in the still, and the spirit comes over purged of its impurities. The latter process is more the rectifier's business than the distiller's, but the cleaner the distiller can render his spirit to the rectifier, the better it is appreciated.

We have briefly alluded to the ordinary distilling process, with which we were well acquainted; it would fill a large volume to describe the varieties of stills which science has introduced since the manufacture of Spirits became of so much importance. Dr. Muspratt, in his most valuable work on Chemistry, under the article Alcohol, gives the fullest information upon the subject of stills and distillation; his work is illustrated by drawings and sections of stills, and the descriptive matter is so plainly and familiarly written, that the unscientific reader may soon make himself acquainted with all the details. He says, p. 74:—

"Previous to the year 1788 the old form of still was in general use. At this period the excise duty was levied according to the size of the still, and no further notice was taken by the officers as to how the Worts were made, except that they visited the distilleries occasionally to observe if any other stills were in operation, or if larger ones were substituted for those which had been actually gauged. About the above period an important revolution took place in the construction of an apparatus by a firm in Leith, by which the distillation
was very much expedited. They lessened the height and increased the width of the still, to expose a larger surface to the action of the fire than could be done in the old form; the head of the still was enlarged in proportion to the quantity of vapour generated, and occasionally several outlets or pipes were inserted around the horizontal upper part, to facilitate the escape of the steam and alcoholic vapour into the condensing worm. This still could be charged, distilled off, and be ready for another operation in the course of a few hours, instead of a week as before with the common still. Though the inventors preserved to themselves its exclusive use for about twelve months, yet such an important discovery could not escape the vigilance of competing neighbours, and hence it shortly afterwards became general in Scotland. The Excise, until they became apprised of the fact, were outwitted; the distillers, as might be expected, pocketing the duty which they otherwise should have paid for the excess of Spirits distilled above the ordinary allowance to which the former method of gauging subjected them. The excise duty, however, was soon altered, and year after year it increased; but the distillers, constantly upon the alert, were enabled to hoodwink the overseers appointed by parliament, which was driven to the necessity of nominating a Committee, in 1799, to investigate this branch of the excise laws, and which furnished a lengthy report of the facts concerning the modes of distillation in Scotland. In consequence of this report the distillers were subjected to an excise duty according to the capacity of the still,
and on the supposition that it would be worked off and charged every eight successive minutes during the distilling season. Even this time was considerably shortened by the distiller: still, the amount of fuel consumed, and the consequent wear and tear, left it a matter of doubt whether they were gainers by it. The rapidity of this method was carried so far, that, in 1815, the last year of the license duty, a still of eighty gallons capacity could be distilled off, emptied, and be ready for a successive operation in three and a half minutes,—sometimes in three minutes! a still of forty gallons could be drawn off in two and a half minutes. An alteration in the excise laws at this time did away with the license duty, and the law became the same as in England, of levying duty upon the Wash and Spirits procured therefrom, which dispensed with the rapid mode.”

The French were the first to effect an improvement upon the ordinary distilling apparatus. The first to make any elaborate improvement appears to have been Edward Adam, an illiterate workman, at Montpelier, who, in 1801, having heard a lecture upon the contrivance of Woulfe for impregnating with gaseous matter water contained in a range of bottles, immediately thought of applying a like plan to Distillation. He obtained a brevet or patent for ten years, and was soon enabled by his success to set up in his native city a magnificent distillery,
which excited the admiration of all the practical chemists of that day, and from that time a complete revolution has been effected in the art of Distillation. About the same time, Solimani, professor of chemistry, at Montpelier, and Isaac Barard, distiller, in the department of Gard, having combined two distinct systems of apparatus, each most ingenious, and obtaining results little inferior to those of Adam, became in consequence formidable rivals. For a description of these stills, and others that we may mention, we refer the reader to Dr. Muspratt’s Chemistry, where drawings and complete specifications are shewn.*

The first to conceive the idea of constructing an apparatus by which continuous distillation might be carried out, was M. Baglioni: in this attempt he was not quite successful, and the subject was taken up by M. Collier Blumenthal, who prepared an apparatus which possessed, in an eminent degree, many of the requirements. M. Derosne very much improved upon this still with respect to the continuous distillation, and his apparatus superseded all others at that time known.

M. St. Marc, a veterinary surgeon attached to the personal staff of Buonaparte, appears to have been the next in the field, for after the adventures

* The Treatises of Le Normand and Derbrantant may also be consulted.
in the field of Waterloo, his occupation being gone, he turned distiller in France, and about the year 1823 he removed to England. Here he, with some others, formed a company for making Brandy from potatoes, and erected some considerable works near London. After three years, however, the project failed, entailing, it was said, a loss upon the promoters of upwards of fifty thousand pounds. St. Marc, however, was not idle during this time, and effected many improvements in the form of his still. He obtained a patent for this still in 1827, and then disposed of it to some Londoners, and returned with the proceeds to his native country. For rectifying purposes this still was a great improvement upon all others, and it came into great request among the distillers of London, Bristol, and other great towns. It had great refrigerating power, and economised fuel, the cleansing and flowing processes proceeding at the same time; it was also in considerable demand for the distillation of Rum in the West Indies, and several other of our Colonies.

In 1830 a patent was taken out for an improvement and an addition to stills by D. T. Shears, of Southwark. This was said to be an ingenious invention founded upon a previous patent granted to Joseph Corty in 1818.

But the most ingenious, original, and powerful
apparatus for distilling Spirits from fermented Worts or Wash of all kinds, is undoubtedly Coffee's, which has all the contrivances for eliminating the Alcohol in the purest state, and of any desired strength, at one operation. We cannot enter into a particular description of this still, but will briefly describe its operation. The Wort, or other fluid to be distilled, is made to flow over a very extensive surface, in contact with a current of steam passing in an opposite direction, by which means the steam is condensed, and giving up its latent heat to the more volatile spirit, this latter is driven on into the condenser in a state of great purity; whilst the residuary Wort and the condensed steam flow out of the vessel from beneath in a continual stream.

"Mr. Coffee," says Dr. Ure, "had many impediments to contend with, from the opposition of the excise authorities, in his first attempt to introduce this ingenious invention into public use; but prejudice and ignorance have at length given way, and the Coffee's still may be now seen in operation at almost every large grain distillery in the kingdom."

As an instance of the enormous size of some of the distilleries in the United Kingdom, we may mention that some of Coffee's stills at Edinburgh, Glasgow, and other places, work off two thousand gallons of Wash per hour, and one upwards of three
thousand gallons. There are several of equal magnitude, and it is stated that those now at work, or being erected, are capable of distilling half a million gallons of Wash per day, yielding, on an average, from eleven to twelve per cent. of Proof Spirit.

The distiller of Malt Whisky calculates on obtaining two gallons of Proof Spirits from one bushel of malt, in average yields. The highest yield is twenty gallons per quarter of eight bushels; and the lowest is sixteen, when the malt and fermentation are indifferent.

In 1831, Dr. Ure, for the information of a Committee of the House of Commons, made experiments on the use of molasses in breweries and distilleries, and gives the following result:—

"I dissolved one cwt. of raw sugar in water, so as to form seventy-four and a half gallons, inclusive of two gallons of yeast. The specific gravity of the mixture was 1·0593 on the 31st of March. By the 6th of April, that is in six days, the gravity had sunk to 0·992, or eight degrees under water, which was reckoned a good attenuation, considering the circumstances and the small quantity operated upon. By distillation it afforded at the rate of 14·875 gallons of Proof Spirit for 100 gallons of the Wash.

"When the distillers first worked from sugar, they only obtained upon an average from one cwt. 10·09 gallons imperial of Proof Spirit; but they afterwards got no less than 11·92 imperial gallons."
For the information of the Committee before referred to, Dr. Ure gives the result of an experiment which he made upon West India molasses. 150lbs. were dissolved in water, and mixed with two gallons of yeast weighing exactly 20lbs. The Wash measured seventy gallons, and had a specific gravity of 1·0647 at 60° Fahr. In two days the gravity had fallen to 1·0055; in three days, 1·0022; and in five days to 1·001. The temperature was kept up from 80 to 90 degrees Fahr. during the two last days, by means of a steam pipe, to favor the fermentation. The product of Spirits was eleven gallons and $\frac{3}{100}$ of a gallon. Now 150lbs. of the above molasses were found to contain of solid matter, chiefly crystallizable, 112lbs.; and as 112lbs. of sugar are estimated by the revenue laws to afford by fermentation eleven and a half gallons imperial of Proof Spirit, the result of that experiment upon molasses must be considered satisfactory, bearing in mind that the saccharine substance in molasses has been not only partially decomposed by heat, but is mixed with some of the glutinous or extractive matter of the cane.

A discussion having taken place in Ireland between certain persons connected with the distillers and the officers of the Excise, whether, or to what extent, raw grain Worts would pass spontaneously into the vinous fermentation, the Board
in London, in order to settle this important point, requested Dr. Ure to superintend a series of researches in a laboratory fitted up at their offices. One experiment, out of several enumerated, appears to be decisive.

Three bushels of mixed grains were taken, consisting of two of barley, one half bushel of oats, and another half of malt, which, being coarsely ground by a hand mill, were mashed in a new tun with twenty-four gallons of water at 155°. The mash liquor drawn off amounted to eighteen gallons, at the density of 1.0465, and temperature of 82° Fahr. Being set in a new tun, it began to ferment in the course of twelve hours, and in four days it was attenuated down to gravity 1.012.

This yielded in distillation, in Low Wines, 3.22 gallons, and by rectification, in Spirits, 3.05 gallons, while the quantity equivalent to the attenuation by the tables was 3.31, being an excellent approximation in such circumstances.

The method adopted in charging the duties payable upon Spirits is as follows:—Before the fermented Wort goes into the still, a calculation is made of the quantity of Wash drawn from the washback and first pumped into what is called the washcharger. If the liquor in the charger exceeds the quantity in the back, the distiller is chargeable with the higher amount; if it contains less, he
must pay according to the original quantity in the wash-back. Until one back is completely distilled into Low Wines, another cannot be removed; and a notice must be given in order that the strength of the Low Wines may be ascertained before they can be removed from the receiver to the charger; while the Low Wines, Spirits, and Faints, produced from each back must be kept separate until an account is taken of their strength and quality by the officer.

In a distillery there are three modes of charging the duty, either on the Wash, Low Wines, or Spirits, whichever is the highest; and the manner of doing it is as follows:—On Worts, or Wash, the strength is made out at one gallon of Proof Spirit for every five degrees of gravity attenuated in every five gallons of Wash. The Low Wines are estimated according to the strength brought to proof, an allowance of five per cent. being made in favor of the distiller; and the Spirits which are produced from the Low Wines of each back are calculated at proof, the Faints remaining being deducted. If any Spirits should be found beyond the proportions just stated from any given quantity of Wash, the duty is paid on the highest quantity. These charges of duty are made out at the end of each period; besides this there is an annual return or compare made of the quantity of Spirits that ought to have been produced, with the actual quantity charged;
and should a deficiency appear, the trader is subject to pay the duty on the difference. This compare must be returned by the officer within one month after the expiration of the year's license, and the trader is obliged to pay the amount within ten days after.

In the process of the work the charges are made from the highest gauge, without any allowance for waste or dregs in the Worts; and the distiller is required, at the end of every distilling period, to make a return of the quantity of Wash distilled, and the Spirits produced; and no Spirits can be removed from any distillery in a less quantity than nine gallons at a strength of 25 over proof, or 11 over proof, or 10 below hydrometer proof.

All Spirits manufactured in the United Kingdom by simple distillation are by the Excise denominated British Plain Spirits; the vats in which they are stored are marked PS, and the same initials are used in the permit. The same Spirit rectified, and made into Gin, is called British Compounds, the symbol expressing which is X. We have endeavoured to trace the origin of this symbol. The only suggestion we can submit is that Gin, or Geneva, on its first introduction occasionally bore the name of Strong Waters, afterwards abbreviated into X Waters, the letter X being anciently used as the symbol of purity or perfection. The letter is likewise used by brewers to indicate the strength of
their Ale or Beer; in some cases it is doubled, trebled, and a brewer's dray may be sometimes seen upon which casks show as many as five X's, which, we presume, betoken something of extraordinary strength.

For the satisfaction of the uninitiated, it will be necessary to explain the system by which the strength of Worts and also Spirits is readily ascertained. The most scientific aid has been called into requisition to assist the government in arriving at a correct method; and that which is now universally used is simple, and meets with general approval from manufacturers and traders.

To ascertain the density of the Worts an instrument is used called a saccharometer (from σακχαρός, sugar, and μέτρον, a measure,) which is, as its name imports, a measure of sweetness or saccharine matter. The instrument is accompanied with a book of tables, in which the gravities are calculated according to the indication shown on the stem. In fact, it may be said to be an hydrometer calculated to show the specific gravity of Wash instead of Spirits. For as alcoholic liquids are strong in proportion to their lightness, and weak in proportion to their weight, the hydrometer will sink in strong and rise in weak Spirits; whilst the saccharometer will sink deeper in weak than in strong Worts.

The hydrometer (from υδας, water, and μέτρον, a measure,) is a test of the density or gravity of
water. The importance of extreme accuracy in determining the density of alcoholic mixtures in the United Kingdom, on account of the great revenue derived from them to the State, and their consequent high price in commerce, induced the Lords of the Treasury to request the Royal Society to examine the construction and mode of application of the instrument now in use for ascertaining and charging the duty on Spirits. This instrument, which is known and described in the law as Sike's Hydrometer, possesses, in many respects, decided advantages over those formerly in use. The Committee of the Royal Society stated, that a definite mixture of alcohol and water is as invariable in its value as absolute alcohol can be; and can be more readily, and with equal accuracy, identified by that only quality or condition to which recourse can be had in practice, namely, specific gravity. The Committee further proposed, that the Standard Spirit should be that which, consisting of alcohol and water alone, has a specific gravity of 0.92 at the temperature of 62° Fahr., water being unity at the same temperature; or, in other words, that it should weigh \( \frac{92}{100} \) or \( \frac{11}{12} \) of an equal bulk of water at the same temperature. This standard strength is known as Hydrometer Proof, and it is at this strength that all duties are charged, and by this generally that the commercial value of Spirits is regulated.
It is scarcely necessary to dwell upon the importance to those connected with the spirit trade of a thorough acquaintance with the use of the hydrometer, a most ingenious instrument, which must interest every one of scientific mind; it is a ready substitute for the hydrostatic balance, to which it is to be preferred on account of the ease and expedition with which it may be used.

The gravity of the liquid is necessarily affected by its temperature, and hence a thermometer is used with the hydrometer, and there are tables which indicate the strength of Spirit at every temperature.* Thus in Standard Spirit at 62° the hydrometer would indicate 920, which, in this table, would give Proof Spirit. If that same Spirit were cooled to 40°, the hydrometer would indicate some higher number, which, however, being marked in the table with the temperature as indicated by the thermometer, would still give Proof or Standard Spirit as the result.

* Glass instruments are supplied by opticians and hawkers to publicans,—an hydrometer, with a long stem balanced with mercury contained in a bulb. As there is no thermometer and corresponding table, the thing is worse than useless; the publican believes in the veracity of his instrument, and hence frequent and unpleasant disputes arise between him and the merchant who may have supplied him with his goods. The evidence of the incorrectness of the test may be easily proved by first trying the strength of the sample, and then increase the temperature of the Spirit by placing it near the fire; the next best thing for the owner to do is to smash the glass apparatus and procure a proper hydrometer.
DISTILLATION.

The following general rule may be adopted for calculating the strength of Spirits, whether above or below proof. To reduce the strength to hydrometer proof, multiply the quantity by its degrees of strength, and add the quotient; the total will be the number of proof gallons. When the strength is under proof, multiply as before, but subtract the quotient from the number of gallons, and the remainder will show the proof gallons.

To shew the specific gravity of Spirits at various strengths, we have condensed, from Dr. Ure’s Dictionary, tables commencing with the strength of Spirits of Wine as generally supplied, and continuing down to water. It will be known to the scientific reader that a vessel which will hold 1,000 grains of water will hold only 792 of absolute alcohol. The specific gravity of alcohol is therefore said to be 792—that of water being 1·000—or 0·792, water being 1.

CORRESPONDENCE BETWEEN SPECIFIC GRAVITY AND PER CENTS. OVER PROOF, AT 60° FAHR.

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We shall show in subsequent pages the injurious effect of the present high duties upon home manu-
FACTURED SPIRITS. One of the evils that has arisen, and will increase, is a recurrence to the illicit manufacture formerly exercised to so enormous an extent, whereby the government is defrauded of its revenue, and the honest trader seriously affected by his duty-paid goods being brought into competition with those which have paid no duty at all.

A very interesting calender of rogueries may be made, showing the various methods which have been successfully practised for evading the duty upon Spirits. Detections have been occasionally made in the establishments of those who have stood high in the commercial world for integrity and fair dealing. We could narrate some curious discoveries of ingenious frauds upon the revenue occurring within the last thirty years, but as some of the parties informed against are in existence, and their business relations still carried on, we may inflict unnecessary pain.

The Excise Reports contain a multiplicity of deeply-laid schemes carried on for some time successfully. It may not be at all times with the sanction or knowledge of the capitalist whose name appears as the distiller that such things are done. His active manager, anxious to gain for his employer a good return for the capital invested, has possibly let his zeal for his master's service militate against the interests of the crown. This has been
offered, we know, as an extenuating circumstance in more than one instance, and charitably, though with some mental reservation, we will suppose such to have been the case.

In spite of all the active surveillance which the revenue officers exercise to detect frauds, they are very frequently done. One deception was carried on successfully for some time by connecting a pipe with the worm and carrying it through a wall into another part of the building unknown to the excise officers; by such means a very large quantity of Spirits may escape the duty.

Prior to an alteration in the law, it was not unusual for distillers to carry on business also as rectifiers in adjacent premises. The facilities which this afforded for the disposal of an excess in stock, rendered it imperative that no rectifying house should be within a quarter of a mile of a distillery; nor any distiller or rectifier carry on the business of a brewer, maker of worts, vinegar, cider or perry; or be a refiner of sugar on the same premises.

The narration of a few only of the manœuvres adopted by those who live entirely by the manufacture of illicit Spirits may be interesting to the reader. The extraordinary contrivances to evade the law and prevent detection induce the feeling that the possessors of so much shrewdness might have employed their talents more to their own
advantage in an honest and honorable calling, for sooner or later detection invariably follows. Morewood, a collector of excise, and an excellent authority, furnishes us with many instances of the artful construction of distilleries on the boundaries of town-lands, in the caverns of mountains, on islands in lakes, and on boats in rivers; of the carrying away and secreting of revenue officers for weeks together, to prevent their giving testimony; of the romantic manner of their treatment while in confinement; and the various other schemes and devices to defeat the intentions of the government. Amongst these may be mentioned the instance of a person who had constructed a distillery so artfully, that it eluded the vigilance of the most expert officers of excise, although it was known to have long existed in the neighbourhood. One determined functionary resolved to find it out at all hazards, and, on one moonlight night, unaccompanied by any person, he followed a horse led by a peasant; across the back of the animal was a sack, which the officer suspected contained materials for this mysterious manufactory. When the horse had arrived at a certain place, the sack was removed from his back and suddenly disappeared. The officer made his observations, returned to his residence, and, having procured military assistance, repaired to the place where the horse had been unloaded.
All was silent, the moon shone bright, the ground was unmarked by any peculiar appearance, and he was almost inclined, with those who accompanied him, to think that he laboured under a delusion. Perceiving, however, some brambles loosely scattered about the place, he proceeded to examine more minutely, and, on their removal, discovered some loose sods, under which was found a trap door leading to a small cavern, at the bottom of which was a complete distillery at full work, supplied by a subterranean stream, the smoke being conveyed from it through the windings of a tube that was made to communicate with the funnel of the chimney of the distiller's dwelling house, situated at a considerable distance.

Another distillery has been known to be worked on the site, and in conjunction with a limekiln, which, from the kiln being continually in operation, kept the other for years without detection. So cunningly were some of these still-houses situated, and so artfully constructed, that the smoke proceeding from them was made to issue as if from burning heath, or sods of peat, ignited for manure. Their position was, for the most part, either on a commanding eminence, in the centre of a bog, or in a well-secured fastness; but always calculated to prevent the identity of townland or proprietorship; while the portability of the apparatus rendered the
discovery and seizure of those stills difficult and hazardous. On the approach of a stranger, an alarm was given, either by dispatching a messenger or sounding a horn, while the machinery was removed, and the potable always destroyed or conveyed into receptacles under ground prepared for such exigencies. Thus the still hunter was often disappointed of his expected prize, the poor distiller put to the loss of many a brewing, and the excise officer rendered the object of the hatred and vindictive feeling of the unreflecting peasantry.

Illicit stills are generally made of tin or copper; sometimes of a tin body and copper bottom; often a large black metal pot is used. The worm is either made of copper or tin, according to the caprice of the smuggler. These stills range from forty to seventy-four gallons content, one being made to serve the double purpose of a still and copper.

The manufacture from these illicit stills has long been a favorite beverage in Ireland, as it is made from malt without adulteration, and possesses a flavor which habit has rendered most agreeable. This, combined with the high duties on legally distilled Spirits, and the want of a ready market for the disposal of the grain of remote and mountainous districts, induced the people to embark in the illicit traffic to an extent which was not only
injurious to the agriculture and revenue of the country, but to the morals and peaceful habits of the community. So far was the practice carried, that in 1806, out of 11,400,030 gallons (the computed consumption of Spirits in that year), 3,800,000 gallons were allowed to be the produce of illicit manufacturers; and in 1811, 1812, and 1813, there were no less than 19,067 illicit distilleries destroyed by the revenue and military.

To put down this illicit trade, various enactments were passed by the legislature, among which that for fining the townlands on which any portion of a still, Wash, Low Wines, or other materials for distillation were found, was not the least oppressive. The annual average of fines levied for seven years under the act for the suppression of this evil amounted to £50,989 for all Ireland; while in one county alone the sum laid for 1806 was £2,620, for 1807, £2,750, and for 1814, £18,125. How could it be otherwise, when it was proved before the Parliamentary Commissioners, that many men were found to declare, that they had never done a day's work in their lives but at illicit distillation, and that they knew nothing else by which they could gain subsistence?

The fines upon townlands having been abolished, it was found necessary to adopt some other measure to put down illicit distillation. Recourse was,
therefore, had to a revenue police, the excise officers having too much other business to attend to, and the difficulty and expense of procuring regular military assistance being almost insurmountable. Accordingly, a revenue police was established in 1822, and was gradually augmented in proportion to the exigencies of the service. In 1826, this force amounted to thirty-two parties; in January, 1833, to fifty-seven parties; and in the next year to seventy parties, numbering, in officers and men, upwards of twelve hundred persons. They were distributed through those parts of the country in which illicit distillation most prevailed; and though their exertions were very great, yet they but partially suppressed the evil.

Their services will be best appreciated by an enumeration of the detections made by them in four successive years:

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<td>71,782</td>
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Morewood, corroborating all that we have advanced in former pages, observes:

"Experience has proved that illicit distillation has
always decreased in proportion to a lowness of the duty, so that it was almost annihilated by the reduction which took place in 1823, by causing a substitution nearly universal of the legal for the illegal article. Difference of opinion, however, exists respecting the extent to which a reduction of duty should be made; perhaps the best means to prevent the evil under consideration, would be to reduce the duty in proportion to the average price of grain in the provinces, so that the temptation to manufacture Spirits from it would be less than the grain itself would bring in the market. Such a measure could scarcely fail of having, at least, a powerful influence, if not of effecting a total suppression of the illegal practice, while it would give the preponderance in favor of the legal manufacture."

Of the many plans which have been laid to obstruct the revenue officers in the discharge of their duty, Morewood narrates the following:—

"On the approach of the assizes in 1803, when many were about to be prosecuted for illicitly distilling, an officer stationed at Danfanaghy, in the county of Donegal, who was to support the informations, was suddenly seized, blindfolded, and carried away by a body of men in disguise, and brought to the island of Arran, on the western coast. From thence he was conveyed to the islands of Goal, Innismay, &c., where he was closely confined, often threatened with the loss of life, and was even obliged, by way of humiliation for
his active services, to assist in the working of an illicit still, while, like another Tantalus, the cup of pleasure was held to his parched lips, without the liberty of gratifying his thirsty desires. At the end of thirteen days, when the necessity for his confinement had ceased, he was again blindfolded, taken from the island, and sent a considerable distance into the interior of the country, when the mask was removed from his face, and he was allowed, in the solitude of night, to make his way to his disconsolate family, who, all the time, had looked upon his restoration as hopeless.

“Another officer, on a similar occasion, was hurried from his bed, without any covering except his shirt and trowsers, put into a sack, thrown across the back of a horse, and, in this manner, was conducted to the margin of a lake, where, in his own hearing, a consultation was held whether he should be drowned by tying a stone to the sack and committing it to the deep, or that he should be put to a more lingering and torturing death. In this awful state of suspense he was removed to a mountainous part of the country, where he was subjected to every kind of insult and privation, continually menaced with death in every shape of barbarity, led out at night as if about to be executed, and again conducted to his solitary habitation, anticipating a renewal of further cruelties. In this state he was retained for a considerable time, till the judge, who presided at the assizes during the trial of some persons for illicitly distilling, suspected the parties as being accessory to this outrage, told them that if the officer who had been taken away
was not immediately liberated, he would pass such a sentence on them as would for ever put it out of their power to commit such another offence, and gave them but twenty-four hours for his restoration. This had the desired effect: the unfortunate man was again put into a sack and restored to his family in the same manner as that in which he had been carried away."

But it was not in Ireland alone that such "free traders" pursued their calling; other and, perhaps, more troublesome opponents to high duties are always to be found when the gain is equal to the risk. There was scarcely any one of the maritime counties of England without its gang of smugglers, for if France was not opposite, Holland was not far off; and the system of prevention was very inefficient, a few scattered custom house officers, aided by an occasional cruiser on the coast, having but little chance against an organized system. It was, moreover, well understood that the detectors more frequently made a decent livelihood by conniving at, than by suppressing the illegal transactions. Thus, to use one of the smuggler's own expressions, a roaring trade in contraband goods was going on along the British coast without let or hindrance.

A popular novelist, giving a description of these practices, observes:—
"As there are land sharks and water sharks, so were there then (and so there are now), land smugglers and water smugglers. The latter brought the objects of their commerce either from foreign countries or from foreign vessels, and landed them on the coast; and a bold, daring, reckless body of men they were: the former, in gangs, consisting frequently of many hundreds, generally well mounted and armed, conveyed the commodities so landed into the interior, and distributed them to others, who retailed them as occasion required. Nor were those gentry one whit less fearless, enterprising, and lawless, than their brethren of the sea.

"Each tradesman smuggled, or dealt in smuggled goods; each public house was supported by smugglers, and gave them in return every facility possible; country gentlemen on the coast dabbled a little in the interesting traffic; almost every magistrate shared in the proceeds or partook of the commodities. Scarcely a house but had its place of concealment, which would accommodate either kegs, or bales, or human beings, as the case might be; and many streets in seaport towns had private passages from one house to another, so that the gentleman enquired for by the officers at No. 1 was often walking quietly out of No. 20 while they were searching for him in vain. The back of one street had always excellent means of communication with the front of another, and the gardens gave exit to the country with as little delay as possible."

In the memoir of the Rev. R. H. Barham (Thos.
Ingolsby) allusion is made to these doings on the coast of Kent, Mr. Barham having been admitted to the curacy of Ashford in that county. In an account of the desperate character of the smugglers, it is narrated that one of them, having been shot through the body in an affray with the custom house officers, actually confessed, while lying on what he believed to be his death-bed, that there was not a crime in all the dark catalogue of human guilt that he had not committed. The man recovered for the time, to afford another testimony to the truth of the old saw respecting the effect sickness is supposed to have upon a certain individual and his followers, but fell dead upon his face after the lapse of a few years, while in the act of planting vegetables in his garden. Mr. Barham was afterwards presented to the living of Snargate, and he removed to Wareham, the curacy of which was at the same time offered him.

"These parishes were about two miles apart, and situated, the former in, the latter on, the verge of Romney Marsh; and, as may be expected, they abounded, even more than the spot he had first quitted, in desperadoes, engaged in what by technical euphemism is termed the 'free trade.'

"But notwithstanding the reckless character of these men, the new rector met with nothing of outrage or incivility at their hands. Many a time, and oft indeed,
on returning homewards late at night, has he been challenged by some half-seen horseman, who looked in the misty gloom like some heavy condensation, but a little more substantial than ordinary fog; but on making known his name and office, he was invariably allowed to pass on with 'good night,—it's only parson!' while a long and shadowy line of mounted smugglers, each with his led horse laden with tubs, filed silently by. Nay, they even extended their familiarity so far as to make the church itself a depot for contraband goods; and on one occasion, a large seizure of tobacco had been made in the Snargate belfry; calumny contended for the discovery of a keg of Hollands under the vestry table. When we add, that the nightly wages, paid whether a cargo was run or not, were at the rate of seven shillings and sixpence to an unmounted man, and fifteen shillings to one who carried his cutlass and pistols, little surprise can be felt if nearly the whole population pursued, more or less, so profitable an avocation."

Mr. G. P. R. James corroborates much of the foregoing statement:—

"The most favored of all counties by nature and art for the very pleasing and exciting sport of smuggling was that of Kent. Its geographical position, its local features, its variety of coast, all afforded it the greatest advantages; and the daring character of the natives on the shores of the channel was sure to turn those advantages to the purposes in question. Sussex, indeed, was
not without its share of facilities, nor did the Sussex men fail to improve them; but they were so much farther off from the opposite coast, that the commerce, which we may well call the regular trade, was at Hastings, Rye, and Winchelsea, in no degree to be compared to that which was carried on from the North Foreland to Romney Hoy. At one time the fair level of 'The Marsh,' a dark night, and a fair wind, afforded a delightful opportunity for landing a cargo, and carrying it rapidly into the interior; at another time, Sandwich Flats, and Pevensay Bay, presented a harbour of refuge and a place of repose to kegs innumerable and bales of great value; at another period, the cliffs round Folkestone, near the South Foreland, saw spirits travelling up by paths which seemed inaccessible to mortal foot; and at another, the wild and broken ground at the back of Sandgate was traversed by long trains of horses, escorting or carrying every description of contraband articles.

"The interior of the country was not less favorable to the traffic than the coast: large masses of woods, numerous gentlemen's parks, hills and dales tossed about in wild confusion; roads, such as nothing but horses could travel, or man on foot, often constructed with felled trees, or broad stones laid side by side; wide tracts of ground, partly copse and partly moor, called in that county 'minnisses,' and a long extent of the Weald of Kent, through which no highway existed, and where such a thing as coach or carriage was never seen, offered the land smugglers opportunities of carrying
on their transactions with a degree of secrecy and safety which no other county afforded. Their numbers, too, were so great, their boldness and violence so notorious, their powers of injuring or annoying so various, that even those who took no part in their operations were glad to connive at their proceedings, and at times to aid in concealing their persons or their goods. Not a park, not a wood, not a barn, did not at some period afford them a refuge when pursued, or become a depository for their commodities, and many a man, on visiting his stable or his cart shed early in the morning, found it tenanted by any thing but horses or waggons. The churchyards were frequently crowded at night by other spirits than those of the dead, and not even the church was exempted from such visitations.

"None of the people of the county took notice of, or opposed these proceedings; the peasantry laughed at, or aided, and very often got a good day's work, or, at all events, a jug of genuine Hollands from the friendly smugglers; the clerk and the sexton willingly aided and abetted, and opened the door of the vault, or vestry, or church, for the reception of the passing goods; the clergyman shut his eyes if he saw tubs or stone jars in his way; and it is remarkable what good Brandy Punch was generally to be found at the house of the village pastor. The magistrates of the county, when called upon to aid in pursuit of the smugglers, looked grave, and swore in constables very slowly, dispatched servants on horseback to see what was going on, and ordered the steward or the butler to 'send the sheep to
the wood' an intimation that was not lost upon those for whom it was intended. The magistrates and officers of seaport towns were in general so deeply implicated in the trade themselves, that smuggling had a fairer chance than the law in any case that came before them, and never was a more hopeless enterprise undertaken, in ordinary circumstances, than that of convicting a smuggler, unless captured in flagrant delict."

As we have in a subsequent portion of this work gone pretty fully into the subject of high duties, and shown the results, we will now only point the reader's attention to the annual parliamentary returns of the number of distilleries and the quantity of Spirits entered for home consumption from 1822 to 1863, and it will be seen that the tendency of high taxation is to get the trade gradually into fewer hands; but we have never yet heard of a monopoly being of any benefit to the general community,—the contrary is a natural sequence.

In 1827, the number of distillers was, in England, 11; in Scotland, 246; in Ireland, 82; total, 339. But in 1862, the numbers were, in England, 10; in Scotland, 119; in Ireland, 27; total, 156. The number of distillers has thus decreased by much more than a half; and the decrease has been proportionately greatest in Ireland, where two-thirds of the distillers appear to have become extinct, and absolutely greatest in
Scotland, where 127 distillers have gone out of the trade. Up to 1853, when the series of additions to the Scotch and Irish Spirit duties began, the decrease in the number of distillers had been very considerable, though slow in comparison with the period following, the number, which had been 339 in 1827, having fallen to 210 in 1862, being a good deal more than a third. *

* It being impossible to procure a complete return of the home consumption, &c., of British Spirits to the end of 1863, during the printing of this portion of the work, the return will be found in the Appendix.
CHAPTER II.

GIN.

"This calls the church to deprecate our sin,
And hurl the thunder of our laws on Gin!"

    Pope.

"Let the thunders of the pulpit descend upon drunkenness, I for one stand up for Gin."—Burke.

"Then shall each ale-house, then each gill-house mourn,
And answering Gin-shops sourer sighs return."

    Pope. Dunciad, b. iii.

the Year 1820—Recipes for Making Gin as generally approved
—West Country Gin—Fine Gin—Plain Gin—Cordial Gin, &c.
—Gin made without Rectification—Dr. Muspratt’s Comments
upon the Process—The Wholesomeness of Gin defended—
Medicinal Character of the Ingredients shown—Moderate Gin
Drinkers long lived—Gin Punch as drank at the Garrick Club
—Gin Sling—Gin Drinking amongst the Lower Orders—A
Gin-palace—The Condition and the Homes of the Poor referred
to—Practical Suggestions as to their Improvement—List of
Rectifying Distillers—The Business not a lucrative one.

“GIN [Fr., Geniévre.] Juniper, a spirit so named
because flavored by the berries of the Juniper, and
formerly called Geneva.”—Richardson’s Dictionary.

There can be no doubt that Gin is a corruption of
Geneva, and, as far as we can discover, the name
became familiar soon after the Revolution, when, as
our trade and commerce ceased with France, the
importations of Spirit from Holland became general.
Sometimes this Spirit was called Hollands, and as
often Geneva, occasionally the two names were
combined, and have continued to be so to the pre-
sent day, in “Hollands-Geneva,” or “Hollands-Gin,”
the contraction Gin being applied to the British
imitation and manufacture.

Amongst our researches, we found in an old
volume an attempt to associate the word Gin with
a name famous in poetry and romance,—Genera, or
Ginnerera, the favorite lady of Ariosto, whose name
cau sed him to immortalize the juniper tree as
Petrarch did the laurel, about as reasonable a
derivation as that of the wag, who said pure Gin was derived from oxygen, and Gin and water from hydrogen.

We have not many sources of information with reference to the use of home-manufactured Spirits until the reign of Charles II., when the importation of, and the preference given to foreign, against British manufacture, was a subject of complaint. This preference was considered as attributable to the unskilfulness of English distillers, and to their making their Spirits from bad materials, which prevented their general consumption; and this, in the fourteenth year of the same reign, when exclusive charters and patents were very common, was made a pretence for incorporating the distillers in and about London, and granting them the sole privilege of making Spirits and Vinegar in the cities of London and Westminster, and within twenty-one miles round the same. But this proved no remedy; no monopoly in trade or commerce ever improved a manufacture or increased its consumption. Statesmen of the present day, whose intelligence prompts them to refer to the history of the past, profit by examples. The importation of French Brandy, notwithstanding the loud complaints of the British manufacturer, still increased the more, so as during the reigns of Charles and James II. the court was too favorably inclined.
towards everything connected with France, to suppress or limit importations from that country.

At last came the Revolution, and then the interests of England, as well as the nature of trade, began to be better understood and more impartially cultivated; accordingly, in the second year of William and Mary, an act was passed for encouraging the distilling of Brandy and Spirits from Corn. This act gave full liberty to every one to exercise the trade of Distillation; and as all trade and commerce with France was then prohibited, it gave real encouragement to the British distiller, and much increased the consumption of home-made Spirits. It was likewise a considerable boon to the farmers, as it opened a market for the spoilt and coarse sorts of grain, which they could not before dispose of, except at a sacrifice.

This Act of Parliament, which was at first made for five years,* was continued for one year longer, and though it then expired, yet the benefit accruing to the nation by thus laying the trade open was so sensibly felt, that by a clause passed the very next year, 8th and 9th William III., it was enacted, "That any person who had then set up any works or offices for making or distilling for sale any Low Wines or Spirits from drink brewed from Malted

* 5th and 6th William and Mary, c. 8; and 7th and 8th William III., c. 30.
Corn or Cider, giving notice to the Commissioners of Excise within ten days after the entering of such office or works, might follow such work, and might refine the Spirits of their own making, paying the duties, and being subject to the same fines and penalties as other distillers."

By such repeated favors and encouragement, British distillers flourished and their numbers increased, whilst the importation of foreign Spirits was much diminished. But in the meantime, owing to the manufacture becoming cheap, the poor began to drink it extravagantly.

"The populace of London," says Smollett, "were sunk into the most brutal degeneracy by drinking to excess the pernicious spirit called Gin, which was sold so cheap, that the lowest class of the people could afford to indulge themselves in one continued state of intoxication, to the destruction of all morals, industry, and order. Such a shameful degree of profligacy prevailed, that the retailers of this poisonous compound set up painted boards in public, inviting people to be drunk for the small expense of one penny; assuring them they might be dead drunk for twopence, and have straw for nothing. They accordingly provided cellars and places strewed with straw, to which were conveyed those wretches who were overwhelmed with intoxication. In these dismal caverns they lay until they recovered some use of their faculties, and then they had