost as big as a man's head;

* See page 69 of this essay. The Chinese term for this wine is *Kau-yang-tsyew*. It is said to be a very strong and nutritive beverage, and the Tartars delight to get drunk with it. Grosier, vol. ii. p. 319. Du Halde, vol. ii. p. 256.

† Grosier, vol. ii. p. 319. Du Halde, vol. i. p. 303.

‡ Ibid. p. 109.

its rind resembles that of the orange, but the substance within is either white or reddish, and has a taste between sweet and sour.* The spirit is perfectly clear and transparent, and is held in high estimation.

From the refuse of their sugar plantations † much rum might be made, but they have not as yet attempted the manufacture of that article. So great is the trade in sugar, that 10,000,000 of lbs. was exported from the country in 1806. ‡

The sugar exported from Canton for American consumption in four years, from 1815 to 1819, amounted to 39,670 peculs; and from that port in the same period, were exported for European use 21,400 peculs. § The entire quantity carried from Canton by the American traders from 1804 to 5th January 1819, appears to be 67,663 peculs ||; and the quantity imported into Great Britain, the produce of the East Indies and China, for seven years, from 5th January 1815 to 5th January 1821, amounts to 1,073,730 cwt., which, at £2 2s. per cwt., gives a sum of £2,254,833, being at the rate of 4½d. per lb. ¶ The Chinese are expert in

* Du Halde, vol. i. p. 109.

† The sugar-cane grows to great perfection in the southern provinces of the empire.

‡ Malte Brun's Geo. vol. ii. p. 605.

§ Parliamentary Report, 7th May 1821, p. 183.

|| Ibid. p. 315.

¶ Ibid. p. 353 to 371.

the manufacture of sugar and sugar-candy; the latter has been celebrated. So far back as 1637, both these articles could be purchased for three half-pence per lb., of a quality as white as snow.*

The wines of Europe are now imported into China like other articles of merchandize, and are often sold to considerable advantage. The xeres or sherry wine is preferred on account of its strength, and because it is not liable to change by heat. The Spaniards send wines to Manilla, Macao, &c., from whence the Chinese bring a considerable quantity, especially for the court at Peking.†

The East India company exclusively exported to China in ten years, from 1810 to 1820, beer alone to the value of £14,309, and wine in bottles and packages for the same period to the amount of £7,383.‡ But the trade has increased, and the following account of all beer, ale, and spirits, both British and Foreign, as well as wine, exported from Great Britain to the East Indies and China for a period of seven years, is inserted here, for the purpose of shewing at one view the extent of this commerce, and its importance as a source of wealth and consumption to our home and foreign manufacture.§

* Parliamentary Report, 7th May 1821, p. 353 to 371.

† Osbeck's Voy. to China, vol. i. pp. 315 and 16.

‡ Parliamentary Report, 7th May 1821, p. 330.

§ Ibid. p. 322, &c.

Year.	Ale and Beer.	Value.			British Spirits.	Value.			Foreign Spirits.	Value.			Wine.	Value.		
	Tuns. Hhd. Gal.	£	s.	d.	Galls.	£	s.	d.	Gallons.	£	s.	d.	Gallons.	£	s.	d.
1814	2,699 1 9	50,021	16	1	5,033	2,938	15	0	207,681	44,016	0	0	360,904	100,251	0	0
1815	5,511 1 24	117,057	7	10	6,981	4,120	14	0	164,885	31,003	0	0	236,271	65,631	0	0
1816	6,821 2 16	137,781	2	10	4,400	3,268	18	5	133,042	24,422	0	0	266,872	74,131	0	0
1817	4,780 0 6	111,187	14	6	3,430	2,815	19	0	124,752	22,718	0	0	198,672	55,187	0	0
1818	3,355 2 19	79,541	1	9	4,075½	3,191	5	0	170,079	38,949	9	9	205,956	57,210	0	0
1819	1,814 2 57	40,398	8	10	1,889	1,406	5	6	215,931	51,633	15	0	178,019	49,449	14	5
1820	3,353 2 3	71,016	8	0	2,740	1,725	16	0	278,533	69,035	18	6	154,606	42,946	2	2

The Americans, also, are carriers of these articles. In the year ending 5th January 1819, one thousand gallons of gin were imported by them into Canton. * The superior quality of European spirits renders their importation desirable, as much confusion and danger have arisen in the immoderate use made of the ardent spirits of the country by the British sailors who frequent this port, and of whose habits the Chinese take advantage, by mixing their liquors with ingredients of an irritating and maddening effect. It superinduces a state of inebriety, more ferocious than that occasioned by any other spirit, and leading the men into the most riotous excesses, tends to establish in the minds of the peaceable inhabitants the most unfavourable opinion of the English character. †

In the island of Formosa, which is situated in the Chinese sea, the inhabitants, particularly on the coasts, manufacture rice-wine, and distil a spirit from it, much in the manner already described; but the people of the interior, who are less civilized, make their drink in a very different way. Like their neighbours, they plant rice and live on the produce; but as they have no wine or other strong liquor, they make in lieu of it another sort of beverage, which, if we may believe Georgius Candidius, a missionary who resided amongst them for a length of time, is very pleasant, and

* Parliamentary Report, 7th May 1821, p. 71.

† Ibid. p. 312.

no less strong than other wine. This liquor is made by the women in the following manner; they take a quantity of rice, and boil it until it becomes soft, they then bruise it into a sort of paste, afterwards they take rice flour, which they chew, and put with their saliva into a vessel by itself, till they have a good quantity of it; this they use instead of leaven or yeast, and mixing it among the rice paste, work it together like baker's dough: they put the whole into a large vessel, and after having poured water upon it, let it stand in that state for two months; in the meantime the liquor works up like new wine, and the longer it is kept, the better it becomes, and, as it is said, will keep good for many years. It is an agreeable liquor, as clear as pure water at top, but very muddy and thick towards the bottom. The latter, if water be not, as in some instances, added, is frequently eaten with spoons. When they go to work in the fields, they take some of the thick or muddy part along with them, in a vessel of cane, and in another some fresh water; these two they blend, and when the mixture has stood a while, it serves to refresh them during the heat and labour of the day.*

In the tributary states of Cochin-China and Tonquin, the Chinese mode of making rice-wine and distilling from that grain is very similar to that

* Vide Candidius's Account of the Island of Formosa apud Churchill, vol. i. p. 405.

already described. Sugar of an excellent quality is made in the former country, and the refining of it is carried on there to a degree of perfection unknown, perhaps, in other parts of the world. * The trade in this article is immense ; the Chinese alone are said to take 800,000 quintals yearly. It is, however, strange that the inhabitants do not manufacture rum. Grapes are produced in abundance, but they do not appear to be used for wine. From the periodical rains, and consequent inundations, Cochin-China is remarkably fruitful in rice. In all the provinces there are great granaries filled with it, in some of which, it is kept in good preservation upwards of thirty years.† In distilling from this grain the Cochin-Chinese are not inferior to any other Eastern nation : their arrack is the chief and favourite drink ; and “ they have it in such “ plenty,” says Barri ‡, “ that all people in general “ drink as much as they will, and become as drunk “ as people among us with wine. Graver persons,” he adds, “ mix that liquor with some other water “ distilled from *calamba*, which gives it a delicious

* The curious reader may find this described at large in Staunton's Embassy, vol. i. p. 258.

† This preservation of the grain is not uncommon ; for we find that corn is kept in the *matamores*, subterraneous vaults, or holes made in the form of a cone, in some of the Barbary states, for thirty years or more. These vaults or holes are closed at the opening, and atmospheric air carefully excluded. *Jackson's Account of Morocco*, p. 102.

‡ *Barri's Account of Cochin-China*, Churchill's Coll. vol. ii.

“ smell, and forms a delicate composition.” Lord Macartney and the gentlemen of his suite were regaled with a portion of this spirit at an entertainment given by the governor of the town of Turon, while the ships were anchored in the bay. It was served in small cups, and resembled, in Staunton’s opinion, Irish whiskey. The host on that occasion, by way of setting a good example to his guests, filled his cup to the brim, in a true European style of joviality, and after drinking, turned it up, to shew that he had emptied it to the bottom.*

As the kingdoms of Tonquin and Cochin-China were at one period governed by the same laws, there still exists an affinity in the manners, customs, arts, and sciences of the inhabitants. A reciprocity of habit prevails, and we do not find that the Tonquinese are acquainted with the making of any beverage with which their neighbours are not familiar. The fertility of the country and temperate nature of the climate are said to enable them to grow a great variety of grain. Besides the rice common to the rest of India, they cultivate, according to Grosier, five other kinds peculiar to the soil. The wine from these appears to be excellent; and their arrack, of which they distil large quantities, is much esteemed throughout the East. From the palm, which is abundant, they extract toddy; but

* Staunton’s Embassy, vol. i. p. 255.

it is reckoned by Barron to be bad for the nerves.* The sugar-cane abounds, but we have not heard that any rum is made. The wine is drank warm, as in China, and much of it is used at their religious sacrifices. On these occasions a strange custom prevails, of trying the animals intended as offerings, by pouring warm wine into their ears: if they shake their heads, they are judged proper to be sacrificed; but if they make no motion, they are rejected. The Tonquinese are of a social disposition; but too much form and ceremony is observed in their visits and entertainments to render them agreeable to strangers. Father Horta† saw a card of invitation for dinner couched in the following terms: "Chao-ting has prepared a repast
 "of some herbs, cleaned his glasses, and arranged
 "his house in order, that Se-tong may come and
 "recreate him with the charms of his conversation
 "and the eloquence of his learning; he therefore
 "begs that he will not deny him that divine pleasure."
 When all the persons invited on such occasions are assembled, and before the entertainment begins, the master of the house takes a cup of gold or silver, filled with wine, either of the country or the mandarin of China, and proceeding to the outer court, with his face turned towards the south, pours it out as a peace-offering or libation to the tutelary spirit of his dwelling. This cere-

* Barron's Description of the Kingdom of Tonquin.

† Letter of Horta, quoted by Grosier.

mony being over, the guests approach the tables, and before they commence eating, waste an hour in complimenting each other. The person of the greatest distinction in company drinks first. The cups employed to hold the liquor are very small, being scarcely deeper than the shell of a walnut; these however are often replenished, which makes amends for their diminutive size. If the guests chance to play at small games, the losing person is condemned to drink freely, as a forfeit for his ill luck. The arrack and wine of Tonquin are sold every where through the country, and in the public markets held every fifth day.*

The Coreans, an ingenious and enterprising people, who inhabit that extensive peninsula washed by the sea of Japan and lying to the north-east of the Chinese empire, manufacture a species of wine, or vinous liquor, from a grain called paniz, or panicum, supposed to be a coarse kind of rice.† This is the only beverage made in the country of which we have any account; but their subjection to the Chinese, and their consequent intercourse with that people, have no doubt given the Coreans a knowledge of all the liquors peculiar to them, as it is probable, since the more southern and fertile districts of Corea afford wheat, millet, barley, rice, and a variety of fruits to exercise the ingenuity of

* Staunton, Grosier, &c.

† Mod. Univ. Hist. vol. vii. p. 329. Malte Brun, vol. ii. p. 498. P. Regis' Geog. Observ. in Du Halde, vol. ii. p. 376, &c.

the inhabitants in the preparation of luxurious potions for the table.

Of Japan, as of the other distant and oriental nations, the early history is but little known. Marco Polo, in the third book of his account of eastern countries, imperfectly describes it under the name of Zipangri. The Portuguese, about the year 1542, were the first who laid open to Europeans a knowledge of those islands.* The inhabitants, though far advanced in civilization, appeared altogether unacquainted with chemistry as a science. In the practice of several of the useful and ingenious arts they had made astonishing proficiency, and in the manufacture of *sacki*, a strong and wholesome beer procured by fermentation from rice, they were not excelled by any other† people. It still appears to be the beverage in general‡ use. Kœmpfer met with it in all the inns at which he stopped on his journey to the metropolis; and although no person whatever is exempt from brewing it, yet there are numbers in the empire who follow no other business than that of making *sacki*. The town of *Muru*, in the province of Bisen, is inhabited chiefly by the brewers of this liquor; and at a village near the city of *Osacca*, it is made to perfection, and in such abundance, that it is sent from thence all over the kingdom, and even exported to other

* Kœmpfer, *Introd. Hist. Japan*, vol. i. p. 32. Thunberg.

† Kœmpfer, vol. i. p. 121.

‡ Titsingh's *Account of Japan*.

countries by the Dutch and Chinese.* Although *sacki* is drank freely by all descriptions of persons, from the emperor to the meanest subject, its immoderate use is seldom productive of much mischief. Some, indeed, of the lower orders have been known to be beheaded for being drunk and † quarrelsome, but this is of rare occurrence. The beer of Japan, as already remarked, is considered wholesome and pleasant to the taste, but it is of such a nature, that it should be drank not cold, but moderately warm ; for when it is not heated, it frequently occasions that dreadful and endemial species of colick, which the Japanese call *senki*, a disease which has proved fatal to many, as well foreigners as natives. To cure this distemper, various means are used, but the principal is the *acupunctura*, or pricking of the abdomen with a needle, so as to let out the hidden or morbifick vapours. “ I have been myself,” says Kœmpfer, “ several times an eye-witness, that in consequence of these three rows of holes, (for “ such are the number of punctures) made according to the rules of art, and to a reasonable depth, “ the pains of the colick have ceased almost in an “ instant, as if they had been charmed ‡ away.” Independent of the *sacki*, they have a variety of other exhilarating liquors, like the Chinese and other orientals, some made from wheat and other

* Kœmpfer, vol. ii. b. v. p. 426. 469. and 477.

† Ibid. p. 567.

‡ Ibid. Appendix to Hist. of Japan, p. 33.

grains. They distil spirits to some extent from rice and wheat ; and from the fruits of the country a very nice description of wine is made. Kœmpfer tasted an excellent sort, made from plums, during his stay at Jeddo. They tap the palm, birch, and other trees, from the juices of which they manufacture various beverages with very considerable skill. It has been remarked, that none of these strong liquors are ever tasted by the women ; nor even by the men, *except* on some extraordinary occasions, or on public festivals * ; but from the picture which Kœmpfer gives of a large portion of the Japanese females, we are disposed to think they are not quite so abstemious.

Between the island of Kiusiu, the most southerly of that group which forms the empire of Japan, and Formosa, is situated the state of Loo-choo, an island which has lately attracted considerable attention, from the interesting accounts given of it by Surgeon M^cLeod and Captain Hall, of the *Alceste* and *Lyra*. The inhabitants are represented by these gentlemen as possessing most amiable dispositions, and enjoying all the comforts of a land rich in every bounty which nature can bestow. The orange, the lime, the tea-plant, and sugar-cane abound, while rice, wheat, peas, melons, pine apples, &c. are reared in great plenty. Samchoo is distilled by them to considerable perfection, and is made much in the same manner as in China. Nine jars, each containing about fifteen

* Mod. Univ. Hist. vol. vii. p. 376.

gallons of this liquor, were sent on board the British ships during their stay. Sacki is in use, and of a quality little inferior to that of Japan.*

In some of the neighbouring islands they make a strong drink from the remainder of their crops of corn, rice, fruit, pulse, &c., called *awamuri*.† On the island of Jesso, although the people are but little advanced beyond the state of hunters and fishers, they make a kind of wine resembling *sacki*, which is very strong. This they drink in great quantities, although they are seldom intoxicated; a circumstance ascribed by Father de Angelis, a Jesuit, to their use of the *todo-noovo*, a kind of oil drawn from a fish of the same name, with which they season their rice, and almost all‡ eatables. In the Celebez islands, where the religion is chiefly Mahometan, little or no distillation is carried on, although most of the oriental grains and fruits abound, and the plantain trees are of the best description. On the fruit of this tree the natives in a great measure live, and regale themselves with its inebriating juice, as also on *sagwire*, a very strong species of palm wine.

At Manilla, one of the largest of the Philippine islands, palm trees are said to grow in great perfection, and to exhibit no less than forty species.

* Captain Hall's Account of Loo-choo.

† Mod. Univ. Hist. vol. vii. p. 993.

‡ De Angelis apud Charlevoix. Hist. Japan. Modern Univ. Hist. vol. vii. p. 442.

Such is the magnitude of some of them, that a Jesuit missionary having touched there but a few days, had, through the kindness of a friend, a place prepared for him so capacious, that under two palm leaves alone, he was enabled to say mass, and to sleep secure from the most violent rain. The leaves are shaped like a fan with ridges, and so strong, that no rain however weighty can penetrate them. Here, as well as in Mindoro, another of these islands, a liquor called *tuba* is drawn from them. Jaggory is sometimes made from the juice * ; but the sugar-cane is so successfully cultivated, that the manufacture of jaggory is rendered less necessary. Rice is reared with little labour, and in such quantities, as to afford the Chinese, who live on and frequent the island, an opportunity for the exercise of their ingenuity in all the varieties of the brewing process. From the cocoa, nipe, and cabonegro trees, they obtain the materials of an excellent species of brandy. † As Manilla is the great mart and centre of all the Spanish traders in the East, and the several nations with whom they deal, much of the luxuries and comforts of other countries are brought thither. The viceroy lives in great splendour, and at his table, as well as at the table of the higher order of merchants, may be found most of the wines, spirits, and liquors of Europe, Asia, and Africa.

* Navarette apud Churchill.

† De Page's Trav. vol. i. p. 203.

In casting our eyes over the broad expanse of the Pacific Ocean, successfully traversed by Bougainville, Furneaux, Byron, Wallis, Dampier, Carteret, Cook, La Perouse, and others, we are presented with so many states and islands, that to describe all would be tedious ; and as they greatly resemble each other in the productions of the soil, it may be sufficient to give a general idea of the most considerable. The Marian isles, which are about twelve in number, were first discovered by Magellan, who had reason to form so unfavourable an opinion of the inhabitants, that he bestowed on them the name of Ladrões, or *islands of thieves*, in memory of the repeated thefts which he experienced. The people were found to be extremely rude and ignorant, but subsequent navigators have represented them in a more favourable point of view. Wallis, in 1767, remained upon Tinian a month, and seemed pleased with the refreshment he procured. The people speak a language bearing so close a resemblance to that of the Philippine islanders, that they are supposed to have sprung from one common stock ; the productions are much the same as in those islands ; since the establishment of the Dutch in Guam, one of the principal settlements of this group, the inhabitants have become better acquainted with the enlivening qualities of the cocoa-nut tree, and of the rice cultivated at Rota. De Pages represents the brandy made from the fermented juice of the cocoa

tree as excellent. The Manilla ships usually touch at these islands for refreshments, in their voyage from Acapulco. The Carolines, a cluster of islands which lie to the south of the Ladrões, are but little known : they are said to resemble the latter, both as to the natural productions and manners of the people. Captain Wilson, who was wrecked in 1783 upon the coast of Pelew, one of the principal of the group of islands of that name, gives a pleasing picture of the inhabitants. The island is stocked with a great variety of plants, and with trees of various kinds : among them may be ranked the cabbage tree, the bread fruit, and a tree producing a fruit like an almond. Plantains, bananas, seville oranges and lemons are found. The leaves of the palm serve as thatch for their houses ; the milk of cocoa supplies them with drink. A kind of sherbet is made, to which the juice of the orange is added. It is remarkable, that the crews of the ships which were sent from Bombay to these islands in 1790, among the other supplies introduced liquors to the notice of the inhabitants, who thus acquired a taste for the luxurious drinks of their more enlightened visitants. Captain M'Clure, who commanded the ships, remained on this island, resolved to pass the remainder of his life among those ingenious and virtuous people. Of New Britain and New Ireland we know little, but such parts of them as have been explored are considered abundantly fertile. The cocoa and different

kinds of palm trees flourish in the forests, while numbers of esculent roots and vegetables are met with in the plains and valleys. The natives are said to be unacquainted with the virtues of the juice of the palm. The Solomon islands seem to be as little known as the two just mentioned, writers being divided as to their number and extent. Quiros, the Spanish navigator who discovered them in 1605, gives a description of the inhabitants, little different from that applicable to other islanders in the Pacific, their arts and habits being much the same. When Cook visited the islands of the New Hebrides, about sixteen in number, in 1774, he found them well wooded and stocked in abundance with sugar-canes and yams. The plantain, cocoas, bananas, and bread-fruit appeared not so abundant as in some of the other islands of this ocean; but, from the fertility of the soil, they might be augmented with very little labour to a supply sufficient for any exigence. Among the inhabitants of the Friendly Islands, the root of the kava-plant is chiefly used as a beverage. It is a species of pepper, esteemed as a valuable article, and cultivated solely for the purpose to which it is applied. In its growth, this plant, of which the natives are very careful, seldom exceeds the height of a man: it has large heart-shaped leaves, and jointed stalks. After it is dug up, it is given to the servants, and in many places to the women, who, breaking it in pieces, scrape the dirt off, while they each chew

their portion, which they spit into a piece of plantain leaf. Those who are to prepare the liquor, collect their mouthfuls together, and deposit them in a large wooden bowl, adding a quantity of water proportioned to the degree of strength required. It is then well mixed up with the hands, and wrung hard to make it yield as much liquor as possible. About a quarter of a pint of this beverage is usually put into each cup. On the natives habituated to its use it has no great effect, unless taken to excess; but on strangers it operates like spirits, occasioning intoxication, or rather stupefaction. From the ease with which it is prepared, it may be considered a common beverage; and there is no feast or ceremony held, however trifling, without kava. On one occasion where Cook was present at a funeral ceremony of mourning, a bowl of this drink, containing about a gallon, was prepared; the first cup (which was formed of a plantain leaf), being presented to the king, he ordered it to be given to another person, the second he drank himself, and the third was handed to Captain Cook; cups were then given to the other persons present, until the liquor was exhausted. Each cup, as it was emptied, was thrown upon the ground, whence it was taken up, and carried to be filled again. Scarcely a word was uttered during the whole of this drinking bout, but the utmost gravity was observed by all, from the king to the meanest person present.

The usual drink of almost all these islanders at their meals is water, or cocoa-nut milk, the *kava* being only their morning beverage, unless used as before observed at feasts, and on occasions of ceremony. In the Society Islands this liquor is somewhat differently prepared, and is used among the better sort of people. At Otaheite, the principal of these islands, they pour a small quantity of water upon the root of the *ava*, and often bake, roast, or bruise the stalks, without chewing, before the infusion. They also bruise the leaves of the plant, and pour water upon them, as upon the root. In large companies it is not drank in the social manner observed among the people at Tongataboo, but from the mode of its preparation it is more intoxicating, and has infinitely worse effects. Its dangerous inebriating quality is exemplified by Captain King in the instance of a man seen by him, who had drank of it to such excess, that he lost his senses, and appeared to be convulsed. Two men held him while in this situation, and busied themselves, by way of a restorative, in plucking off his hair by the roots. * Many of us, says the same writer, who had visited these islands before, were surprized to find several of the natives, who when we last saw them were remarkable for their size and corpulency, now almost reduced to skeletons; and the cause of this alteration was universally attributed to the use of the *ava*. Their skins were dry, rough,

* Cook's Voy. vol. i. p. 350.

and covered with scales ; which they say occasionally fall off, and their skin becomes in some degree renewed. As an excuse for so destructive a practice, they allege its tendency to prevent corpulency ; but it enervates them exceedingly, and probably shortens the duration of their lives.

This practice of taking *ava* prevails in the Sandwich Islands, where it is prepared in the same way as among the natives of the Friendly Isles, with this difference, that when a sufficient quantity is collected, they strain it into a calabash through the fibres of the cocoa nut. The effect it produces is well described by a gentleman who visited them lately.* When a man, says he, first commences taking it, he begins to break out in scales about the head, and it makes the eyes very sore and red ; then the neck and breasts, working downwards, till it approaches the feet, when the dose is reduced. At this time the body is covered all over with a white scurf, or scale, resembling the dry scurvy. These scales drop off in the order of their formation, from the head, face, neck, and body, and finally leave a beautiful smooth clear skin, and the frame clear of all disease. The process is also held to be a certain cure for venereal infection. The writer of this article has known many white men go through a course of this powerful medicine. Women are not allowed to use it ; and thus, unhappily, the dreadful disease, first brought to these

* Literary Gazette, Nov. 1821.

islands by Captain Cook's crew, remains to curse the inhabitants.

The chiefs, continues the same writer, are much addicted to the use of spirituous liquors, and think nothing of taking a tumbler of strong Jamaica rum at a draught. The higher class of women are, if possible, the greatest drunkards. They distil an excellent spirit from the *tee* root, which grows wild about the mountain, and resembles the beet-root of this country. It is however larger and much sweeter, of a brownish appearance, and in perfection all the year round. The natives collect a quantity of this root, and bake it well under ground; when sufficiently baked, they pound it up in an old canoe kept for that purpose, mixing water with it, and leaving it to ferment for several days. Their stills are formed out of iron pots, which they procure from ships that call there; these they can enlarge to any size, by fixing calabashes, or gourds, with the bottom cut off, and made to fit close on the pot, cemented well with a sort of clay, called *peroro*; a copper cone is also affixed, with which an old gun barrel is connected, and passes through a calabash of cold water, which cools the spirit. The stills are commonly placed by a stream of water; they take the water when warm out of the cooler, and replace it with cold; by which simple process a spirit is produced not unlike whiskey, only not so strong, but much more pleasant. This spirit is called by the natives *y-wer'a*, which signi-

fies warm water, or luma, in imitation of the word rum. A man of the name of William Stephenson was the first who introduced distilling; he was a convict who had escaped from New South Wales, and lived on the islands for many years; he has left a large family behind him. The credit of first discovering this mode of distilling has been claimed by a person of the name of Young; but, as it has been justly observed, neither of them deserves much praise for the introduction. Mr. Manning, who left Nootka Sound, on the north-west coast of America, at the time when the Spaniards formed an establishment at that place, has cultivated the grape and peach on the island of Woahoo, one of the most important of the Sandwich group; from the former he makes very good wine, and from the latter good peach brandy. In company with this man, the writer, from whom we select this information, went round the island, and found all the plains and vallies in the highest state of cultivation.

In these islands are found very good wheat, rice, Indian corn, and every description of fruit that grows in the West Indies.

New Zealand and New South Wales.—With the larger portion of the other islands in this ocean our acquaintance is comparatively superficial. In New Zealand the inhabitants are so ignorant as not to know the simple process of preparing food by boiling; and it is said, that by a happy con-

trariety to the taste of man in other regions, they abhor all kinds of intoxicating liquors. The natives of New Holland are represented as possessing the same dislike, but of the lower order of British settlers in that island a different character is given. Reid, who lately visited the colony, remarked, that one could scarcely pass through the streets of Sydney without meeting them in a state of intoxication.* This indiscriminate censure is, however, really applicable to such alone as were permitted to amuse themselves for a certain time in the week, a liberty that was found to be much abused, and which is now mostly restricted, if not altogether abolished by the governor.† The number of licensed houses for the sale of beer and spirits contributed much to this, there being at one time no fewer than sixty-seven; but they are now reduced to twenty-five, a number still perhaps too great for the population. The annual value of spirits imported into New South Wales amounts, by Wentworth's account, to £10,000, and the licence for permission to retail them costs £25. For selling beer alone the vendor pays £5; and the brewer, for leave to make it, is subject to an annual licence of £25. There are four breweries in the colony, but the beer is said to be bad, a cir-

* Reid's Voyage to N. S. Wales and Van Dieman's Land, 8vo. p. 266.

† Parl. Rep. on the State of the Colony of N. S. Wales, printed 1822, p. 30.

cumstance attributed more to the want of skill on the part of the manufacturer than to the quality of the grain, which is allowed to be good. Porter and ale, to a considerable extent, are imported from England. The policy of licensing stills has hitherto been discountenanced by the government; but from the rapid progress of agriculture, nothing, it is conceived, would tend more to the relief of the industrious than the adoption of such a measure. It has been strongly urged by the landholders, merchants, and other respectable inhabitants of the colony, in a petition to the British cabinet, dated 11th of February 1819.

The advantages attendant on a permission to distil are forcibly illustrated by Wentworth, in a short review of the actual loss which the colonists have sustained from the want of it during the last fifteen years. This loss he calculates to be not less than £250,000; a sum which, had it been applied to the immediate encouragement of agriculture, would have imparted life and vigour into the whole community. Allowing the colony, says that writer, to require 60,000 gallons of spirits annually, 20,000 bushels of grain would be expended in distillation, the whole of which, when necessity required, might be turned into the ordinary course of consumption, and directed to the purposes of subsistence.*

* Wentworth's Statist. Hist. and Political Description of N. S. Wales, 8vo. p. 114. 253. and 259.

That the erection of distilleries would be much for the advantage of New South Wales, there can, from the improved state of that settlement, be no manner of doubt ; and we see little more evil to be dreaded from the home than from the foreign manufacture. The import duty on spirits is ten shillings per gallon, while on wine it rates only at nine-pence. If spirits be abundant at this high rate of duty, why need they be more so under a proper system of restriction and taxation, although made within the precincts of the colony? The adoption of such a measure would not only improve the revenue, but offer a sure and ready market to the farmer, as an encouragement for a great portion of his labour and industry.

The manufacture of peach brandy, which is chiefly confined to the Americans, might be successfully carried on by the people of New South Wales, since the peaches grow in such plenty throughout the colony, that the inhabitants employ them for no other purpose than that of feeding pigs. This useful fruit appears to thrive in every situation, as well on the most barren, as on the most fruitful soil. Barley, rye, wheat, and oats, grow in great abundance.

The spirits with which the colony is supplied are principally furnished by merchants in India. At first no person could trade in this article to the settlement without a licence ; but the restriction was abolished a few years ago, and permission

given for any one to supply it with this commodity, in consequence of which a considerable quantity was sent thither from Ireland in 1822.

Since the foregoing was written, we find by the report of the commissioner sent out by government to inquire into the state of agriculture and trade in this colony, that distillation has been permitted by an act of 3 Geo. IV. c. 96., and regulations for conducting the same issued by the governor, and published in the Sydney Gazette, on the 3d of February 1821. Liberty was given to commence on the 1st August 1822. By these regulations it appears, that no still of less capacity than forty-four gallons is to be licensed, and that no grain whatever shall be distilled but from that grown in the colony. The governor has the power of suspending distillation, when the price of wheat in the Sydney market shall exceed 10s. per bushel for two successive days ; but in that case distillation from fruit will be permitted. The spirit is required to be of a strength of at least seven per cent. above hydrometer proof, and a duty of 2s. 6d. per gallon to be paid for as much spirit of that strength as every still shall be found capable of producing from the number of charges that can be worked off in the space of twenty-eight days.

The system of charging the duty on working against time, as practised in Ireland, was adopted, as better calculated for the collection of the revenue in a colony possessing such imperfect

means, than any system of survey by officers. The form and dimensions of stills were fixed in proportion to the diameter and altitude. *

To prevent the sale of spirits in small quantities from the distilleries, it is provided, "that no person "who shall be a partner, or have an interest in a "licensed distillery, shall have a licence to retail "spirits; and no licensed distiller is permitted to "sell at any time a smaller quantity of spirits than "100 gallons."

Great care has been taken to prevent a monopoly in the trade; and to avoid the expence and inconvenience of carrying grain to *particular markets*, stills are allowed to be set up in any part of the colony.

Instead of 10s. per gallon duty on spirits imported, 15s. are now charged, except on rum the produce of the British West Indies, which is only chargeable with 10s. per gallon. The duty is levied on the strength of all spirits imported, in proportion to the degree in which they may exceed hydrometer proof.

The rum sent from Bengal to the colony has been estimated as high as thirty and forty per cent. above proof, while that brought from other places seldom exceeded from twenty to thirty. In 1819, the quantity of spirits issued from the bonded store to *dealers* amounted to 58,079 gallons, and

* See the description of these proportions in the article on Ireland.

in 1820, to 69,745 gallons. To which if we add in the first year 18,743, and in the second, 17,062 gallons, given out on account of government, the annual consumption of the colony, making some allowance for the strength, and for what is sold direct from the importer, may be estimated at 100,000 gallons. This is a prodigious quantity, when we consider the population, which in 1820 did not exceed 23,939 persons, and of these there were 5,668 children. Making no allowance for the latter, the quantity of spirits swallowed by each individual yearly comes to somewhat better than five gallons and three pints! which exceeds the consumption of the proportion for the population of Ireland by four gallons, and of that of Scotland by more than three.

It is to be lamented, that although the settlers of New South Wales are represented by Mr. Bigge as treating the aborigines with kindness and humanity, yet they have of late adopted the practice of supplying them with spirits, which sometimes stimulates them to the commission of the most shocking outrages upon each other, and to acts very offensive to delicacy.*

Scarcely, says a voyager, do the intoxicating fumes get into their heads, when they breathe nothing but battle, and shout forth their war cries. Impatient for murder, they seek antagonists, pro-

* Commissioner's Report, printed by order of the House of Commons, 1823, p. 59.

voke them by ferocious songs, and demand death in the hope of inflicting it. They find but too readily the opportunities they provoke; and their war-whoop is answered by whooping not less terrible. Then the combatants, drawn up in two lines, perhaps twenty steps from each other, threaten mutually with their long and pointed spears, launch them at their adversaries with wonderful strength and dexterity, and finally attack each other with ponderous and formidable clubs. Limbs are fractured, bones smashed, skulls laid open; no exclamation of pain escapes from these ferocious savages, the air resounds only with frightful vociferations. He who falls without having found a victim, dies rather of despair than from the hurts he has received; and the warrior who has laid low a few enemies, soon expires without regretting the loss of life.* Fortunately for the more civilized portion of society in that quarter, these scenes are not of frequent occurrence, and the exertions of government are not wanting to check them altogether. The revenue arising from spirit, beer, and brewing licences, in the colony, for the year 1820, amounted to £1,527 10s. †

Cape of Good Hope.—At the Cape of Good Hope, since its colonization by the Dutch under Van Riebeck in 1650, the vine has been cultivated with considerable success. The wine called Constantia, that has been so much prized in Europe, is the produce

* Arago's Voyage.

† Report, p. 86.

of two farms known by that name, and situated within eight or nine miles of the Cape. These farms, on an average, yield about 75 leagers per year, which, at 160 gallons the leager, gives a quantity equal to 12,000 gallons ; but De la Caille and Barrow have calculated the produce at a great deal more. Besides this excellent wine, many are made of different tastes and flavours. Among these, the madeira of the Cape, which is sent to Holland, America, the Dutch settlements in India, and to England, is considered the best. It is a boiled wine, and is said to be much improved by the voyage. From 20 to 30 rix-dollars the leager, according to Barrow and others, is the common price that the farmer obtains for his wine at Cape Town, where it is afterwards sold at the rate of from 40, 50, 60 to 80, and 100 dollars ; and that too, perhaps, after undergoing adulteration.

The trade in this article is of great consequence at the Cape, and the merchants are particular in the mode of storing and securing the wine. They generally keep it in vaults and cellars in large vessels made of mahogany, or a wood resembling it, very thick, highly polished, and shaped like a hogs-head. These vessels are kept as clean as our dining tables ; and are bound round with great brass hoops, while the edges are secured with clasps of the same metal, so that neither time nor accident can damage them. One of these tuns, or reservoirs, will contain from six to seven hundred

gallons. The bung holes are secured with plates of brass, hasped down and locked. The cocks are also strong and large, with locks and keys to them, so that the servants or slaves are prevented from embezzling any of the wine, as the casks are never opened, except in the presence of one of the proprietors. Many of these tuns are elegantly carved and ornamented with figures.* When Mr. Barrow visited the Cape, a pint of good wine might have been purchased for three-pence; and had it not been for the licence on the privilege of retailing, it might have been obtained for three-halfpence.

There is no duty on wine in the colony, except upon what is brought to the Cape market, and then it is subject to a tax of three rix-dollars the leager. Brandy, or brandewyn, as it is called at the Cape, is also exempt, except on passing the barrier, when it is charged with a duty at the same rate as the wine.

With the manufacture of this spirit the vine-growers seem not to be well acquainted, as it has hitherto been considered of an indifferent quality. The brandy of the Cape is principally extracted from the husks and stalks of the grapes, mixed up and fermented with the lees of wine; other ingredients are sometimes used of a less grateful nature. The whole of the operation is generally committed to the care of a slave, who having neither knowledge nor interest in the process, pays no re-

* Percival's Account of the Cape of Good Hope, 4to.

gard to the quality of the spirit; through this neglect it contracts a strong empyreumatic flavour, which it never loses.* This spirit has been long in use at the Cape, though the better sort of people among the Dutch seldom drink it. It is eagerly purchased by the Hottentot and Caffre hordes, who barter their cattle and other commodities for it. The following quantities of wine and brandy stated by Barrow to have passed the barrier, will shew the extent of the trade for the period of four years.

1799	6,953 $\frac{1}{2}$	leagers of wine,	and 598 $\frac{1}{2}$	leagers brandy.
1800	5,199 $\frac{1}{2}$	do.	472 $\frac{3}{4}$	do.
1801	5,463 $\frac{1}{2}$	do.	320 $\frac{1}{2}$	do.
1802	4,031 $\frac{1}{2}$	do.	273 $\frac{1}{2}$	do.

This includes the consumption of the town, the army and the navy, as well as the exportation for that time, which is said to be from 400 to 800 leagers of wine, and from 30 to 100 of brandy annually, besides the produce of the Constantia farms. Since that settlement came into the hands of the British, this trade has gradually increased, owing in a great measure to the salutary enactments of the legislature.

The quantity of wine imported from the Cape into Great Britain for eight years, commencing with 1812, has been stated in the appendix to the second report of the parliamentary committee on the foreign trade of the country to be, in

* Barrow's Travels in Southern Africa, 4to. vol. ii. p. 320.

	Tuns.	H.	G.			Tuns.	H.	G.
1812	40	2	56	} Exported of this quantity from Great Britain.	{	1814	13	1 22
1814	349	3	55			1815	41	1 52
1815	1,512	1	4			1816	199	1 54
1816	1,631	2	21			1817	483	0 1
1817	4,218	0	29			1818	566	1 25
1818	3,648	0	15			1819	329	2 5
1819	1,648	3	19			1820	344	3 58
1820	1,925	0	60					

The whole produce of the Cape is supposed at present to be about 12,000 leagers, comprising only what crosses the barrier; with the wastage it may be computed at about 14,000 pipes. The consumption of the colony is calculated at 6,000, the shipment to St. Helena about 2,000, and the remainder is for this country and its dependencies. * They have no breweries deserving of notice, though a kind of beer is said to be made by the Dutch, in which a species of bitter herb is used instead of hops. The malt drink comes all from Europe, and is of course very dear.

This colony is susceptible of great improvement, and might be made of essential benefit to the British empire. Were the vine plantations properly managed, and a due regard paid to the selection of the grapes, and the manufacture of wine, much of the money that is sent to foreign countries for this article might be saved and turned to our own advantage. The vines, according to Latrobe, are permitted to grow without espaliers,

* Parl. Rep. No. 703, 1821, p. 56, &c.

placed in rows like currant-bushes in our gardens, and when arrived at a certain height, the upper shoots are taken off to increase the quantity of grapes ; a method very different from that practised in Europe.

The sugar-cane might be cultivated to any extent, and rum and sugar manufactured of a quality not inferior to any that are made elsewhere. How far it might be the policy of government to give a preference to the plantations in this quarter, we are not prepared to say ; but unquestionably the country in the vicinity of the Cape is more congenial to health, and affords better promise of a redundant population, than most of our other foreign colonies. Many of these too often prove fatal to European emigrants ; and at best can only be approached, in the way of settlement, by men of large capital and extensive connexions.

West India Islands.—Passing to the islands in the Mexican Gulf, known by the general name of the West Indies, we find the distillation of ardent spirits there carried on to an extent not surpassed within the same limits of territory in any other quarter of the world.

The time at which the manufacture commenced there is not exactly ascertained, but the first plantation of sugar-canes was established, according to Oviedo Valdes, in Hispaniola or St. Domingo, by the Spaniards in 1520.* The rapidity of the cul-

* *Historia Natural de las Indias.* Poyer's *Hist. Barbadoes*, 4to. p. 40. *Alcedo's Dictionary.*

ture was such, that, in 1535, there were not less than thirty plantations on the island. As the use of the still was then known, it may be conjectured, that not long after this period the distillation of rum suggested itself, as the only means to compensate the planter for the loss incurred in disposing of the scummings and molasses, after their separation from the sugar.

As to the name given to this spirit, writers are at variance, some attributing its derivation to one thing, and some to another. The word *rum* seems to have been formerly used in Great Britain to convey the idea of any thing *fine, rich, best, or excellent*: thus, to express a superior brandy, it was common to say *rum Nantz*, because the best description of that liquor was distilled at Nantz; and as spirits, extracted from molasses, could not well be ranked under the name of whiskey, brandy, arrack, &c. it was called *rum*, to denote its excellence or superior quality. This term is probably taken from the last syllable of the Latin word *saccharum* (sugar), and it is not a little singular that the liquor itself has been always known among the native Americans by the name of *rum*.

The process of manufacturing sugar from the cane, is too well known to require a description here; and the molasses, from which the rum is principally made, are the syrup of the sugar, which no course of boiling can bring to a thicker consistence. The distillation of this substance together

with the scummings of the boilers has been thus described to the author by a gentleman long resident in Demerara and the West Indies.

From the liquor of the cane, which runs warm from the coppers through a trough to a receiver prepared for that purpose, the scummings are taken, and, with some of the liquor itself, are pumped from a cistern into vats of considerable size, generally containing from 300 to 800 gallons, where the fluid is mixed with water and molasses in the proportion of twenty-five gallons to 100. When this mixture is sufficiently blended together in the vats, which in some plantations amount to thirty, it is covered over with boards or mats made of plantain leaf, and allowed to ferment for three or four days, or longer, should there be a want of yeast or other ferment to make it work, which often occurs at the commencement of the season. When reduced to a due degree of acidity, which is ascertained by the subsiding of the fermentation, it is run into a still proportioned to the vat, and wrought off, as low wines, in which state it is put into the still again. The first run, or discharge, after it is thus returned to the still, is taken off for high wines, as they are called, or strong rum, in the proportion of twenty-five gallons to 300, the strength of which, when tried by a glass bead instrument, is from eighteen to twenty-two. The second run of the still, drawn off in cans and carried by negroes to another vessel, is of a strength from twenty-three to

twenty-six. From these two runnings of the still, the rum exported from the colony of Demerara is made up. The deficiency in the strength of the second distillation is supplied by an addition from the first, which is always stronger than that exported, and of too ardent a nature to be used by itself, twenty-five bead being colony proof.

In the Windward islands, one-third of scummings is mixed with one-third of lees, or *dunder*, and one-third of water. When these begin to ferment, which they usually do in twenty-four hours, the first mixture of molasses takes place, in the proportion of six gallons for every 100 gallons of the fermenting liquor, and a day or two afterwards an additional quantity of molasses is added. The fermentation is [tempered by the addition of cold or warm water. *Dunder*, a term by no means familiar to the ear of a European distiller, is the lees or feculencies of former distillations, serving all the purposes of yeast in the fermentation. It is derived from a Spanish word, and is well known among the planters in the West Indies. The attenuating properties of this ferment are such, that the materials with which it is mixed are said to yield a much greater proportion of spirit than could be obtained if they were fermented without it. * Various mixtures are used in the fermenting process, such as tartar, nitre, sea-water, or common salt. In some

* Edwards's Hist. W. Indies, vol. ii. p. 232, 233.

of the islands a still usually makes about 220 gallons of rum in the day. This is produced from about 530 gallons of low wines; or 113 of rum from 1,200 gallons of wash; it is of such a strength that olive oil will sink in it, and seldom exceeds proof, though sometimes, by double distillation, it is made to approach to the strength of alcohol. The process of distilling is in general slow, and much caution is observed in the condensation of the spirit. To provide against a scarcity of water, which often occurs in the islands, they preserve, in large tuns or tanks, a sufficiency of rain water to enable them to mix the molasses, &c., and to cool the worm of the still. As the water becomes heated in the worm-tub, it is carried to cisterns or coolers; and, when cold, is run again upon the worm. In most of the islands, the curing houses for sugar, and the distilleries for rum, are constructed on the sides of canals, and the canes are carried either in boats or by negroes from the plantations to these houses.

The richness of flavour peculiar to this spirit, which has rendered it famous in almost all parts of the world, is supposed to be derived from the raw juice and the fragments of the sugar-cane, which are mashed and fermented with the other materials in the tun. The essential oil of the cane is thus imparted to the wash, and carried over in the distillation; for sugar when distilled by itself has no peculiar flavour different from other spirits. Time adds much to the mildness and value of rum, which

the planters, it is said, often improve by the addition of pine-apple juice.

The average exports of rum from the principal islands, in 1787, amounted to 6,345,966 gallons. From Barbadoes, in a medium of eight years from 1740 to 1748, the export amounted to 12,884 puncheons of 100 gallons each. In 1810, as appears from the parliamentary reports, 3,428,452 gallons were exported to Great Britain from Jamaica alone; and in 1813 not less than 3,763,281 gallons.

The following is a statement of the exports to Great Britain from 5th January 1822, till 5th January 1823, specifying the quantity sent from each island.*

Jamaica.	Tobago.	Grenada.	Saint Christopher's.	St. Vincent's.
2,318,137	310,984	179,745	61,263	40,787 gals.

Trinidad.	Montserrat.	Nevis.	Dominica.	Antigua.	Tortola.
20,390	14,935	10,187	2,268	249	220 gals.

* Parliamentary Paper, No. 71, printed 28th Feb. 1823.

Settlement of Demerara.—The superior quality of the rum manufactured in the colony of Demerara, has injured the sale of the West India rum considerably. Its distillation, as appears from Bolingbroke, has been carried to a high state of perfection, by the perseverance and skill of several scientific men, who have succeeded in causing the rum of Essequibo and Demerara to be as much in request in the American market as that of Jamaica is in England. The following exports of rum since the last establishment of the British custom-house on that settlement, is thus recorded.

From Oct. 1, 1803, till Sept. 10, 1804,	4,887 puncheons.
Sept. 10, 1804, till Jan. 5, 1805,	504 do.
Jan. 5, 1805, till Jan. 5, 1806,	3,611 do. and 17 hhds.
Jan. 5, 1806, till Jan. 5, 1807,	4,722 do. and 17 do.
Jan. 5, 1822, till Jan. 5, 1823,	20,059 do. and 1859 do.

The export from this colony into Great Britain, for the year ending 5th January 1823, amounted to 1,193,556 gallons.

The mode of making the rum has already been described, and the produce, expected by a planter in Demerara, is at the rate of 80 gallons for every hogshead of sugar which his estate produces, each hogshead averaging about 1200 lbs. The rum made on a sugar estate, is generally calculated to pay all its expences.* In the West India islands also, it has been computed, that if a plantation be care-

* Bolingbroke's Statistical Account of the Settlements on Demerara, &c. 4to. p.100.

fully managed, the sale of the molasses and rum together will defray the ordinary charges of the estate.

Besides rum, the beverages common to most Europeans are familiar in the islands. Hospitality is a prevailing characteristic of the inhabitants; and the practice of drinking is too often carried to excess.

Most other liquors are preferred to new rum, which is considered very unwholesome, and is not unaptly termed by the inhabitants "*Kill Devil*." To its excessive use may be attributed the death of many brave men in our naval and military service. A seaman, says Bolingbroke, belonging to one of his Majesty's ships stationed in the West Indies, died suddenly, turned quite black in several parts of his body, and was evidently in a putrescent state. The surgeon requested leave of the captain to open and examine him, when a quart of new rum, nearly as clear as when it first issued from the still, was found in his stomach, which had evidently caused his death.*

In a country, where the heat of the climate must considerably relax the strength of the body, we need not wonder at the fatal consequence of drinking to excess: even at home we have too many deplorable instances of a similar fatality caused by

* Bolingbroke's Statistical Account of the Settlements on Demerara, &c. 4to. p. 292.

even a smaller portion of ardent spirits. Moderation in all situations is conducive to health, but in the warm regions of the tropics, where there are so many sources of disease, forbearance and caution are especially necessary.

Madeira, claret, punch, porter, and cider, are favourite liquors in many of the islands, as also a drink called sangaree, which consists of half Madeira and half water, acidulated with lime-juice and sweetened with sugar.

The practice of partaking of these at all hours pretty generally prevails; even in the Senate House at Barbadoes the members drink punch. On one occasion, when Pinckard was there, two persons suddenly appeared with a large bowl and a two quart glass filled with punch and sangaree. These were first presented to the speaker, who, after dipping deep into the bowl, passed it among the members. Nor was the audience forgotten, as it was considered to be correctly in order for strangers to join in this part of the debate.*

When a supply of rum cannot be procured by the negroes, they make a fermented liquor from cassada, resembling beer, which in Barbadoes is called *piworree*†, and in other places *ouycou*. This plant, the manioc of America, grows to the size of a

* Pinckard's Notes on the West Indies, vol. i. p. 409.

† Ibid. p. 429.

large shrub, or small tree, and produces roots somewhat resembling parsnips.* From both the bitter and sweet cassada, a nutritious bread is made, which is thus prepared by the natives. When the roots are washed and scraped clean, they are grated very fine, and squeezed through a coarse bag or sieve, either of hair or hemp, into a pot or stone vessel, and dried by a gentle heat, until the mixture becomes farinaceous or mealy. In this state it is fit for use, and is frequently made into excellent puddings. From the same roots a starch called *tapioca* is prepared, which is a profitable export to the Brazilians. The *ouycou* is sometimes brewed very strong, and it is considered both nourishing and refreshing. Molasses and yams are used in the preparation, and the liquor after fermentation is of a reddish colour. Great quantities of this beverage are consumed at feasts, of which we shall have occasion to speak hereafter.

The bitter cassada is poisonous when raw, but heat deprives it of that quality. Raynal asserts, that the cassada or manioc plant was originally introduced into the West Indies from Africa, and that the Indians were first instructed by the negroes in the art of converting the poisonous root into wholesome food. Edwards contradicts

* Robertson's Hist. America, vol. ii. p. 7.

this, and shews from the first decad of P. Martyr, which bears date Nov. 1493, that the cassada furnished the Islanders with the principal part of their food at the time when they were visited by Columbus, and long before any of the negro tribes were brought thither.*

For a view of the extent and importance of the revenue arising to Great Britain from the rum imported from these islands, the reader is referred to that part of this essay which treats of our home distillation.

Mexico and Peru.—On directing our observations to the American continent, we find, that when the Spaniards first visited Mexico and Peru, the inhabitants understood the preparation of several intoxicating drinks procured from maize or Indian corn, from the manioc or roots of the yucca, and from the agave or maguey, a species of cactus or opuntia. The first they bruised and fermented into a kind of beer called *chicha*.† The second and third were boiled and bruised to a paste, which the women by the application of their saliva converted into a fluid called *masato*‡, in the manner practised for a similar purpose by the people of Formosa. The juice of the agave they fermented

* Edwards' Hist. W. Indies. Also, Robertson's Hist. Amer. vol. ii. note 59.

† Skinner's Present State of Peru, 4to. p. 258.

‡ Ibid. p. 280.

into a kind of wine called *pulque* or *pouchra*. * This beverage is in great demand at present all over the South American continent, and the spirit extracted from it is known by the name of *Mexical*, or *agua ardiente de maguey*, from the circumstance of its distillation having been first introduced at Mexico by the Spaniards. The manufacture of this liquor was prohibited for a long time by the Spanish government, as injurious to the trade of their brandies; but as it was a general favourite among the inhabitants, and smuggled to great extent through the country, its distillation was at length publicly permitted, on the payment of a certain duty.

In the *Theatro Americano*, published at Mexico in 1746, it appears that 161,000 pesos were raised by the tax on pulque †; and when Humbolt visited New Spain in 1804, the cultivation of the maguey had become an object of great importance to the exchequer.

* This writer observes, that to procure the drink, they boil a certain quantity of *yuecas*, and, having reduced them into a paste or meal, moisten it with saliva, leaving it to ferment for three days. "By the addition of water, it becomes a very powerful and intoxicating liquor. In order to cultivate the *yueca*, the Peruvians clear a small portion of the forest with hatchets of stone, resembling ours, but having, instead of a handle, two ears, with a channel to secure the extremity by the means of cords." Bonnycastle, vol. ii. p.189.

† Robertson's *Amer.* vol. iii. note, p.196.

The duties of entry on this article paid in Mexico, Puebla, and Toluca, in 1793, amounted to 817,793 dollars, nearly £200,000 sterling. The expense of collection amounted to 56,608 dollars, and the net profit to the crown was 761,181 dollars. The entire revenue, derived from the fermented juice of the agave, through the whole of New Spain, is said to exceed 800,000 dollars; but it must be considerably greater, since a late writer computes the annual consumption of the inhabitants of the city of Mexico alone at 1,000,000 of dollars. The number of houses for the sale of it in that capital has of late become so numerous, that the police, to check the great irregularities which they occasion, allow them to remain open no longer than from ten o'clock till four in the day.* This drink is allowed to enter the city by only one gate, that of Guadaloupe; and a similar regulation prevails in most of the other cities of New Spain.

Large plantations of the maguey are now under cultivation, both by natives and Spaniards; and the mode of conducting the crops is thus described:

The plants are set about five feet asunder, in rows. When the inside leaves, which grow on the head of the plant, come to a certain stage of ma-

* Bonnycastle's Account of Spanish America, 8vo. vol. i. p. 63.

turity, they are cut off, and a hole like a cup is sunk in the stalk. This they cover with leaves, and the juice, which is of a ropy or honey-like consistence, flows into the cavity. As soon as this hollow becomes full, it is emptied, an operation which takes place twice or thrice a day. The exudation of the plants continues for two or three months, and on an average they produce each about 150 quarts annually. As the climate is warm, the fluid generally ferments in a few days, and becomes fit to drink. It has some resemblance to cider, but the smell of it, in most instances, is heavy and disagreeable. Europeans are said to dislike it at first; yet, when accustomed to it, they account it wholesome and nutritious, drinking it often to excess.

If proper attention were bestowed on the distillation of pulque, it would yield an excellent spirit; but many obstacles have been raised against this measure by the rapacity of the Spanish merchants. These gentlemen, at one time, carried their efforts so far as to solicit the government to extirpate the plant altogether; but, as the country is now likely to pass into more liberal hands, a better order of things may be expected to arise, and in the course of some time, the spirit of the maguey may be brought to rival the brandies of Europe. As it is, pulque brandy forms a considerable branch of the trade of the provinces,

through which it is transported in leather bags on the backs of mules. Vines are cultivated in these settlements to great extent, and the wine, in some places, is not inferior to the best Spanish. The sugar-cane is also productive; and in Mexico, as well as in some of the other principal districts and towns, sugar-mills and distilleries of rum, on a large scale, are kept at work. The wine and brandy of Chili are sent to Lima and other cities in the southern provinces, where they are sold at a very reasonable rate. Lavaysse tells us that, at Cumaná, a bottle of wine may be had for little more than 5*d.*, and punch of a tolerably strong quality at the rate of a penny per quart.*

Floridas.—We learn from Brackenbridge, that in the Floridas and the adjoining districts, a considerable excise was raised by the Spanish government on spirits, where circumstances did not forbid their distillation. But the manufacture at best was inconsiderable when compared with the abundance of grain and fruits which these countries afford. East Florida is so fertile, that it often produces two or three crops of Indian corn in one year; and where nature is thus bountiful, to what advantages might not her gifts be turned?

* Lavaysse's Statistical, Commercial, and Political Description of Venezuela, Trinidad, &c. Lond. 1820.

Brazil.—In Brazil, although furnished with abundance of grain and fruit, both indigenous and exotic, the confined policy of the government has prevented the application of indigenous produce in the composition of liquors, for the sake of encouraging the consumption of wine and brandy from the mother-country. As, however, sugar is made in Brazil, some rum is distilled, which pays a duty of from fifteen to twenty per cent., whether for home consumption or for exportation.

A mixture of black sugar and water, called *grapa*, is made by the negroes, which, although never fermented, is drunk, on account of its cheapness, with avidity by both men and women, who continue whole days at it dancing and singing. To give it an intoxicating effect, the leaves of the *akajee* tree are added. Cider is made by the Portuguese, as well as another drink called *kooi*, of the apple *akajee*, and also a sherbetta of sugar, water, lemons, and nutmeg. The *kooi* is prepared by bruising the *akajee* apples to obtain the juice, which is strained, and allowed to remain until cleared by fermentation.

From the root *aipimakakara*, a kind of manioc, a wine is prepared called *aiipy*. The roots are first sliced and chewed by the females, then put into a pot of water and boiled until fit for expression. The liquor thus obtained is named *kaviaraku*, and drank lukewarm. Sometimes the sliced roots are

well mixed with warm water, and the decoction is drunk with avidity. In appearance it is like butter-milk, and not having undergone any degree of fermentation, it cannot possibly keep many days. A better kind is made from barley or maize, and likewise another liquor, called *vinthro da batatas*, from the *batata* root.

In Paraguay real wine is made of a good quality, and *pulque* from the maguey, while in Buenos Ayres liquors of every description may be obtained. The Indians cultivate maize, from which they make their favourite drink.

United States.—In the United States the distillation of spirits is a manufacture of considerable importance. It was practised, though rudely, by some of the early settlers, and has continued to increase in proportion to the progress of agriculture. The resources of the country are great; and, as fuel is plentiful, there is scarcely any check to the efforts of the industrious in this branch of trade. The reader is here presented with a view of the distilleries and breweries existing in the several states in 1810.

States.	Number of Stills.	Gallons of Spirits from Grain, Fruit, Molasses, &c.	Value in Dollars.	Breweries.	Quantity of Beer, &c.	Value in Dollars.
Massachusetts	60	3,012,510	1,735,526	—	24,400 barrels.	86,450
New Hampshire	—	20,560	22,160	—	135,950 gallons.	74,450
Vermont	—	173,285	129,964	—	—	—
Rhode Island	—	1,195,398	848,240	—	Current Wine.	4,990
New York	591	1,828,339	1,299,542	42	75 barrels.	340,765
Connecticut	—	1,374,404	811,144	—	—	—
New Jersey	—	1,103,272	615,125	—	Beer, &c.	17,229
Pennsylvania	3,594	6,532,284	3,986,045	48	2,170 gallons.	376,072
Delaware	51	27,600	15,480	2	71,273 gallons per day.	7,616
Maryland	400	860,742	509,660	7	476 barrels.	69,380
Virginia	—	2,367,589	1,711,679	—	9,330 ditto.	23,898
Ohio	343	1,000,000	580,180	13	4,251 ditto.	5,712
Indiana	28	22,073	16,350	—	96 ditto.	6,000
Kentucky	2,000	2,220,773	740,342	—	—	—
Tennessee	—	801,945	—	—	—	—
North Carolina	—	1,886,691	758,005	—	—	—
South Carolina	—	436,853	296,060	—	—	—
Georgia	126	545,213	462,390	1	1,878 ditto.	11,968
Mississippi Territory	—	—	—	—	—	—
Illinois Territory	6	10,200	7,500	—	—	—
Michigan Territory	—	20,400	15,000	—	Cyder, 1,500 barrels.	4,500

This return was made by the marshals of the districts, and by the secretaries of the territories; but it is thought to fall considerably short of the actual quantity produced. The value of the whole distilled and fermented liquors of the States in 1810, was said to amount to 16,528,207 dollars; and if its increase be supposed to have kept pace with the population, the amount must now be prodigious. Mr. Seybert, in his statistical annals of the States, published in Philadelphia in 1818, says, that the number of distilleries were about 15,000. To encourage these and the brewery establishments, as well as the making of wine, government has made such salutary regulations as cannot fail to render them of great service to the agricultural interests of the country. The restriction on home manufacture is comparatively trifling, and has been computed to amount to little more, throughout all the States, than about *one cent* or scarcely *a penny* per gallon, while on all beer, ale, and porter imported in bottles, a duty is imposed of fifteen cents, or if imported otherwise than in bottles, of ten cents per gallon; and on spirits from grain, first proof forty-two, second forty-five, third forty-eight, fourth fifty-two, fifth sixty, and on all above the fifth proof seventy-five cents per gallon. If the spirits should be made from any other materials than grain, the duty on first and second proof is thirty-eight cents, on third forty-two, fourth forty-eight, fifth fifty-seven, and upon

all above that number, seventy cents per gallon. On wines imported from Madeira, Burgundy, Champaign, Rhenish, and Tokay, 100 cents, and on Sherry and St. Lucar wines sixty cents. On wine not enumerated above, when imported in bottles or cases, seventy cents. Lisbon, Oporto, and other wines of Portugal and Sicily, fifty cents. On the wines of Teneriffe, Fayal, and other western islands, forty cents; and on different kinds not imported in cases and bottles, twenty-five cents per gallon. The foreign spirits imported into America are considerable. It appears by the public returns, that in the year 1790, 3,678,199 gallons were imported; and in 1792, 4,869,992 gallons; while in the latter year, 948,115 gallons of spirits, the produce of the United States, were exported. During the years 1806 and 1807, 9,750,000 gallons a year were imported, which yielded an annual revenue of 2,865,000 dollars. The foreign wine exported in the years 1802, 1803, and 1804, at a medium, amounted to 1,108,000 dollars; and strong liquors of all kinds to 642,000 dollars. The imports from various parts of the world were, at a medium, during the same years, for wine, 3,881,000.

The Americans export spirits to Manilla and the Philippine islands; to the Floridas, Honduras, Campeachy, and the Mosquito shore; also to the Spanish West Indies, and to their own colonies. In 1812 were sent to those places 101,243 gallons of:

whiskey, besides wine and geneva. Large importations of wine are made from Madeira in return for other merchandize. The wine is purchased at about 160 dollars a pipe, and what is not consumed in the States is carried to the East and West Indies.

The immense number of navigable lakes and rivers which intersect this vast continent, affords great facility for the transportation of spirits, and the interchange of commodities between the different states. In the course of eleven months, terminating on the 1st July 1811, among other articles, 3,768 barrels of whiskey were sent down the Shenandoah and Potomac rivers; whilst, by a similar means of conveyance, the spirits made at Brownsville near Pittsburg are in such repute, that they are frequently sent to New Orleans, a distance of nearly 2,000 miles.

In 1810, as appears by the report of the secretary of the treasury, the quantity of malt liquors made in the States was nearly equal to the consumption. The annual importation was reduced to 185,000 gallons, while the exportation of native beer, ale, and cider, amounted annually to 187,000.

In the early stages of the manufacture, the distillers and brewers seemed to have had no other object in view, than to meet the consumption of the States, and of the Indian tribes connected with them. But they have long since turned their attention to foreign markets; and from the ease

and cheapness with which they can procure and manufacture the raw materials, they are likely to become successful rivals of all the nations of Europe.

The distilleries for the most part are conducted on a small scale; and, as might be expected when the trade is committed to a vast number of people of opposite interests, a great deal of competition as well as of ignorance prevails. Breweries not being generally established, the want of barm has not failed to produce great inconvenience; and the distillers in many of the principal towns, as well as in the remote parts of the union, are obliged to have recourse to various deleterious substitutes for the fermentation of their wash; hence (combined with a want of due attention to the attenuation of their potale) arises that ardent quality which renders their whiskey, in many instances, disagreeable to foreigners. Great improvements, however, are said to have taken place; and their peach brandy, which is now made in abundance, is allowed, when matured by age, to be one of the most exquisite spirits in the world*; yet, in making it, the peaches are suffered, in some instances, to remain in the vat till they are in such a state of putrefaction as to be offensive.† Fifteen bushels are allowed to yield about six gallons of strong

* Cox's View of the United States, p. 176.

† The peach-tree on the river Ohio comes to maturity in three years. Mellish, p. 343.

brandy. In preparing them for the fermenting tuns, the seeds are carefully taken out, and the substance of the peach is bruised to a pulp, and left for three weeks or a month in that state to ferment; a proper allowance of water then is added, and they are distilled. Brandy is manufactured in America from various fruits; and from the persimon apple a valuable spirit is made, by putting a quantity of the fruit into a vessel for a week, until it becomes quite soft. Water is then poured in and left for fermentation, without the addition of any other ingredient to promote it. The brandy is then made in the common way, and it is said to be much improved when mixed with sweet grapes, that are found wild in the woods.

Another kind of palatable liquor is procured from the same apple. The ripe fruit is bruised and mixed with wheat or other flour, and formed into cakes which are baked in an oven. These are afterwards placed over the fire in a pot full of water, and when they become blended with the fluid, malt is added, and the brewing completed in the usual manner; thus is produced a beer preferable to most others.

From the maple, which abounds in Massachusetts, Vermont, Pennsylvania, Rhode Island, Ohio, Tennessee, North Carolina, and other States, an extensive supply of sugar is drawn. Chemists have proved that the saccharine matter is abundantly diffused through the vegetable kingdom.

Plants from which it is produced are most numerous in the East and West Indies, and of these the maple is next in eminence to the sugar-cane. Of the various kinds of this tree, the sugar-maple, *acer saccharinum*, and the silver maple, *acer dasycarpum*, are the most productive. To the Americans, it has proved a source of wealth and domestic luxury. Even in Germany, it is asserted that those trees will afford sugar equal in quality to any muscovado of our islands, and so cheap as 4*d.* or 5*d.* per lb.*

The sugar maple trees grow to the height of from 60 to 80 feet, and from 2 to 5 feet in diameter. They put forth a beautiful white blossom in spring, before they shew a single leaf, and arrive at full growth in about 20 years. The wood is very strong and of a fine texture, but being very inflammable, it is not employed in building, but is used chiefly for fuel. The mode of tapping the tree is by perforation with an axe or auger; the latter is the preferable instrument. The incision, being about three-fourths of an inch in an ascending direction, is afterwards gradually deepened to two inches. A spout made of sumach or elder is introduced about half an inch into the hole, and projects from 3 to 12 inches from the tree. The sap flows from four to six weeks, and in greater abundance when there is frost in the night, and a

* Philosophical Magazine, vol. iii. p. 105.

thaw during the day. There are three modes of converting the sap into sugar, viz. evaporation, freezing, and boiling, the last of which is the most general and rapid. Farmers have no better apparatus for conducting this process, than one or two small iron kettles, and with these they will make 200 or 300 lbs. of sugar in the space of a fortnight or three weeks. Others, however, carry on the manufactory more scientifically, on an extensive scale.

The profits of the maple tree do not arise from its sugar alone, for it affords most agreeable molasses and excellent vinegar. The sap which is suitable for these purposes is obtained after that which affords sugar has ceased to flow.

These sugars and molasses form the basis of a large proportion of the rums at present manufactured by the Americans, to the great injury of the British colonies, as is manifest from the great decrease in the exports of these articles from thence to the States.

The extent and value of the maple sugar manufactory will be best illustrated by the subjoined view of the returns of a few of the States for the year 1810.

Massachusetts	-	422,000 lbs.	Value	82,400 dollars.
Vermont	-	1,200,000	-	120,000
Delaware	-	755,859	-	150,000
Virginia	-	1,659,447	-	—
Ohio	-	3,023,806	-	309,932
Indiana	-	50,000	-	—

Kentucky	-	-	2,471,647 lbs.	Value 308,932 dollars.
Tennessee	-	-	162,340	-
Illinois	-	-	15,600	-
New York	-	-	64,000	10,000

The price varies from 7 to 16 cents per lb., but it is in general cheap, compared with that which is imported.

The vine of late years, both native and foreign, has been much cultivated among the Americans. So late as 1805, a company of emigrants from the *Pays de Vaud* settled at New Switzerland, in Indiana, with a view of cultivating the vine; and formed an establishment there, extending about seven miles along the Ohio. The vineyards are now very extensive, and the settlement is in a prosperous state. In 1810, the crop of that district exceeded 2400 gallons; and in 1811, upwards of 2700; and the wine was allowed by correct judges to be no way inferior to the claret of Bourdeaux.

The grapes which have succeeded best are those from the Cape of Good Hope and the island of Madeira. Those of the country give wine of tolerably good quality, and from them in 1810 there were produced ninety-six barrels, valued at 6000 dollars. These successes, joined to other considerations, have given rise to the belief that America, in a few years, will be completely independent of France, as well as of the other European states, in the article of wine. Brandy, in some of the plantations, is made from the lees of the wine, &c.;

but the apparatus there, like that in many other places, is too often ill adapted to the purposes for which it is intended. It may be observed in general, that in the manufacture of spirits, the Americans seldom practise that cleanliness and caution in the brewing, fermenting, and distilling, which in other countries are so essential to flavour and quality. They ferment the wash, in many instances, on the grain, and put the mixed mass into the still; a practice calculated to give the spirits a strong empyreumatic flavour, as no machinery is used.

The error of mixing extraneous ingredients with the proper materials is very prevalent; among them is salt, which in Indiana is used in great quantities. This custom prevailed at one time in Great Britain and Ireland; and among the Highlands of Scotland it is in some places observed to this day. The affinity which salt possesses for the watery particles of the material in the still may perhaps render it useful, but it is at present rejected by the great body of the practical distillers of Europe.

The rums of New England are considered of good quality, and some deem them not inferior to the best that are produced in the West Indies. Geneva is successfully imitated, particularly since the tide of emigration has brought many intelligent men from Holland, who possess sufficient knowledge in this branch of trade to render the

American article equal in quality to that manufactured in the Netherlands. Many of the Irish emigrants distil, in genuine purity, that description of spirit commonly called *innishowen* or *potyeen*, which is no less a favourite on the other side of the Atlantic, than on the shores of Magilligan or on the banks of the Shannon.

From the extraordinary cheapness with which spirits can be procured in the United States, averaging scarcely more than thirty-eight cents the gallon, the people indulge themselves to excess, and run into all the extravagancies of inebriety.

In order to check this baneful vice, the American legislature, in 1821, wisely enacted a law, which places the concerns and property of habitual drunkards in the hands of a committee appointed by the court of chancery, thus extending to them the jurisdiction exercised by that court in regard to the estates of lunatics.

So great is the consumption of spirits, that in New York there are not less than 1600 spirit-sellers; and through the whole of the union the number of dram-shops exceeds that among us in a tenfold proportion. The friends of humanity would rejoice in the establishment of an adequate check to an evil of such dangerous consequence in a country which promises to become eminent in greatness and power.

Canada.—In Canada the proximity of the United States has rendered the propensity to drinking fa-

miliar and habitual to many of the inhabitants, among whom the practice of manufacturing liquors is pursued nearly in the same manner, but the trade is not equally extensive.

The cultivation of barley, a grain so essential to distillers, was for a long time unknown to the Canadians; and the want of it, combined with the limited produce of oats, Indian corn, and other ordinary kinds of grain, rendered the distillation of spirits rather a precarious and expensive manufacture. The supplies therefore were chiefly drawn from Great Britain; but since the establishment of a distillery at Quebec, and breweries in different parts of the country, barley is reared in great abundance. Large quantities are made into malt, and the ale manufactured from it is celebrated in various parts of the West Indies. The duty on spirits is not more than sixpence per gallon, and the produce appears sufficient to counteract the necessity of seeking for supplies elsewhere. This was pretty evident from the dull sales and losses on the whiskey exported from Ireland to Canada in 1815, the average price of which did not exceed from 3s. 6d. to 3s. 9d. per gallon.

Rum might be manufactured in Canada from the sugar of the maple tree, but that liquor is principally imported from the West Indies. The great consumption of foreign spirits lessens the demand for those distilled in the province.

In Quebec, where there are three breweries, the best brandy (real cogniac) of the first strength, is sold at 4s. 6d. per gallon, port wine at 7s. 6d., and porter at 8s. per dozen. In Montreal, Leeward Island rum is not more than 4d. the three half-pints, while beer is 6d. per quart, although there are several breweries in the place.

Of the imports of wine and spirits into this state some notion may be formed from the annexed estimate for 1820, as detailed in the letter of a respectable house at Quebec.

Pipes of Wine.				
Madeira.	Port.	Teneriffe.	Spanish Red.	Fayal and Sicily.
257	328	270	1,688	150

Pipes and Puncheons of Spirits.			
Rum.	Brandy.	Geneva.	Whiskey.
15,420	233	341	203

Indian tribes.—The numerous hordes of savages who wander through the vast woods and deserts of this great continent, use for the most part beverages either made by themselves or furnished by their civilised neighbours. Their propensity to intoxication is in general very strong, but their poverty prevents them from indulging it. Brandy, says Kalm, has killed more of them than any of the diseases with which they have been infected.

That liquor was unknown to them before Europeans visited the country. To die by drinking brandy they account a desirable and honourable death. A savage being asked by a French officer what he thought this drink was made of, gave for answer, “It is made of *tongues and hearts*; for “when I have drank of it, I fear nothing, and I “talk like an angel.”

When they assemble together for any purpose, they never separate without a drunken revel, which often continues for several days. Regardless of what may be the fatal effects, they continue drinking till the last drop is exhausted.

One very extraordinary meeting, at which a great deal of the native and foreign beverages is consumed, is termed *the feast of the dead*, being peculiar to all the American savages residing on the gulf of Mexico, the Mississippi, and the Ohio; it is strikingly worthy of attention. During this feast, which is probably a remnant of Mexican superstition, the bodies of all who have died since the

last solemn festival of the kind are taken out of their graves, though they may have been interred at the greatest distance, and brought to this carnival, or rendezvous of carcases. It is not difficult to conceive the horror that must be excited by this general disinterment, but the enthusiasm of the Indian mind renders him insensible to that feeling. When the feast is over, the dead bodies are again interred; and some individuals perform incredible journeys with their dead friends on their backs, to deposit them in the grave from which they had been raised.*

The Brazilian savages usually meet, on the day appointed for a feast, early in the morning, at the first house of the village, where they consume most of the liquor, and make themselves merry with dancing. They afterwards remove to the next house, and thus proceed until nothing is left, or until they can drink no longer; the scene that follows this general intoxication is disgusting in the extreme.

Some of the tribes bordering on the United States, sensible of the dangers attendant on such excesses, have wisely decreed a prohibition of spirituous liquors, and any one infringing this law is deprived of the right of citizenship. The Ricaras shewed great resolution in this respect, refusing with a degree of indignation an offer of whiskey from an American party, and testifying great sur-

* Bolingbroke, 4to.

prise that their great father, the President, should send them a liquor which possessed the quality of making them fools. It is remarkable, says Dr. Robertson, that the women are not permitted to partake in the debauches of the Indians. Their province is to prepare the liquor, to serve it about to the guests, and to take care of their husbands and friends when their reason is overpowered.

The Canaries.—Leaving the western world, we find that the first islands of any consideration in the trade of wine and brandy in the Atlantic ocean are the Canaries, which at one time had large sugar plantations, and were the only settlements likely to cope with our colonies in the West Indies. They however have been long devoted to the cultivation of the vine. The brandies distilled in those islands, particularly in that of Grand Canary, are in great demand in the foreign settlements of the Spaniards, and in North America. The exports of Teneriffe are chiefly from Santa Cruz, and consist of white wine, of which about 40,000 pipes are annually made in the island; of these, 25,000 are said to be exported, and a good deal of the remainder is manufactured into brandy.* It may be interesting to the curious reader to be presented with a view of the quantity of wine shipped from the Canaries into Great Britain for a series of thirty-five years.†

* Staunton's Embassy, vol. i. p. 83.

† Parl. Report, No. 703.

Years.	Tuns. H. G.	Years.	Tuns. H. G.
1785	65 2 35	1803	113 3 61
1786	69 1 44	1804	199 1 59
1787	83 2 39	1805	229 0 53
1788	118 0 46	1806	537 3 47
1789	27 2 48	1807	608 0 46
1790	139 1 50	1808	1,683 1 28
1791	77 1 62	1809	1,659 0 12
1792	158 1 27	1810	1,563 3 44
1793	57 0 37	1811	1,139 3 51
1794	186 1 24	1812	2,266 2 33
1795	136 0 38	1814	2,039 0 44
1796	122 1 38	1815	2,327 3 41
1797	1 1 45	1816	835 0 3
1798	434 1 15	1817	1,132 2 40
1799	—	1818	1,762 1 34
1800	55 0 12	1819	1,578 0 54
1801	37 1 40	1820	1,071 1 15
1802	137 3 21		

M. Bory estimates the average produce of wine in Teneriffe alone at 22,000 pipes, among which is to be included the *vin de malvasia* *, or malmsey, a very rich and luscious sack, which was in the seventeenth century a great favourite in England. About 500 pipes of this wine are made in Madeira, in which

* So called from Malvasia, a town in the Morea.

island, according to Sir George Staunton, the whole annual vintage at an average amounts to 25,000 pipes of 120 gallons each.*

Madeira.—The wines from Madeira shipped into Great Britain from 1785 to 1820 were,

Years.	Tuns.	H.	G.	Years.	Tuns.	H.	G.
1785	613	2	26	1803	1,564	0	1
1786	526	2	29	1804	1,075	0	40
1787	578	1	41	1805	1,101	3	41
1788	1,074	2	13	1806	1,605	2	61
1789	1,174	1	12	1807	1,981	3	32
1790	1,464	3	45	1808	2,790	0	50
1791	1,623	2	58	1809	2,902	1	44
1792	1,252	0	42	1810	2,353	1	24
1793	1,007	3	0	1811	1,518	0	33
1794	783	2	10	1812	2,035	2	47
1795	699	3	52	1814	2,018	2	50
1796	501	1	23	1815	1,826	0	11
1797	287	3	0	1816	1,512	1	3
1798	659	0	17	1817	1,270	2	58
1799	671	0	41	1818	2,316	2	47
1800	967	2	42	1819	2,922	0	28
1801	1,177	0	54	1820	2,617	1	61
1802	1,497	3	38				

* Staunton's Embassy, vol. i. p. 52.

Europe.—Having taken a survey of the numerous and various kinds of drink which foreign nations have at different times invented, we shall return to Europe, where the practice of distillation, and its fatal effects, are so generally prevalent.

Spain.—Of the chemical attainments of the Saracens we have already given a brief history, and to them has been attributed the first introduction of the still into Spain. Anderson, in his History of Commerce, has placed this event in the year 1150*, but by what authority we know not. That distillation was known at an earlier period, appears from the writings of Rhazes and Geber, the former of whom resided in Seville, at the court of Almansor, in the ninth century.

The first spirit of which we have any account in Europe, was made from the grape, and sold as a medicine, both in Italy and Spain, under the Arabic term *alkohol*. The Genoese, in the thirteenth century, dealt largely in it, and are said to have acquired considerable sums in the sale of *aqua vitæ*. They were the first Europeans who prepared this liquor from grain; and they sold it in small bottles at a very dear rate. But a long period elapsed after its introduction as a cordial ere brandy was used in the preserva-

* Burgoing's Modern State of Spain, vol. iii. p. 277.

tion of wines. The improvements which were subsequently introduced in the manufacture, brought the spirit into frequent and common use, and hence it became an article of great value in commerce.

At present, brandy is distilled in almost every province of Spain; but the quantity produced and consumed is much smaller than that of wine, the manufacture of which is carried on to a vast extent. From Catalonia alone it is computed that England receives annually 10,000 pipes; Guernsey and Alderney, 4000; Holland and the north of Europe, 20,000. To other countries, 350,000 pipes have frequently been exported. Valencia and Malaga, since the establishment of a free trade to America and elsewhere, export upwards of 12,000 pipes yearly.*

The quantity consumed in the kingdom is very considerable; 5000 hogsheads, according to Townsend, are required for the supply of Madrid alone, besides 18,000 arrobas of brandy.† From this statement, and an inspection of the subjoined table of the annual exports to Great Britain, a tolerably correct estimate of the magnitude of the Spanish wine trade may be formed.

* Burgoing's Modern State of Spain, vol. iii. p. 277.

† The arroba weighs 25 lbs.

Years.	Tuns. H. G.	Years.	Tuns. H. G.
1785	2,769 3 8	1803	6,871 2 56
1786	3,139 3 11	1804	6,646 3 29
1787	4,216 0 16	1805	9,393 2 25
1788	4,701 3 7	1806	8,264 3 1
1789	3,999 0 14	1807	7,640 3 28
1790	4,868 3 0	1808	11,986 2 8
1791	6,519 3 11	1809	10,939 0 46
1792	5,395 0 20	1810	10,168 1 21
1793	4,363 2 47	1811	4,541 3 22
1794	6,160 1 25	1812	8,068 2 24
1795	8,088 3 62	1814	5,635 1 58
1796	6,092 2 18	1815	5,148 0 38
1797	2,259 0 57	1816	3,392 2 15
1798	3,571 1 30	1817	4,796 2 7
1799	6,676 3 15	1818	6,935 1 16
1800	8,354 3 15	1819	4,363 2 56
1801	6,335 3 61	1820	4,302 3 48
1802	5,325 1 58		

The Spanish government takes an eighth of all the spirits as a tax, and claims a right of purchasing the remainder. The provinces, however, to prevent confusion or embarrassment, generally agree upon a composition for these exactions.

It may be here interesting to detail the process observed by the Spaniards in the distillation of brandy.

Wine to the amount of four-fifths of the content of the still is thrown in, the head is luted on, the fire kindled, and in about an hour and a half the still begins to run, producing a spirit of fifteen per cent. above hydrometer proof, and equal in quantity to one-twentieth of the charge. Afterwards it declines to glass proof, and then to feints. The over proof and glass proof are drinkable immediately, and the feints are either distilled again with the next charge of wine, or rectified by themselves. When wines used for distillation are old, heavy, or overcharged with thick substances, and when a very fine clear spirit is desired, a quantity of pure spring water is thrown into the still along with the wine; but this expedient is regulated by the judgment of the distiller, nor is it universally practised. No other ingredient is used in the distillation of brandy: but liqueurs are scented by different ingredients, of which considerable quantities of a very inferior sort are distilled for country consumption.

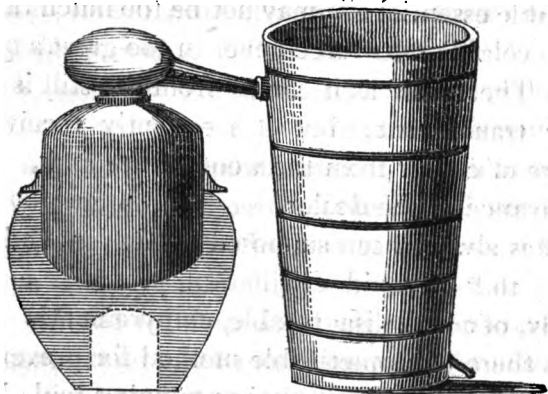
Brandy of the first distillation retains more vinous flavour than when rectified. When the wine is good, and a high proof is not required, the first distillation is preferred. No brandy can be produced from unfermented liquors, nor are grapes in their natural state ever thrown into the still. About a gallon of the first run, is put in with the feints, rather for being of a low proof, than for any great quantity of the essential oil that it contains, or for any bad taste that it may have. All

the art practised for preventing any disagreeable flavour consists in the skill with which the fermentation of the juice of the grape is conducted, and in a proper management of the fire, that the vegetable essential oils may not be too much raised, or the volatile salts forced over in too great a quantity. The spirit as it comes from the still is perfectly transparent; but it frequently receives a change of colour from the wood of the cask, or the contrivance of the dealer.

It has always been supposed by dealers and distillers, that a rapid distillation produces a fiery brandy, of a bad, disagreeable, empyreumatic taste; nor is there any practicable method for preventing the liquid from boiling over or running foul, but a proper management of the fire.

In Spain, stills are made of copper, as are also the heads and worms, but few of them are tinned. Those in general use, with few exceptions, differ little from each other in shape, being cylindrical from the bottom to the shoulder, commonly 33 inches in diameter, and the same in altitude, but about two inches deeper in the centre than at the sides. The breast of the still is convex, the head is in the form of a compressed globe, and the pipe which connects it with the worm is joined to the lowest part of the circumference, where a kind of gutter or canal is formed in the inside for the purpose of conveying the condensed liquor to the pipe. The worms are small, only two inches and a half

in diameter at the mouth of the condenser, and fifteen feet in length, making about five circular turns. A correct representation of the whole is given in the annexed engraving.



The worm-tub is usually from five to seven feet high, and from four to five in diameter; some of them are built round with brick and mortar. The furnaces are like ovens, the bottom of the still falling about a foot under the line of the dome, or breast, and about two feet from the ground, on which the fuel is laid, without any grate, ash-hole, or stopper to the entrance of the furnace. The still when charged with wine is run off in about fourteen hours, but when rectifying, in about eighteen or twenty-two, wood being principally used as fuel. Distillation from grain is not practised.

The excise on brandy was first imposed in Spain under Philip II. in 1590; but the administration

and monopoly of this revenue were given up by Philip V. in 1717, when a duty was laid both on exports and imports of three rials vellon * for every arroba of brandy of all sorts, and six rials vellon for every arroba of anniseed, cordial, and all other waters. † In 1747 brandy again became a royal monopoly, at which period public warehouses were appointed for its sale.

According to the statement of an early writer, quoted by Townsend ‡, three and one-eighth gallons of wine (the amount of twice that quantity of grapes) as it comes from the press cost one shilling and two-pence for the labour, and it requires four hogsheads of ordinary wine to yield a hogshead of brandy, Hollands proof; hence it has been inferred that corn would be a more profitable crop; but the attachment of the Spaniards to the cultivation of the vine has been so long established, that, in many parts of the kingdom, they neglect almost every other kind of agricultural pursuit. In the neighbourhood of Malaga, the mountains are clothed to their very tops with vines. Upwards of 14,000 presses are kept at work in that district during the vintage. Around Alicant, and the adjacent country, from which we obtain our *vino tinto*, or *tent wine*, the reservoirs, erected for hold-

* A rial vellon is equal to 2½d. British.

† The Theory and Practice of Commerce, by Don Geronymo De Uztariz.

‡ Osorio.

ing water for the nourishment of the vines, are structures which must have cost immense labour and expense. One of these, called El Pantano, situated between two mountains, within four leagues of the town, holds water sufficient to supply the whole district for a year. The walls of this basin are two hundred feet high, and at the base upwards of forty feet thick. Another, in the canton called Huerta de Alicante, is surrounded by a wall sixty feet in height, and broad enough for three waggons to go abreast.

In the province of Catalonia, the inhabitants plant the highest cliffs with vines, and rather than allow a piece of ground to remain useless, descend by ropes from projecting precipices, to cultivate spots which nature seemed to have intended solely for the resort of the eagle, or the habitation of the chamois.

Portugal.—In this respect, the Spaniards are not more zealous than the people of Portugal. In many of the provinces of that kingdom, the sides of the steepest hills and mountains are converted by means of terraces into vineyards. In 1681, although the wines of the Portuguese were of an inferior quality, large quantities were exported from Lisbon. The English, in particular, encouraged the manufacture to such an extent, that from 1750 to 1755, a pipe of the best quality could be procured for ten milreas, or £2 15s. 6d. of our money.

During that period, many of the proprietors of vineyards, rather than sell their wines at reduced prices, or run the risk of loss in keeping them, converted the greater part of the poorer sort into brandy. Large portions of this were used to strengthen the wines intended for exportation, and the surplus was either sent to the colonies in America, or bartered for slaves on the coast of Africa.

The taste of the English, says Link, and their fondness for drinking, are evidently the cause that induce the Portuguese to mix so much brandy with their wines. All that they manufacture have now some brandy added, even before fermentation.*

In 1756, the board which was appointed to superintend the wine trade of Portugal made a monopoly of the brandy distilleries for the provinces of Beira, Minho, and Trás-os-Montes, and after some time, succeeded in procuring the entire management of these articles throughout the kingdom. This board, which is now better known under the name of the Wine and Brandy Company, hold their meetings at Oporto, and are approached in all cases either by petition or memorial.

No wine can be sold, or brandy distilled, but by their permission. All duties are laid on and levied by them, as well for what is manufactured in the country, as for the spirits imported.

* Link's Travels in Portugal, p. 371.

The vicinity of Oporto is said to yield annually 80,000 pipes of wine, 20,000 of which are annually exported; and the whole quantity sent out of the kingdom during the same period is computed at 780,000. * The exports to Great Britain are thus reported.

Years.	Tuns.	H.	G.	Years.	Tuns.	H.	G.
1785	12,171	0	6	1803	27,682	3	53
1786	11,770	1	37	1804	9,849	2	3
1787	16,087	0	13	1805	20,003	0	61
1788	18,039	3	27	1806	19,848	1	38
1789	19,839	1	35	1807	23,914	1	62
1790	21,431	3	22	1808	22,093	0	16
1791	23,606	0	17	1809	20,578	1	61
1792	26,938	3	23	1810	27,360	0	39
1793	15,629	2	9	1811	9,260	2	19
1794	22,229	3	40	1812	15,007	3	28
1795	25,286	2	1	1814	15,498	0	48
1796	15,017	2	58	1815	16,913	0	60
1797	12,420	2	14	1816	8,215	0	35
1798	16,956	3	11	1817	14,125	1	36
1799	24,300	1	10	1818	17,944	2	4
1800	20,738	0	47	1819	10,311	1	24
1801	28,669	1	27	1820	10,599	1	24
1802	22,023	0	7				

* Playfair's Translation of Boetticher, Table, No. 11.

The bad quality of the native brandy has, hitherto, made it of little commercial importance; but the late introduction of the syrup of the fig will, no doubt, if judiciously managed, improve its flavour, and retrieve its character.

No spirits are made from corn in Portugal, but some are occasionally made from damaged figs and raisins unfit for other purposes. In Algarve, a project was once instituted for making spirits from the carob or locust pod, but it was not successful.

Many of the stills used in Portugal, particularly those in the neighbourhood of Lisbon, are made in London. The size is arbitrary, varying generally from 140 to 4 or 500 gallons. The body and head are copper, but the worms are mostly pewter. The farmers use small stills of a bad construction; a tube of copper, or a musket barrel thrust through a cask, frequently performs the office of the worm and cooler, and the spirits of course are bad. In charging the still, the Portuguese fill it to within 8 or 9 inches of the top with wine, which is slowly worked off, and unless intended for exportation it is rarely re-distilled. In the second distillation, it is made of such a strength, that olive oil will sink in it. White wine yields more spirit than red, and on the *purity* of *either* depends the *goodness* of the brandy.

Islands of the Mediterranean.—Spirits of a superior description to those of the Portuguese are distilled in Italy, and in several islands of the

Mediterranean, particularly in Majorca and Sicily. Most of the wine made on the island of Mitylene is sold to the Greeks, who convert it into brandy. From Tenedos, upwards of 600,000 oke of wine are annually exported. The Turkish government farms the revenue on this article, which commonly amounts to 30,000 piastres. This wine, which is sent in large quantities to Constantinople, Smyrna, and Russia, is considered superior to that of the surrounding islands. The brandy made from it is thought to be good, and the little that is exported pays about 4 parats per oke. From the fruit of the mulberry tree, the people of Scio distil a weak but agreeable brandy, and make some from wine known among them by the name of Homer's nectar; so called from a tradition, that it was given to the immortal poet when he was weaned from the breast.* The Russians draw a considerable supply of wines from Santorin, one of the most esteemed of which is *vino santo*. This is sold at the vintage for 3 or 4 parats per oke, and is made from white grapes. The vine-growers expose these grapes to the sun for 7 or 8 days, spread on the terraces or flat roofs of the houses; they are then pressed, or trodden in a vat, and the liquor is put into casks carefully bunged up till the fermentation ceases. It soon becomes a sweet and luscious wine, and is exported from the island to

* Olivier's Travels through the Ottoman Empire, vol. ii. p. 130.

the amount of 1,000,000 of okes. Some brandy is made, but the quantity is inconsiderable. *

Cyprus.—The wine annually produced in Cyprus is equal to 40,000 jars, or 10,000 barrels, Italian measure. Each of these jars holds about five bottles of Florence measure. The wines of Cyprus are said to have a pitchy smell, owing to the vessels in which they are made being half sunk in the ground, and pitched over to prevent the earth from attracting the wine. The Venetians carry off a great deal of it, and some is sent to France, England, Holland, and to different parts of Italy. It is a custom in Cyprus to bury large vessels of wine on the birth of a child, which are not raised until the solemnization of its marriage, which is perhaps upwards of twenty years after. During this time the wine is said to acquire an exquisite flavour, and to become a real luxury to a delicate palate.

The Cyprians in making wine carry the grapes from the terraces with shovels into *linos*, or cellars, paved with marble or covered with cement, and obliquely inclined. They are then squeezed as often as necessary in small presses called *patitiri*, the juice flowing into a cistern placed at the lowest part of the floor. It is afterwards conveyed into large earthen conical pitchers, half immersed in earth, where it is allowed to ferment for forty days,

* Olivier's Travels through the Ottoman Empire, vol. ii. p. 259.

and then closed with a clod of baked earth. From dried grapes an excellent spirituous liquor is made, partly for home consumption, and partly for exportation to Syria.

After the conquest of Cyprus by the Turks, some of the wine found there was eighty years old; it was sent to the seraglio as a most valuable rarity, and generally reserved for the sick. Father Stephens tells us, that so excellent was its quality, that it kindled in the fire and burned like oil. It is related of the Emperor Selim II. that he conquered Cyprus on account of its delicious wines, remarking on that occasion to Mustapha his generalissimo, "I propose to conquer Cyprus, an island which contains a treasure, that none but the king of kings ought to possess.*" In all the islands of the Archipelago, wine is made in greater or less quantity, and from the abundant saccharine matter of the grapes, it is customary to add one-fourth or even one-third part of water in the process.

France.—In no country with which we are acquainted has brandy been manufactured to such extent or perfection as in France. The distillation of it commenced there, according to Le Grand, in 1813†; but, as in the instance of Spain, little more was manufactured at first than what served the purpose of the vineyard. Its superior quality, however, soon recommended it to general notice;

* Maritti, vol. i. p. 233.

† Priv. de France, t. iii. p. 64.

and at an early period large quantities of it are mentioned among the other articles of European commerce.*

It is strange, that although the Phocians are said to have cultivated the vine in Gaul, 600 years before Christ, we should have no authentic notice of earlier distillation there than 1313. The first attempt at the distillation of wine is attributed to Arnaud de Villeneuve, professor of medicine at Montpellier in the thirteenth century.†

The liquors used at the ancient feasts of the Gauls were wine and beer, the last being the more common of the two. Diodorus Siculus says, that they became so fond of wine, particularly that manufactured in Italy before it began to abound in their own country, that they have been known to give a slave for a gallon.‡ Their love of this liquor hurried them into great excesses, and whole armies are said to have fallen victims to their enemies through its direful effects. It appears that Charles the Great was forced to make some severe laws against it, one of which obliged the judges on the bench and the pleaders at the bar to continue

* The English manufacture of ardent spirits, says Anderson, had so improved, that, in 1683, the importation of French brandy, at £40 per ton, amounted *only* to £80,000.

† This eminent man practised physic for some time at Paris with great reputation; but while on a voyage to cure Pope Clement V., he was shipwrecked, about the year 1310 or 13, and was buried at Genoa.

‡ Diod. Sic. lib. v.

fasting * ; others forbade that any one should be forced to drink more than he wished, or that the soldiers in the field should invite any man whatever to drink, under pain of excommunication, or of being condemned to drink enormous draughts of water by way of punishment.†

According to Strabo, a whole vintage has been exhausted at one feast among the Lusitanians. The coryphæus, or head guest at an entertainment, who conducted the eating as well as the drinking, always began first, and then presented to his next neighbour the cup, or rather pitcher, which thus went round the circle, for it seems they all drank out of the same vessel, and no man could drink before it came to his turn, or refuse when it did come : hence, in all probability, the custom of drinking to one another, which was, it appears, common to the Scythians, Persians, Greeks, and Romans, as well as to the Gauls and most of the northern nations. At their feasts, the Gauls, like the Persians, talked upon affairs of state as the cup went round ; and as they generally sat till morning, the liquor was sometimes productive of much disorder, frequently terminating in desperate conflicts. These assemblies were usually accompanied with

* It is related of Wincelas, king of Bohemia, that when he came to treat with Charles VI. at Rheims, in 1397, he got intoxicated every day with the wine of the country, and chose rather to forego every thing than not indulge in this excess. Vide Univ. Hist.

† Ibid.

music, songs, and dancing ; and the dancers, who were commonly armed *cap-à-pié*, beat time with their swords upon their shields. On some occasions the company dressed themselves in the skins of beasts, and in masquerade habits, many of which were very indecent ; but soon after the introduction of Christianity these practices were abolished.

So early as 1268, the manufacture of beer was of such importance, that laws were drawn up and approved by the mayor of Paris to regulate the trade. The brewers at that time were called *cervoisiers*, from *cervoise*, the name given to beer. In 1489, the laws were revised, on account of the abuses that were practised in the breweries ; and again, in 1630, ten new regulations were added to the code, and registered in parliament in 1714. In 1801, there were seventy-eight master brewers in Paris ; but it is proper to observe, that no one can open or carry on a brewhouse in that capital without having regularly served five years of an apprenticeship, and three years as a foreman. The law wisely enforces that some of the members of their corporation shall examine the ingredients used in brewing, lest any noxious or deleterious substance be employed ; and it likewise enjoins, that barm shall not be sold in any place without a previous inspection.* No oxen or other animals

* The French prepare dry barm in the following manner : When a sufficient quantity of brewers' barm is collected, it is put into thick bags or sacks. A number of these are placed together

are allowed to be fed or kept within the range of the brewery concerns, in order to prevent filth and

in a press, and squeezed for some time. The first liquor which runs from them serves the workmen for drink; that which flows on a second pressure is used by tanners in the preparation of leather, which it is said to render more pliable. When the liquor is completely extracted from the bags, and there remains nothing but the spirit of malt and hops, the residuum is left to dry in the bags under the weight of the press, and only drawn out to be sold to bakers, or such as may require it. One pound of this barm will serve to leaven 500 lbs. of dough for the lightest bread. In the event of a dull sale, the maker is obliged to keep this barm in a very dry place, and as free from air as possible. A similar process is observed in Flanders. Cobbett, in his *Cottage Economy*, speaks of a substitute for barm, in America, which he calls *yeast-cakes*, and which it may not be improper to describe here. "The people of Long Island," he observes, "make a parcel of these cakes once a year, and when they bake, they use them instead of *leaven*." He adds, that the best bread he ever ate in his life was lightened by them. The materials for a batch of the cakes are as follows: "3 ounces of good fresh hops, $3\frac{1}{2}$ pounds of rye-flour, 7 pounds of Indian corn meal, and 1 gallon of water. Rub the hops so as to separate them. Put them into the water, which is to be boiling at the time. Let them boil half an hour; then strain the liquor through a fine sieve into an earthen vessel. While the liquor is hot, put in the rye-flour, stirring the liquor well, and quickly, as the rye-flour goes into it. The day after, when it is working, put in the Indian meal, stirring it well as it goes in. Before the Indian meal be all in, the mess will be very stiff; and it will, in fact, be *dough*, very much of the consistence of the dough that bread is made of. Take this dough, knead it well, as you would for *pie-crust*, roll it out with a rolling-pin, as you roll out *pie-crust*, to the thickness of about the third of an inch. When you have it, or a part of it at a time rolled out, cut it up into cakes with a tumbler glass turned upside down, or with something else that will

annoyance. Formerly, each brewer could have only one pan, or mash kieve, per day, containing fifteen septiers of malt. Three members of the corporation, annually elected, are obliged to inspect the breweries, all of which they may visit whenever they please.

In 1639, the distillation of brandy, and other strong waters, in France, came under the direction of the law. As the regulations by which it is governed are in some degree similar to those established for breweries, a detail of them would afford little interest to the reader.

Wine of every description is used in the distillation of French brandy; hence their variety and

“ answer the same purpose. Take a clean board, a *tin* may be better, and put the cakes *to dry in the sun*. Turn them every day; let them receive *no wet*; and they will become as hard as ship biscuit. Put them in a bag or box, and keep them in a place *perfectly free from damp*. When you bake, take two cakes, of the thickness above mentioned, and about three inches in diameter; put them in hot water, *over night*, having cracked them first. Let the vessel containing them stand near the fire-place all night. They will dissolve by the morning, and then you use them in setting your sponge, as it is called, precisely as you would use the yeast of beer. White pea-meal, or barley-meal, will do as well as Indian meal.” In Latocnaye’s *Promenade in Ireland*, a description is given of the manner of making bread in some parts of France and the Continent, which chiefly consists in letting some *fermented dough* turn sour, and then mixing it with the flour they intend to bake, taking care to put only a sufficient quantity to prevent the bread from being acid. See *Promenade*, vol. ii. p. 34.

peculiar excellence. Formerly aromatic seeds and juices were made use of in the process, but that practice has been long since abandoned.

The general method, now observed in the manufacture, differs in nothing from that practised in the distillation of malt wash, or molasses, in Great Britain, except that a little of the natural lee is thrown into the still along with the wine to improve the flavour. The stills, through which they run it, are made of copper, with broad bottoms, set in brick-work with proper flues and dampers. To ascertain the strength, a small quantity of brandy at the run is put into a very clear glass bottle of four or five inches in length, and swelled at the centre; which being well shaken, the size and stability of the bead determines the quality of the liquor, and the state of the still. But, although this is the old and common practice, it is pretty certain that the hydrometer is used where great accuracy is required.

The stills are worked by small pieces of wood, mostly ash; the head of the still is taken off at each time of charging, and the furnace filled with wood. The dampers are then closed, and not opened unless the fire is too dull, or to give it air. This requires caution, for if the fire gets strong, there is danger that the still may be burned, or the head blown off; to prevent which, cold water is thrown on the head and worm, an expedient that not only

contributes to cool the still, but to deprive the liquor of its pungency.

Great quantities of this liquor are distilled at Bourdeaux, Rochelle, Cogniac; and in the department of the Charente, the Isle of Rhé, Orléans, Blois, Poitiers, Angiers, Tours, Nantes, Burgundy, Champagne, and Montpellier.

In these districts, beside the brandy from wine, a great deal is made from cider, syrup, and molasses, in most places where there are sugar houses. A spirit resembling whiskey is also made from the fruit of the sloe tree. Some of this is manufactured by the peasantry in the neighbourhood of Thionville, and is preferred by many to real brandy. The fruit when quite ripe is gathered, and, with the kernel, bruised to a pulp, in which state it undergoes fermentation for some days, and is afterwards distilled. In the making of liqueurs, the French have not been excelled. The practice is of early date, and was introduced by the Italians, who also, in the year 1630, invented the well known drink of lemonade.*

The value of the brandy annually exported amounted, at the beginning of the last century, to 5,852,900 livres; in 1778, to 4,660,221; in 1784, to 11,360,200; in 1787, to 14,689,600; in 1788, to 14,657,300. In the year 1789, there were ex-

* Beckman's Inventions, vol. iii. p. 376.

ported to the Baltic, 17,800 hogsheads, and in 1790, 13,222.* Townsend, when he visited Montpellier in 1787, purchased the best wine for one halfpenny per quart. The abundance at that time was so disproportioned to the demand, that the inhabitants distilled as much as freighted 32 vessels, containing 2,400,000 gallons, the principal part of which, he says, was smuggled into England.† Notwithstanding this vast manufacture, the importation of foreign spirits into France is sometimes very considerable. In 1787, the value of the corn spirits imported amounted to 1,874,000 livres, and that of wine-brandy to 3,715,000.

The revenue arising to the state, according to Young, from the duties on wine and home-made spirits, amounted under the government of Louis XVI. to 56,250,181 livres, or £2,460,444 sterling. But at present it is not near so much, owing to the falling off in the consumption among the different European nations, caused by the want of mutual intercourse during the long revolutionary wars. In 1822, France exported to England 1,179,687 gallons of brandy.

Beneath is a representation of the exports of wine from France to Great Britain from 1785 till 1820 both inclusive.

* Oddy on European Commerce.

† Townsend's Travels, vol. i. pp. 47 and 48.

Years.	Tuns.	H.	G.	Years.	Tuns.	H.	G.
1785	470	1	41	1803	1,445	0	9
1786	475	2	16	1804	1,425	3	0
1787	2,127	3	20	1805	2,593	1	5
1788	1,445	1	45	1806	5,393	1	40
1789	1,114	3	26	1807	5,438	1	33
1790	1,101	2	52	1808	7,838	0	58
1791	1,137	0	43	1809	13,105	0	33
1792	1,617	1	9	1810	4,117	0	52
1793	1,590	0	11	1811	3,441	2	57
1794	757	3	25	1812	5,100	1	7
1795	1,347	2	49	1814	3,902	3	32
1796	1,809	3	38	1815	2,116	1	17
1797	850	0	2	1816	1,612	0	46
1798	1,577	0	49	1817	802	2	17
1799	1,662	0	61	1818	1,798	2	6
1800	2,078	1	15	1819	1,543	3	30
1801	2,506	3	36	1820	1,090	3	30
1802	1,236	1	61				

Switzerland.—In Switzerland, which is one of the most mountainous districts of Europe, the cultivation of grain has been so limited as scarcely to admit distillation upon any scale. The richness of the valleys and the declivities of the mountains, however, afford to the inhabitants abundance of fruits, in the cultivation of which they have been very successful; from many of these, but par-

ticularly from the Machaleb cherry, a very superior spirit, called Kirschwasser, is manufactured. This, in the opinion of Stolberg, is no way inferior, either in strength or taste, to that made from corn at Dantzic.* Coxe also speaks of it as a pleasant spirit, and many agree, that it is not excelled by the Dalmatian maraschino. It is distilled in the cantons of Zurich, Schaffhausen, Lucerne, Berne, Neufchatel, &c. Quantities of it are exported yearly to Germany, Italy, and France.

Through the Pays de Vaud, and several of the cantons where the vine is cultivated, good brandy is made, but not to such extent as to require particular notice. When Coxe travelled through the country, the best wines were sold for sixpence per quart, and the worst for three halfpence. In 1779 there were exported 10,029 casks, each containing 180 bottles; in 1781, 24,568 casks; and in 1782, 11,354.†

Holland.—Although in Holland, as in Switzerland, the quantity of grain reared is inadequate to the consumption of its inhabitants, yet there are few countries better supplied with that necessary of life. From Russia, Poland, Elbing, Koningsberg, and Flanders, are drawn those immense resources, which not only enable the Dutch to export large quantities, but to distil to great extent. When Doctor Shannon visited that country in 1774,

* Stolberg's Travels, vol. i. p. 146.

† Coxe's Travels in Switzerland, vol. i. p. 58.

there were at Weesoppe, in the neighbourhood of Rotterdam, 300 stills, of from 3 to 500 gallons each; at Scheidam, in the year following, there were 120 stills, and in 1792, no less than 220. The entire stills of the province amounted to 400, and their average contents were from 250 to 400 gallons.

It has been calculated, that the annual produce of spirits, in the Dutch distilleries, is nothing short of 14,000,000 of gallons, 4,560,000 of which are consumed in the country.

The best Geneva we now have is obtained from Holland, and is made, according to Dr. Rees, from an ordinary spirit distilled a second time, with an addition of some juniper berries. The original liquor, however, was prepared in a very different manner.

It was a custom, continues the same writer, in the distilling of spirits from wort, or other fermented liquors, to add in the working some aromatic ingredient, such as ginger, cortex winteranus, or grains of paradise, to take off the bad flavour, and to give a pungent taste to the spirit. Among other things used with that intent, some tried the juniper-berry (*genevre*, as it is called in French), and finding that it gave not only an agreeable flavour, but a very valuable quality also to the spirit, the distillers adopted it generally, and the liquor has since sold under the French name *genevre*, or, as it is rendered in English, *geneva*.

The juniper was added to the malt in the grinding; a proper proportion was allowed, and the whole was reduced to meal together, and worked in the common way. The spirit thus obtained was flavoured *ab origine* with the berry, and exceeded all that could be made by any other method.

The two principal modes observed in the preparation of the wash for geneva are thus described. A quantity of flour of rye, coarsely ground, is mixed with a third or fourth part of barley malt, proportioned to the size of the tub in which the vinous fermentation is to be effected. This they mix with cold water, and then stir it with the hand to prevent the flour from gathering into lumps, and to facilitate its dissolution.

When this point is attained, water is added of the heat of the human blood. The whole is well stirred, after which the ferment is mixed with the wort, being previously diluted with a little of the liquor. The fermentation generally begins six hours afterwards; if it commence earlier, there is reason to apprehend that it will be too strong, and means are employed to check it. If the fermentation be well conducted, it generally terminates on the third day, when the liquor grows transparent, and assumes an acrid taste, hot and biting on the tongue. Having attained this point, the wash is well roused or stirred, and the mash with all the corn is put into the still; and then commences the first distillation, which is conducted very slowly.

This is a matter of the utmost importance, as it is considered that when the first distillation proceeds rapidly, the essential oil goes over with the spirit, and mixes with it so intimately, that an unpalatable taste of the grain is imparted, which no subsequent process can neutralize without employing ingredients hurtful to health. This liquor is then rectified over juniper-berries once or twice, according to the sort of spirit which it is intended to produce. For common use one rectification is deemed sufficient, though it is not considered so fine, pleasant, or delicate, as that which has undergone several rectifications, and which is called double geneva. Some distillers mix the juniper-berries with the wort and ferment them together; but in that case they only draw a spirit from it for the use of the interior, or for exportation to England; the juniper, however, is most commonly used at the rectification, and not before.

The second method pursued by the best distillers is as follows: The malt and rye are mixed with warm water in given proportions, and thoroughly blended together, until all the farinaceous substance is incorporated; the liquid is then allowed to rest until the flour has settled at the bottom. The wort is afterwards permitted to flow into the fermenting tub, where a similar operation takes place with another quantity of water poured upon the same grain, and these operations are repeated until the wort thus drawn from it at different times has ab-

stracted the whole saccharine matter in the flour. This liquid is put into the fermenting tun or vessel, and when it comes to the proper temperature, about blood heat, the ferment or yeast is added. The fermentation is considered more mild and regular by this method than the other.

Some pour all the water which they intend to use into the tub or kieve at once, and put the flour gently into it, while two or more persons are employed in stirring it with sticks made for that purpose, in order to mix the flour and to prevent it from gathering into lumps; when the whole is properly reduced and mixed together, they proceed to draw it off into a cooler before it is put into the fermenting vessel. In all cases the gravity of the worts is low, seldom exceeding forty; and by distilling from a mixture of wash and grains, the produce is allowed to be much greater than that obtained in Great Britain from potale alone.*

Koempfer attributes the discovery of this spirit to Professor Sylvius of Leyden, who died in 1672. Like brandy, it was first sold in the apothecaries shops; but the distillers finding that it was drunk with avidity by the common people, commenced the making of it themselves, and shortly after it became an article of great trade. The Dutch, whose mode of distilling enabled them to obtain a milder spirit than other nations, succeeded better

* Vide Parl. Rep. on Distillery Duties, 1799, apud Crookson's Obs. Appen. Dist. Rep. No. 2. p. 206.

in the manufacture, and for a series of years it seemed to have been in their hands a complete monopoly ; but as it has been imitated with success in other parts of the world, they have now many rivals, and the exportation of this article has considerably diminished.

The geneva imported into Great Britain from Holland, for the year ending the 5th January 1823, appears to have been 83,520 gallons.*

The brewing of ale and beer was early practised in the Netherlands. Isaac and John Hollandus, who were natives of this country, and flourished in the thirteenth century, have written with great ability on the subject, as well as on fermentation and distillation. Delft, among other places, became famous for its beer, and it was for many years the great staple of that port ; what is now made there, is chiefly consumed in the neighbourhood. At Gouda and Muyden it is made in great perfection, and London porter is imitated with success.

Germany.—The Germans, in most of the wine districts of the Rhine, distil from the skins of grapes that have been pressed, a spirit called *troster*, which they mix with ground barley or rye, and ferment in the usual way. The spirit is considered very wholesome, and forms a great article of commerce between them and the Dutch. From Upper and Lower Austria, immense quantities of this liquor

* Parl. Paper, No. 202.

are sent into Holland, where, after a second distillation, it assumes the name of gin, and is exported to various parts of Europe.* The revenue it produces forms a very considerable branch of the Austrian finance.

At Vienna, Krems, Waidhofen, Lintz, Freystadt, Ems, Gmunden, &c. several distilleries are employed, not only in this manufacture, but in that of grain exclusively. A considerable portion of the produce of these stills is transported to Moravia, Bohemia, Styria, Carinthia, &c.; some is sent into Hungary; but the quantity is trifling, as the people of that country principally distil for themselves. Almost every peasant there may obtain leave for that purpose on payment of two florins, or four shillings and sixpence, to the landlord from whom he rents his farm. There are several distilleries of importance at Fiume, Ujlak, Pilis, Csaba, Pesth, Rosenau, Presburg, Stehlweissenburg, Debritzen, &c.†; in which they distil from various sorts of grain, wine, and the refuse of the vintage, from plums and various other fruits, and from ‡ potatoës. The principal part of these spirits is sold at the fairs in the country, of which there are above 2000

* It is a mistaken notion, says Doctor Render, in his Tour through Germany, to suppose that the spirituous liquor called hollands, or gin, is made only in Holland; the greatest part is manufactured in Germany.

† Bright's Travels in Hungary, 4to. p. 228.

‡ Ibid. p. 618.

in the year. At these fairs they are exposed in booths or magazines, in casks, to the amount of many thousand eimers.* The stills in general use are made of copper, but are not of large size: wood is the common fuel, though in some places peat is used.†

Hungary.—Since the introduction of the vine into Hungary, by the emperor Probus, in the fourth century, the culture of the grape has continued to be an object of great importance, not only there, but throughout the whole of the German empire. The produce of the wine districts of Hungary alone has been estimated by Schwartzner at 18,000,000 of eimers, which is more than one half of the whole vintage of Austria and its provinces, calculated by Blumenbach at 32,873,971 eimers, or 2,522,955 pipes of 126 gallons each. The principal vineyards are around Ofen, Pesth, Tokay, the Syrmian, where at least 70,000 eimers of spirit are annually distilled from the grapes after the wine is drawn off; Grosswarden, Erlau, Werchetz in the Banat, the Houthier, Ædenburg, Rusth, &c.

Great as the quantity of wine yielded by these vineyards may appear, it is said to be equal to no more than one sixth part of what France affords. The consumption of wine in Hungary is very considerable, but it scarcely exceeds the export, as may be inferred from the commercial tables of Austria.

* Bright's Travels in Hungary, 4to. p. 219. 249.

† Ibid. p. 262.

Proper in 1807, where it appears that among the goods exported were

Common Tokay wine, 2813 casks, worth 168,780 florins.	
Tokay Ausbruch, worth	- - 10,800
Other kinds of Ausbruch, 124 eimers, worth 3,720	
Common Hungarian wine 39,077 eimers, 474,462	

So great is the encouragement given to the sale of the produce of the country, that the emperor, in 1804, forbade the use of foreign wines at his table. The most celebrated wine of the empire is Tokay, which has continued to maintain its character since the thirteenth century.

This delicious wine, says Bright, is the product of the district around the town of that name, called the *Submontine*, or the *Hegyalla*, which extends over a space of about 20 English miles. Throughout the whole of this tract it is the custom to collect the grapes which have been dry and sweet, like raisins, whilst hanging on the trees. They are gathered one by one; and it is from them alone that the prime Tokay, or as it is termed *Tokay Ausbruch*, is prepared. These grapes are put together in a cask, in the bottom of which holes are bored to let that portion of the juice escape which will run from them without any pressure. This, which is called Tokay essence, is generally very small in quantity, and very highly prized. The grapes are then put into a vat and trampled with the bare feet, no greater pressure being permitted. To the

squeezed mass is next added an equal quantity of good wine, which is allowed to stand for twenty-four hours, and is then strained. This juice, without farther preparation, becomes the far famed wine of Tokay, which is difficult to be obtained, and sells in Vienna at the rate of £12 sterling per dozen. The greater part of the vineyards in which this wine is made is the property of the emperor, though several are in the hands of nobles. Such are the richness and body of Tokay that it keeps to any age and improves by time. It is generally exported beyond the seas in casks, and during the voyage refines itself. The wine called *Méneser*, from the vineyards of Menes, is said to equal Tokay; and those of *Ædenburg*, *Rusth*, *St. Gyorgy*, and *Ofen*, are next in repute.

The mode of making the common wines of the country is thus described.—When the season arrives for gathering the grape, all the wine-presses, and the casks, both new and old, are carefully cleansed with boiling water, or sometimes with boiling wine, or a decoction of the vine leaf. Every thing being prepared, the labourers, accompanying their work with songs, or cheered by the well-known music of the bag-pipe, commence the vintage. The vine-gatherers stand in varied ranks; women and children, old and young, freeing the vines from their bonds, and collecting the grapes into the wooden troughs or pails which they carry with them; behind them follows the *weinzelder*,

watching that no grapes are left ungathered. The men collect from each the grapes that have been gathered, and carry them in tubs to the persons employed to prepare the must, who throw the grapes into a vessel for the purpose, and beat them with large sticks. This vessel has a double bottom, the upper one of which is pierced with holes, so that the juice which is pressed out escapes through it, and, when the upper part is full, the grapes are emptied into the wine-press; or, if they are to be carried from the place, into a cask set in a frame. The gathering is generally divided into two parts, the white and the red; for the white wine all white and rose-coloured grapes are taken, the mouldy and rotten are seldom rejected, but all are bruised together and placed without delay upon the press, and the expressed juice is immediately put into casks. The greater the body collected the better for the fermentation and quality of the wine; hence the cause of the large vessels found in many of the wine districts of Germany, such as the great tun at Heidelberg, which holds 800 hogsheads or 50,400 gallons.* When a vintage is great and the press small, the bruised grapes are often put into sacks and trodden under foot. The husks are brought from these sacks to the press, and what remains after pressure is put into vessels, where they are kept to be distilled into brandy. The red grapes

* Chauchard's Germ. 4to. Chaptal on Wines.

are gathered precisely in the same way as the white, only after having been bruised they are put, not immediately into the press, but into large vats, where they undergo a kind of fermentation. *

In many parts of Germany, as in France, they feed the cattle on the refuse as it comes from the press ; the mass is broken with the hands, in order to divide the lumps, and is then thrown into casks, where it is moistened with water and covered with earth mixed with straw to the depth of seven or eight inches. When the weather is such that the cattle cannot go into the fields, about six or seven pounds of this refuse soaked in warm water with bran, straw, turnips, potatoes, and oak or vine leaves, preserved on purpose in water, is given to them in a tub evening and morning. Horses and cows are said to be fond of this food, but it is given to the latter in moderation, as it has a tendency to make their milk turn sour. †

When Dr. Bright visited Pesth in 1814, the prices of wine and spirits were as follows :

1 eimer (nearly equal to 10 gal. English) of old Ofen wine from	30 to 40 florins,
Ditto last year's Ofen wine - -	15 to 20
Ditto old white Ofen wine - -	32 to 45
Ditto last year's white Ofen - -	18 to 22
Ditto of spirits distilled from plums -	35 to 90
Ditto from grain - - -	52 to 55

* Hungarian Miscel. App. Bright's Trav.

† Chaptal on the Cultivation of the Vine.

These prices being considered dear at the time, the Doctor, in order to afford some standard of comparison, has also stated the prices that prevailed during the fair held at Pesth in the latter end of the year 1813; viz,

1 eimer old red Ofen wine	-	-	-	14 to 20 florins.
Ditto of the same year	-	-	-	8 to 12
Ditto common wine of the country	-	-	-	6 to 8
Ditto of spirits distilled from plums	-	-	-	25 to 30
Ditto from grain	-	-	-	22 to 25

The same writer considered five-pence a high price for a bottle of wine. In Rusbeck's time it could be purchased at from two to four cruitzers the bottle. Although the peasants in Hungary are permitted to purchase vineyards, they are obliged to pay the one-tenth of the produce to the lord of the soil; a heavy tax when the chance of bad vintages, which too often happen, and the occurrence of other casualties, are considered.

Notwithstanding the extent to which wine is made and distillation carried on throughout various parts of the German empire, immense quantities of spirits are yearly imported. In 1802, there were 470 pieces, 198 casks, 1101 pipes, 16 chests, 33 hogsheads, and 14 ankers of brandy imported into Hamburgh, besides 15 casks, 4 pipes, and one chest of arrack; also 215 pipes, 72 pieces, 52 casks, and 1,347 ankers of Geneva, together with 2,991 casks, 399 hogsheads, and 2,236 puncheons of rum. This vast supply always finds a ready con-

sumption in the interior, whither it is carried by means of the Elbe, &c. In the same year, wine to the value of 2,381,815 florins, and spirits to the value of 104,490 florins, were sent from Hungary into the German states of Austria, including Galicia, while wine and other liquors to the amount of 29,865 eimers, valued at 219,989 florins, were sent into Hungary. The greater proportion of the wine and spirit trade of Germany consists in an internal commerce, and an interchange of the produce of one province with that of another, its external or foreign trade being principally confined to the free towns. The following is a return of the wine sent to Great Britain from the Austrian dominions, including Hungary and the districts of the Rhine, from 1785 to 1820.

Years.	Tuns.	H.	G.	Years.	Tuns.	H.	G.
1785	133	3	47	1803	58	0	42
1786	187	3	52	1804	34	3	2
1787	177	2	32	1805	121	0	56
1788	138	2	27	1806	103	1	57
1789	117	0	6	1807	44	0	59
1790	122	1	26	1808	6	2	8
1791	128	1	40	1809	43	2	5
1792	139	1	1	1810	133	1	9
1793	110	2	27	1811	10	0	39
1794	129	1	37	1812	23	1	30
1795	36	0	1	1814	126	3	56
1796	54	0	12	1815	140	3	18
1797	48	1	15	1816	121	2	42
1798	61	3	56	1817	85	0	28
1799	92	3	45	1818	153	2	62
1800	119	2	18	1819	120	1	60
1801	105	3	45	1820	130	1	58
1802	114	2	4				

From the attention paid to the care of bees, honey is produced in abundance; *mead* is manufactured, and is of some moment in the trade of the country. Many of the distillers purchase the honey for the making of *rossolio*, and use it as a syrup instead of sugar.

It appears that the name of *aqua vitæ*, and the practice of distilling spirit of wine upon aromatic herbs, were known in Hungary so early as the fourteenth century, and that a queen of that country rendered herself famous by a medicinal preparation from rosemary in which *aqua vitæ* formed a principal part. The receipt for making it was copied from her breviary by Prevôt, who died in 1631, and whose book was published by his two sons at Frankfort in 1659.* Among the Germans, the manufacture soon became of such importance that many of the nobles kept stills for the purpose of distilling waters of all sorts for the benefit of their families and the poor. An instance of this may be found in the consort of Philip the second duke of Grubenhagen, a princess of Brunswick, who in 1560 supported a

* The receipt is as follows: 'Take of *aqua vitæ*, four times distilled, three parts, and of the tops and flowers of rosemary two parts. Put these together in a close vessel; let them stand in a gentle heat fifty hours, and then distil them. Take one dram of this in the morning once every week, either in your food or drink, and let your face and the diseased limb be washed with it every morning. It renovates the strength, brightens the spirits, purifies the marrow and nerves, restores and preserves the sight, and prolongs life.

still and laboratory of that kind at her palace at Grubenhagen in the circle of Lower * Saxony. Tacitus has given an early proof of their skill in the making of beer†, and their celebrity in the brewing of that beverage seems to have gathered strength by time. The quantity furnished in the different cities and towns is immense. Some years since there were no fewer than 250 privileged brewers in the town of Rostock, who exported annually 800,000 barrels, under the name of Lubeck beer, the excise raised upon which composed the principal part of the Duke of Mecklenburg's revenue. The *mum* of Brunswick is well known, and justly appreciated for its good quality. The process observed in the manufacture has been, it is said, always kept secret; and to prevent discovery, the men who brewed it were hired for life. A receipt for making it, as recorded in the town-house of that city, is here given, though we are far from considering it to be genuine.

“ Take sixty-three gallons of water that has
 “ been boiled till one-third part is consumed, and
 “ brew them with seven bushels of wheaten malt;
 “ one bushel of oatmeal, and one bushel of ground
 “ beans. When the liquor is turned, the hogs-
 “ head must not be filled too full at first. As soon
 “ as it begins to work, put into it 3 lb. of the inner
 “ rind of fir, 1 lb. of the tops of fir and beech, three

* Beckman's Hist. Inv. vol. iii. p. 148.

† De Moribus Germanorum, sect. xxiii.

“ handful of *carduus benedictus*, a handful or two
 “ of the flower of *ros solis*; add burnet, betony,
 “ marjoram, avens, pennyroyal, and wild thyme, of
 “ each a handful and half; of elder flowers, two
 “ handfuls or more; seeds of *cardamum* bruised,
 “ 30 oz., barberries bruised, 10 oz. When the li-
 “ quor has worked awhile, put the herbs and seeds
 “ into the vessel, and after they are added, let it
 “ work over as little as possible; then fill it up.
 “ Lastly, when it is stopped, put into the hogshhead
 “ ten new-laid eggs unbroken; stop it up close,
 “ and use it at two years end.” *

This receipt is somewhat similar to that pro-
 cured by Monk at the court of Brunswick in the
 reigns of our Charleses, and given in the *Harleian*
Miscellany. †

Provinces bordering on Germany.—In many of
 the provinces bordering on the German states,
 such as Wallachia, Moldavia, Bosnia, Servia, and
 Dalmatia, a good deal of spirits is manufactured.
 At Zara, the capital of the latter district, is dis-
 tilled from the *Macarska* cherry that liquor called
maraschino, so celebrated throughout Europe. It
 is to the essential oil of the nut, or stone of the

* In addition to this heterogeneous mass, Doctor Agidus Hoff-
 man recommended water-cresses, brook-lime, and wild paraley,
 of each six handfuls, and the rasping down into it of the same
 quantity of horse-radish to make it the sooner drinkable.

† Vol. iii. p. 315. Dublin, 1744.

cherry, when ground and brought over in the still, that it is said to owe its exquisite flavour.*

There is also made among the islands on the coast of Dalmatia an excellent kind of brandy, known by the name of *rakia*, which is drawn from the husks of the grape, mixed with aromatics. About 2,000 Venetian barrels of this spirit is manufactured, one year with another, at the town of Pago, in the island of that name. This the inhabitants principally export to Italy and Venice.

Prussia.—In the Prussian territories the manufacture of ardent spirits has never been an object of great importance, at least in a commercial point of view, although few countries have finer grain, or are more extolled for the excellence of their ale. It was remarked by Wulfstan when he navigated the Baltic as far as the country now called Prussia, in the eighth century, that the people there brewed *no ale*, because they had such plenty of honey; noted many centuries before by Pythias, when *mead* was the common drink of the meanest of the people, while the rich drank mare's milk, or perhaps a spirituous liquor prepared from it.† In the Polish department they make strong waters from wheat, rye, barley, oats, cider, pulse, &c. These are drunk chiefly by the common people, and often by the higher orders, who use them after they have been rectified with anniseeds, cinnamon, or other spices.

* Vide the Abbe Fortis' Travels into Dalmatia, p. 291.

† Macpherson's Annals, p. 263.

Considerable quantities of this spirit, or *goldwasser*, are distilled at Dantzic, and from thence sent into the interior. The supplies of grain necessary for the stills kept at work in that city and neighbourhood are drawn from the public granaries, which are so numerous and important, that a short description of them may not prove uninteresting. The buildings which compose them, says Oddy, are so extended, that they form a separate town, and consist of ranges of from four to five stories high. They are situated upon an island, formed by the river Motlau, which runs close by the city on one side, and is met by another branch at a place called the Forestadt on the other. There are three bridges on each side of the island, at the end of streets over it, from the city to the Forestadt. In the night, all the bridges are drawn up, excepting the two at the end of the main street, across the centre of the island, communicating betwixt the old city and the Forestadt. On this island are all the principal warehouses for ashes, hemp, linens, and the extensive granaries, forming seventeen streets, besides the large centre one, that extends the whole length of the island. To guard these warehouses, from twenty to thirty ferocious dogs, of a large size, are kept, amongst which are blood-hounds; these are let loose at eleven o'clock in the night. To command and to keep the dogs within their districts, as well as to protect the passengers from harm, there are large

high gates at the end of each of the streets leading to the main one. No light is allowed, nor is any person suffered to live on this island. The dogs prowl about the whole night, and create great terror. It would be impossible, without them, to keep property secure, amongst the hordes of Poles, Jews, and others, who resort to Dantzic; as no exemplary punishment would have half the effect which the dread of these dogs produces. In winter, when the water is frozen over, and when the dogs might be liable to stray, there are three keepers placed at particular avenues, with whips, to drive them within their range.* No fire or robbery was ever known; and the expence levied on each building for these precautions is very reasonable, considering the immense property they contain. No vessels lying along side those warehouses are allowed to have a fire or light of any kind on board, nor is a sailor or any other person suffered even to smoke. The corn annually received and exported from Poland, through the medium of those granaries, is computed at 730,000 tons, or 365,000 lasts.

The preparation of rossolio is an important branch of distillation at Dantzic. It is an agree-

* Ælian, in his *History of Animals*, liii., tells us, that a thousand large mastiffs were constantly kept at the temple of Adranus, which stood in the city of Adranum, now Aderno; and that they were taught to fawn upon such as brought presents to the temple, to conduct drunken persons home at night, and fall furiously on thieves, and tear them in pieces. Univ. Hist. vol. vii.

able spirit, composed of the juice of the plant *rosa solis*, brandy, sugar, cinnamon, cloves, nutmegs, and other ingredients *; and is in great demand in the German states. This cordial is considered good in paralytic disorders, &c.

The exports of corn brandy from Dantzic in 1802, amounted to 1,098 ohms; and in 1804, to 14,312 florins and 276 ohms. The imports of rum and French brandy in 1803, were 1,412 hogsheads; and in 1804, 1,383 ohms. Through the other principal Prussian ports, in 1804, 1,224 hogsheads of rum and brandy were received. †

The excise raised on mead, beer, and spirituous liquors in the Polish part of Prussia is of some importance, but in no degree equal to the means they might possess of extending it. In the management of the distillery the Prussians have not hitherto shewn much skill. Most of their concerns are poor and ill adapted to the work. At Pillau, Elbing, Koningsberg, &c. the stills wrought some years since were oblong squares of copper, generally about ten feet in length, three wide, and three deep. Wood is the common fuel, though coal is plentiful, particularly in Silesia, and *peat* may be procured in some of the states in abundance. But as a too intimate acquaintance with the luxuries of life seldom contributes to the felicity of the human race, it is perhaps fortunate for these people that

* Vide Cooper's Complete Distiller, pp. 214 and 15.

† Oddy on European Commerce, 4to.

the great bulk of their agricultural proceeds is exported in the raw, rather than in the manufactured state.

Hanover.—In Hanover, an annual revenue of upwards of sixty-seven thousand pounds is levied on the manufacture of beer and spirits. The principal breweries are at Embeck, Gosslar, and Hanover; and there are few towns in that kingdom at which distillation from grain is not carried on.

Denmark.—The Danes, among the other inhabitants of the north, who drew from France a vast quantity of her brandies, at present distil from corn to a large extent. In 1800 the distillers of Copenhagen, amounting to 316, formed a corporate body, their consumption of grain in that year was 287,824 tons, which yielded 2,347,850 gallons of spirits. At Flensburg, two hundred stills are employed, the produce of which is principally sent to Iceland and Norway. In the town and neighbourhood of Husum, in the duchy of Schleswick, the manufacture of ardent spirits is prosecuted with much vigour. There, as well as in other parts of the Danish territory, the feeding of cattle on the refuse of the stills forms a very profitable part of the trade.*

The average estimate of the spirits exported from Denmark amounts in value to about 100,000

* Denmark, Schleswick, and Holstein produce corn in such abundance, that the export, in one year, often amounts to £105,000. Vide Boetticher's Statistical Tables, No. 2.

rix-dollars, or £22,500. The crown draws a large proportion of the national resources from the excise on this article, and from the licences permitting its manufacture and sale. The wash used in the distilleries is principally made from malted barley and rye, but scarcely any oats are used : considerable quantities of the spirits are converted into cordials, and much drunk in the taverns and retail shops in the form of drams, called *snaps*. *

Norway.—In Norway it would be vain to look for the still, the worm, or the mash tun, nature having so stinted her gifts to that country, as to oblige its inhabitants to depend on others, partly for the necessaries, and entirely for the luxuries of life. In the northern districts their grain, for the most part, is destroyed by incessant rains ; and what remains is preserved in wooden sheds, heated by means of stoves, or dried by the winds, on poles fitted up for that purpose. † A practice somewhat similar is observed in many parts of Sweden, with this difference, that the shocks of corn are spread on wooden frames raised several feet from the ground. ‡ The only beverage of the Norwegians, that may be called native, is procured from the birch tree. The mode of extracting the juice is very simple ; it is done by boring a hole in the trunk, and then stopping it with a cork, through which, when a quill, open at both ends, is thrust,

* Clarke, vol. v. p. 41.

† Coxe's Travels.

‡ Acerbi's Travels, 2 vols. 4to.

the juice passes at the rate of a large drop every second. Amidst the immense forests that darken the mountains of Norway, great quantities may easily be obtained in this way. The inhabitants manufacture it as follows :

To a given quantity of juice is put a proportion of sugar, mostly two pounds to every gallon. These are boiled together until all the impurities rise to the top, and are skimmed off. To the remainder, when properly cooled, is added a little yeast to promote fermentation. About three or four days complete the whole of the process. Among some of the better class, wine and lemons are used in the making of this liquor.

A distillery on a small scale was established in 1793 for the manufacture of brandy, but we have not heard of its success. Ale to considerable extent is imported, and dealt out with freedom at weddings, christenings, and other entertainments. For stronger drink, the Norwegians depend on the Danes, Dutch, and French, who carry on a profitable trade with the country. The Dutch in return for their gin receive from them large supplies of juniper-berries.

Sweden.—The Swedes also furnish them with corn-brandy, but in such small quantities as scarcely to be deserving of notice ; for, although grain is cultivated to some extent in Sweden, there are but few distillery establishments in that kingdom. It is curious, that among those few, should be

ranked the palace near Abo, formerly the frequent residence of the Swedish monarchs, and that of Calmar, in the province of Smaland, once the habitation of the celebrated Margaret. In 1793 a large distillery was raised near Gripsholm, within about 25 miles of the capital. It was calculated to work annually about 1,200 Riga lasts of grain, or 18,000 tons. A term of twenty years was given to the proprietors for working it, after which it was to become a royal monopoly. In that distillery there were 96 vats of equal size, in each of which were usually mixed four tons and a quarter of flour, 2,000 kannes of water, and ten kannes of common yeast. Each vat yielded from 80 to 84 kannes, and sometimes 90, according to the grain. The mixture was stirred at intervals until fermentation took place, when the vats were covered, and luted down with a composition of lime. In four days the wash was ready for the still. The number of stills amounted to twenty-six, four of which contained 4,000 kannes, the others 2,000. The process was slow, from six to seven hours being employed in bringing over the wash, and a proportionate time for the spirits. One-fourth part of the grain used was barley, and as each ton yielded twenty-two kannes of spirit, the crown exacted twelve of these, at a strength six degrees above proof. The remaining ten fell to the proprietors, which they sold at sixteen skillings four runsticks per kanne; making, upon 18,000 tons, 180,000

kannes, on the whole produce nearly 400,000. There were ninety-six workmen employed, at about fourteen to sixteen plottes per month.

Grain is not the only ingredient used in the Swedish distilleries. A large species of black ant, which affords on distillation a resin, an oil, and an acid, is employed with rye to give flavour and potency to the brandy. This insect is commonly found in small round hills at the bottom of the fir-tree. It is, says Consett, less a matter of surprise that they should use these insects in their distilleries, than that they should eat them, and consider them as highly palatable and pleasant. "As I was walking," he remarks, "with a young gentleman in a wood near Gottenburg, I observed him sit down upon one of those living hills, which, from the nature of its inhabitants, I should rather have avoided, and begin with some degree of keenness to devour these insects, first nipping off their heads and wings. The flavour, he declared, was of the finest acid, rather resembling that of lemon. My young friend entreated me much to follow his example, but I could not overcome the antipathy which I felt to such kind of food." *

The propensity of the Swedes for strong drink of all kinds is well known, and their wish to refine

* Vide Consett's Remarks in a Tour through Sweden, &c. Chemists have tried the distilling of ants, and have obtained an acid resembling vinegar in many respects. Its properties and attractions are not yet distinctly determined.

upon this luxury, may have led them to adopt the
 ant as the Dutch have the juniper. To their con-
 stant use of spirits, Fortia attributes the thinness
 of the population. Several attempts have been
 made to restrain them in the exercise of so fatal an
 indulgence, but to no purpose.* They allege that
 the practice of drinking is conducive to health, and
 even the most temperate adhere to the custom of
 taking an allowance both morning and† evening.
 At their dinner parties, which in general are given
 with great ceremony, the company assemble in an
 adjoining room, where a side-board or table is
 spread with bread, butter, cheese, pickled salmon,
 and corn-brand. To these, says Thomson, who
 on one occasion met fifty persons at a private house,
 the company pay a visit, and each takes a dram by
 way of whet to his appetite.‡

Where the lower orders use beer as a common
 drink, breweries ought to abound. In 1809 there
 were 159 registered establishments of that kind in
 the country. Some years previous to that period
 they were enabled to export 232 barrels from Stock-
 holm, and in 1790, 169. When Thomson, who
 lately travelled in Sweden, visited Gottenburg, a
 Mr. Lorent was erecting a brewery for porter, to
 enable him to imitate that of London, which sold
 at the inns for 2s. 6d. the bottle.

* Fortia's Travels.

† Clarke's Travels, vol. v. p. 135.

‡ Thomson's Travels in Sweden, 4to. pp. 12 and 13.

The imports into Stockholm for three average years were as follows :—

Years.	Awms.	Year.	Awms.	Year.	Awms.*
1786. Of arrack	- 35	1790. 63		1792. 127	
Of brandy	- 86	4,614		351	
Spirits of wine	- 486	24		10	
French wines	- 5,150	5,376		5,661	
Rhenish and Moselle wines	- 194	191		346	
Spanish and Portugal	- 162	230		118	

As agriculture in Sweden has been carefully studied, much of the sterility of the soil has been overcome, and the land in many places rendered tolerably productive. Oats, barley, rye, and wheat are cultivated, but not in sufficient quantity for home consumption, since it has been calculated that upwards of 300,000 tons of grain are yearly imported. The annual duty on spirits distilled in the country seldom exceeds £41,541.

Lapland.—In Lapland, a large portion of which is subject to Sweden, scarcity is sometimes so great that the inhabitants are compelled to feed upon the bark of trees; yet, amidst this desolate region, a late traveller ascribes the only evils with which the people are beset to the habitual use of brandy.† Their love for this liquor is such, that

* An *awm*, or *ohm*, is 36.7 gallons wine measure.

† Clarke's Travels, vol. v. p. 404.

they have been known to give a crown for a glass*, and to exchange one of their best rein-deer for six drams of the common Swedish spirit.† They regard their passion for it as a misfortune, but when a remonstrance is made on the subject they answer, that without brandy they could have no wives. This unhappily is too true, for when a young Laplander wishes to choose a wife, he must first furnish a friend with some bottles of brandy to mediate between him and her father, who is disposed to permit the visits of the lover only in proportion to the brandy he brings. This perquisite too often induces a parent to postpone the nuptials of a daughter for two or three years. From the pleasure it gives in this world, they consider a little of it necessary for comfort in the next, hence they put into the coffin of a deceased friend a flask of brandy with other articles, in order that he may cheer himself on his journey. At all their baptisms and funerals, intoxication prevails, and the ceremonies of rejoicing or mourning are made mere pretexts for drinking.‡ But, in a country where the winters are so rigorous and the cold so intense, it need scarcely seem surprising, that an ignorant and savage people should have recourse to strong liquors to enliven the solitude of their rocks and mountains, and to give a brisker flow to their spirits. Their chief supply of brandy is drawn from

* Ehrenmalm.

† Clarke's Travels, vol. v. p. 425.

‡ Clarke's Travels, vol. v. p. 404.

the border fairs of Norway, Sweden, Muscovy, and Finland. To these places they generally resort in caravans or companies, travelling in sledges drawn by rein-deer, and exchange their furs, baskets, cheese made of rein-deers milk, dried fish, toys, and the deer itself, for their favourite liquor, and for such necessities as they may want. Whole families go to market in this way, and seldom return without experiencing some of the fatal consequences of too great an indulgence of their passion for strong liquors.

Finland.—The taste and habits of the Finns, their neighbours, are little better; for without beer and brandy they deem life to be joyless. Old and young possess the same propensity, and although little acquainted with bodily debility, their excessive use of inflammatory liquors undermines their physical vigour, and often renders them disgusting objects of intemperance and folly. When Mr. Bullock, an English gentleman, visited them in 1822, for the purpose of procuring a herd of rein-deer, he could effect nothing without brandy. One of them, when he found he could not get a glass, told this traveller and his companion that “he wondered what sort of people they were not to have so much as a drop of brandy.” It may be generally observed of all these northern hordes, that the precept of their ancient god, who recommended full cups, has been devoutly followed: *Ale* and

mead were the favourite beverages of *Odin*, but these have long given place to the more bewitching delusions of the alembic.

Russia.—Distillation in Russia is one of the most extensive and the most beneficial of all trades to the crown, brandy being the idol of the populace; its manufacture and consumption are calculated at 5,500,000 vedros *, or 27,500,000 gallons. For producing this, about 1,650,000 chetverts †, or 11,000,000 poods of corn are necessary. The sale of it has been hitherto a monopoly of the crown, and the right to distil it confined, with the exception of a few privileged provinces, to the nobility who possess landed estates. In all those parts of the empire where grain abounds, distillation is carried to the greatest extent. The fertility of Little and White Russia, Livonia, Karkof, Varonitch, Orel, Kursk, Kalouga, Tula, Iver, Nijegorod, Kazan, Simbirsk, Penza, Tambov, Saratov, &c. &c. affords ample means to distillers.

The following enumeration of a few of the distilleries made some years since in the province of Penza and the adjoining districts, may afford an idea of the magnitude of these establishments.

1st. A distillery belonging to the crown domain Doorzovye, where 150 labourers were employed

* A vedro is a measure that contains from 15 to 20 quarts.

† One chetvert is reckoned equal to $5\frac{1}{2}$ bushels Winchester measure.

to work 80 stills, in which were made 100,000 barrels or eimers of corn spirits.*

2d. A distillery in Brilovskoi, belonging to the imperial college of finances, where, from 90 stills worked by 160 men, 110,000 barrels were produced yearly.

3d. A private distillery consisting of 20 stills, which made 30,000 barrels.

4th. A distillery in the district of Insara, belonging to a private family, in which 24 stills wrought by 55 men yielded 7000 barrels.

5th. A distillery in the district of Moksha, the property of the Annikof family, where, from 6,000 chetverts of corn, and 3,000 fathoms of wood, 15 stills wrought by 40 men produced 33,000 barrels.

6th. A distillery at Kutlinskaya, Sloboda, where, from five stills wrought by 30 workmen, 7650 barrels of spirits were made from 1700 chetverts of corn; 1530 fathoms of wood were consumed as fuel.

7th. A distillery in the village of Suamenskoi, where two stills wrought by 20 men produced, from 400 chetverts of corn, 1600 eimers of spirits, and burned 550 fathoms of wood.

8th and 9th. Two distilleries in the village of Nishnayashkafita, in the district of Gorodishtshe, the property of a nobleman, one of 12 and the

* The Russian eimer is equal to 3 gallons and 1 quart English wine measure.

other of 13 stills, managed by 50 workmen; these yielded together 50,000 eimers of spirits annually.

10th and 11th. Two distilleries in the village Siramas belonging to a noble family, in one of which were 12 stills wrought by 50 workmen, producing 11,000 barrels of corn spirits; and in the other, 5 stills farmed out and wrought by 10 men, 4000 eimers of spirits were yearly made.

12th. A distillery near the village of Petrovka, in which were 13 stills worked by 70 men, who in some years distilled 7,000 eimers of brandy.

13th and 14th. Two distilleries, one in the village of Stolipina, the other near the village of Mamsa; they consisted of 35 stills each, and were worked by 90 men, who distilled upwards of 90,000 eimers annually.

15th. A distillery in the district of Kerensk, in the village Nikolsky, or Kitta; it contained 30 stills wrought by 72 men: from 2135 chetverts of corn, and 2000 fathoms of wood, 5,000 eimers of spirits were distilled.

16th. A distillery near the village Polivanova, the property of a noble family, where sixteen stills wrought by forty-five men produced 8,150 eimers of spirits, from 2,370 chetverts of corn, and a consumption of 7,000 fathoms of wood.

In the whole of Penza there were 397 stills wrought by 982 men; in these stills 86,279 chet-

verts of corn, and 96,375 fathoms of wood *, were consumed in the manufacture of 554,401 eimers of spirits.

Rye and barley are the kinds of grain principally used in all the distilleries. These for the most part are malted and mixed in proper proportions. To a vessel containing about 500 gallons of boiling water, they put 900 pounds of ground barley-malt, or rye and barley ground to meal. These, when well mashed with rakes and thoroughly mixed together, are allowed to stand until the liquid becomes viscous and holds in solution the saccharine matter of the grain. Water is afterwards added to bring it to the consistence at which they wish to ferment it. When the mash is completely finished, the liquor is drawn from the tub or kieve and put into proper vessels, where barm or yeast mixed with cold water are added, and the vessels being secured from the admission of atmospheric air, the material is allowed to ferment, until it has arrived to that stage at which they deem it fit for the still. Some only draw a part of the wort from the mash kieve in the first instance, and mix that with barm, allowing the remainder to stand until it becomes a little tartish, before they pour what was taken out into the kieve. The whole materials, brewing grains and all, are then mixed and fermented together. This rude mode of preparing wash has

* A fathom of wood is equal in bulk to the space to which a man can extend both arms.

long been practised in Russia, and is considered highly injurious to the product of the grain. The extract is said generally to fall far short of what is obtained in Holland or in our own country. While eighteen gallons of spirits were taken from a quarter of grain in Britain, only eight were obtained in Russia; hence it was estimated that the Russians annually lost in their distilleries not less than to the value of £3,000,000 and a half sterling. * From a chetvert of corn, weighing nine poods†, or 360lbs., a Mr. Vassili Nicolavetch Subof, director of economical affairs in the government of Pensa, extracted six eimers and a quarter of spirits; while others from the same quantity of grain could get only five eimers. This he attributed to the temperature of the hot water used in the mash, which he regulated by means of cold water and ice, and preventing the spirituous parts from making their escape during the progress of fermentation. His general extract was seven eimers and four-fifths of common proof spirits from ten poods or 400 lbs. of grain.‡ At the distilleries formerly conducted at Moscow they usually drew, from one chetvert of barley-malt, five or five and a half vedros of brandy. But there are few instances in which the Russian distillers can be said to have shewn much improvement or real practical knowledge.

* Parl. Rep. on Distillery, and Evidence therein, 1799.

† A pood is equal to 40 lbs. ‡ Pallas' Travels, vol. i.

Spirits are commonly distilled of such a strength as that not less than one-half of the fluid shall burn away, either in a silver or copper vessel ; but of late the hydrometer has in some places been adopted as a test of more accuracy.

The revenue arising from the sale of brandy is very extensive, according to Mr. Tooke, who estimated its amount at from eight to nine millions of rubles. Until 1752 it was farmed for £540,000 ; until 1770 for £620,000 ; until 1774 for £900,000 ; and until 1778 for £1,500,000 ; in 1779 it was let for four years, at the sum of £1,800,000, since which time it has been gradually increasing. So far back as 1789 the licences to inns and taverns yielded £1,708,338, and the brandy sold in the cities of Petersburg, Moscow, and the parts adjacent, amounted to 3,320,000 rubles per annum ; but this is not remarkable, when, in the city of Moscow alone, there were no fewer than 4,000 kabaks or shops for the retail of brandy. The crown, or rather the chamber of revenue, farms all the kabaks, and the contractor or merchant who supplies them with spirits is prohibited from distilling himself, but is obliged to buy all from the functionaries of government, who either draw the brandy from their own distilleries, or obtain it by contract from those of the privileged provinces. When any person farms the kabaks, he is allowed to keep beer, mead, and wine in addition, which, with other trifling advantages, enable him to pay the

government three rubles for every vedro of brandy, and to sell it in those houses at the same price.

Besides the produce of the corn distilleries, the Russians make several intoxicating beverages. Beer is brewed in Petersburg, Moscow, Nishney Novgorod, Riga, and other places. That of Riga is of a superior class, and the ale brewed on the Okka, in the government of Nishney Novgorod, is said to resemble Burton, both in quality and flavour. Some of the establishments for conducting this branch of trade are pretty extensive. We are told of one that Mr. Herrmann visited, which had seven large vats, each holding about 250 vedros, or twenty-five barrels of forty gallons each. One and a half chetvert of rye-malt, three of oat-malt, three of barley-malt, and one and a half pood of hops, were used at one brewing. From this, 130 vedros of beer were obtained, which sold for about twenty rubles. Strahlenberg says, that they make of oat-meal, or wheat and hops, a thick white liquor called *braga*, which when fresh is pleasant enough, having a tartish or vinous flavour, remarkably heady, and only drank by the common people. * The Usbecks make this liquor of rice, and occasionally of millet. The brown beer of the Calmucks, called *schara* †, is somewhat like this.

In some of the southern provinces, they make it with millet softened to a pulp and mixed with

* Strahlenberg on Northern and Eastern Asia.

† Signifying red or dark yellow.

malted rye and barley, with an addition of oats. The liquor seldom assumes a clear colour, but when sufficiently fermented it is reckoned very intoxicating. Hops are plentiful in many parts of the empire, and grow wild, particularly in Little Russia, on the Uralian mountains, on the Altay, and in Taurida. Some are cultivated by the peasantry, but the chief supply is drawn from foreign markets. Boetticher calculates the annual import of this article at £21,874.*

The ordinary household beverage of Russia is *quass*, a drink prepared, according to Tooke, as follows : To one chetverik, about thirty-five pounds, of barley-malt, two or three handfuls of rye-malt, and the same proportion of unbolted rye-meal, are added, and the whole mass is thrown into iron pans, where it is stirred with a quantity of warm or boiling water until it resembles thin porridge. About two inches deep of oat husks are then thrown over it, when the pans are placed in an oven, where they remain for twenty-four hours. Boiling water is again poured upon it till it is full to the brim. It is then poured into wooden vessels, the bottoms of which are covered inside with straw, having a plug or cock to let out the liquid. Lukewarm water is now added, and the whole suffered to stand for some time. When it has stood as long as necessary, it is drawn off

* Vide Playf. Trans. Boetticher's Tables, No. 12.

into casks, in each of which a piece of coarse rye-bread is put, to acidulate the *quass*. The casks are placed in a cellar, and in twenty-four hours it is fit for drinking. From the proportions of grain mentioned, six or seven vedros of *quass* are obtained. It may be made of barley-malt alone ; but the rye-meal is absolutely necessary.

In most places, continues the same writer, they do not go so circumstantially to work. It is even customary to leave out the barley-malt, adding much more meal than rye-malt ; the proportion to half a pood of meal being only two or three handfuls of malt. Instead of bread they put in some yeast of the former brewing. Some add raisins, which cause the *quass* to acquire a strong foam. Numbers make *quass* from rye-meal only. But in all the modes of making it, cold, or tepid, water is poured on the ingredients, the pans greased and set in a hot oven.

Another kind of *quass*, called *kisslyschtschy* is made with boiling water and rye-meal alone, the mixture being violently and for a long time stirred about in hot water. Cold water is poured upon it, and the vessel set by for fermentation, after which it is bottled. This fine drink foams vehemently, and effervesces with the solution of a gas, that sparkles like Seltzer water. The *kisslyschtschy* has some resemblance to the Vienna hornerbier. In some houses they also use a small quantity of honey, or raspberries and cranberries, with other fruits, in

making *quass*, from which it acquires an agreeable ruby colour, and becomes extremely pleasant to the taste.

Mead, the ancient and favourite drink of all the northern nations, is as much in request in Russia as *quass*. It is manufactured in great perfection, and is usually of two kinds, white and red. To make the first, says Tooke, two poods of white honey are mixed in five ankers of clear river or soft water, and boiled and skimmed till nearly an anker is boiled away. The liquor is then strained through a fine sieve, or piece of linen, into a broad open vessel, and mixed with a couple of spoonfuls of beer-lees, and a pound of white bread, *kalatsch*. After it has stood in this vessel, in a moderately warm place, and fermented for thirty-six hours, it is poured through another sieve or piece of linen into a cask, in which has been previously put a pound of small shred isinglass for clarifying it.

For red mead, to one pood of honey they add eight vedros of water, and reduce them by boiling to six vedros. When cold, the juice of about half a chetverik of pressed or bruised cranberries, strained through a seive, is mixed with it. A small complement of yeast is then applied, and a roll of clean sand, with about four ringlets of isinglass, or the albumen of eggs, are thrown into the vessel to clear or fine the liquor. Cinnamon, cloves, ginger, mace, and other spices, are infused. It is placed in a cool cellar, and after standing there for some weeks,

it is either bottled for use, or drawn from the cask direct. When properly made and preserved, it is considered by many as equal in strength and flavour to tokay.

Strawberries, raspberries, and cherries, are often used in the making of *mead*; and in most cases the stones, or seed, of the latter are bruised and put in along with the fruit; and these, with the aromatics usually employed, are thought to improve the flavour and quality.

The honey, of which the metheglin is made in such abundance, is of the best kind, and forms a considerable article in the trade of the empire. The great bulk of it is drawn from the bee-hives reared on the Oka, on the Don, in Little and White Russia, in the Polish provinces, and in the western tracts of the southern Ural. Independent of the internal consumption, the export to foreign countries is considerable, and amounts in value, on an average, to from 6 to 10,000 rubles in the * year. For their industry, the Russians in this respect are

* There are many tribes in Russia who scarcely follow any other employment than that of rearing bees. Pallas and Tooke tell us, that among the Bashkirs are individuals who possess, besides their bee gardens, some hundreds, nay some thousands of wild bee-hives in the forests, and obtain annually from 40 to 100 poods of honey. The hives are formed in the hardest and strongest trees, upwards of five fathoms from the ground, by hollowing out the trunk and closing the aperture with a board pierced with small holes for the bees to enter. The greatest enemies to their labours are bears, who frequently make terrible havoc among the hives. To defeat the purposes of this animal, the peasant in

very commendable ; and were they imitated by our own countrymen, the money sent from Britain to other nations for honey, which is said to be not less than £240,000 annually, might be saved.

The other liquors most common in the country are made from fruit of various kinds, such as apples, pears, plums, currants, cherries, gooseberries, raspberries, bilberries, cranberries, &c. &c., and the juice of the birch tree. The preparation of these varies in different places, and is generally regulated according to the judgment or taste of the persons who conduct the process. Tooke observes, that in making cherry wine, about five or more vedros of

often obliged to have recourse to some curious contrivances, among which the following appear the most singular.

Knives are placed in such parts of the tree where the hives are situated, that the bear on climbing or coming down may encounter death almost at every step ; some, however, have been cunning enough to elude this contrivance altogether, by removing the knives with their paws. A block of wood is sometimes suspended before the entrance to the hive, which, as often as the bear attempts to remove it, falls back and hits him on the head, when he becomes so enraged, that he is frequently precipitated to the bottom on spikes prepared to receive him. Boards are often suspended from a neighbouring branch, like scales, and so fastened to the tree where the animal climbs, that when he gets upon the platform, and attempts to rifle the hive, he finds himself in a moment separated from the object of his search, and swinging in the air, with the prospect of a descent upon spikes below, which threaten instant death. Others, again, cut the trunk into blocks, which they hollow and close at both ends, leaving an opening on the side for the bees : this plan is generally found to prove more than a match for the ingenuity of the luxurious brute.

the ripe fruit are crushed in a tub until the stones are broken ; and that to each vedro one and a half or two pounds of honey, and a pint of good brandy or wine, are added, with a little yeast to make it ferment. When it has properly cleared itself of the yeast, it is poured into kegs or bottles, and placed in a cool cellar.

These are the principal drinks made and used by the Russians. The vine is cultivated in some of the southern parts of the empire, and wine is made, but not to such extent as to supply the national demand. The most important vineyards are those of Astracan, which at one time were cultivated at the expence of the crown, but are now principally in the possession of private individuals. The vineyards are 135 in number, 21 of which still belong to the crown. Vines were first brought into that region from Persia by an Austrian monk, in the early part of the seventeenth century ; and their culture having been found to succeed, the czar, Ivan Vassilievitsh, in the year 1613, caused them to be planted about the city. Peter the Great also encouraged their cultivation ; and the grapes became so excellent in his time, that they were exported to Petersburg for the use of the imperial table, and for such of the nobility as could afford to purchase them, a practice still carried on to advantage. Great caution is observed in the carriage of those grapes ; they are packed in red millet, in small casks or jars, suspended by chains, in wooden

cases, to prevent bruises on the road. A pood of them costs between two and three rubles on the spot. In the vineyards above mentioned, white and red wines of a superior description are produced, which some compare to the *Lachrymæ Christi* of Germany, the *vin de grave*, or the champagne of Burgundy. In making wine, they put the grapes into canvas bags, tread on them with the feet in troughs, and then squeeze them in wooden presses. Brandy is also distilled in considerable quantity, and of an excellent kind.

The Cossacks, particularly those of the Don, cultivate the vine, but not in such abundance as to permit their distilling much brandy from it. The grapes are said to be good, and were they not pulled too soon, the wine manufactured from them would, in the opinion of Doctor Clarke, surpass all others in the world. The practice of burying the vine during winter is injurious; but this the Cossacks are obliged to do, to save it from the severe frosts of the country. A similar practice, as mentioned by Strabo, was observed from the most remote antiquity in the country near the Bosphorus.* In 1772, the whole produce of the vineyards of the Don did not exceed from seventy to eighty hogsheads, of forty eimers each; but the increase since that period has been considerable.† The wine made on the banks of the Terek, of the

* Geog. lib. vii.

† Pallas' Travels, 4to. vol. ii.

Volga, near Saratof, and in the Taurida, are good ; and were its sale not injured by the importation of Greek and Moldavian wines, it might be turned to great advantage. The Caucasian Tartars, although they profess the Mahometan faith, drink wine publicly, which they render very inebriating, by hanging the unripe heads of poppies in the casks while the fermentation is going on.* The mountains inhabited by these people are very fertile, and the vines grow so luxuriantly, and climb to such a height about the trees, that in many places the inhabitants find great difficulty in gathering the grapes.

Crimea.—The wines of the Crimea rank so high, that they are in demand even in the remote governments of the empire. The valleys of Soudak and Koos are considered to yield the best.† Upwards of 30,000 eimers are annually produced, nearly one-third of which is sent to Kerson. Mrs. Holderness, who was in the Crimea in 1821, says that the free importation of Greek wines have injured the cultivation of the vine, both as to extent and management.‡ It was a great trade formerly among the Crim-Tartars to prepare *bekmess*, or marmalade, and *misseless*, or syrup, from their grapes ; but the sales of fruit and wine were found to be more profitable ; and lest any thing should be lost

* Tooke.

† Pallas' Travels, vol. ii. ; and Guthrie's Tour, 4to. p. 130.

‡ Mrs. Holderness's Notes, 16mo.

in that way, they distilled brandy from the refuse of the vintage. The vats, in which they carried on the fermentation for that purpose, were pits made in the earth, well covered, and plaistered with clay. The lees of 100 eimers of wine generally yielded four eimers of brandy. Beside this home distillation, large importations are made of *sekis-kaya-vodka*, or brandy prepared in the island of Scio, from fruit and the lees of the grape. Many of the farmers of the distilleries import their supply of fruit and wine lees from the Greek islands direct.

Storch is of opinion that the knowledge of distillation is of very early date among the people of the Crimea, and that they were among the first who learned it from the inhabitants of Italy or Spain. Their present rude mode of manufacture certainly shews an attachment to ancient customs.

The *arraki* of the Mountain Tartars, which they prepare from sloes, dog-berries, elder-berries, wild grapes, and plums, is sold in common with their strong beer or *busa*, which they brew from ground millet. The ordinary drink of this people is made by triturating and dissolving cheese in water; they make from the boiled juice of apples or pears, and from grapes, a nice description of marmalade, called *nardenk*, which is purchased by the Tartars of the Steppes. From Anatolia they likewise import a preparation of the same kind, and convert it into their favourite liquor.

On the Dniepér and at Kherson they distil a good deal; and at Odessa, a town built on the Dniester since 1792, there are not less than six distilleries and as many breweries.

Siberia.—In many parts of Siberia, spirits are extracted from such fruits and grain as the country affords, but the principal supply is drawn from Russia. At a distillery on the river *Uk*, wrought some years since, there were 106 coppers, 28 coolers, and 6 stills. To every cooler they reckoned ten chetverts of rye-malt, with a fifth or seventh part of oats or barley. The coppers were so proportioned, that they were commonly filled out of one cooler, and held 42 vedros. The worts were usually drawn from the mash tun, and the fermentation was completed in four days. From 30 to 40,000 chetverts of corn were the annual consumption, and from each chetvert three or four vedros of common brandy were obtained. In another establishment, about sixty versts north of the city of *Irkutsk*, the annual quantity of brandy made amounted to 60,000 ankers.* But, as few districts of this extensive region, three-fourths of which lie in the same latitude as Norway and Lapland, yield grain sufficient for the ordinary consumption of the population, the beverages are mostly drawn from the different species of *vaccinium*, or berries, that

* Billing's Account, N. Parts of Russia, 4to.

abound; of these the cranberry, bilberry, raspberry, strawberry, gooseberry, &c. are the principal: from the *prunus fruticosa*, which grows plentifully, an agreeable wine is made. The trade with Siberia being a monopoly of the Russian merchants, the brandy, wine, and other liquors transported thither, form a profitable part of their traffic.

Kamtschatka. — In Kamtschatka, the most eastern district of the empire, a spirit resembling brandy is distilled from a sweet grass, called by the natives *slatkaia-trava*. When this plant has attained its full growth, it is about six feet high, and is covered with a white down, not unlike hoar frost. It tastes as sweet as sugar, but is very hot and pungent. The stalk is hollow, and consists of three or four joints, with large leaves issuing from each. Before the country was subjected to the Russians, this grass was employed as a principal ingredient in the cookery of the Kamtschatdaks, but has since been chiefly appropriated to the making of brandy. When prepared and dried it is purchased by the government, at the rate of from three to four rubles the pood. It is gathered and made ready for the distilleries in the following manner: “The stalks being cut, and the downy substance “scraped from their surface, they are placed in small “heaps, till they begin to heat and smell. When “dry they are put into sacks of matting, where “they remain a few days, and become gradually “covered with a sweet saccharine powder, which

“ exudes from the hollow of the stalk. Only a
 “ quarter of a pound of powder is obtained from
 “ 36 lbs. of the plant in this state. The women
 “ who conduct the business find it necessary to
 “ defend their hands with gloves, whilst they are
 “ scraping the stalks, the rind being of so acrid a
 “ quality as even to ulcerate the part it touches.
 “ The spirit is drawn from the plant in this state
 “ by the following process. Bundles of it are
 “ steeped in hot water, and the fermentation is
 “ promoted in a small vessel, with berries of the
 “ *gimolost*, or of the *golubitsa* ; care being taken
 “ to close the mouth of the vessel, and to keep it
 “ in a warm place, whilst the fermentation con-
 “ tinues, which is often so violent as to agitate the
 “ vessel which contains the fluid, and occasion a
 “ considerable noise. When this first liquor is
 “ drawn off, more hot water is poured on, and a
 “ second fermentation ensues in the same manner.
 “ Both liquor and herbs are then put into a copper
 “ still, and the spirit is drawn off in the usual way.
 “ The liquor thus prepared is called by the natives
 “ *raka*. According to Steller, the spirit distilled
 “ from this plant *unscraped* is very pernicious to
 “ health, and produces sudden nervous disorders.”*
 Lesseps says, that those who drink of it are sure
 to be extremely agitated during the night, and to
 experience on the next day melancholy and un-

* Cooke, vol. iv. ; and Lesseps' Travels, 2 vols. 8vo.

easy sensations. But notwithstanding these disadvantages, it is drunk by the inhabitants with astonishing avidity. Such as cannot distil it themselves, procure it from the Russian and Cossack merchants, who, knowing their blind attachment to its bewitching qualities, sometimes take advantage of their weakness, as the following anecdote related by Lesseps will fully illustrate. A Kamtschatdale had given a sable for a glass of brandy. Inflamed with a desire of drinking another, he invited the seller into his house. The merchant thanked him, but said he was in a hurry. The Kamtschatdale renewed his solicitations, and proposed a second bargain : he prevailed.—“ Come, “ another glass for this sable ; it is a finer one than “ the first.” “ No ; I must keep the rest of my “ brandy ; I have promised to sell it at a certain “ place, and I must be gone.” “ Stay a moment ; “ here are two sables.” “ ’Tis all in vain.”—“ Well, “ come, I will add another.” “ Agreed, drink.” Meanwhile the three sables were seized, and the hypocrite made a fresh pretence to get away ; his host redoubled his importunities to retain him, and demanded a third glass. Further refusals and further offers were made. The higher the chapman raised his price, the more the Kamtschatdale was prodigal of his furs. Who would have supposed that it should have ended in the sacrifice of seven most beautiful sables for the last glass !—They were all he had.

Beside brandy, the Kamtschatdales make use of a beverage equally potent, extracted from a red mushroom, known among the Russians as a strong poison. This they ferment in a vessel with fruits, and scarcely give it time to clarify, ere they invite their friends to partake of it. A noble emulation inspires the guests to disburden the master of the house of his nectar, and the company seldom separate until the whole is exhausted. For the use and invention of this liquor they are indebted to their conquerors; mushrooms, in Russia, being exceedingly abundant, the quality is well known. Coxe tells us, that he seldom entered a cottage without seeing great quantities; and in the market places, where they were exposed for sale, the varieties were as remarkable as the number, being white, black, brown, yellow, green, and pink.* The annual sale of these at Moscow amounted to upwards of 1000 waggon.

The species of mushroom carried to Kamtschatka is named *muchumor*, and when boiled communicates a strong intoxicating quality to the water. It would appear from Strahlenberg, that the rich, in some places, lay up great stores of them; and the poor who cannot buy, watch their banquets with wooden bowls, in order to procure the liquor after a second process.

The great fondness of these rude and simple people for spirits of all kinds causes them often to

* Coxe's Travels, vol. i. p. 394.

pay at the rate of a ruble per glass for a very spurious species of French brandy; yet, with all their love for it, they seldom have recourse to undue means of obtaining it. Sauer relates a pleasing instance of this honest feeling in a Kamtschatdale, who usually accompanied him on his aquatic excursions, and expended every farthing of his money on spirits.—“ I one day,” says he, “ saw him coming to my habitation; and to tempt him, I hid myself in an adjoining room, leaving a glass of brandy upon the table, and a bottle, half-full, close to it, with some sea-biscuit. He came in, saw nobody, and called me, but obtained no answer. Upon which he advanced to the table and smelt the glass: ‘ It is brandy,’ said he, ‘ but I will not drink; and the bottle half-full? Well, I won’t taste you; but I’ll go and seek master, and scold him for leaving you in this manner. I’ll just smell again, and go.’—I stepped out of the window into the garden, and went to meet him; when he accosted me in the following manner: ‘ I have been into your room, and saw a glass full of brandy; perhaps you won’t believe me; but indeed I did not taste it.’—‘ I dare say you did.’—‘ No, by — I did not; I knew you would not believe me; but a Kamtschatdale will never take any thing without permission.’—‘ Well, I must believe you; will you come and drink it?’—‘ Yes, that I will; but I wanted to scold you for leaving it so.’—A

stronger instance of forbearance than this could scarcely perhaps be produced from among a people vastly superior in civilization.

Most of the spirits manufactured in this remote country, like those made in the other parts of the Russian territory, are farmed by the crown, and sold at licensed kabaks or dram-shops, under certain regulations.

Although the manufacture of spirits throughout the whole of the Russian empire is prodigious, immense quantities are yearly imported.

In 1768 the whole amount of the imports of the vine came to 697,000 rubles, and the exports from the several ports of Russia, exclusive of those on the Caspian, in 1793, were 3,971 osh. 9 ankers of corn-brandy and other spirits, valued in rubles at 66,218.

In 1794 the entries at the port of Petersburg were, for wine, to the value of 734,000 rubles, and for brandy 7,000 rubles.

In 1796 the imports at the same port were,

Of ale and porter, 7,033 casks, amounting in rubles to	469,217
brandy, arrack, rum, and shrub, 112 hhds.	- - 32,605
liquors, 21 hhds.	- - - - 7,902
wines of all kinds, 19,427 hhds.	- - -1,568,367

The imports in 1797 were

Of beer and porter, 4,500 casks valued at	- rubles 327,350
arrack, rum, and brandy, 3,544 ankers	- - 90,237
strong liquors, 3,180 bottles	- - - 8,680
wines of all kinds in hhds. 11,294	- - 985,411

In 1802 the value of the imports were 96,056 rubles.

In 1803, there were 6,507 ankers of arrack, brandy, and rum, imported into Petersburg. These imports have greatly increased, since the establishment of peace among the several powers of Europe, notwithstanding the high duties imposed by the tariffs of the court, which tend to discourage an intercourse with foreign nations in the purchase of articles that may be produced at home, even in an inferior degree. The rum imported from England from 1809 to 1822 will be found in a subsequent page.

The prices, when Tooke compiled his work, stood as follows :

A hogshead of beer, when purchased from a Russian brewer, cost eight rubles ; from an English brewer, twenty rubles ; brandy was sixty-five rubles the anker ; port wine from 350 to 250 rubles the pipe ; French, from 250 to 150 rubles the hogshead ; Madeira, 300 rubles the hogshead ; Champagne, per case of fifty bottles, 200 rubles ; Rhine wine from one ruble fifty kopuks to three rubles fifty kopuks per bottle ; Hungary wine from two rubles fifty kopuks to six rubles the bottle.

From the encouragement which the present emperor, Alexander, has given to men of ability, in every department of science and art, to settle in his dominions, it may reasonably be expected that distillation will arrive, in a few years, to as great perfection there, as in any other quarter of the globe.

British Empire.—In the British Empire, the distillation of spirits has been long an object of attention, both to the government and the people; but the period at which this important branch of trade originated in these kingdoms seems now not certainly known. It is indeed probable, that before the introduction of agriculture, *mead*, or honey diluted with water, was the only strong liquor known to the inhabitants of the British Isles. We read that Eumenes, in his panegyric upon Constantius, in the year 296, remarks that Britain produced such abundance of corn, that it was sufficient to supply not only bread, but also a *drink* which was comparable to wine.* This, no doubt, was ale; for we find that the manufacture of that beverage had become of such consequence in the year 694, that Inè, king of the West Saxons, directed that every possessor of a farm of *ten hides* of land, or as much as required *ten ploughs*, should, among other articles, pay him twelve ambers of Welsh ale, each containing above seven gallons of English wine measure.

England.—It is well known, that the vine was first planted in Britain by the Romans; and its cultivation became common shortly after its introduction. In almost every monastery wine was manufactured.† The Isle of Ely, from the abundance of its vintage, was denominated the isle of

* Macpherson's Annals.

† Speed's Chron. folio, sec. viii. p. 252.

vines; and the bishop thereof, shortly after the conquest, commonly exacted three or four tuns of wine, as the tithe of the vineyard, while a certain quantity was reserved in his leases for rent. Yet, to whatever use its produce may have been converted, we have no account of the introduction of the still at so early a date. Wine seems to have been known to the Saxons, as mention is first made of it at the feast given by Hengist, about the year 450, to Vortigerrr the British king, after the completion of Hidecastle; when Rowena, the beautiful daughter of the Saxon chief, is represented with a golden bowl filled with wine, drinking to the health of the monarch; which is also regarded as the first instance on record of drinking healths in Britain. * But although wine was familiar among the Saxons, it was not used with profusion. A great bowl, from which the *obbæ*, or big-bellied jugs, of the monks were filled twice a day for their dinner and supper, was all that Ethelwold allowed to his monastery; and at festivals, a *sextarium* of mead was the quantity distributed among six of the brethren at dinner, and among twelve at supper. On certain occasions, such as one of the great high feasts of the year, a measure of wine was allowed. The favourite drinks of these people were ale and mead. Of the former, indeed, they had three sorts, but these were merely modifica-

* Vide Bailly.

tions of the same beverage. Pigment, morat, and cider were in use. The first of these liquors was sweet and odoriferous, being made of honey, wine, and spiceries of various kinds; while the second was made of honey, diluted with the juice of mulberries; and the third was prepared from such fruits as the country afforded. During those times, it would appear to have been a custom among the Saxons, that when the dinner was over, and the tables were removed, they should continue drinking till the evening.* In the reign of Edgar, drinking was so prevalent, and carried to such excess, that a law was enacted, that no man should drink beyond certain nicks or marks made in the pots for the purpose of limiting the † potation. During the latter part of the reign of William the Conqueror, who ascended the throne in 1066, we are told that the vine was cultivated to some extent in England, and that a vineyard at Roganeia, in the hundred of Rochford, contained *six arpents*, and yielded on an average *twenty modii* of wine. William of Malmsbury says, that, in 1156, Gloucester excelled all other parts of England in the abundance and pleasant taste of its grapes, and that the wine made from them was entirely free from harshness and sourness, and very little inferior to the wines of France. But adverting to a period nearer our own times, we learn that in the time of

* Turner's Hist. Ang. Sax. vol. ii. chap. iv. p. 51, &c.

† Basil Kennet's Hist. Eng. vol. i. p. 91.

Henry the Third, in 1256, the manufacture of ale had become of such consequence, that the price of it was fixed in proportion to that of corn and wine, and that a brewer might sell two gallons of it for a penny in cities, and three or four for the same price in the country.* The method of making this liquor, as practised by the ancient Britons and other Celtic nations, is thus described by Isidorus and Orosius. “The grain
 “was steeped in water and made to germinate, by
 “which its spirits were excited and set at liberty;
 “it was then dried and ground, after which it was
 “infused in a certain quantity of water, and being
 “fermented, it became a pleasant, warming,
 “strengthening, and intoxicating beverage.” This ale was commonly made of barley, but sometimes of wheat, oats, and millet. The ancient Welsh and Scots had two kinds of it, called *common* and *spiced ale*, and the value of each was thus determined by law. - “If a farmer hath no mead, he
 “shall pay two casks of spiced ale, or four
 “casks of common ale, for one cask of mead.” By this law a cask of spiced ale, nine palms in height, and eighteen in diameter, was valued at a sum equal in efficacy to £7 10s. of our present coin; and a cask of common ale of the same dimensions, at a sum equal to £3 13s. At this period, common ale was an article of such luxury

* Hume, vol. ii. p. 333.

among the Welsh, that it could only be procured by the great and opulent. Before the introduction of christianity, this liquor was in such repute, that the Saxons and Danes believed that "to drink large and frequent draughts of it was one of the greatest pleasures enjoyed by the heroes admitted into the hall of Odin."* Meetings were formerly held in England for the express purpose of drinking ale, denominated *scot-ales*. One of these, called *give-ale*, seems to have been a remnant of the Anglo-Saxon superstition. These drinking bouts were sometimes held in public-houses, and sometimes in the church or churchyard. The expence of a *scot-ale* was defrayed by joint contribution; and when held in taverns, the clergy were not allowed to be present. There were occasionally common drinkings termed *leet-ale*, *clerk-ale*, *church-ale*, and *bride-ale*, the last of which still prevails in Scotland under the name of a penny bride-ale, a practice intended to assist those who are unable to defray the expence of a wedding-dinner. †

Houses for the sale of this beverage were first licensed in England in the time of Edward the Sixth, by an act of the 5th and 6th of that monarch; and in the time of James the First, the power of licensing inns and alehouses was granted by letters patent to certain individuals; but as great abuse was committed under this mode of collection, it

* Mallet's Northern Antiq. chap. vi.

† Supplemental Vol. Encyc. Britannica.

was soon after placed on the same footing as any of the other branches of excise.* This duty was not very productive, as appears from an abstract of the money raised in England, for a period of *nineteen* years, viz. from November the 3d, 1640, to November the 5th, 1659, in which the whole amount of wine licences is rated at £312,200. In 1663, they amounted to £20,000; in 1688, to £10,000.† About this period, the ale and beer brewed in England came, on an average of some years, to 4,950,413 barrels of strong, and 2,254,006 barrels of small beer. In the year 1691, the quantity brewed by the common brewers in the city of London, and its suburbs, amounted to 1,222,764 barrels of strong beer and ale, and 865,831 barrels of small beer. But the duty upon these articles being doubled in that year, it set a number of private brewers to work, which so affected the licensed breweries, that in the year 1695 the annual quantity of strong beer and ale was reduced to 909,299 barrels, and the small beer to 813,824 barrels. In 1724, the quantity of strong beer brewed in London and the neighbourhood was 1,172,494 barrels, and of small beer 789,495 barrels, while in the whole of the kingdom the strong beer amounted to 4,075,871 barrels, and 2,465,695 barrels of small beer. ‡

* Sinclair's Hist. Revenue, p. 208.

† Ibid. p. 261 and 281.

‡ Maitland's Hist. Lond.

It may afford to the curious reader some satisfaction to be presented with an account of the beer and ale brewed in England for periods of five years, from the first year that the excise on that article was put under the management of commissioners in the time of James II., embracing portions of the reign of William III., Anne, George I., II., III., and IV., a lapse of 138 years.

Year.	James II.		Year.	William III. *	
	Strong Beer.	Small Beer.		Strong Beer.	Small Beer.
	Barrels.	Barrels.		Barrels.	Barrels.
1684	4,384,093	1,933,924	1689	5,134,309	2,707,726
1685	4,654,564	2,102,021	1690	4,690,711	2,645,656
1686	4,780,097	2,255,062	1691	4,669,544	2,374,731
1687	5,044,311	2,435,169	1692	3,796,805	2,378,642
1688	4,989,000	2,543,856	1693	3,529,498	2,385,996

Year.	Anne.		Year.	George I.	
	Strong Beer.	Small Beer.		Strong Beer.	Small Beer.
	Barrels.	Barrels.		Barrels.	Barrels.
1708	3,756,920	2,295,008	1721	3,935,717	2,315,737
1709	3,540,031	2,215,883	1722	3,982,066	2,320,118
1710	3,391,799	2,113,862	1723	4,049,091	2,389,248
1711	3,336,286	2,106,970	1724	4,075,871	2,465,695
1712	3,306,696	2,049,313	1725	3,997,249	2,327,351

* The reign of William commenced February 13, 1688.

Year.	George II.		Year.	George III. and IV.*	
	Strong Beer.	Small Beer.		Strong Beer.	Small Beer.
	Barrels.	Barrels.		Barrels.	Barrels.
1746	3,592,800	2,161,600	1818	5,572,505	1,504,165
1747	3,774,400	2,136,200	1819	5,895,705	1,568,797
1748	3,885,800	2,204,200	1820	5,650,850	1,523,825
1749	3,913,100	2,132,700	1821	5,811,455	1,530,027
1750	3,851,800	2,178,000	1822	6,018,618	1,530,189

In 1822, there were in London ninety-eight brewers and thirty-seven licensed victuallers, who brewed 2,000,932 barrels, of which 1,673,603 were strong, and 327,329 table beer.† In the rest of England were 1488 brewers and 20,575 licensed victuallers, who brewed 5,547,875 barrels, of which 4,345,015 were strong, and 1,202,860 table beer.‡ In London alone the brewings of five years were as follows : §

Year.	Strong Beer.	Small Beer.
	Barrels.	Barrels.
1818	1,567,212	331,243
1819	1,621,766	347,468
1820	1,538,645	346,951
1821	1,617,028	335,675
1822	1,673,603	327,329

* Vide Appendices Rev. Committee, 1783 ; et Princip. Taxation, 8vo. Parl. Paper, No. 571. sess. 1823.

† Parl. Paper, No. 571. sess. 1823.

‡ Ibid.

§ Ibid.

T 4

The duty, as first imposed on beer, in 1660, by the 12th Charles II., and granted to him for life, was 2s. 6d. per barrel on strong, and sixpence on table beer. This revenue was *farmed* till 1684, when it was placed *under commissioners*. For some years previous to that time it was managed by George Darkwood and partners. In 1688, the excise on this article, clear of all deductions, amounted to £666,383.* By the 5th of William and Mary, in 1694, the duties were raised to 4s. 9d. on strong, and 1s. 3d. on table beer; but the products were not so great, and they afterwards continued to fluctuate according to the change of the duties. The increase of population and the habits of the people have now rendered the consumption of this beverage prodigious; and notwithstanding that the duty at present is 10s. on every barrel exceeding 16s., and 2s. on every barrel of 16s. or under, the *net* amount of last year's revenue (1821) came to £2,549,620 18s. 9½d.†

In 1504, ale was sold in England at three-pence per gallon; and it was about twenty years after, that *hops* were introduced, which is thus noticed by an early writer—

“ *Hops*, reformation, bays, and beer,
Came into England all in one year.”

The use of this plant in malt liquor was derived from Artois; and some say, though perhaps in-

* Hist. Rev. p. 281.

† Parl. Paper.

correctly, that this circumstance first gave that drink the name of beer, to distinguish it from the ancient and softer malt liquor called *ale*. Yet it is certain that beer, as a beverage, from malt was known and used by that name long before. Hops were planted and grown in England in abundance in the reign of James I. *, though as early as the time of Edward VI. land was *set* for their cultivation.† The great supply, however, was drawn from abroad until 1690, when, to encourage the home plantation, a duty of 20s. per cwt., over and above all other charges, was put upon what was imported; and in 1710, the duty of one penny per pound was imposed upon all hops reared in England, and three-pence on foreign.‡ In a note subjoined is given the annual amount of the duty on this article, from 1745 to 1819 inclusive, calculated at the rate of one penny per pound, or 9s. 4d. per cwt., to the year 1801, from which date it is made up at the rate of two-pence per pound, or 18s. 8d. the cwt.§

* Hume, vol. vii. p. 242.

† 5 & 6 Edw. 6. c. 5.

‡ 9 Anne, c. 12.

§ Duty referred to above, viz. :

	£	s.	d.		£	s.	d.
1745	34,635	0	0	1753	81,000	0	0
1746	91,879	19	6	1754	112,000	0	0
1747	60,000	0	0	1755	82,157	0	0
1748	87,000	0	0	1756	48,106	0	0
1749	36,305	19	1	1757	69,713	0	0
1750	65,000	0	0	1758	72,896	0	0
1751	73,954	0	0	1759	42,115	0	0
1752	79,000	0	0	1760	117,992	12	4

(continued.)

The gross revenue on hops for 1821 was £241,303 4s. 2½d., and the *net* amount £221,372 17s. 11½d.*

Hops yield a crop of great uncertainty, and attended with much risk to the cultivator; for which reason, although this plant appears to give encouragement to agriculturists, from the fact of

Table—continued.

	£	s.	d.		£	s.	d.
1761	79,776	13	6	1791	90,059	1	10
1762	79,295	14	1	1792	162,112	19	5
1763	88,315	16	7	1793	22,619	13	4
1764	77,178	1	4	1794	203,063	2	0
1765	73,778	7	6	1795	82,342	19	5
1766	116,445	14	6	1796	75,223	17	8
1767	25,997	9	8	1797	157,458	11	10
1768	114,002	0	0	1798	56,032	1	6
1769	16,201	11	7	1799	73,279	15	3
1770	101,137	2	11	1800	72,928	7	7
1771	33,143	5	5	1801	241,227	8	6
1772	102,050	4	2	1802	33,616	7	1
1773	45,847	12	10	1803	433,054	11	0
1774	38,887	1	0	1804	386,124	19	5
1775	41,597	0	0	1805	57,158	17	7
1776	125,691	0	0	1806	266,265	14	7
1777	43,581	13	2	1807	174,037	16	10
1778	159,891	2	10	1808	437,697	7	3
1779	55,800	0	0	1809	111,223	9	3
1780	122,724	4	4	1810	127,851	0	10
1781	120,218	9	10	1811	273,192	19	7
1782	14,895	12	5	1812	53,151	4	10
1783	75,716	14	4	1813	228,665	3	2
1784	94,359	17	8	1814	243,986	12	4
1785	112,684	5	9	1815	215,441	8	4
1786	95,973	14	8	1816	80,566	11	10
1787	42,227	3	4	1817	115,690	13	0
1788	143,168	0	0	1818	346,896	16	6
1789	104,063	7	4	1819	421,001	18	7
1790	106,841	9	4				

* Finance Accounts, 1822, p. 40.

45,662½ acres * being devoted to its growth in England, yet there might be policy in giving up the duty upon it altogether, as this measure might induce brewers to employ nothing else in the manufacture of their beer, which, from the high impost they may now be induced to do, and certainly no substitute so agreeable and wholesome has yet been discovered.

The trade in malt liquor in England employs an immense capital, since, besides what is consumed in the country, large shipments are annually exported. In another part of this essay, where the exports to India and China are stated, will be found an account of the quantities of this commodity sent to those countries. The following is the aggregate of the exports of strong beer for five years, ending 5th April 1822; viz.

For the year 1818	-	-	-	78,871 Barrels.
1819	-	-	-	78,100
1820	-	-	-	47,102
1821	-	-	-	58,246
1822	-	-	-	63,348 †

The brewing of porter, a drink which chiefly differs from ale and beer by being made with higher dried malt, commenced some time about the year 1722. The discovery of it is attributed to a person of the name of Harwood, who, to avoid the

* Parl. Paper, 1822, No. 282.

† Parl. Paper, No. 571. 1822.

trouble of mixing beer, ale, and two-penny, a species of drink then in demand, contrived to brew a liquor which would answer the same end; and from its being purchased by porters, and such like persons, it was ever afterwards distinguished by the name of *porter*. In the manufacture of this beverage the English have not been excelled by any other nation, although it is imitated in most of the countries of Europe. The water of the Thames is said to be superior to any other for the making of it; but Mr. Richardson alleges that this is a mistaken idea, as some of the principal brewers find the New-river water equally good. The specific gravity of the former is 1000.3, and its spissitude 1000.182, while the specific gravity of the latter is 1000.3, and its spissitude 1000.344. *

It is said that the annual quantity of porter brewed in London exceeds 1,316,345 barrels, of 36 gallons each; and that of porter and ale the consumption in the metropolis amounts to 2,000,000 of barrels. This vast supply is chiefly drawn from the breweries within the city, which, in respect to size, style of building, and ingenuity of operations performed in them, are not surpassed, nor indeed equalled, by any other establishments of the kind in the world †. Subjoined is a statement of the porter

* Vide Treatise on Brewing.

† Some of the vats in the breweries are of enormous size. One for holding porter in Meux's is said to be $65\frac{1}{2}$ feet in diameter, and $25\frac{1}{2}$ altitude. It contains 20,000 barrels.

brewed by some of the principal houses in London, for two years, ending 5th of July in each period; viz.

	From 1816 to 1817.	From 1822 to 1823.
	Barrels.	Barrels.
Barclay, Perkins, and Co. -	281,484	351,474
Truman, Hanbury, and Co. -	168,756	219,127
Whitbread and Co. -	151,888	213,841
Reid and Co. -	157,131	190,078
Combe, Delafield, and Co. -	110,776	140,209
Felix Calvert and Co. -	98,301	107,858
Henry Meux and Co. -	124,468	103,499
Goodwin and Co. -	60,307	72,076
Elliott and Co. -	55,163	61,619
Taylor and Co. -	42,980	58,763
Cross and Co. -	25,756	19,501

The revenue arising from the breweries in England, as already noticed, is of great importance to the state, not only from the duty imposed on beer, but from that on malt, of which such immense quantities are annually consumed by the brewers. In the year ending the 5th April 1821, the number of bushels of malt charged with duty, amounted to 26,906,810, and for 1822 they were 25,635,852. * The duty of 2s. 6d. a bushel on this article for the year 1821 yielded a *net* revenue of £4,810,524 8s. 0½d.

Some have maintained, that by taking off the duty on beer altogether, an increase of revenue would follow from the increased use of that beverage,

* Parl. Paper, No. 485, 1822; and Parl. Paper, No. 467, 1821.

and from a consequent increase in the consumption of malt; but without entering farther into this speculation, it may be safely observed that an experiment of that kind might tend to deteriorate the article considerably, by placing its manufacture in the hands of men who would probably take advantage of the public, in the absence of the existing regulations, which require beer to be made from malt and hops alone, by substituting raw grain in lieu of the former article.

As to *wine*, it was always held in such high estimation that the importations were carried on extensively. So early as the time of Edward the First, who mounted the throne in 1272, a duty of two shillings was imposed on every tun imported into England, in lieu of the ancient impost called *prisa*ge.* This tax afterwards obtained the name of *butlerage*, because it was paid to the king's *butler*. The English at this period were much addicted to habits of inebriety, and spent a great proportion of their incomes in riotous feasts, where eating and drinking were carried to excess, without any elegance. According to Hollinshed, the strongest wines were in the greatest request, while claret and other weak wines were scarcely thought of. The most delicious were always to be found in the monasteries, the merchant fearing that his soul would go straightway to the devil if he should serve the monks with any other than the best.

* Hist. Revenue, p. 40 and 94.

Wine was so abundant, that in 1392, when Richard the Second, after a long absence, was received in London by the citizens with great demonstrations of joy, the very conduits in the streets, through which the cavalcade passed, were allowed to run with every variety of this beverage. * In the time of Henry the Eighth it was used at breakfast with beer, and we are told that a quart of each was the usual quantity served to two persons. Up to the period of the revolution the principal supply was brought from France, at which time, according to the report of the commissioners of trade and plantations, not less than 20,000 tuns were the imports for one year. The duties on these wines in 1713 were as high as £24 per tun. From 1770 to 1782 they were from £60 to £96. On other wines the duties were upwards of from £30 to £45 per tun. During the four last years of this period, the average quantity imported appears to have been 14,094 tuns, while the re-exportation was 2,006, leaving a balance of 12,000 tuns for the consumption of the country. For an account of the quantities of wine imported into England during a series of years, the reader is referred to such parts of this essay as treat of the wine countries of Europe, &c. The subjoined is the aggregate of all sorts of wine imported for two periods of

* Vide Maitland.

seven years, from 1771 to 1782, and from 1801 to 1822, with the custom duty thereon ; viz. *

Year.	Gallons.	Duty.		
		£	s.	d.
1771	4,252,396	486,386	18	5
1772	3,930,612	447,811	4	1
1773	4,140,831	471,386	6	0
1779	3,215,593	458,879	17	0
1780	5,169,693	789,531	9	1
1781	3,354,581	593,081	3	0
1782	2,467,371	453,574	8	5

Year.	Gallons.	Duty.		
		£	s.	d.
1801	8,908,691	988,477	4	7
1802	7,350,497	1,046,307	12	1
1803	9,059,018	996,844	1	0
1819	5,518,597	761,512	11	6
1820	5,421,838	765,773	19	6
1821	5,748,376	759,675	3	6½
1822	6,517,325	756,366	8	11

Of these wines, which include French, Spanish, Canary, Portugal, Madeira, Rhenish, Cape, Sicilian, &c., the exports were in the same years as follows †;

* Parl. Paper, No. 239, 1823 ; et Princip. Taxation, 8vo.

† Parl. Paper, No. 239.

Year.	Gallons.	Year.	Gallons.
1771	364,659	1801	955,342
1772	347,646	1802	614,178
1773	612,883	1803	600,027
1779	428,348	1819	930,469
1780	862,523	1820	1,105,457
1781	444,760	1821	1,256,338
1782	286,772	1822	985,729

From this it would appear that the consumption of foreign wines legally imported, for a population of 11,978,875 persons, only amounts, on an average, to 6,010,971 gallons, and of this quantity, 40,000 pipes are said to be annually consumed in London alone, which, at 126 gallons the pipe, may be estimated at 5,040,000 gallons for the inhabitants of that city, the number of whom, in 1821, were returned at 1,274,800 souls. The high price of foreign wine has induced many to have recourse to the manufacture of home-made wines, which of late years has been carried to great extent and perfection.

The quantity of home-made wines which have been charged with the duty of excise in England for the last fifteen years, is stated to be,

		Barrels.	Gallons.	£	s.	d.	
Years ended 5th July *	1806	11,893	29	29,139	11	0	Duty.
	1807	10,191	12	24,968	18	5	
	1808	11,951	17	29,281	6	2	
	1809	13,699	28	33,564	16	3	
	1810	11,669	10	28,589	18	4	
	1811	12,403	9	30,388	1	7	
	1812	7,104	14	17,405	18	11	
	1813	12,215	26	29,928	15	8	
	1814	11,707	14	28,683	6	6	
	1815	13,983	14	26,583	12	5	
	1816	5,656	2	13,857	7	7	
	1817	2,538	12	6,214	11	8	
	1818	8,703	20	14,216	0	10	
	1819	9,439	30	15,417	0	5	
	1820	4,420	26	7,224	0	1	
To 5th Jan.	1821	1,105	7	1,805	7	11	

In 1822 the revenue derived from imported wine amounted to £962,570, and in 1823 to £962,397.

With respect to distillation, the spirit of enquiry which had influenced all Europe in the vain search after the philosopher's stone, was in England productive of some good effects; as the discoveries of Friar Bacon, who lived in the thirteenth century,

* Appendix to 2d Report, No. 706, 1821.

fully prove. But to the efforts of Albertus Magnus, Arnoldus de Villa Nova, Raymond Lully, and others, we are indebted for an early and practical knowledge of the chemical labours of the Arabians, whose indefatigable researches first laid open to European investigation the sources from which *aqua vite*, or the great elixir of life, might be drawn. In England, for a long period, the progress of the manufacture of that cordial was slow, and, like the product of the alembic in other parts of the world, was sold in the shops of the apothecaries as a medicine. France, for a series of years, was the great still-house of Europe, as her wines afforded a constant supply for the distillation of brandy; but as the knowledge of agriculture advanced, and grain became plentiful, the demand for that spirit diminished, and the home manufacture at length attained to such importance, that it was taxed with a duty of two-pence per gallon, in the reign of Charles the Second. At first it was thought expedient to lay the duty on spirits of the first extraction, or, as they were termed, *low wines*, and the early returns of the English distillery are made up in that way.

The produce of all the stills in England in 1694 amounted to 1,885,752 gallons of *low wines*, or 754,300 gallons of spirits*, and in 1743 it had in-

* Calculated by the Irish mode of computation.

creased to 12,498,800 gallons of *low wines*, or 4,999,520 gallons of spirits. The duties, in 1751, were raised to four-pence on the gallon of low wines, and to one shilling on the gallon of spirits. The manufacture decreased in consequence, and the produce was only 11,200,000 gallons of *low wines* in that year. The duties were also raised in 1760, and then amounted to 9*d.* on the gallon of low wines, and 2*s.* 3*d.* on the gallon of spirits, equal to 36 $\frac{3}{4}$ *d.* on the gallon of potale, or wash. These high and increasing duties tended to decrease the operation of the stills; for we find that in 1783, the whole amount of spirits charged with duty in England, was only 1,364,801 gallons. In 1785, the contents of the stills which worked from the raw material, amounted to 223,877 gallons, exclusive of those of rectifiers, amounting to 159,852 gallons. The revenue then arising from the gross distilleries was £324,895 9*s.* 1*d.* In 1802, it was estimated at £500,000, and on the 5th January 1812, it amounted to £505,015. In 1822 the duty on *British spirits* came to £3,246,076, and in 1823 to £3,201,065.—Annexed is a statement of the spirits made in England from 1760 to 1779, contrasted with a like period from 1802 to 1821, inclusive; viz.*

* Parl. Paper, No. 692 and 160, sess. 1821 and 2.

Year.	Gallons.	Year.	Gallons.
1760	770,208	1802	3,177,311
1761	2,714,119	1803	4,625,954
1762	2,172,869	1804	2,842,650
1763	1,997,744	1805	3,159,607
1764	1,970,827	1806	2,686,054
1765	1,982,865	1807	3,984,115
1766	2,245,130	1808	4,282,971
1767	1,759,420	1809	3,685,456
1768	1,905,561	1810	4,333,334
1769	2,263,107	1811	4,565,159
1770	2,340,376	1812	4,317,359
1771	2,276,063	1813	4,258,187
1772	2,362,233	1814	4,076,837
1773	1,993,297	1815	3,778,421
1774	1,785,982	1816	3,471,962
1775	2,253,507	1817	3,720,634
1776	2,201,011	1818	3,770,422
1777	2,325,435	1819	3,657,217
1778	2,792,791	1820	3,058,622
1779	2,604,980	1821	3,053,351

The imports of foreign spirits from an early period were very considerable, and in the time of Elizabeth they were of such importance, that they ranked among the commodities bestowed by the crown on individuals who had distinguished them-

selves either in civil or military employments.* In the subsequent reigns, till the time of Charles the second, they were subjected to various changes and regulations, a detail of which could afford but little interest to the general reader. The following is a pretty correct view of the imports from 1684 to 1691, and from 1770 to 1782, contrasted with the imports from 1815 to 1822 ; viz.'

Year.	Gallons.	Year.	Gallons.	Year.	Gallons.
1684	1,248,381	1770	611,454	1815	3,883,449
1685	1,414,614	1771	649,764	1816	3,260,645
1686	915,429	1772	534,107	1817	3,267,520
1687	1,171,680	1773	575,954	1818	3,319,200
1688	1,438,783	1779	703,081	1819	3,546,310
1689	1,989,165	1780	873,840	1820	3,520,172
1690	333,381	1781	709,433	1821	3,446,048
1691	101,613	1782	735,537	1822	3,226,648†

It is to be observed, that the items in the first column are altogether brandy, the second is composed of that spirit, arrack and geneva, while the third and last is principally made up of rum, a liquor which has been for many years in great de-

* Hist. Revenue, p.183.

† Parl. Paper, No. 584, session of 1822.

mand in England. The average annual import from 1815 to 1822, for rum, is 2,618,681 gallons, and for other spirits, 953,167 gallons. The duties derived from rum were, for the years

	Customs.	Excise.	Total.
	£	£	£
1819	151,790	1,625,045	1,776,835
1820	150,963	1,603,966	1,754,929
1821	149,598	1,534,814	1,684,412
1822	141,474	1,435,010	1,576,484
1823	132,010	1,391,470	1,523,480 *

On all foreign spirits imported into *Great Britain* the revenue in 1822 came to £2,301,081 ; and in 1823, to £2,318,279. The aggregate of all the rum brought into Great Britain from the several colonies and countries from which the same was imported, from 5th January 1808 to 5th January 1822, is thus stated. †

1809.	1810.	1811.	1812.	1813.
Gallons.	Gallons.	Gallons.	Gallons.	Gallons.
5,985,258	6,530,149	5,582,805	6,998,853	6,469,226

* Parl. Paper, No. 84, session 1823.

† Ibid. No. 218, session 1822.

1814.	1815.	1816.	1817.	1818.
Gallons. 9,200,285	Gallons. 8,569,067	Gallons. 6,817,134	Gallons. 3,887,102	Gallons. 6,355,230

1819.	1820.	1821.	1822.
Gallons. 5,482,571	Gallons. 6,386,514	Gallons. 7,035,909	Gallons. 7,127,131

As an important share of the imports of this colonial product is re-exported, it may not be uninteresting, or improper, to give a detail of the countries to which it is sent, and the quantity to each, in the same period. *

Years.	Russia.	Sweden.	Norway.	Denmark.	Prussia.
1809	678	138,745	- -	2,427	—
1810	69,853	564,412	6,534	5,953	44,521
1811	48,177	252,861	16,919	9,539	65,503
1812	12,131	7,328	83,505	27,509	1,195
1813	26,666	410,796	106,843	47,071	8,543
1815	30,752	277,564	19,605	74,350	339,775
1816	42,802	33,306	32,464	169,913	251,540
1817	29,956	2,106	22,947	28,906	466,173
1818	48,323	-	21,279	53,422	426,875
1819	27,752	3,219	52,477	189,884	367,629
1820	89,132	1,255	1,241	44,227	363,813
1821	770,759	353	9,599	118,712	465,409
1822	31,858	-	1,564	189,369	461,983

* Parl. Paper, No. 218, sess. 1822. The records for the year 1814 were destroyed by fire.

Years.	Germany.	Holland.	Flanders.	France.	Portugal.
1809	1,318	-	-	-	3,683
1810	17,178	8,696	-	-	10,310
1811	30,154	-	-	-	38,100
1812	21,843	-	-	-	371,215
1813	27,863	-	-	-	47,582
1815	993,517	126,149	100,925	29,396	5,211
1816	1,061,313	83,478	326,448	572	12,626
1817	825,923	88,867	60,138	10,826	24,254
1818	1,112,943	194,894	230,474	587	2,411
1819	904,663	90,188	166,664	302	561
1820	791,072	24,980	15,590	187	776
1821	911,936	57,874	52,531	334	827
1822	864,556	123,963	39,669	21	889

Years.	Spain.	Italy.	Malta.	Gibraltar.	Ionian Islands.	Turkey and the Levant.
1809	2,697	350	8,539	18,405	-	-
1810	4,591	1,679	42,161	15,504	-	2,400
1811	7,800	-	35,876	54,410	-	7,134
1812	32,528	3,491	138,159	96,904	-	964
1813	52,830	4,918	66,684	139,435	-	5,297
1815	384,080	140,350	78,902	43,595	3,644	46,600
1816	2,776	77,257	32,236	13,076	-	46,764
1817	6,812	25,432	30,065	22,502	-	12,564
1818	9,454	180,678	14,628	38,630	-	37,251
1819	14,484	249,032	40,669	62,219	1,861	42,784
1820	6,779	82,517	15,166	19,370	116	57,716
1821	4,887	101,097	24,634	23,945	-	83,116
1822	9,238	206,429	20,231	16,055	1,073	87,208

Years.	East Indies and China.	New Holland.	Cape of Good Hope.	Other Parts of Africa.	United States of America.
1809	76,555	1,266	825	38,861	26,270
1810	43,034	.	5,777	33,098	960
1811	65,014	3,214	2,069	23,101	6,641
1812	68,838	105	4,108	18,454	222
1813	57,097	10,338	4,337	55,302	110
1815	56,415	110	19,872	75,455	—
1816	68,985	3,641	13,562	86,269	112,371
1817	56,571	2,728	8,684	32,725	34,544
1818	57,592	902	11,372	32,260	37,932
1819	43,400	374	7,830	70,060	48,049
1820	38,462	7,160	18,071	68,948	13,219
1821	31,078	39,079	11,861	94,062	11,195
1822	43,019	9,631	13,636	84,034	148,961

Years.	British Colonies in North America.	West Indies.	Foreign Colonies, Continent of America.	Whale Fisheries.	Ireland and Isles of Guernsey, Jersey, Alderney and Man.
1809	54,383	23,710	10,285	3,054	739,028
1810	229,228	34,793	7,425	1,215	914,338
1811	226,449	34,379	10,294	3,950	204,144
1812	304,162	21,805	7,575	2,850	442,809
1813	421,567	48,091	8,558	5,876	615,735
1815	890,219	95,028	8,961	8,608	84,197
1816	968,736	24,798	18,125	7,382	98,592
1817	838,785	51,607	13,232	7,274	74,242
1818	537,447	28,276	12,617	9,668	46,318
1819	636,061	35,781	21,996	10,152	69,212
1820	596,215	35,828	25,160	9,914	70,831
1821	763,807	36,190	38,984	11,776	67,726
1822	551,097	50,696	47,352	12,963	142,555

Total rum exported to all parts :

1809.	1810.	1811.	1812.	1813.
Gallons. 1,151,079	Gallons. 2,063,660	Gallons. 1,145,728	Gallons. 1,667,700	Gallons. 2,171,539

1815.	1816.	1817.	1818.
Gallons. 3,933,280	Gallons. 3,589,032	Gallons. 2,777,863	Gallons. 3,146,233

1819.	1820.	1821.	1822.
Gallons. 3,157,303	Gallons. 2,397,747	Gallons. 3,731,771	Gallons. 3,158,050

Having given a brief view of the nature and extent of the spirit, wine, and beer trade in England, it only remains to make a few remarks on the present mode of distillation in that country, premising that, so far as regards the manufacture, the law is very explicit.

There is no working against time, as has been the practice elsewhere. The great object is to make strong worts, which have to ferment, so as to attain the greatest possible attenuation. In order to prevent fraud, it is directed that for every 100

gallons of fermented worts, nineteen gallons of spirits should be produced, that quantity being deemed the maximum which any worts are capable of yielding. Hence it became a matter of great moment to the English distillers, to make their worts of the greatest density, always keeping in view a perfect fermentation.

At present the average gravity of worts brewed from a mixture of malt and barley is in all from 100 to 120 pounds of saccharine matter per barrel. But part of this gravity is made up from a mixture called *lob*, which is a powerful and strong saccharine, made from barley and malt flour, which is added to the brewing of the common worts. This mixture, although so high in gravity, is yet generally well fermented, being cut down so low as from six to two lbs. on Dicas's instrument. This attenuation is accomplished generally in the space of from ten to fourteen or twenty days at most. When perfectly fine, it is put into the wash still, and distilled into *low wines*. These are afterwards put into the low wine still, and made into *spirits* and *feints*.

The mere working of these stills is a simple mechanical process, to perform which, from their great size, there is plenty of time. The average charge of a *wash still* is from 10 to 20,000 gallons of wash at once, and the charge of the *low wine still* is the produce of the wash from the *wash still*.

From this it will be seen, that the particular skill requisite in conducting a distillery in England

to advantage, relates to the brewing of strong worts, and to the proper fermenting of them, a sort of knowledge which has absolutely become a science in the hands of those who possess it.

Of the laws under which the spirits are made, the following may be taken as an abstract. In the first place there are preliminary formalities respecting notices for brewing, &c. When the worts are placed in a wash-back, they are carefully gauged, and the quantity ascertained with the greatest nicety. Worts, either as such, or as wash, cannot be removed from a back under a severe penalty, except when a notice is given to the officer to charge the wash still, in which notice the number of the back or backs must be mentioned. This notice must be given at least six hours previous to the charging of the still. At the proper time the officer comes to the distillery with a bunch of keys to open the following locks, viz. the lock or locks of the back or backs to be emptied, then the lock of the wash pump, a conveyance from which goes to the wash still, at the end of which conveyance, near the still, there is a cock, the lock of which is also taken off, and which eventually admits the wash into the still. This operation generally occupies from one to four hours, and always in presence of the officer, who has previously taken stock.

After the wash still is charged, which must be with less than three-fourths of its content, the locks

are again replaced and sealed up, and then the officer takes stock a second time, to ascertain the decrease of wash in the backs, which is compared with the increase in the still, and is commonly found to correspond. Such decrease stands as a charge against the distiller.

This being done, the officer locks the discharge cock and unlocks the furnace door of the still, which may then be said to be at work. During the working of the charge, one or two officers call to see the process going on, and when the still is completely off, they either re-charge under a previous notice as before stated, or if no notice of charging is served, they lock up the furnace door, and the discharge cock of the still is opened. The same locking and unlocking takes place in the case of the *low wine* still. The produce of this still is divided into two parts, *spirits* and *feints*, which run into separate vessels properly secured; and when the distillation of the low wine still is completed, the officer takes an account of the quantity and strength of the spirits and feints, calculating them into spirits at the strength of seven per cent. over proof, by Sikes's hydrometer; after which the spirits are sent into the general stock of the house, and the *feints* are run into the next, or next succeeding charge of the wash still, and both vessels *being emptied* are again locked up, to receive a fresh produce from the low wine still.

The duty is charged upon wash only, and at the rate of two shillings per gallon, which at nineteen per cent. produce, makes 10s. 6d. on the gallon of spirits. A return of the wash distilled in the course of one week is made to the collector on the succeeding Monday, and the trader must pay the same at a period not later than eight days. Those duties are immensely heavy, the average weekly amount of each distillery in England, being from three to ten thousand pounds. In that country no bonding of spirits for the duty is allowed; and this regulation has tended much, if not entirely, to keep the trade in very few hands.

The gross distillers in 1820, with the quantity of spirits made by each, are subjoined*; viz.

			Gallons.
Castle and Company	-	Bristol	368,307
William Booth	-	Stanstead	77,695
Currie and Company	- }	Bromley	816,042
Baker and Company	- }	Ditto	—
Currie and Company	- }		
Metcalf and Company	- }		
William Booth	-	Brentford	372,711
Leafer and Company	-	Battersea	377,561
Jno. Williams	-	Worcester	67,834
Samuel Bawtree	-	Colchester	104,481
Isaac Holmes	-	Liverpool	—
Richard Blundell	-	Ditto	183,385
Liptrap and Company	-	London	373,831
Cooke and Company	-	Ditto	316,775
Bishop and Company	-	Maidstone	—

* Parl. Paper, No. 692, 1821.

It must be observed, that English spirits, although made from very fine materials, yet, on account of the richness and grossness of the wash rendered necessary by the nineteen per cent. produce, are unsaleable to the public at large, the quality of the spirit being too coarse and harsh. Accordingly a new set of traders, denominated rectifiers, are called into action, between the distillers and the consumers. These rectifiers re-distil the spirit with the addition of certain drugs and compounds, such as juniper-berries, spirits of turpentine, &c. &c., with which they make a sort of compound called British *gin*, or else, with spirit of nitre, prunes, &c. make an imitation of *brandy*, or manufacture spirit of wine or alcohol for the use of druggists, &c. The following are the names of the rectifiers in England in 1821, with the quantity of British and Irish spirits received by each in that year *, viz.

		Gallons British.	Gallons Irish.
John Adams -	Reading -	12,355	—
Edward Bovington -	Windsor -	1,797	—
William Cross -	Chester -	8,661	358
Thomas Whitelegg -	Ditto -	6,931	—
Richard King -	Plymouth -	7,119	—
Fudge and Co. -	Ditto -	19,149	—
John and Thos. Sewers	Exeter -	2,752	484
George Savale -	Colchester -	24,034	—
Lawrence Lazarus -	Leigh -	11,515	1,212
Vernon and Banester -	Tewkesbury -	9,604	—
Robert Haveland -	Cirencester -	1,936	—
Spicer and Co. -	Portsea -	2,415	—

* Parl. Document, No. 692, session 1821.

		Gallons British.	Gallons Irish.
John Eveins - -	Hertford -	3,014	—
Edward Boys - -	Rochester -	8,634	—
Thomas Southern -	Seven Oaks -	2,528	148
William Raven - -	Chatham -	6,324	—
John Brenchley & Son	Gravesend -	9,171	—
Falkner and Atlee -	Deptford -	1,949	—
George Wheelhouse -	Ditto -	6,678	—
Thomas Seddon & Co.	Liverpool -	31,880	39,425
Robert Preston and Co.	Ditto -	158,668	3,750
H. Copeland and Co.	Ditto -	2,754	2,158
E. Milnes and Co. -	Manchester -	26,074	1,635
W. Willett and Co. -	Ditto -	6,724	1,567
W. Fowler - -	Ditto -	12,482	1,427
W. Newall and Co. -	Ditto -	12,466	8,032
Eliza Duckworth -	Ditto -	3,788	2,615
J. Barton and Co. -	Ditto -	24,005	634
George Bennett & Co.	Paik - -	726	1,391
Mary Dackin - - -	Warrington -	6,534	2,918
P. Booth and Co. -	London -	277,054	—
Gordon and Co. -	Ditto -	274,161	13,942
Mark Currie and Co. -	Ditto -	56,992	—
I. Stevenson and Co. -	Ditto -	9,071	—
W. and A. Hood -	Ditto -	20,748	—
J. Woolaston and Co.	Ditto -	10,716	1,589
G. Richards and Co. -	Ditto -	109,917	—
Sedger and Co. - -	Ditto -	276,232	35
J. Deady - -	Hampstead -	44,548	771
H. Taylor - -	Chelsea -	2,269	—
R. Hartwell - -	Ditto -	317	—
J. Wood - -	Newcastle- on-Tyne }	627	393
Robert Boucher -	Earsham - -	9,638	707
E. Square - -	Norwich -	7,950	—
W. Hill - -	Mardell -	5,025	—
C. Horner and Co. -	Aldridge -	590	—
F. Castle - -	Bristol -	177,171	2,298
J. Shute and Co. -	Ditto -	31,208	8,763
J. Dyer and Co. -	Ditto -	4,446	—
J. Roche - -	Ditto -	4,831	8,770
W. Jackson - -	London -	31,310	67
S. Burns - -	Ditto -	30,367	2,739

		Gallons British.	Gallons Irish.
T. Gaitskill and Co. -	London	68,057	—
James Bishop and Co. -	Ditto	104,245	774
John Graham and Co. -	Ditto	—	603
J. Jaques -	Ditto	—	494
T. Davies, Marc & Co. -	Ditto	68,676	—
J. Wyatt & Co. -	Ditto	55,666	—
Edward Burbidge & Co. -	Ditto	55,091	619
J. Nicholson -	Ditto	162,964	581
Thomas Davis -	Ditto	8,621	—
Hodgson and Bailey -	Ditto	25,670	—
Thomas Chappell -	Ditto	17,383	—
E. & E. Scott, Bower- bank -	Ditto	27,918	—
Smith and Goldie -	Ditto	208,679	876
William N. Curtis -	Ditto	16,735	—
Thomas Bird -	Ditto	11,526	—
J. Stein and Co. -	Ditto	3,007	—
J. Crompton and Co. -	Ditto	4,038	—
R. Demain -	Ditto	3,644	4,673
J. Reid -	Ditto	67,132	—
F. Pothonier and Co. -	Ditto	19,358	—
T. Pickford and Co. -	Ditto	14,398	5,543
G. Whitfield and Co. -	Ditto	—	7,980
Holmes and Co. -	Ditto	52,506	—
H. and W. Pounsett -	Ditto	65,788	—
Shirley and Co. -	Ditto	14,779	—
N. Maughan -	Ditto	51,316	—
M. Langdale -	Ditto	144,101	—
J. Bockitt -	Ditto	115,845	433
J. M'Cartney -	Ditto	—	1,259
G. Harrington -	Ditto	24,164	—
E. Swain and Co. -	Ditto	32,342	—
T. Browning and Co. -	Ditto	72,262	1,882
Childs, Vickers and Co. -	Ditto	113,875	—
H. Pigeon and Co. -	Ditto	88,144	8,890
Hodges and Co. -	Ditto	531,523	433
Burnet and Co. -	Ditto	234,548	—
James Forth -	Kingston	6,405	—
W. G. Scott -	Ditto	3,812	—
Thomas Chapman -	Putney	5,151	132

		Gallons British.	Gallons Irish.
W. Chatfield and Co. -	Croydon -	9,759	2,483
H. Cheeseman -	Dorking -	2,177	—
J. Slee -	Brighton -	2,294	—
Hicken and Co. -	Birmingham -	35,885	1,624
G. Dodson -	Lichfield -	912	—
F. Williams -	Worcester -	46,158	—
J. Norman -	Halifax -	2,161	—
J. Sutcliffe -	Ditto -	4,009	261
Ard. Walker -	Leeds -	29,902	—
Skelton Wells -	Ditto -	6,197	—
W. Harrison -	Ditto -	4,135	255
J. Cadman -	Ditto -	6,426	—
C. Scott and Co. -	Ditto -	3,823	—
J. Hagger and Co. -	Sheffield -	1,119	135
Wilson and Son -	Ditto -	3,445	—

All raw spirits, whether manufactured in England, Scotland, or Ireland, must pass through the medium of these traders. If, however, the laws were such as to enable the distiller, in the first instance, to make a pure good spirit, not only would there be a direct supply to the consumer, but the liquor would be far more palatable and wholesome, in its natural state, than when impregnated with such compounds as have been described. In fact, it is evident, that were the English distiller able to make such a spirit as could be drunk in punch, like the Scotch or Irish, the most beneficial effects would ensue: the trade would become prosperous, and an augmented consumption would increase the revenue; there would be a decrease in the consumption of geneva, brandy, and rum,

the produce of foreigners, in relation to that part on which duty is paid; an efficient check would be given to the smuggling of these articles; and lastly, and of the greatest importance, the increased consumption of a superior English spirit would give such an impetus to our agricultural interests; that we as a nation might eventually become exporters instead of importers of this article, or, in other words, of agricultural produce.

Scotland.—The aborigines of Scotland, having been principally shepherds, ignorant of the arts, their drink must have been as simple as their labours, and as limited as their knowledge; but as luxury increased, and the toils of agriculture became irksome, it is natural to conclude, that their inventions in fermented liquors would proportionally advance, and that they would seek to dissipate their care and elevate their spirits by some sort of beverage. This solace they are said to have found in an intoxicating drink, called by their poets “the joy of the shell.”*

The ancient inhabitants, we learn, made a liquor by bleeding the *birch trees*, which were common in the country. They also fermented a beverage with honey, bees being very plentiful in the woods; and *mead*, a drink of the same description, is still used in the western parts of the kingdom. In process of time, when grain

* Ossian, vol. ii. p. 9; and Transact. of the Society of Antiq. Scotland.

became abundant, they brewed an ale which was called *loin*, a word signifying provisions. Some say they made a drink from the juniper, and others that they made one from heath. But at this remote period, it would be both idle and unprofitable to endeavour to determine a matter so unimportant, and concerning which there are, we believe, no records. Yet, it is reasonable to presume, that the Scotch were not less expert than their neighbours in the preparation of all those liquors which were common to other nations in the same circumstances. We shall not attempt to trace the progress of their inventions in this respect, but descend to modern times, in which we have certain data and unquestionable information.

In 1272, a duty by gauge was placed upon wine; but it is not until 1482 that we find the manufacture of beer or ale in Scotland noticed by the government, although it abounded in that country long before.* At the union a duty was introduced similar in point of regulation to that imposed in England. On *two-penny ale*, which was the principal *malt-drink* in use at the time, it was rated at 2s. 1½d. per barrel. Several alterations followed, but, in proportion to the advance of duty, the work of the brewery decreased. In 1760 the excise stood at 3s. 4½d. per barrel. For

* Acts, Jac. 3. c. 89.

the purpose of exhibiting the progress of the beer trade in Scotland, the quantity brewed for periods of five years in different reigns is subjoined ; viz.

Anne.		George I.		George II.	
	Two-penny. Barrels.		Two-penny. Barrels.		Two-penny. Barrels.
1709	449,625	1720	520,487	1755	294,630
1710	432,129	1721	490,626	1756	297,802
1711	452,523	1722	491,152	1757	261,890
1712	487,172	1723	462,089	1758	231,544
1713	504,830	1724	492,043	1759	268,497

George III.		George III. and IV.		
	Two-penny. Barrels.		Strong Beer. Barrels.	Table Beer. Barrels.
1779	152,465	1817	111,159	205,976
1780	160,233	1818	108,947	192,433
1781	159,760	1819	123,644	209,379
1782	138,233	1820	116,299	207,009
1783	110,230	1821	123,448	206,171*

From these tables it would appear that the average quantity of *two-penny ale* brewed in Scot-

* Parl. Paper, No. 486, printed 1822. Princip. Taxation.

land in any one year of the two periods from 1709 to 1724 exceeds by 157,869 barrels the *strong and table beer* made on an average from 1817 to 1821, a proof that the tax on this article has been raised too high, and that the taste of the people is more disposed to the use of other beverages.

The regulations under which this liquor is made are various. Every brewer is obliged to keep a book, in which he must enter the quantity of malt intended to be brewed, with the day and hour he purposes to mash the same, nor is he authorized to remove the grains from the kieve until they have been examined by the proper officer. After the mash has been completed, the gravity of the worts is ascertained and minuted accordingly, so that the strength and quality of the beer may be known and charged with the duty.*

The *gross* amount of the revenue raised on beer in Scotland in 1821 came to £84,847 6s. 10½d., and the *net* sum to £71,324 0s. 2½d.† The quantity of malt made in 1821 amounted to 1,299,497 bushels, and in 1822 to 1,347,431 bushels.‡ The gross revenue in 1821 came to

* 1 & 2 Geo. 4. c. 22.

† Finance Accounts, 1822, p. 41. The produce of the excise on beer in Great Britain, for 1822, came to £2,711,006; and in 1823, to £2,892,577.

‡ Parl. Paper, No. 512, 2d July 1823. These accounts are made up from 5th July of one year, to the same date of the next year.

£225,973 15s. 2½d., and the net to £209,304 14s. 6½d.*

The following are the quantities of wine which paid the duties of excise since it first came under survey in Scotland, in 1786, to the year 1822, with the export and drawback thereon for the same period; viz.†

	Import.				Export.			
	Gallons.	£	s.	d.	Gallons.	£	s.	d.
1787	295,338	19,571	13	4	19,324	1,107	9	3
1788	569,746	29,287	14	2	41,819	1,816	17	10
1789	421,684	21,119	6	0	35,567	1,480	10	8
1790	503,257	25,410	4	9	47,042	1,904	14	7
1791	635,362	32,052	8	5	72,580	2,881	3	8
1792	598,941	29,588	0	6	61,820	2,422	8	3
1793	513,381	25,186	3	9	57,782	2,270	4	6
1794	438,639	21,182	2	9	61,690	2,350	10	6
1795	317,014	44,058	1	10	27,721	1,312	10	5
1796	474,309	60,739	3	11	63,677	4,328	17	4
1797	367,664	66,281	10	2	65,542	5,634	13	11
1798	286,029	36,693	15	10	59,694	6,460	15	0
1799	569,319	60,113	5	4	77,525	9,438	17	11
1800	652,830	83,631	5	5	49,251	5,939	11	9
1801	366,656	47,319	1	8	48,823	5,879	16	5
1802	553,548	71,475	14	2	68,593	7,946	1	11
1803	662,081	104,908	3	2	48,330	5,735	3	6
1804	290,261	59,844	18	6	29,768	4,607	18	4
1805	328,914	69,379	4	4	45,381	7,359	10	11
1806	363,086	76,672	18	5	34,013	6,500	17	1
1807	422,248	89,264	7	2	20,502	3,932	15	5
1808	382,279	81,055	15	8	12,294	2,457	18	10
1809	356,943	75,702	6	3	12,654	2,570	1	0
1810	435,917	91,680	17	2	15,218	2,611	5	1
1811	352,158	73,466	1	9	11,911	2,339	8	8
1812	337,157	70,313	1	7	10,177	1,802	9	10
1813	279,650	64,325	2	9	11,594	2,280	1	7

* Finance Accounts, 1822.

† Parl. Rep. No. 703.

	Import.				Export.			
	Gallons.	£	s.	d.	Gallons.	£	s.	d.
1814	286,513	59,841	16	6	11,947	2,536	5	11
1815	347,313	73,847	19	8	15,121	3,048	11	0
1816	298,561	62,326	18	6	12,576	2,439	5	10
1817	301,837	62,489	12	2	10,439	2,117	13	7
1818	394,218	82,281	18	7	13,385	2,677	7	6
1819	393,858	84,178	16	0	12,357	2,477	0	0
1820	313,787	65,442	6	8	10,406	2,067	6	4
1821	331,126	54,710	11	2	—	—	—	—
1822	401,234	55,594	11	6	—	—	—	—

On an average of the imports and exports for the last seven years, the annual quantity of wine left for the consumption of a population of 2,000,000, is not more than 321,408 gallons, being to each individual somewhat better than a pint. Home-made wine is a manufacture not carried to any great extent in Scotland, nor is it an art of much antiquity. Pennant says, that in the year 1635 they began to make some in England from the raisins or dried grapes of Spain and Portugal, and that one Francis Chamberlayne had succeeded so well that he obtained a patent for the manufacture of such wines for fourteen years. * The author of the *Tatler* complained that in his day they could squeeze Bourdeaux out of the sloe, and draw Champagne from an apple. † The manufacture has certainly been very successfully pursued by the English, since it is estimated that one half of the port and five-sixth of the white wines consumed in Lon-

* Pennant's London, 8vo. p. 33. † *Tatler*, vol. iv. No. 131.

don are the produce of the home presses. The Scots, like the Irish, are more partial to spirits than wines of this description. The home-made wine which paid the duty in Scotland for the last fifteen years appears to be *

		Bar.	Gal.	£	s.	d.	
Years -	1806	11	8	27	1	3	Duty.
	1807	13	0	31	17	0	
	1808	10	0	24	10	0	
	1809	32	28	80	10	10	
	1810	13	15	33	1	6	
	1811	34	27	85	8	8	
	1812	44	8	108	8	3	
	1813	116	29	286	9	6	
	1814	89	11	218	19	1	
	1815	188	17	462	13	1	
	1816	64	2	156	19	3	
	1817	55	0	134	15	0	
	1818	44	30	73	8	3	
	1819	72	0	153	10	8	
	1820	17	1	27	16	5	

Both in England and Scotland it may be observed that the consumption and export of wine has been rather on the decline for some years past, a circumstance attributable to several causes, but chiefly to the excess of duty and port charges, which places

* Parl. Report, No. 703.

almost all descriptions of wine beyond the reach of even the middling classes. The improved quality and low price of spirits have also materially contributed to this diminution.

In reviewing the Scotch system of distillation, and comparing it with the English, we find the difference to be very considerable. At the union, in 1707, the duty on spirits was much the same as that levied in England. The whole quantity made in the year 1708, the earliest date of any regular account for Scotland, was 50,844 gallons. The manufacture rapidly increased until the year 1756, at which period the distilleries yielded 433,111 gallons of spirits; an additional duty was then put upon the spirits, and the quantity decreased accordingly. About twenty years after, (in 1776) commenced the export to England, which again increased the manufacture.

The mode of collecting the duty in Scotland, till the end of the year 1784, was by an actual account and survey of the quantity of *wash*, *low wines*, and *spirits* made by the distiller. From the first of Nov. 1784 the whole duty was rated on the wash thus; for every 100 gallons, the distiller was allowed a credit in his spirit stock for 20 gallons, *one to ten* over hydrometer proof. The same regulation was established at that time in England, but in Scotland it only continued for about two years, and in 1786 gave way to the licence system. By this plan, the distillers in the lowlands were charged

at the rate of £1 10s. per annum on every gallon contained in each still; and in the highlands, only £1; the still in the latter place was limited to a certain size, and the spirits to be made were not to exceed a defined quantity, while a line of demarcation was drawn for the sale of their respective spirits. At that time it was thought that a still could not be worked more than from four to seven times in the week. It was discovered, however, that the distiller could work with greater dispatch, and make a larger quantity of spirits than was conceived. Upwards of 300,000 gallons were stated as the amount smuggled into England in 1787, over and above all that had been brought to charge.

The duty on the content of the still was raised in 1788 to £3; while at the same time such stills as were entered for the English market were exempt from this duty, and the spirits charged at the rate of 2s. 6d. per gallon, on their importation into England.

Improvements continued to be made in the rapid mode of distilling, in consequence of which the duty on the capacity of the still was augmented successively, from £3 to 9, 18, 54, 108, and lastly to £162. Such was the increase of rapidity in work, that in 1799 a forty-three gallon still could be wrought off in *two minutes and three quarters* or nearly *twenty-two times in an hour*.* This dispatch was princi-

* Vide Doctor Jeffrey's Report.

pally effected by altering the still from its original, deep and contracted form, to a shallow and broad construction, by which a larger surface of the liquid was exposed to the action of the fire. To such a height was this improvement carried, that a *forty* gallon still, of which the head formed *ten*, has been known to be *four feet broad*, and only *three or four inches in altitude at the sides*. *

In 1802, an act was passed, imposing, in addition to the then existing licence of £162, an obligation of 2025 gallons of spirits per gallon of still room, at the rate of nine pence per gallon, and enacting, that the wash brewed should produce at least 11 per cent. This law placed the Scotch distillery on a very respectable footing, and the trade continued so regulated until 1814, the only alteration in the interim being an increase of duties on account of the wash, and an increase of the per-centage to 16½ gallons of spirits for every 100 of wash; but in that year the whole scene changed; the English system was put in force by one sweeping act of parliament, and the old Scotch plan was laid aside. Rapid work, small stills, and large chimnies, gave place to *lob*, large stills, chains, and locks. Numerous alterations in the internal economy of distilleries followed, and much money was thrown away by the alterations consequent on the change of system. The

* For a view of an improved still of this kind, see *Philosophical Magazine*, vol. vi.

persons engaged in the Scottish trade, not being then a united body, tamely submitted to the measure, some from curiosity, and some from a notion that opposition would be hopeless, while others, being rich, were indifferent. On the part of the government the attempt was made with the best intention, that of promoting one uniform system; but in making the change, the difference of materials, or, in other words, the difference between the Scotch and English barley and malt, was quite forgotten. The English barley and malt might yield a produce of 19 per cent., when Scotch could not. Another important matter overlooked, was the want of rectifiers in Scotland, to reduce the spirits made under the act to a marketable standard. While 11 per cent. was the medium of calculation, under a former law for the making of wash or potale, excellent spirits were made, sold, and consumed, — spirits from potale producing $16\frac{1}{2}$ per cent. were barely tolerated; but the spirit made from wash producing 19 per cent. was scarcely drinkable, being so harsh and ardent as to be unfit for punch, and quite unsaleable. The consequence was, ruin to many respectable distillers, as well as great injury to the revenue by the production and smuggling of Highland whiskey, a liquor which, from its mildness and good flavour, was more consonant to the taste and habits of the Scottish people. In the following year great amendments were made, the old Scotch plan was revived,

grafted on a continuation of the English system. This, however, was found not to answer, as the trade gradually declined every year, until 1817, when it appeared by the returns of the sales of legal spirits, that another and more effectual change was necessary. The trade had in a great measure got into the hands of smugglers, and thus reduced to an illicit traffic, flourished in different parts of the country beyond all conception. In this state of things, all systems, English as well as Scotch, or mixtures of either, ceased at once; all monthly or yearly obligations were dispensed with; 10 and 12 per cent., according to the gravity of the worts, were substituted for 19 per cent.; and what is now called the Scotch system, or rather a new system, took place. The law which introduced this alteration brought with it a lowering of the duty, and has served to correct many of those abuses which prevailed to an alarming degree. This law has been so framed, that the manufacturer may be accommodated in the gravity of the wash, from which he wishes to distil, and pay duty in proportion to the saccharine matter obtained from the grain; thus,

				81lbs. gravity, 15 gallons spirits		} are required of a strength equal to 7 per centt. over hydrometer proof.*
From 100 gallons wash of	{	75	Do.	14	Do.	
		70	Do.	13	Do.	
		65	Do.	12	Do.	
		60	Do.	11	Do.	

* 58 Geo. 3. c. 50. 1 Geo. 4. c. 74.; and 3 Geo. 4. c. 52.

But the act has undergone some recent changes ; and as its operation has extended to Ireland, a full explanation of the whole will be found under that head.

The method of distilling in Scotland is now much the same as that practised in England ; and the process observed in the preparation of the *wort* or *wash* is little different, except in the production of the *strength* or *density*, that being a matter of choice with the distillers of the former country, while it is a point of necessity with those of the latter.

The grain spirits manufactured in Scotland are made either from malted barley or bear, called also *bigg*, which is a grain of the same nature, but inferior in quality to barley ; or from a mixture of such malt with barley or bear, raw or unmalted. Wheat is sometimes used, but its high price in general limits its distillation.

The malt, or mixture of malt and raw grain, when ground, is mashed in a quantity of hot water, either by machinery, or workmen with rakes provided for the purpose. When the fluid becomes perfectly impregnated with the saccharine or farinaceous and fermentable part of the grain, it is drawn off into an under back, or receiving vessel, adjoining the kieve, and in this state is called *worts*. From the under back it is pumped into coolers, and allowed to cool down to a certain degree of heat, and then run into tuns or backs,

where, with the addition of yeast or barm *, it ferments, and when attenuated, is called wash. From this wash *imperfect* spirits, or *low wines*, are distilled; and when these have undergone a second distillation, they are sold in Scotland for consumption; but in England, as already observed, they are not used for drinking in that state, but pass under the denomination of *raw spirits* from the distiller to the rectifier, who by further distillation prepares them for the consumer.

The average price of spirits in Scotland, at 7 per cent. over proof, for the year 1821, was, in Edinburgh and Glasgow, 7s. 11d. per gallon, which exceeded the duty by 2s. 5d.; but when made entirely from malt, the price was from 2s. to 2s. 6d. higher. For the average of the same year, English spirits sold in London at 14s. 5½d., which exceeded

* Doctor Thomson, the able and ingenious professor of chemistry, is of opinion, "that the vast quantity of porter-yeast used by the Scotch distillers, and often in a state almost approaching to putrefaction, cannot but have an injurious effect upon the flavour of their spirits, and has undoubtedly contributed to the reputation of Highland over Lowland whiskey. The Highland distillers (especially the smugglers) have not the means of procuring yeast from London. Of course their wash is less perfectly fermented, but the flavour of their spirits is much more agreeable. The flavour given to the Lowland whiskey by the yeast may be distinctly perceived; and on that account," says the doctor, "we are disposed to suspect that the flavour of the spirits always suffers in proportion as the fermentation is brought nearer a state of perfection." Supplement. Vol. to Eneyc. Brit., art. Distil.

the duty by 3s. 11½d. per gallon, and Irish spirits at the same port sold at 14s. 0½d.*

Annexed is a view of the operation of the Scotch distilleries in periods of seven years, from their commencement, in the reign of Queen Anne, under the regulations and duties of the excise.

Anne.		George I.		George II.			
Year.	Gallons.	Year.	Gallons.	Year.	Gallons.	Year.	Gallons.
1709	65,922	1720	47,370	1732	160,189	1749	436,576
1710	79,989	1721	50,601	1733	115,294	1750	450,883
1711	24,513	1722	62,577	1734	120,978	1751	497,134
1712	151,066	1723	40,485	1735	104,036	1752	543,038
1713	110,873	1724	51,071	1736	114,833	1753	538,221
1714	75,046	1725	102,013	1737	264,376	1754	467,819
1715	68,484	1726	143,603	1738	272,080	1755	418,714

George III.				George IV.	
Year.	Gallons.	Year.	Gallons.	Year.	Gallons.
1761	48,035	1778	64,826	1816	1,030,772
1762	37,386	1779	88,163	1817	2,139,207
1763	30,639	1780	217,901	1818	2,367,914
1764	32,537	1781	219,935	1819	2,366,998
1765	34,307	1782	264,425	1820	2,167,558
1766	35,259	1783	184,487	1821	2,566,676
1767	33,859	1784	268,503	1822	2,499,880

* Parl. Paper, No. 692.

In 1752, when the duty was $4\frac{1}{2}d.$ per gallon, the revenue amounted to £10,181 19s. 3d.; but as 5,000,000 of gallons are now presumed to be the quantity consumed in Scotland, the excise at 5s. 6d. the gallon for 1822 should have been £1,375,000, whereas the actual sum collected was only £687,467, a striking proof of the great smuggling carried on in that quarter.

The stills used for home consumption range from 40 to 2000 gallons content, while such as work for exportation to England are from 3000 to 9000. In some of the concerns the distillers have from two to four stills for the manufacture of *wash* and *low wines*, for the working of which the regulations are minute and various, but the process of distilling in all cases is slow. The following are the exports of spirits to the English market, from 1809 to 1820.*

Years.	Gallons.	Years.	Gallons.
1809	- - 751,896	1815	- - 1,520,686
1810	- - 895,799	1816	- - 1,423,569
1811	- - 623,972	1817	- - 1,149,195
1812	- - 1,294,211	1818	- - 1,637,724
1813	- - 729,187	1819	- - 1,403,285
1814	- - 1,474,231	1820	- - 1,341,978

* Parl. Paper, No. 409, 1822.

In the first two years there were *two* houses wrought for the English trade, and from 1811 to 1813, *three*; in the remaining years, *five*. Underneath are the names and residences of the distillers engaged in this branch of business in 1821, with the spirits made by them in that year.

Robert Stein and Co. -	Kilbagie - -	372,570	} 1,160,575 gallons. 7 per cent. over.*
James Haig and Son -	Lochrin - -	259,703	
William Haig and Co. -	Bonnington -	319,045	
William Haig - -	Seggie - -	133,973	
Andrew & Charles Stein	Hattonburn -	75,284	

The following are the names and residences of such distillers as worked in Scotland for home consumption in the year 1821, with the spirits made by each, viz.†

		Gallons.
Brown and Co. - -	Glenburn - -	6,836
James Fraser - -	Old Room - -	1,911
Campbell, M ^c Andrew, & Co.	Easdale - -	2,679
John Sinclair - -	Tobermory - -	6,086
John Beith and Co. - -	Campbeltown -	4,905
Neil, M ^c Eachran, and Co. -	Dail - -	6,798
George Montgomery - -	Octomore - -	1,392
John Johnston - -	Lagvullin - -	4,178
Archibald Campbell & Co.	Ditto - -	2,139
John M ^c Dougall - -	Ardbeg - -	4,183
D. M ^c Eachran jun. and Co.	Bridgend - -	4,480
D. and J. Johnston - -	Tallant - -	1,959
D. M ^c Nicoll and Co. -	Ballygrant - -	381
Thomas Calder - -	Gunsgreen - -	18,931

* Parl. Paper, No. 160, p. 4.

† Ibid.

		Gallons.
James Muir - - -	Barronepark - - -	1,519
Sinclair Sutherland - - -	Brawlin - - -	3,332
Donald Sutherland - - -	Ditto - - -	1,985
Peter Finlayson and Co. - - -	Hoy - - -	1,989
James Henderson - - -	Sempster - - -	2,383
W. Smith and Co. - - -	Wolf Burn - - -	3,822
John Baillie and Co. - - -	Ulgno More - - -	2,006
A. Brodie - - -	Thurso - - -	5,086
John Philip - - -	Dolls - - -	72,473
John Mowbray - - -	Cambus - - -	92,284
John Bald and Co. - - -	Carsebridge - - -	105,036
John Stein and Co. - - -	Clackmannan - - -	61,155
D. Montgomery - - -	Poyntsfeld - - -	1,307
John Findlay and Co. - - -	Loggieside - - -	1,838
John Bullock - - -	Duntocher - - -	4,767
Peter M'Gregor - - -	Littlemill - - -	20,448
John Manuel - - -	Stobbs - - -	9,383
James Haig and Son - - -	Sunbury - - -	137,699
Thomas Spears, sen. and Co. - - -	Kirkaldy - - -	129,819
W. Young and Co. - - -	Grange - - -	99,677
A. Dunlop - - -	Haddington - - -	164,426
George Dunlop and Co. - - -	Linton - - -	77,027
A. Taylor - - -	West Barns - - -	81,135
W. and J. Aitchison - - -	St. Clement's Wells - - -	131,808
D. Wright and Co. - - -	Ormiston - - -	4,267
A. M'Farlane and Co. - - -	Multhead Stone - - -	2,811
William M'Farlane - - -	Mains - - -	1,321
William Robertson - - -	Gillybanks - - -	5,663
A. Bullions - - -	Claypots - - -	1,433
R. Stevenson and Co. - - -	Little Dunkeld - - -	16,395
A. Forbes and Co. - - -	Milton - - -	3,414
Allan M'Gregor and Co. - - -	Drummond - - -	3,811
C. Duff and Co. - - -	Tombdaboill - - -	3,905
John M'Gregor and Co. - - -	Camsairnie - - -	4,305
James Robertson and Co. - - -	Ballechan - - -	6,895
David M'Martin and Co. - - -	Pitcastle - - -	2,636
David Taylor - - -	Perth - - -	1,020
John M'Farlane - - -	Bridgend - - -	3,931
J. H. Rennie - - -	Yets of Muckart - - -	19,503
John Cassells - - -	Kepp - - -	76,229
John Primrose - - -	Tulliallan - - -	25,820
L. M'Kinnon - - -	Corry - - -	1,277
A. M'Cullum and Co. - - -	Inverness - - -	2,500

		Gallons.
W. Menzies - - -	Gorbals - - -	11,097
Blair, Anderson and Co. -	Ditto - - -	24,371
Daniel M'Farlan and Co. -	Port Dundas - - -	91,145
John Gourlay and Co. -	Ditto - - -	81,763
John Carnie and Co. -	Barrowfield - - -	59,297
John Alexander - - -	Loch - - -	4,201
David Foyer - - -	Bogside - - -	267
W. Gibson and Cp. -	Kirkfield - - -	12,922
James Glen - - -	Mains - - -	72,680
James Stark - - -	Lauriston - - -	3,073
John Alexander - - -	Linlithgow - - -	12,316
J. and C. Grieve - - -	Bo'ness - - -	9,353
A. H. Rennie - - -	Kirkliston - - -	52,554
Tod, Padon, Vannon & Co. -	Bo'ness - - -	103,300
W. Fraser - - -	Brackla - - -	4,726
John Fraser - - -	Taynahinch - - -	1,840
James Urquhart - - -	Brayes of Dunvoray -	1,282
Harry Crookshanks -	Stromness - - -	594
David Driver - - -	Kirkwall - - -	835
W. Traill - - -	Widford - - -	737
Peter M'Owan and Co. -	Crieff - - -	11,279
Thomas M'Innes - - -	Overhill - - -	23,891
Peter Comrie and Co. -	Lochlin - - -	13,340
John Comroie and Co. -	Ditto - - -	19,802
John Drummond and Co. -	Hosh - - -	17,552
Thomas M'Cornish and Co. -	Hoshmill - - -	19,265
A. Bannerman - - -	Tullibardine - - -	45,631
J. Mailer and Co. - -	Ruthenbank - - -	17,913
John Christie - - -	Fowlis - - -	9,273
John M'Laren and Co. -	Comrie - - -	16,457
Peter Halley - - -	Cold Wells - - -	4,935
John Fisher and Co. -	Glack - - -	4,145
James Baxter - - -	Currylea - - -	6,122
A. Duff and Co. - - -	Haugh - - -	3,607
A. Campbell and Co. -	Littochbeg - - -	1,774
James Dunn and Co. -	West Mill - - -	5,890
William Gow - - -	Middleton - - -	1,777
John Harvey and Co. -	Yoker - - -	53,800
James Menzies - - -	Paisley - - -	44,777
A. Ross - - -	Milton - - -	791
H. Munro - - -	Penninich - - -	8,916
W. B. Rose and Co. -	Pollo - - -	3,447
John Forrest - - -	French Mill - - -	8,454

			Gallons.
Robert More	-	Underwood	64,948
James Cowan and Co.	-	Fintry	40,001
James Buchanan	-	Overtown	6,788
John Mill	-	Linmile	10,337
James M'Nab	-	Cowie	30,253
W. Cowan	-	Charterhall	29,397
W. Paul	-	Stirling	17,321
James Harper	-	Clynelish	5,887
Thomas M'Lelland	-	Bladenoch	4,344

The foregoing list shews the effect of a free and open trade, and the advantages that may be derived from general competition. In 1816, there were only thirty-six distillers in Scotland, and the revenue arising from the produce of their united efforts, at a duty of 8s. 4d. per gallon, amounted to only £428,539. In 1817, in consequence of the lowering of the duty and the favourable alterations in the law, the number had increased to 108, and the revenue to £599,165. In 1822, there were 111 distillers in the country, who wrought 81 stills under 500 gallons content, and 30 of a larger * size. The spirit produced by these, in point of quality, is allowed to be excellent, and the demand which under the new law it is likely to meet with will put it in successful opposition to the foreign and home smuggling, which have so long proved destructive of the happiness and good order of a large portion of the community.

* Parl. Paper, 1822.

As the compounding of spirits was scarcely rendered necessary until after the introduction of the English law, the trade of a *rectifier* in Scotland was too insignificant to merit attention or encouragement. The following were the rectifiers in 1821, with the *raw spirits* received by each in the space of five years. *

	1817.	1818.	1819.	1820.	1821.	Gallons at 1 to 10, 8 and 7 per cent. over proof.
—						
A. Richardson, Leith	6,195	8,082	9,313	8,628	30,272	
B. Cheyne, Leith	-	1,053	652	636	-	
B. Cheyne, Edinburgh	-	-	-	523	752	
J. Gould, Edinburgh	117	3,222	3,117	-	-	
J. Manuel, Edinburgh	-	-	706	5,124	685	
T. Creighton, Edinburgh	-	-	-	-	2,204	
J. Burns, Hamilton	-	540	584	315	467	
F. S. Smith, Glasgow	-	-	3,438	2,189	2,600	
J. H. McAlpin, Glasgow	-	-	3,406	4,528	8,869	
J. McClure, Glasgow	-	-	-	-	2,501	
A. S. Simpson, Ballinloch	-	292	-	-	-	
J. Campbell & Co., Islay	-	-	-	290	-	
F. Manuel, Edinburgh	-	-	-	-	3,359	

Before the distillery had arrived to any degree of perfection, the imports of *foreign spirits* were, considering the circumstances of the country, in a proportion, perhaps greater than those of the sister kingdom, although the commerce of the latter began to establish itself long before. The great supply, before the introduction of *rum*, was drawn from France and Holland; but without entering

* Parl. Paper, No. 160, 1822.

more into detail, it may suffice to add the imports of these articles for the last two-and-thirty* years.

	Rum.	Brandy.	Geneva.	
Years. {	1791 263,896	18,111	25,619	} Gallons.
	1792 174,581	29,661	46,768	
	1793 198,195	15,124	40,662	
	1794 255,514	3,495	26,367	
	1795 128,858	4,056	22,339	
	1796 135,826	6,168	41,770	
	1797 142,219	14,820	157,926	
	1798 143,970	18,655	64,281	
	1799 138,844	18,086	61,505	
	1800 287,895	7,977	128,939	
	1801 419,084	38,637	303,748	
	1802 561,795	51,424	375,963	
	1803 454,851	68,809	169,583	
	1804 149,458	3,657	33,240	
	1805 184,362	12,686	73,402	
	1806 226,572	27,226	93,706	
	1807 271,555	55,979	98,890	
	1808 287,115	64,103	74,811	
	1809 346,271	567	43,494	
	1810 396,671	17,463	67,555	
	1811 360,367	21,943	41,486	
	1812 343,883	4,880	9,378	
	1813 290,022	3,036	3,110	
	1814 336,587	3,006	18,184	
	1815 338,091	23,874	35,337	
	1816 261,241	17,795	23,053	
	1817 226,044	17,808	24,621	
	1818 244,622	12,994	28,541	
	1819 223,855	18,279	27,504	
	1820 167,084	16,455	21,747	
	1821 130,511	14,073	15,953	
	1822 157,031	18,050	42,194	

The duty on these, in 1822, amounted to the following sums; viz. *rum*, £81,461 5s. 3½d.;

* Parl. Paper, 409.

brandy, £15,357 4s. 9d.; *geneva*, £35,897 17s. 3d.* Before closing this article, we cannot avoid observing, that to the ingenuity of the Scots we are greatly indebted for the improvements in our great national beverage, and from their persevering industry, fostered by the legislature, much may still be expected.

Ireland.—The history of distillation in Ireland is wrapped in as much mystery as that of other countries; that island ranked, in the most remote ages of European darkness, as the seat of learning and the sciences.† From its early settlement by eastern emigrants, and its extensive commercial intercourse with foreign nations, we might be led to conclude that the knowledge of distillation here must have been coeval with its discovery. Vallancy asserts on good authority, that the Bramins came into Ireland along with the Scythians, and, according to Gebelin, they brought with them from Arabia, where they had a settlement, numerous improvements in philosophy and the arts.

If the Phœnicians, or Egyptians, were at an early period acquainted with distillation, it is likely that they would have introduced it into Ireland, where they came in great numbers to traffic and to settle. These colonists would also diffuse a spirit of commercial enterprise through the country, which

* Parl. Paper, No. 140, session 1823.

† O'Halloran, O'Flaherty, Ledwich's *Antiq.*, Campbell's *Strict.*, &c.

would render its harbours better known than those of the adjacent isles. Accordingly we learn from Tacitus, that "the ports and landing-places of Hibernia were better known than those of Britain, through the frequency of commerce and of mer-chants."* The Liber Lucanus distinctly mentions, that at a very early period the Irish had made great progress in the arts, in the dying of purple, blue, and green, and in the separation and refining of gold; also, that on the river Liffey, in particular, there was a great smelting-house, where they refined *orban* and *orbuidh*, white and yellow gold.

Water-mills were introduced into the country about the year 500, by which the inhabitants were enabled to grind their grain, and to render it more easily subservient to domestic purposes. *Ale* at that time was in common use and home made. *Wine* was used on some occasions, but that was imported; and ornaments of gold, made from the ore found in the mountains, were by no means uncommon; in the manufacture of them the artists displayed no inconsiderable share of skill and taste.†

The ancient inhabitants at their ordinary entertainments sat down in a ring on rushes or beds of grass, instead of benches or couches. Three-legged wooden tables were set before them, after the

* Vita Agricolaë, c. 24.

† Vallancy's Collectanea de Rebus Hibernicis, No. 13.

manner of the ancient Gauls, covered with victuals, such as bread baked on a gridiron, or under the ashes, milk-meats, flesh and fish both broiled and boiled. The waiters in the meantime handed about the drink in cups made of wood or horn, and sometimes of brass.* When festivities were held at night, "the lights were made of the pith of "rushes, twisted together with a small part of the "skin to preserve cohesion. This substance was "saturated with unctuous matter, and formed into "a taper about the size of a man's waist, from "which issued a splendid flame, visible at an immense distance."† Ware relates, that "the "ancient and peculiar drink of the Irish, as also "the Britons, was *ale*. Dioscorides ‡ takes notice "of this drink in a passage, where he says that the "Britons and Irish (whom he calls Hiberi) instead "of wine use a liquor called *curmi* made of barley. "But Camden observes, that *curmi*, in that place "is corruptly written for the old British word "*curw*, which signifies *ale*, which last name it "took from the Danes, who call it *oel*; this is the "liquor which Julian the apostate in an epigram "calls *The offspring of corn and wine without wine*. "The Irish have no name for this drink, that I "know of, but *leann*, which signifies liquor in "general, but they understand by it *ale*. Beer,

* Harris' edit. of Ware's Antiq. pp. 182, 183.

† Stuart's Armagh, p. 505. ‡ Lib. xi. cap. 110.

“ or *ale*, brewed with hops to preserve it long, is
 “ a liquor of no antiquity. The Irish had also
 “ in ancient times another beverage, or mixture of
 “ water and honey, now called *mead*, but by them
 “ *miodh*, and *mil-fion*, that is, *honey-wine*, as ap-
 “ pears in the life of Saint Berach, who flourished
 “ in the seventh century, and in the annals of
 “ Ulster under the year 1107.” *

In the fifteenth chapter of Jonas's life of St. Columbanus (who flourished in the sixth and seventh centuries between 589 and 610), there is the following curious passage, illustrative of this subject :
 “ When the hour of refreshment approached, the
 “ minister of the refectory endeavoured to serve
 “ about the *ale*, (*cervesiam*) which is bruised from
 “ the juice of wheat and barley, and which above
 “ all the nations of the earth, except the Scordiscæ
 “ and Dardans, who inhabit the borders of the
 “ ocean, those of Gaul, Britain, Ireland, and Ger-
 “ many, and others who are not unlike them in
 “ manners, use ; he carried to the cellar a vessel
 “ which they called *typrus*, and placed it before
 “ the vessel in which the ale was deposited, when
 “ having touched the *spigot*, he suffered it to run
 “ into the *typrus*.” †

It is a tradition prevalent in the north of Ireland, that the Danes, when in possession of the country

* Harris' Ware, p. 183.

† Messingham Flor. p. 226. Jonas wrote Columbanus' Life about A. D. 640.

in the ninth century, brewed beer from heath ; but it is certain that this shrub would yield a very unpalatable drink without the addition of some kind of saccharine matter. * This may have been effected by the application of honey, the flower of the heath being used as a substitute for hops, since it is well known that, before the introduction of the latter plant, broom tops, wormwood, and other bitter herbs have been so employed.

According to usual practice, in ancient times, of fermenting worts for the purpose of making beer, the yeast was preserved by means of a furze, or whin bush, kept over in the chimney until the next brewing. This when dipped in the wort caused the liquor to ferment.

To the Norwegians and Danes, who were neighbouring nations of the Saxons, may be ascribed the introduction of wine into Ireland, as in that early period it became an article of taxation ; and our annals state that Brian Boroimhe exacted a tribute from the Danes of *Lumneach* (Limerick), about the year 970, of 365 tuns of wine ; which circumstance shews to what extent the trade in this article was carried ; yet it would seem more

* Wormius speaks of the drinking of *heather-beer*, as one of the pleasures which the souls of departed heroes enjoyed in the society of the gods. A gentleman some years since tried the manufacture of heather-beer in the county of Donegal, but he did not find it to answer the palates of his northern friends, who had been long accustomed to good Ennisshowen.

likely that the Irish had introduced this drink previous to the Norwegian and Danish invasions, from their early connexion and regular intercourse with Spain.

The venerable Bede, who flourished towards the end of the seventh century, says, that Ireland is pleasantly situated, that it abounds with honey, and that it is not destitute of vines.

We are told, that in 1156 the Irish kept up a trade with the people of Chester, whom they furnished with several of the necessaries of life; and that in 1300, when King Edward was carrying on his warlike operations in the south of Scotland, he received from Ireland a considerable number of cargoes of *wheat, oats, malt, and ale*. In the same year, the mayor and community of Drogheda made him a present of 80 tuns of wine, and chartered a vessel belonging to their own port, by which it was conveyed to him at Kirkcudbright.

The word distillation, in these countries, was long in use, and the idea of the process attached to it had its origin in the name of a disease or symptom of a discharge from the head in rheums and other affections arising from cold. The use of spirituous liquors was noticed in early songs and writings; and the English who came with Henry II. admired the habit of copious potations to which our ancestors were addicted, and to which we their descendants yet adhere with hereditary attachment.

Campion relates that in his time, "on account of the marshy and watery state of Ireland, the inhabitants, but particularly new-comers, were very subject to rheums, distillations, and fluxes, for remedy whereof they used ordinary drink of *aqua vitæ* (usque-bagh), so qualified in the making that it dryeth more and inflameth less than other hot confections." * The same writer further observes, that "in haste they squeeze out the blood of raw flesh, and ask no more dressing thereto, the rest boileth in their stomachs, with *aqua vitæ*, which they swill after such a surfeit by *quarts* and *pottles*." Speaking of a famine which happened in 1316, he says, it was caused by the soldiers eating flesh and drinking *aqua vitæ* in Lent; and in another place he states, that a knight, called Savage, who lived in 1350, having prepared an army against the Irish, allowed to every soldier before he buckled with the enemy a mighty draught of *aqua vitæ*, wine, or old ale.

Ware affirms, that "the Irish *aqua vitæ* or *usquebah*, as they call it, inflames much less than the English *aqua vitæ*, because that liquor, as it is thought, is the invention of more modern times; yet," says he, "we find the virtue of it, and a receipt for making it, both simple and com-

* Campion's Hist. Ireland, p. 13, edit. 1809.

“ pound, in the *red book* of Ossory, compiled 200 years ago ; with another receipt for making a liquor then called *nectar*, made of a mixture of honey and wine, to which were added ginger, pepper, cinnamon, and other ingredients.” Ledwich, on the same subject, says, that for some time *aqua vitæ* was used only as a medicine ; and its operation in preserving health, dissipating humours, strengthening the heart, curing colic, dropsy, palsy, quartan fever, stone, and prolonging life, was firmly believed on the faith of physicians, and made it eagerly sought for. At what time, continues the same author, this liquor reached Ireland, is not ascertained. It was called *aqua vitæ*, or *water of life*, at a very early period, in England. In Ireland, it was at one time as well known by the name of *buil-ceann*, as *usquebah*.* The former appellation was very expressive, *buil* signifying madness, and *ceann* the head, intimating its infuriating effects.

In the reign of Henry VIII. it was decreed that no ale should be sold above 2*d.* per gallon, upon pain of 8*d.* *toties quoties* ; that there be but one maker of *aqua vitæ* in every borough town, upon pain of 6*s.* 8*d.* ; and that no *wheaten malt* go to any Irishman’s country, upon pain of forfeiture of the same in value, except only bread, *ale*, or *aqua vitæ*.†

An act of parliament was passed at Drogheda, in

* From the word *usque* is derived the term *whiskey*.

† Harris’s *Hibernica*.

1556, against distilling *aqua vitæ*, "a drink no-
 "thing profitable to be daily drunken and used,
 "now universally made throughout this realm,
 "especially in the borders of the Irishry, thereby
 "much corn, grain, and other things are con-
 "sumed," &c.* The act prohibits the making of
 it without the lord deputy's licence, under the
 great seal, on pain of imprisonment and fine of *four*
pounds. But peers, gentlemen of ten pounds per
 annum in lands for life or inheritance, and freemen
 of towns corporate, had liberty to make *aqua vitæ*.

In the reign of Elizabeth, *aqua vitæ*, as we have
 already seen, was a considerable article of trade,
 but we have no means of ascertaining of what it
 was composed. It is conjectured that it was si-
 milar to the cordial now called *usquebah*, one of
 the ingredients of which is saffron. English
 writers of that period speak highly of it, and the
aqua vitæ of that age was probably brandy, imported
 from France or Spain. The *term* was afterwards
 applied to the spirit manufactured here from corn ;
 but notwithstanding the frequent use of *aqua vitæ*
 at this period, our wealthy and luxurious country-
 men indulged in the use of costly wines. Hol-
 linshed, in his chronicle, says, that the great *Shane*
O'Niel, who proved so violent an opponent to Eli-
 zabeth, usually kept in his cellar at Dundrum
 200 tuns of wine, of which, as well as *usque-*

* Rol. Parl. 3 & 4 Philip & Mary, c. 7. Vesey's Stat. vol. i.
 p. 251.

bah, he drank copiously, and to such excess, that his attendants were often obliged to bury him in the earth chin-deep, until the heating effects of the intoxication had abated.*

Ledwich places his earliest authentic notice of distillation in Ireland in 1590, at which period, he observes, the inhabitants imitated foreign liquors by the addition of aromatic seeds and spices, as was practised in France. But the making of *aqua vite* was established long before; and we are surprised that an antiquary of so much research and respectability should have fallen into this mistake, in the face of an act of parliament of such notoriety.

From the first period of its introduction, the distillation of spirits, with the exceptions we have noticed, remained uncontrolled by duty till the Restoration, at which time it had acquired sufficient magnitude to be deemed a productive article of revenue. On the 25th of Dec. 1661, a duty of four-pence was established on every gallon of *aqua vite* distilled in the kingdom.

This duty was collected by means similar to those now in use, with this difference, that as the distiller was not obliged to shew any stated quantity of work in the month, the increase or decrease depended in a great measure on the vigilance and integrity of the officer whose business it was to attend to the distillery.

Shortly after the accession of Geo. III., a specific

* Hollinshed, vol. vi. p. 331.

quantum of work in the way of *charges or doublings* was laid on the stills of this kingdom, which, in 1779, the time at which the principal change took place *, numbered 1152, producing a revenue of £63,818. In 1782, on a five hundred gallon still there were *four* doublings, and the following year *eight*, the duty being 14*d.* per gallon; while in 1792 there were 16 charges on 200 gallon stills, the general size wrought at that time. The charges gradually increased until 1806, when the trade assumed a degree of importance, that it had not previously possessed, being then principally confined to a few individuals of weighty capital. This will be more apparent from a knowledge of the number of stills, and their contents, for some years prior to that date. .

		Dublin.		Cork.		Rest of Ireland.	
		No.	Contents.	No.	Contents.	No.	Contents.
Years	1798	44	39,523	12	13,892	154	64,562
	1799	37	34,372	12	13,892	127	52,690
	1800	32	29,154	11	12,998	122	47,602
	1801	32	29,136	7	7,046	85	32,553
	1802	31	33,911	7	7,971	66	33,720
	1803	32	29,797	7	7,971	81	42,141
	1804	28	24,446	10	11,334	77	45,050
	1805	26	22,323	10	11,378	54	31,605
	1806	15	11,871	7	6,981	29	18,046

The scale of work stood as follows in the last of these years (1806), at which period government refused to license stills under 500 gallons content; viz.—

* 19 Geo. 3.

Size of Still.	Charges required Monthly.	Spirits required Weekly.
Gallons.		Gallons.
500	74	3,237
750	74	4,856
1,000	72	6,300
1,250	66	7,218
1,500	64	8,400
1,750	62	9,493

The last was the largest still wrought in Ireland at that time or since. In the same year all the laws relating to the distillery trade in the kingdom were compressed into one act *, in which every thing relating to the business was fully defined. Among other matters, it was found necessary to fix the dimensions of stills, to place the process on an equitable footing, as it was obvious, that if these dimensions were not determined, the distillers could produce a much greater quantity than the law required, by making the bottoms of their stills as large as possible, so as to have the advantage of exposing more surface to the heat of the furnace. It was ordained, that the diameter of every still, taken in the widest part, most remote from the bottom, should be to the altitude of such still, taken in a perpendicular line from the centre of the diameter to the bottom, in the proportion of not more than three to one ; *i. e.*, for every inch of altitude, the diameter should not exceed three

* 46 Geo. 3. c. 88.

inches, and so on in proportion. This law remains in force till the 10th of Oct. in the present year (1823).

It was soon discovered that the ingenuity of the Irish distillers, like that of their neighbours in Scotland, when the licence system prevailed, far outran the enactments of the legislature in extent of work. In the following year (1807), it was considered prudent to license stills of 200 gallons content and upwards; the work was then considerably increased, as will appear from the sub-joined statement.

Size of Still.	Charges Monthly.	Spirits required Weekly.
Gallons.		Gallons.
200	120	2,100
300	120	3,150
400	108	3,530
500	96	4,200
750	84	5,512
1,000	76	6,650
1,250	69	7,546

No addition was made at that time to the work of larger stills. In 1815, there were 56.76 per cent. added, on an average, to the foregoing proportions of work; and in the same year an act was passed, allowing stills of from 44 to 100 gallons to be licensed. Considerable advantages were granted to these, in expectation that they might tend to the suppression of illicit distillation, it being intended that they should be confined to those districts of country in which that baneful practice prevailed.

The charges on those small stills were far short

of the proportion allotted to the larger ones. One of 100 gallons content was only obliged to perform 90 charges monthly. Under this regulation also, it was soon discovered that the distillers turned the advantages thus granted them to their own private emolument, instead of preparing whiskey similar to the illicit spirit, commonly called *ennisshowen* or *potyeen*, which was the intention and expectation of government. In consequence of this, their work was increased in 1817 to 200 *doublings monthly*; notwithstanding this *great* addition, the proprietors of large distilleries were jealous of the superior advantages which they imputed to the smaller stills.

In 1816, 20 per cent. was again added to the work of stills exceeding 100 gallons; and in 1817, 10 per cent. more.

Subjoined is a correct list of all the stills that were at work in Ireland in the month of February 1818, with the quantity of spirits produced by them weekly, in proportion to their doublings or charges: also the average consumption of grain and coals in each; specifying such as were obliged, from the nature of the country in which they were situated, to use turf. This table was calculated and published by the author in April 1818, in a small essay on distillation written by him at that period, and inserted in a periodical work, of which he was a proprietor.*

* Newry Magazine, No. 19, p.52.

Names.	Residence.	Size of stills.	Monthly charges.	Spirits produced weekly.	Average consumption of coals weekly.
		Gals.		Gals.	Tons.
Jameson and Dewar	Dublin -	1510	135	17,836	300
John Jameson -	—	1256	143	15,715	280
Robert Haig -	—	1250	143	15,640	280
James Jameson -	—	1002	154	13,501	260
Nicholas Roe -	—	751	172	11,300	240
John Power -	—	751	172	11,300	240
John Murrough -	Cork -	1021	154	13,756	260
William Wyse -	—	501	189	8,285	220
Samuel Perrott -	—	500	189	8,268	220
P. W. Callaghan -	—	500	189	8,268	220
John Brown -	Limerick -	501	189	8,285	220
Ditto -	—	501	189	8,285	220
George Connell -	—	206	272	4,902	150
James Shaw -	Belfast -	503	189	8,306	220
Robert Thompson -	Newry -	509	189	8,417	220
Malcolm Brown -	Dundalk -	500	189	8,268	220
Andrew Stein -	Clonmell -	500	189	8,268	220
John Birch -	Roscrea -	306	174½	4,666	Turf.
John Cassidy -	Monsteraven -	200	194½	3,400	Do.
James Mullaniff -	Longford -	100	200	1,750	80
Holton & O'Beirne -	Athlone -	101	217½	1,919	Turf.
Robert Hackett -	Birr -	101	217½	1,919	Do.
John Robinson -	—	101	217½	1,919	Do.
Robert Codd -	Drogheda -	101	304	2,682	100
John Thomson -	Carrickfergus -	99	200	1,732	80
John Falls -	Dungannon -	98	200	1,715	80
Michael Rigan -	Galway -	98	200	1,715	80
Alexander Stewart -	Londonderry -	94	200	1,645	80
D. and A. M'Intyre -	Killether -	77	200	1,347	60
Patrick Brennan -	Kilkenny -	100	200	1,750	80
Bartholomew Finn -	Galway -	53	200	927	40
William Cathers -	Newtonlimavady -	49	200	857	40
William Leathem -	Buncrana -	49	200	857	40
Total gallons of spirits made weekly		-	-	209411	4750

Taking the average produce to be seven gallons per barrel, the number of barrels of grain used weekly would be 29,916.

On comparing the foregoing table with the scale of work for 1806, the increase appears prodigious, and, indeed, almost incredible. It is a striking instance of the results produced by the ingenuity and activity of man, when powerfully excited; for it is a well known fact, that when the work on distilleries was not half so great as it now is, much more difficulty was experienced in the performance of it.

To the Scotch distillers who had established themselves in the country, and whose experience enabled them to introduce improvements previously unknown, this increase in a great measure may be attributed. But great as the quantity unquestionably is, the market was clandestinely supplied with a very considerable surplus, which by some has been stated as a fifth, but by others to approach nearly to a half. Be this as it may, it must appear strange that although the manufacturers were known to be producing a greater quantity of spirits than the law allowed, yet six years have been suffered to pass away without any change of system. For such an anomalous proceeding it would be no easy matter to account.

At various times plans have been suggested for the improvement of distilleries. Among the many, one of a curious nature was proposed by a Mr.

Birch of Roscrea, calculated to obviate the difficulty of procuring fuel in the interior of the country. That gentleman has shewn that it is practicable to work a still by the application of steam much more advantageously than by the use of either turf or coals, and besides that it produces a greater quantity of spirits in a given time than could be done by any other known process. What gave rise to this method was the great scarcity of fuel experienced at the Roscrea distillery, occasioned by the badness and want of turf in wet seasons. In the year 1818 the board of excise was solicited for permission to work by steam; and notwithstanding the determined opposition of the distillers in Dublin, the plan was put into execution under the superintendence of a respectable professor of chemistry, assisted by several practical revenue officers. In carrying on the experiment the liquor in the still was boiled by the force of steam, raised in a boiler prepared for that purpose, and conveyed by a pipe which communicated with the exterior of the still only, filling up with steam the spaces or interstices made in the formation of the still, and also the space between the still itself and its case, which case was made of wood, and every part of it exposed to view. Previous to this trial, which was conducted at Roscrea, there were, independent of the steam engine, four furnaces, one for the still and one for each copper, which contained 212 superficial feet, but by the proposed plan of working these furnaces

were reduced to two, containing only sixty-four superficial feet subject to fire influence. It moreover appeared, that steam not exceeding 225 degrees of temperature was able to produce the highest charge of the excise laws, with a saving of upwards of four-fifths of the fuel, and the same of all other attendant expences. According to a calculation made at the time, the expence of working a 200 gallon still with coal amounted to £4,390, of which £540 only afforded employment to the people; whereas, when worked with turf, employment would be given to the amount of £23,816 13s. 4d., all circulating at home to the best advantage. The great saving of fuel effected by the steam system might appear inconsistent with the important consideration of employment to the poor; but although a still worked by steam would not consume more than one-fifth of the quantity of turf or coal that would be required, yet it was argued that for the same reason it would be the means of erecting in the interior ten distilleries for one, and thereby diffusing the business more generally and with greater effect.

This ingenious method of distillation was ultimately rejected by the board of excise, on the principle that it was considered to afford facilities to smuggling under the existing regulations; but since the act of the 4 Geo. IV. chap. 94. has relieved the distiller from the production of a limited quantity in a given time, this steam method is

worthy of a serious reconsideration, and perhaps further experience would render its adoption of considerable benefit in those remote parts of the country, where native fuel is scarce, and foreign cannot be procured but at an enormous expence. *

In 1821 an attempt was made at the Carrickfergus distillery, by Thomas Pottinger Esq., to ascertain by means of machinery, placed in inclosed vessels, the exact quantity of spirits distilled and chargeable with duty, so that no fraud on the revenue could be practised by any artifice that the distiller could possibly devise. On trial, however, it was conceived that Mr. Pottinger's plan might be simplified; and at the suggestion of Mr. Coffey, inspector general of excise, fresh experiments were made with a new apparatus on a still of 500 gallons content. The machinery was contrived to record, without the agency of any person, every part of the distiller's operations, from the time he brought his wash into the still-house, until he took it away as finished spirits. A further trial was made at a distillery in Dublin, but as the application of the apparatus was found not to answer the end expected, although possessing an uncommon share of merit, it was finally relinquished.

To give a brief epitome of the principles upon which these experiments were conducted, it may

* Vide "An Address to the Nobility and Gentry of Ireland, on the Subject of Distillation". Printed in Dublin, by M. Goodwin, 1819, p. 41.

be observed that there was a twofold object in view. First, to keep the produce out of the reach of the distiller during the process, and at the same time allow him to examine the heat, strength, and colour of the spirits while running. Secondly, to secure the casks so as to prevent any defalcation in the contents or diminution of the charge. To secure these objects, a glass jar was stationed at the end of the worm, in which was placed an hydrometer, and to the outside was affixed a scale to indicate the strength, the heat being at the same time determined by an adjoining thermometer. To prevent all access to the fluid, or run from the worm, overhead was placed a glass cylinder, which, without breaking, it was impossible to remove. To effect the second object, the different receivers were covered by iron plates, bolted and screwed within. Each was furnished with a ball cock to prevent its being filled above a certain height, in which was placed a very large copper ball attached to a pump to regulate the strength of the liquor at the time of pumping. These balls were in reality hydrometers, which, when the liquor became stronger than the usual standard, sank to the bottom, and by that means opened an air valve which communicated with the pump, and prevented it from working. To these contrivances were super-added, within the spirit receiver, a machine by which the spirits were measured, as they came from the worm, and the quantity registered by an index. The whole was so secured as to be inaccessible to the distiller or the visiting officers.

The improvements suggested by Mr. Coffey were that no wash could be put into the still without being measured and recorded. For this purpose a close vessel was employed, denominated "the wash measuring gauger," having two stopcocks, or rather a double cock, so constructed that the act of opening the one for filling the charger, shut the other for emptying it, while at the same time the distiller was enabled to fill his charger and convey the contents into the still. This double cock was inclosed in an iron box containing a few wheels, by the revolution of which the quantity of wash put into the still was marked on an index visible through small glass apertures. In this measuring charger an overfall pipe was fixed to shew when it was full, which contained a valve to prevent any liquid being forced up through it. A similar charger was constructed for conveying the low wines into the still, on the breast of which was a close copper case, in which all the communicating pipes terminated. This case contained a valve opening and shutting at pleasure. The discharge cock was so constructed as to let every thing pass freely out but nothing into the still. The air or safety valve was fixed on the lying arm, in such a manner that no fluid could be conveyed through it into the still. All the receivers were close vessels communicating with the still by means of a force pump through the measuring charger already described. In the same manner the spirits receiver was connected with a vessel termed "the spirits measurer," through which all spirits were filled and emptied by means

of a double cock, similar to that attached to the wash charger, and by this means the number of gallons taken out of the receiver was accurately recorded. In the spirit measurer was placed a small close vessel of tin copper, so connected with the filling and emptying cocks, that at each time of drawing off, about one-eightieth of a gallon was retained. From this sample vessel, as it may be called, a pipe, terminated by a cock, proceeded through the bottom of the measurer into a metal box secured by a lock. This contrivance enabled the officers at any stated period to ascertain the average strength at which the distiller had drawn off his spirits, and to make a surcharge, if such was deemed necessary.

Through the kindness of a learned and ingenious gentleman * we are enabled to lay before the public an account of the quantity of spirits made in the licensed distilleries of Ireland from the year 1719 to the present time, with the quantity of spirits, wine, and beer imported and exported, together with the number of barrels of ale home-brewed ; a document which cannot fail of being considered as curious as it is important. These tables may be relied on, as they have been made out with great care from parliamentary and other documents of the best authority.

* James M'Donnell, esq. M. D. Belfast. We are happy to avail ourselves of this opportunity to express our gratitude to this highly respectable and worthy man, for this and many other favours.

Years.	SPIRITS.		WINE.	ALE AND BEER.		
	Distilled.	Imported.	Imported.	Brewed.	Imported.	Exported.
	Gallons.	Gallons.	Gallons.	Barrels.	Barrels.	Barrels.
1719	173,564	323,124	1,111,726	601,457	299	6,408
20	136,075	327,082	1,386,293	574,687	292	6,164
21	131,299	292,125	940,147	546,256	393	6,093
22	125,280	388,007	1,143,752	535,756	244	6,328
23	133,773	379,601	1,007,632	545,686	273	5,878
24	132,642	415,062	1,227,315	568,768	246	5,636
25	134,080	327,194	1,172,678	564,234	163	4,791
26	169,211	346,360	1,313,319	540,628	266	4,427
27	218,936	411,622	1,425,352	548,862	355	4,080
28	155,283	404,222	1,260,297	514,845	424	4,144
29	129,309	409,544	1,521,085	455,761	470	4,646
30	134,738	538,316	1,246,238	455,102	1,059	4,384
31	174,791	336,922	957,420	500,707	1,362	6,048
32	184,028	221,682	1,294,459	532,960	983	5,883
33	225,871	375,227	1,145,653	516,438	770	5,331
34	268,349	396,474	1,134,979	522,877	455	5,100
35	209,045	383,301	1,170,845	463,829	705	6,258
36	195,738	627,690	1,255,227	441,132	1,157	5,365
37	228,807	605,723	911,400	451,185	1,349	3,707
38	216,785	404,092	1,324,869	488,421	1,057	3,870
39	211,038	531,878	1,122,796	496,401	1,159	3,612
40	239,811	472,758	1,154,807	478,869	1,989	2,392
41	248,276	382,841	1,167,907	455,844	5,278	3,253
42	272,238	662,741	759,398	456,602	9,463	5,618
43	354,166	566,131	1,087,656	542,840	1,323	2,578
44	402,272	385,650	754,655	601,246	1,937	3,572
45	452,315	290,288	1,046,235	561,546	3,899	3,958
46	334,415	411,362	596,688	503,294	4,914	3,758
47	402,075	489,388	506,762	486,259	14,552	4,490
48	531,443	333,919	1,328,932	550,898	8,255	4,686
49	565,383	538,097	1,016,599	583,155	11,895	3,866
50	598,546	820,843	2,080,690	605,465	12,655	6,217
51	598,179	967,655	1,396,196	601,649	14,018	4,737
52	596,090	786,639	1,126,823	625,399	21,274	6,461
53	623,334	1,165,085	1,029,672	592,348	20,477	5,573
54	561,230	1,473,380	2,014,509	587,322	20,054	4,663
55	498,304	919,133	1,779,639	556,581	16,840	4,431
56	479,861	1,239,997	1,183,003	539,346	13,572	4,312
57	404,460	746,517	746,009	489,825	10,949	3,566
58	399,793	842,515	691,477	449,738	15,228	4,125
59	107,543	1,285,665	1,368,118	501,002	16,557	3,882
60	225,217	742,623	1,713,556	545,558	13,500	4,899
61	432,130	956,101	905,971	568,217	18,837	4,923
62	692,875	1,390,632	1,522,137	618,399	18,008	4,908
63	668,487	1,273,674	1,338,797	618,208	22,099	4,259
64	661,215	1,742,309	1,313,450	622,658	28,935	5,031
65	715,475	2,141,415	1,777,086	578,068	27,788	4,926
66	649,396	2,216,709	1,678,064	568,884	32,441	5,353
67	354,964	2,577,057	1,566,101	565,332	29,488	4,139
68	657,637	2,744,289	1,592,634	522,344	40,542	4,231
69	831,114	2,789,361	1,583,421	529,499	45,452	3,596
70	801,174	2,396,396	1,519,707	501,562	38,440	3,995
71	734,253	2,675,131	1,392,672	439,863	44,105	3,216

Years.	SPIRITS.				WINE.		ALE AND BEER.			
	Distilled.	Imported.	Exported.		Imported.	Exported.	Brewed.	Imported.	Ex- ported	
			Irish.	Foreign.						
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Barrels.	Barrels.	Blk.	
1772	758,788	2,566,835	-	131,769	1,308,972	12,600	433,160	47,736	2,491	
73	590,881	2,213,394	63	40,788	1,555,291	9,576	447,330	58,675	2,944	
74	1,026,124	2,072,527	-	22,741	1,571,802	11,592	461,035	51,995	2,307	
75	980,401	1,799,123	267	18,066	1,287,903	10,584	465,207	53,906	1,976	
76	1,160,341	2,445,204	-	20,308	1,279,330	9,072	458,460	66,954	1,990	
77	1,115,352	2,297,704	-	73,077	1,293,127	8,820	472,840	71,797	1,343	
78	1,127,112	1,605,375	-	10,053	1,088,546	6,804	478,902	70,369	1,261	
79	1,094,026	1,451,994	10	19,009	707,490	3,276	437,812	48,274	998	
80	1,229,416	1,069,535	-	1,577	1,017,654	4,788	429,200	40,459	412	
81	1,787,298	594,748	3,966	25,898	1,269,082	10,837	485,826	54,365	719	
82	2,076,855	776,477	1,456	886	992,702	7,308	503,492	63,495	1,006	
83	1,771,513	864,787	1,185	76,993	931,593	13,608	432,098	54,456	1,253	
84	1,436,502	1,763,600	230	14,761	1,079,405	13,356	388,027	54,251	2,084	
85	1,450,415	1,450,677	-	15,763	1,151,270	14,868	361,903	48,381	2,054	
86	1,849,449	1,501,451	70	29,040	836,806	12,600	383,400	55,282	1,727	
87	1,960,418	1,292,385	579	44,835	986,656	27,259	395,087	68,492	2,285	
88	2,229,663	1,387,585	68	21,350	1,564,803	8,316	412,137	74,725	1,298	
89	2,801,429	1,459,236	152	8,541	1,306,707	11,592	389,318	91,009	1,122	
90	2,966,795	1,472,822	408	5,345	1,436,030	16,884	434,397	109,049	1,372	
91	3,508,244	1,208,195	-	9,242	1,553,272	25,532	467,436	101,655	1,452	
92	3,520,082	836,482	299	47,948	1,574,893	55,692	531,648	125,058	1,677	
93	3,436,440	708,560	429	34,579	1,468,449	44,352	590,307	125,057	495	
94	3,936,355	451,316	135	4,081	1,132,642	25,704	535,359	76,255	809	
95	4,262,036	610,809	1,011	8,997	1,492,525	32,760	521,822	72,393	1,076	
96	3,704,681	317,941	1,216	6,655	3,209,041	33,920	528,686	58,738	2,611	
97	3,867,174	143,080	58,615	15,204	1,308,875	33,920	567,284	67,188	797	
98	4,783,954	84,581	2,866	10,053	363,052	21,672	600,038	50,914	1,149	
99	4,253,187	136,085	4,055	7,614	1,802,619	41,076	545,806	25,178	1,631	
1800	3,621,498	393,783	3,152	13,994	2,788,699	57,456	449,790	19,709	444	
1	1,565,380	1,319,717	2,270	691	1,210,349	67,032	398,746	17,972	363	
2	5,237,195	1,951,931	227,519	242,478	1,493,205	125,643	402,942	10,495	2,108	
3	4,807,143	1,257,135	1,130,019	259,724	2,441,932	65,772	561,438	9,884	5,782	
4	4,713,736	454,219	930,800	80,963	1,860,257	53,676	695,100	3,209	6,775	
5	4,612,335	319,357	1,196,569	117,988	1,994,846	40,572	770,688	3,143	9,707	
6	4,648,772	210,084	1,044,548	32,703	1,226,732	104,580	760,371	2,160	5,797	
7	5,641,060	352,078	531,648	61,583	1,289,162	154,476	750,307	2,449	4,510	
8	2,006,837	467,057	648,706	24,872	2,424,065	79,632	751,146	2,188	4,630	
9	233,750	1,052,968	512,098	70,996	1,753,978	160,272	960,300	1,708	5,713	
10	6,412,625	1,758,321	76,990	209,665	1,670,818	174,384		1,101	4,098	
11	7,088,566	746,017	136,955	512,653	1,372,341	274,428		1,378	5,393	
12	1,462,948	532,344	793,140	148,184	542,101	169,848		528	8,727	
13	4,667,559	1,057,390	411,843	166,533	1,471,428	224,532		338	6,266	
14	5,666,825	664,990	144,351	545,212	1,198,764	331,884		215	6,814	
15	4,615,405	405,187	942,038	213,953	891,828	410,760		173	8,022	
16	4,821,358	285,708	580,559	175,824	1,050,840	149,436		220	8,556	
17	3,100,386	71,527	196,268	67,083	639,620	194,040		163	5,480	
18	4,473,016	163,811	48,260	95,329	491,652	216,468		194	1,153	
19	3,968,269	45,477	43,833	20,792	779,688	272,160		162	679	
20	4,636,192	108,439	236,713	59,764	843,696	80,136		317	4,128	
21	4,230,377	67,213	516,885	34,485	858,728	111,888		235	3,185	
22	4,318,012	69,751	415,912	45,111	696,276	68,544		-	5,483	
23	-	45,884	556,979	14,152	690,228	57,456		-	6,096	

Since the year 1809 no account has been kept of the quantity brewed.

The revenue arising from spirits imported is considerable. On rum it amounted in 1819 to £13,609; in 1820 to £16,339; in 1821 to £12,987; and in 1822 to £12,538.* By the equalization of the duties, rum is now charged 11s. 7d. per gallon, geneva 18s. 10d. Spanish red, Oporto, sherry, and Teneriffe wines, £95 11s. per tun of 252 gallons. The exports, particularly of our home manufacture, are increasing, and markets offer in almost all those countries to which rum is sent, as enumerated under the exports of that article from England.

In Ireland, as in Scotland, home-made wines are rather a nominal than a real source of revenue. Since the duty was first imposed, in 1799, except in two of the last eight years, those wines yielded little or nothing, the aggregate of duty being only £10 4s. 5½d.

The revenue on distilled spirits is of great magnitude, and its increase, when contrasted with that of 1779, is enormous. In that year, although the distillers, 1,152 in number, were at full work, it only came to £63,818. In a more recent period, when the number was limited to thirty-three, the *weekly revenue alone* amounted to nearly that sum, being often upwards of £62,387 0s. 6½d.

From the best information collected on the subject, we are enabled to give the following brief

* Parl. Paper, No. 107, 1823.

statement of the expence attending the manufacture of spirits in Ireland. This, it appears, does not exceed $6d.$ for every gallon distilled, the coals alone being on an average $4d.$ of this charge: the remainder is incurred by barm, men's wages, and several incidental expences, after deducting the value of wash and grains.

Distillers in general use about one-fifth of malt, and supposing the average produce to be about seven gallons and a half per barrel of grain mashed, (which is considered a fair estimate,) it is easy to calculate what the price of whiskey should be, when we know the rate of corn: for instance, suppose

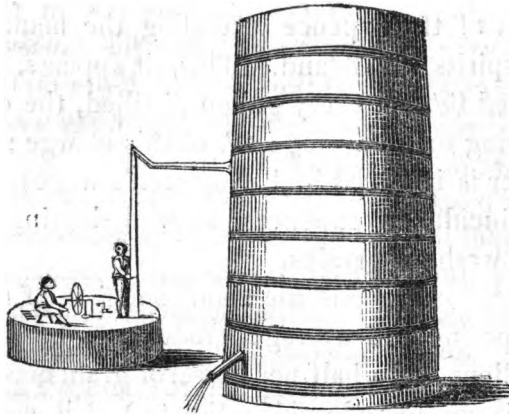
$\frac{2}{3}$ of barley at $18s.$ per barrel of 12 stone ground grain.

$\frac{1}{8}$ of oats at $12s.$ Do.

$\frac{1}{5}$ of malt at $32s.$ Do.

The average cost per barrel of grain would be $19s.$, which we are to divide by seven gallons and a half, the supposed produce; this will shew the cost for grain to be $2s. 6\frac{1}{2}d.$ per gallon, to which we are to add for manufacture, as already stated, $6d.$, and for duty $5s. 11\frac{1}{2}d.$ At the above rate for grain, whiskey would stand the distiller in $9s.$ per gallon.

To enable the reader to form a correct idea of the description of stills used in Ireland, a representation is subjoined.



It is customary in this country, as well as in England, to rectify spirits; but that business has been hitherto conducted on a confined scale, as will appear from the following table, in which is exhibited the quantity of raw spirits purchased for that purpose in the course of five years.

	1817.	1818.	1819.	1820.	1821.
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.
Thomas Donoho, Dublin -	65,634	95,812	83,748	70,778	75,748
John Costigan, Dublin -	46,871	63,678	47,147	35,799	47,649
James Morris, Dublin -	11,512	5,327	—	—	—
Edward Morris, Dublin -	-	-	822	117	—
William Lyons, Dublin -	63,633	68,426	50,503	32,666	16,463
Anne Lyons, Dublin -	-	-	-	-	12,175
Patrick Hayes, Dublin -	51,979	82,133	45,425	38,326	32,648
Patrick Colgan, Dublin -	71,006	72,341	52,581	44,192	34,745
James Daley, Cork -	3,839	2,862	5,825	3,129	3,783
Mathew Campbell, Clonmell -	3,753	—	—	—	—
Ann Quirk, Clonmell -	-	15,320	8,958	—	—
John Anderson, Clonmell -	-	-	2,329	—	—
Francis P. Russell, Limerick -	11,596	12,938	13,477	16,935	12,412
And. A. Watt, Londonderry -	-	-	13,660	5,195	—
David Watt, Londonderry -	-	-	-	5,698	14,717
Henry Downes, Waterford -	14,891	16,156	7,737	7,175	—
Samuel Anderson, Limerick -	-	-	-	6,089	9,198

The alteration of the distillery law in the last session of parliament arose from the causes which have been explained, and from a desire on the part of government to establish a uniform system of distillation in Scotland and Ireland.

The great and leading principle upon which that act depends for the security of the revenue and the support of a fair trade, is the accuracy of the saccharometer in ascertaining the gravity of the worts or fermentable matter contained in the grain, and the checks adopted which are supposed sufficient for obtaining a proper account of the worts brewed.

The use of this instrument was known for many years to distillers, but its adoption by the officers of excise is rather of recent date.

It is a simple machine, and is nothing more or less than, as its name imports, a *measure of sweetness*; it was constructed to ascertain the sweetness of worts, or to compare their weight with that of equal quantities of the water employed. In fact, it may be said to be a *hydrometer* calculated to shew the specific gravity of wash instead of spirits. For, as spirituous liquors are strong in proportion to their levity, or weak in proportion to their gravity, hence, as the hydrometer will sink deeper in strong than in weak spirits, so the saccharometer will sink deeper in weak than in strong worts.

Of the vast number of those instruments which have been constructed, none perhaps have met with more general sale than that invented by Mr. Dicas of Liverpool. It is calculated to shew the gravity or saccharine matter in an English ale barrel of 36 gallons, equal to 44 gallons wine measure. When a wort, therefore, is stated upon it to be 60 lbs. gravity, the meaning is, that 44 gallons of such liquid weighs its weight of water and 60 lbs. more.

The instrument adopted by the act is the invention of Doctor Thompson of Glasgow, whose attention was called to the gravity of worts during some distillery experiments carried on under government, in which he was employed. It bears the name of Mr. Allan, who is the maker, and was the one in use by the excise in Scotland previous to the passing of the present law. It differs from that of Dicas in a very immaterial degree.

Worts of a gravity of from 30 to 80 degrees may be now distilled according to the quality of the grain, or agreeably to the convenience of the manufacturer; but the trader is required to specify in writing to the excise, six days previous to his commencing to work, the gravity of the wort or wash which he intends to distil; and no change is allowed to take place for one month in that gravity, which must not at any time exceed by more than three degrees the prescribed density, without a new notice.

As soon as the worts are let into the back from the cooler, the distiller must give notice to the officer, stating the quantity and gravity of the wort; and he is not to add any yeast or barm for the space of one hour, until the officer has tried the same, and sees that it corresponds in every respect with the notice.

Allowance is made for the expansion of worts by heat, where a wort receiver is previously kept, and tables are to be prepared under the direction of the commissioners of excise for such expansion.

The better to prevent fraud, the periods of brewing and distilling are kept distinct and separate; or, in other words, the manufacturer is not permitted to distil in the week in which he is preparing the wort, or to brew in the week he distils.

Before the removal of any wash or potale from the fermenting back or backs for the purpose of distilling, eight hours previous notice must be given to the officer, who is obliged to attend to unlock the different fastenings, which are nearly similar to those described in treating of English distilleries.

The duty, which is lowered to 2s. British currency, is charged in three different ways:—
1st, On the wash, at the rate of one gallon of proof spirits * for every five degrees of gravity, according

* Proof spirits are a mixture of an equal quantity of water and alcohol, 100 gallons of 25 per cent. over is chargeable as 125 of proof spirits.

to the attenuation, which charge is to be set forward as each back is decreased.

2d, By the produce as it appears in low wines or singlings, according to their strength compared with proof spirits, after making an allowance of 5 per cent. on the quantity.

3d, By the produce of low wines into spirits and feints, calculated as proof spirits.

Exclusive of the regular daily charges of any of the three modes which may be highest, and which are charged at the end of every distilling period, a yearly account is to be made up of all wash distilled during the term of the licence, at the respective monthly gravity or gravities declared by the distiller, into proof spirits; and if that calculated quantity of spirits shall be more than what the distiller has already been charged with, he must then pay the duty on the difference; which amounts in fact to this, that, although he gets credit for bad fermentation in the charge from each back, yet it is the declared gravity which is eventually charged and paid for.

The act provides for the using of malt or raw grain, and leaves it at the discretion of the distiller to use either, on giving proper notice of his intention to that effect. As an inducement for the exclusive use of malt, a drawback of one shilling is allowed on every gallon of proof spirits. But every distiller is obliged to use at least one-fourth of

malt, or pay duty on that amount, or the difference on any thing deficient of that quantity.

The size, form, and dimensions of the stills (none of which can be less than 40 gallons) are left to the option of the distiller, who is at liberty to work either quick or slow, as he pleases.

There is one peculiar regulation in this act deserving of notice, which, in addition to many others, renders the subduction of spirits extremely difficult, the distiller being obliged to have the end of the worm of his still inclosed and secured by such mechanism and means as the board of excise may direct, so that the run from it shall be conveyed directly into a receiver which is accessible only to the officer, until the actual quantity so discharged be ascertained. But a clause is reserved, giving a power to the lords of the treasury to suspend its operation, if found, on due proof, prejudicial to the quality of the spirits.

No spirits distilled from malt are permitted to be sent to England, unless a repayment of one shilling a gallon be made, which amounts to a prohibition.

Liberty is given to warehouse spirits without payment of duty, of a strength of from 11 to 25 per cent. over, on Sikes's hydrometer; and the casks are not allowed to be of less content than 100 gallons each; nor can a vessel of smaller capacity than that originally stored, be permitted from

the warehouse. A rent is required at the rate of one penny per week for every 40 gallons.

A free intercourse is opened between the Scotch and Irish dealers, and a competition in the manufacture of the two countries established. The law is in every respect favourable, and spirits of a superior quality may be expected.

Having laid before the reader a sketch of the state of distillation, with the most important beverages, and inebriating matters used in different countries of the world, we shall take leave of the subject for the present, with a few observations on the effect which the low price of spirits may be supposed to produce on the bulk of the population of Ireland.

It was observed by an American gentleman, who lately, and for the first time, visited this country, that he was early and strongly impressed with the belief, that the Irish people were the most drunken race on the face of the earth. In that impression he was partly confirmed by the exclamation of a pilot, who, on being asked by the sailors when taken on board, "What news in Ireland?" replied, "News! why the best news by —— we ever had "in the country; the duty is going to be taken off "the whiskey."

To such trifling incidents are unfavourable impressions too often to be attributed.

That the lower orders of the people of Ireland are generally more prone to the use of spirituous

liquors than most of their neighbours, is a fact too evident to be denied; but, that there is any inherent peculiarity in the Irish character, in which that proneness originates, cannot be affirmed.

So far back as the time of Henry VIII. we find the legislature warmly exerting itself in the suppression of this vice; while an Irish parliament, under Elizabeth, was equally intent on checking its destructive ascendancy. The force of habit is powerful; and daily experience shews us what it is capable of effecting, even in the use of tobacco; a weed which imparts less vigour to the body or pleasure to the mind than the talismanic enchantment derived from the elixir vitæ of the bottle.

To the peculiar circumstances of the country, involved, as it has been from an early period, in foreign and domestic broils, combined with the want of education and of regular employment, love of company, the hospitable and social habits of the people, together with a number of festive and saints' days appropriated to religious observances, marriages, christenings, patterns, fairs, and wakes, all so many scenes of festivity and joy, may be attributed the influence and hold which the use of intoxicating liquors has obtained.

Under all the enactments of the legislature, whether with the view of making it a source of revenue by the imposition of duties, or of checking it as the cause of vice and immorality, the propensity to drunkenness still prevails; and it appears in all

stages of the manufacture of ardent spirits, that the lower the duty the greater the consumption ; a positive proof that the vice of drunkenness does not exist in an inverse ratio to the ease of procuring it.

In the year ending the 25th March 1792, when the duty was only 1s. 2d. per gallon, there were consumed 3,482,055 gallons of legally distilled spirits in Ireland, the population being then a little above three millions ; while, in the year 1820, when the population had advanced to seven millions and a half, and the duty to 5s. 6d., there were only 3,363,611 gallons consumed.

That intoxication has prevailed in proportion to the cheapness of spirits, is not only supported by facts, and indisputable testimony, but is too apparent to be contradicted. In a report of a committee on the petition of the brewers of the cities of Dublin, Cork, and Waterford, ordered to be printed by the house of commons on the 6th of June 1811, it was stated that the excessive use of spirituous liquors has of late much increased in different parts of Ireland, and that the cause of this excess is the cheapness of the article. Nay, to such a height has its baneful influence arisen, that it has already begun to produce a physical effect on the labouring classes of Dublin, where it is observed that the bodily strength of the male population is impaired by the increasing quantity of spirits which they consume. The medical attendants of the fever hospital and general dispensary of

the city of Waterford give it as their opinion that the excessive use of spirituous liquors among the common people of that district, caused by the late reduction of the price, has been visibly productive of increased disease ; and they further state, that they have observed with extreme regret an evident increase of wretchedness and misery in the habitations of those orders in that city, which they ascribe to the misapplication of the produce of their labour in the purchase of these liquors. The evidence of the coroners of the city of Dublin, dated May the 21st, 1811, is no less conclusive ; for they certify that the number of deaths occasioned by the excessive drinking of ardent spirits, has greatly increased within the last twelve months ; and they consider this evil to have arisen from the reduced price of whiskey, which has tempted the working classes to indulge in a gratification attended with consequences so destructive.*

At what period, it may be asked, in the history of illicit distillation in this country, was there occasion for such complaint? In France, Spain, and Italy, where wine and brandy are in the greatest abundance, and within the reach of the lowest order of the people, drunkenness, in the opinion of a late writer, is nearly unknown. There is, he says, a greater quantity of wine and spirits consumed, in proportion, in this country, than in

* Wakefield's Statist. and Polit. Account of Ireland.

France and Russia. These assertions, however, do not controvert our opinion, since wine, of which there is the greater consumption, and even brandy, is less intoxicating than our spirits; and, from the local and moral circumstances of the people of those countries where they are made, they are considered rather as articles of commerce than as domestic luxuries. From these observations, we conceive ourselves justified in denying the assumption which has been urged by some, that a high duty on spirits leads to excess in indulgence; the contrary appears to be the fact. Yet we do not affirm that to the operation of a low duty are the great bulk of the irregularities which take place in the country to be attributed. It is not in the management of distillery laws, or in their adaptation to the suppression of smuggling, either in the public or private distilleries (a practice which we are bold to affirm was never carried to the extent presumed), that we are to look for the causes which have produced in Ireland those scenes of wickedness, bloodshed, and horror which have so much disgraced the character of a country yielding to no other; either in fertility of soil, in beauty of scenery; or in the valour and ingenuity of its inhabitants. By a more general diffusion of knowledge, and a complete participation in all those privileges which the Union with the different parts of the British empire may be expected to produce, aided by the meliorating hand of time, the cha-

racter of the Irish may be rescued from the imputations which, in some instances, have been wantonly, and, in others, but too justly cast upon it.

The establishment of manufactories, the encouragement of industry, the opening of markets in remote districts, and the formation of canals connecting our great lakes, and thereby affording a more ready communication with populous towns, would tend much to the improvement of the people, and by giving them employment, serve to eradicate many of those causes of discontent which have too long proved destructive to the happiness of the kingdom.

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