on the General Committee, and receive a grant from that Institute towards the payment of local expenses.

It was mentioned that a new List of Members had been printed and issued in June last.

The Report was dated 20th December, 1900.

MEETING HELD AT BREWERS' HALL, ADDLE STREET,
E.C., ON TUESDAY, 12TH FEBRUARY, 1901.

Mr. H. F. BUXTON (Vice-President) in the Chair.

The SECRETARY announced that the Committee, after due consideration, had decided not to hold this year the Annual Dinner, which had been postponed on account of the death of Her late Majesty, the Queen.

The Beer Duty.

By H. GRAHAM ALDOUS.

IT will assist us in our subject if we somewhat briefly survey the history of the taxes (direct and indirect) which have been laid upon beer in England in the past. During the narrative I shall have recourse to frequent foot-notes rather than break the threads of the argument.

In England brewers have been taxed from early times. A portion of their profits went to the Revenue in the shape of a tax upon the "movables" of brewers in the twelfth century, and from time to time down to the Revolution brewers in England were subject, in one form or another, to the attention of the Ruling Power. But it was not until the struggle between Charles I. and the Parliament had set in, that the Excise can be said to have been established in England. It had been customary in Holland long before and may be said to have been copied by the English Government from that country. Its introduction into England was unpopular, and the Government imposing it lamented the necessity, and protested that the measure was

merely of a temporary nature and would terminate with the war. It is worth while for a moment to recall the words of Lord Chancellor Clarendon who, writing in the days of the Great Revolution in England, describes the imposition of Excise as follows :—

“The two Houses at Westminster, who called themselves, and they are often called in this discourse the Parliament, had at this time by an Ordinance, that is an Order of both Houses, laid an imposition, which they called an Excise, upon wine, beer, ale, and many other commodities, to be paid in the manner very punctually and methodically set down by them, for the carrying on the war. This was the first time that ever the name of payment of Excise was heard of, or practised in England, laid on by those who pretended to be most jealous of any exaction upon the people: and this pattern being then printed, and published at London, was thought by the members at Oxford as a good expedient to be followed by the King; and thereupon it was settled, and to be governed, and regulated by Commissioners, in the same method it was done at London. And in Oxford, Bristol, and other Garrisons, it did yield a reasonable supply for the provision of arms and ammunition; which, for the most part, it was assigned to; both sides making ample declarations, with bitter reproaches upon the necessity that drew on this imposition, ‘that it should be continued no longer than to the end of the war, and then laid down and utterly abolished’; which few wise men believed it would ever be.”

The words and the prophecies are worth recalling. Let us hope that since those days “human nature,” at any rate where money and Governments are concerned, has improved; and that nowadays, when a Government promises to remit a tax or a portion thereof, it will keep to its word at the earliest opportunity.

The tax imposed in Lord Clarendon’s time was a beer duty, all ale and beer* being for Excise purposes brought under the headings of

* In the 15th and 16th centuries a sharp distinction was drawn between ale and beer. Thus, in the year 1 Richard III (1483), the Brewers’ Company petitioned Lord Mayor Billesdon “to forbid the putting into ale of any hoppes herbs or any other like thing but only licour malte and yeste.”

Also, in Andrew Boorde’s *Dietary* (1542), ale is described as “made of malt and

"strong" or "small," a greater duty being charged upon "strong" than upon "small." A duty was also laid upon hops at about the same time. In 1697 a tax of a fraction more than 6*d.* a bushel was systematically put upon malt to enable William III. to carry on the war against France, and for rather more than the next 130 years the three duties remained in existence, the Beer Duty, the Hop Duty, and the Malt Duty.* In 1830 the Beer Duty was abolished: and rightly so, looking to the method of making the charge. A tax ought to be unerring in its incidence, easy of collection, and ought not to hamper the freedom of the manufacturer. The Beer Duty which was abolished in 1830, owing both to the difficulties and to the faulty methods of its collection, led to much friction between the Excise Officers and the Trade, opened the door to fraud, and seriously hampered brewers in brewing a variety of beers to suit their various customers. We must remember that there was no saccharometer used for the purpose of assessing an accurate *ad valorem* Beer Duty. To instance at what a comparatively recent date the saccharometer came into anything like general use in breweries I will give you an extract from a book published in London in 1760, and written by a brewer carrying on an extensive business at Windsor, and who is described in the preface as of a reasoning turn of mind assisted by a great experience in an extensive business.

The first chapter of this Mr. William Reddington's book on Brewing

water while beer is composed of malt hops and water." See *Curiosities of Ale and Beer*, Bickerdyke, Lendenhall Press (no date: about 1887), ch. iv., *passim*.

The Beer Duty until 1684 was "farmed." We find, for instance, in the Dartmouth MSS., April, 1659:—

	£	s.	d.
England—By the excise of beer and ale in farm	329,011	0	0
Scotland—By the excise of beer and ale in farm and <i>aqua vita</i>	47,444	13	4
Ireland—By customs and excise in farm	70,000	0	0

Cf. Dartmouth MSS., Historical MSS. Commission, 3 (No. 24), p. 96.

* The Malt Duty was always intended to be a duty upon the *malt*, not upon the barley, as I have seen it lately stated. By the Act of 1702, 1 Anne, it was provided, "that out of every twenty bushels charged in the cistern or other utensil there shall be an allowance made to the maker of such malt, or upon the floor within forty-eight hours after the same be thrown out of cistern, of four bushels, in consideration of the difference between the quantity of such corn when it is wet and swollen and the quantity thereof when it is converted into dry malt." And again, after it had been on the floor more than forty-eight hours eight bushels were to be allowed "in consideration of the difference between the quantity when upon the floor and the quantity when it is dried and perfectly made malt." See also 12 Anne, Secs. 1, c. 2.

is devoted to a "Description of an Instrument contrived by the Author for estimating the strength of Beers." He writes: "This instrument, which I will call the Sensible Float, was contrived by me when I first began to inquire into the Theory of Brewing: and it is to be made in the following manner:—Take some of the best bung corks and a small round stick with inches and tenths* on the top, and a piece of lead at the bottom, cut in the same form as the corks, from an inch to the diameter of the stick; put as many corks on the stick (with a piece of lead between every cork) as shall make the whole instrument about 18 inches or 2 feet long. The diameter of the uppermost cork should be about 3 inches, and that of the lowest, 1 inch. This instrument is to be put into a glass tube, 30 inches deep and 4 broad; fill this tube with water and put a wooden cover over it with a hole in the centre, just big enough for that part of the stick which is marked with inches to move. The leads should give the instrument such a weight as to cause it to sink 4 inches under the surface of the water; then if you pour out the water, and fill it with your strongest beer to the same height as the water, you will find the stick rise considerably higher than it did in the water; if it should rise so as to appear above the surface of the beer, more weight should be added, that it may sink lower in the water. As many shillings as you value your beer at, so many divisions you should make between the height to which the instrument rises in the water and the height to which it rises in the beer. By this method, you may estimate what proportion the value of any beer bears to the price of the strongest; for suppose the strongest beer to be valued at 30s. a barrel, by putting one-thirtieth part of water to 29 parts of this beer into the tube, the instrument will not float so high by one of the 30 divisions."

The foregoing description is not perhaps particularly easy to follow in all its details, but the general import is sufficiently clear; and we may safely surmise that if the use of the saccharometer, or any similar instrument, had been at all general in brewing in those days, we should scarcely have had this "groping about" by one who was considered to be so well versed in the arts of his business as to warrant him in writing a book.† Again, to take a book of later

* ? tenths.

† *Practical Treatise on Brewing*. By Wm. Reddington, late of Windsor, Brewer. London, MDCCLX. Published posthumously. In 1784 Richardson,

date published in London at the beginning of the last century,* and the author of which was described in the *Monthly Review* of July, 1802, as one who wrote "like an honest, as well as an intelligent brewer." In this book, although it is remarked that the use of the saccharometer had then become common, no less than two chapters and a-half are devoted to the description of the instrument and to impressing upon those brewers who do not use one, the great utility attaching to its use. A sixth edition of this book was issued in 1819, so that even at that date we gather that the saccharometer was not used in breweries to anything like the present extent. We must also bear in mind that prior to 1847† there was no method known of obtaining an "original gravity." The result of all this working in the dark may be readily imagined. There was a great difference between the amount of the duty on "strong" and on "small." For instance, in 1643, the duty on "strong" was 2s. a barrel, and on "small" 6d. a barrel, and any alteration made was generally one of increase, and one which accentuated the difference between "strong" and "small," so that by 1802 we find the duty on "strong" 10s. a barrel,‡ and on "small" 2s. a barrel.§ To a dishonest brewer, therefore, who did not mind becoming rich at the expense of the Government, the desirability of selling "small" as "strong," or of blending the two and selling the mixture as "strong," was ever present, especially as the Government, in order to differentiate between the two qualities of beers, fixed a maximum price above which "small" beer was not to be sold.|| Moreover, there must have frequently been great

of Hull, published a book showing the use of the saccharometer, and in 1785 Baverstock published his *Hydrometrical Observations and Experiments in the Breweries*.

* *A Practical Treatise on Brewing*. By Alexander Morrice, Common Brewer.

† The Excise were indebted to Messrs. Dobson (a Secretary to the Board) and Phillips (Principal of the Board's Laboratory) for the discovery of the method of determining the original gravity of beer. The accuracy of the method was confirmed by Professors Graham, Hofmann, and Redwood.

‡ See Appendix A, p. 63.

In 1760 the duty on "strong" beer was increased from 5s. to 8s. a barrel. Private brewers paid or compounded for the Malt Tax, but were free of Beer Duty. Therefore the higher the Beer Duty the more private brewing increased—to the detriment of the Revenue, the preferential treatment of the rich man, and the damage of the common brewer.

§ There was an allowance of three barrels in thirty-six, or rather more than 8 per cent. for waste, &c.

|| For instance, in 1902 it was provided by 42 Geo. 3, c. 38, that no common

friction between honest brewers and the Excise owing to an error on one side or the other in stocktaking in the cellars, or to an occasional serious deficiency in extract due to a setting of the "goods," or from a want of "palate" on the part of the Excise officers.* The attempt of the Government to fix and regulate the prices of beers was altogether vexatious and unsound. It is true that in 1782 a third beer, table beer, carrying a duty and selling at a price between those of "strong" and "small," was recognised, but with the result that three beers were found to be more difficult of checking than two, and in 1802, two beers were again reverted to. Yet again, in 1823, in an attempt to enable brewers to meet a demand for a beer not quite so strong as "strong," and not quite so small as "small," the Government allowed† a beer called "intermediate" to be brewed. Its production, however, was hedged in by all sorts of annoying precautions and regulations—*e.g.*, a certain quantity (5 to 5½ barrels) of the beer had to be produced from a quarter of malt: the beer was not to be sold for "on" consumption: it was not to be brewed within 100 yards of the brewery of a "common brewer," nor within a quarter of a mile of a malt house.‡

brewer was to sell, or permit to be sold, any beer brewed or made as for table beer and charged with duty as table beer, at a higher price than 16s. the barrel exclusive of the duties, either as the price of the beer or under pretence of carriage, credit, or interest of money or under any other pretence whatever on forfeiture of £100. By 59 Geo. 3, c. 53, the 16s. was raised to 18s.

* By 7 & 8 Will., 3, c. 30, it was provided, "The gauger may taste the drink upon any brewer's dray."

† Subjoined is a resolution moved by the Chancellor of the Exchequer on 21st March, 1823, preparatory to bringing in his "Intermediate" Bill. The resolution is instructive as an evidence of the harassing regulations to which the Government resorted in order to obtain the duty upon beer: "That there shall be levied and paid an Excise duty of 5s. for every barrel containing 36 gallons ale measure of beer or ale which shall be brewed in Great Britain for sale, and which shall be levied in the proportion of not less than 5 barrels containing 36 gallons each of such beer or ale, nor more than 5½ of such barrels for and from each and every quarter of malt which shall be used for the brewing thereof, and which shall be sold in any quantity at one time of 9 gallons or upwards at a rate or price not exceeding 27s. the barrel, or which shall be sold in any quantity at one time of less than 9 gallons thereof at a rate or price not exceeding 10d. the gallon."

‡ It is interesting to note that during the debate on 24th March, 1823, on this Bill for "Intermediate" Beer, a Mr. F. Lewis said that he thought it would be perfectly practicable to impose a duty *ad valorem* on beer. The late Chancellor of the Exchequer had had in contemplation such a tax. He himself (Mr. Lewis) was convinced that such a tax could be very accurately adjusted. The present inartificial system of duties was as old as the time of Charles II. By means of the

All things considered, the methods of imposing* and collecting the Beer Duty were unsound and irritating, and unduly hampered the brewer in his business, and its abolition in 1830 was, under the circumstances, a commendable fiscal move and a relief to the Trade.

We have spent some little time upon a retrospect of the old Beer Duty, but the investigation will assist us in obtaining a wider grasp of our subject.

The abolition of the Beer Duty was at once followed by a large increase in the Excise returns of the amount of malt used. Roughly speaking, the quarters used jumped from $3\frac{1}{2}$ millions to 5 millions. The Malt Duty at that time (1830) was 1*l.* 0*s.* 8*d.* per quarter. When it was regularly imposed, in 1697, it was put on at practically 4*s.* 6*d.* a quarter: by increases, chiefly due to war expenses, it reached, in 1804, as high as 35*s.* 10*d.* a quarter, but after Waterloo it was lowered, and in 1822 it was fixed at 2*s.* 7*d.* a bushel, or £1 0*s.* 8*d.* per quarter.

In 1840 an additional 5 per cent. was put on,† making it £1 1*s.* 8½*d.* per quarter. In 1854, owing to the Crimean War, the duty was raised by Mr. Gladstone, the Chancellor of the Exchequer, from 2*s.* 7*d.* to 4*s.* a bushel,‡ with the proviso that the increase was to be continued during the war, until the 5th day of July next, after the ratification of a definitive treaty of peace and no longer.§ Peace was proclaimed early in 1856, with the result that, on the 1st July, 1856, the increase in the duty, which had not produced the amount expected,|| was taken off, and it again became 2*s.* 7*d.* plus 5 per cent. a bushel of malt, or

saccharometer the quality of beer could be accurately ascertained and the duties apportioned accordingly. Mr. Lewis's remarks do not appear to have had any attention paid to them. Mr. F. Buxton, a very able man and a brewer, who spoke immediately after Mr. Lewis, does not appear to have been in any way struck by them.

• Private brewers of all degrees were exempt from Beer Duty, alike in castle and cottage.

† An additional 5 per cent. was put on all excisable articles, with the exception of spirits.

‡ See Appendix A, p. 63.

§ A precedent to be borne in mind by brewers.

|| Consumption of malt:—

1853.....	42,000,000 bushels.	
1854.....	36,800,000 "	{ Decreases of 12 per cent. and 20 per cent., whereas Mr. Gladstone had allowed for a falling off of about 5 per cent.
1855.....	31,000,000 "	
1856.....	40,000,000 "	

its equivalent of sugar (the use of sugar in brewing having been permitted in 1847).^{*} On the removal of the increased duty, the consumption of malt at once showed expansion. In 1862 the duty was very properly taken off hops.[†] In its place a duty, amounting to practically 1s. a quarter on all malt and sugar brewed (representing 3/4 a barrel and four barrels to the quarter) was charged in the form of an additional Brewers' Licence Duty. This made the duty on a quarter of malt amount to £1 2s. 8½d., at which it remained until 1880.

Towards the close of the year 1879, and in the early part of 1880, Mr. Gladstone, despite his seventy years of age, had displayed the most astonishing vigour in attacking the Conservative Government in a series of speeches chiefly delivered in the North of England and in Scotland during what is known as his "Midlothian Campaign"; and as a result, on the dissolution of Parliament at Easter, 1880, the Liberal Party was returned to power, Mr. Gladstone accepting the premiership on 23rd April. To the functions of the First Lord of the Treasury he superadded the onerous duties attaching to the Chancellorship of the Exchequer. On 10th June, 1880, he made his Financial Statement, the chief portion of which was devoted to the abolition of the Malt Tax and to the establishment of a Beer Duty in its stead.

The Agricultural Party had for years been demanding the abolition of the tax upon malt. They were continually petitioning the Houses of Parliament‡ in the matter. In 1833 and 1853, and upon other occasions, set assaults in the agricultural interest had been made in Parliament upon the tax; and it is not at all improbable that the conversion of the Malt Tax into a Beer Duty would have taken place at an earlier date than 1880 if it had not been for the difficulties of

^{*} From June, 1811, to July, 1817, porter brewers were allowed to use sugar caramel for colouring porter; but this permission was then withdrawn, and brewers were again confined to burnt malt for that purpose.

[†] The hops, cured for use, were "bagged," and then weighed for duty purposes by the Excise officer; their true weight, together with the name of the grower, his place of abode, and the year of the growth, being stamped upon the pocket. A long credit was allowed by the Government to the grower. In the latter years of the tax, the first moiety of the duty, which was charged in September, was payable in May in the next year, and the second moiety in the November following.

For an explanation of the term "Old Duty," which is frequently used at the present day in estimating a hop crop, see Appendix A, p. 63.

[‡] Even in 1830 (the year of the abolition of the Old Beer Duty), Lord Suffield presented three petitions from Norfolk praying for a repeal of the Malt Tax.

survey presented by the great number of small licensed brewers, and for the prevalence of private brewing. For instance, in 1853, there were as many as 45,294 licensed brewers-for-sale; and we may calculate* that something like 2,000,000 bushels of malt were used by private brewers. But by 1879 the number† of brewers-for-sale had fallen to 22,278, an average decrease of about 900 breweries a year on the 26 years: and private brewing had decreased by at least 9/10ths of its amount, to less than $\frac{1}{2}$ per cent. of the total malt used. This large decrease in the number of brewers brought within the power of the Inland Revenue authorities the possibility of a satisfactory supervision of the remainder, and obviated to a considerable extent the opposition which that Government Department had hitherto displayed towards the substitution of a Beer Duty for the Malt Tax.

The Agricultural Party was also "at it again," under the leadership of men like Mr. Chaplin and Sir Fitzroy Kelly (afterwards Chief Baron of the Exchequer). In 1867 and 1868 the agriculturists strongly advocated the repeal of the Malt Tax before a Select Committee appointed to consider the question, and ultimately gained the day by the casting vote of the Chairman. In 1875 the Central Association of the Chamber of Agriculture made a formal application to the then Chancellor of the Exchequer in favour of the substitution of a Beer Tax for a Malt Tax; and in 1879, for a like purpose, Mr. Chaplin had put down a motion on the House of Commons "Paper." Moreover, the barley harvest of 1879 was an extremely bad one,‡ and, accordingly, the stock of malt in the spring of 1880 was small, and, therefore, a less sum than usual would be required for drawback. All these considerations, coupled with the advance of science, gave Mr. Gladstone an opportunity for making a great fiscal change,§ a change which, in theory, had great recommendations, and a

* By subtracting from the total malt charged with duty, the malt used by brewers for sale and by people for purposes other than brewing.

† See Appendix B, p. 64.

‡ One of the fiscal objections to the revenue from a Malt Tax was its variability in accordance with the excellence and abundance, or the reverse, of the barley crop.

§ He abolished the duty on malt and on the sugar used in brewing, the duty on maltsters and malt roasters and dealers in malt, the brewers' licence duty (placing merely a £1 registration licence on common brewers and one of a few shillings on private brewers), and obtained the revenue thus abolished by placing a duty upon beer. The amount estimated as necessary for drawback, £1,100,000, he obtained by putting an increase of 2d. for the half-year (1d. for the year) on the income tax.

change which, in practice, has, on the whole, been found to substantiate its promise. We cannot do better here than refer to the words of Mr. Gladstone in making his financial statement. In the course of his speech he said :—

“The Malt Tax is a tax upon a raw material ; for, although malt is a manufactured article when you compare it with the grain from which it is made, just as the grain is a manufactured article when you consider it in relation to the earth and seed from which it is made, so the malt tax only represents a later stage in the preparation of this commodity for human use. It has the disadvantages of the manufactured article in this, that when we charge our duties upon the intermediate stage, these duties enter into the price of the product at once, and they enlarge the demand for capital necessary for carrying on the trade. The profits of the tradesman must be had upon the duty no less than upon the ordinary price, and a much greater burden is inflicted upon the consumer than the benefit received by the Exchequer. Well, Sir, again I must own I am strongly of opinion that a tax like the Malt Tax, which is considerable in its incidence in relation to the value of the product, has undoubtedly a powerful effect in giving an artificial preference to a particular commodity grown by the farmer against all other commodities. It is true that we do not wholly prohibit malting from other substances than barley, but our legislative regulations are such that, though the object is not sought or perhaps intended, yet they have the effect of absolute prohibition. Practically, malting is confined by law to barley ; and as this heavy duty is applied to barley, the effect of it is that it gives a very strong and powerful preference to the highest qualities of barley ;* and the highest qualities of barley, on account of the Malt Tax, enjoy a superiority over the inferior

* By 28 and 29 Vict., c. 60, the duty on malt could be charged according to the weight of the grain used when such weight was less than 53 lbs. per bushel, 53 lbs. per bushel being taken as the standard normal weight of malting barley. But the permission was hedged in by many provisions. The cistern, for one thing, had to be covered over with a cover made of wood or iron, or iron grating, or strong wire-work, and capable of being secured with a Revenue lock. The Act was made use of to some extent when the season produced English barleys of a light weight, chiefly in the Eastern Counties. But not more than from 5 to 10 per cent. of malt was made under the provisions of this Act, and in some seasons not even that amount.

qualities of barley greater than they would enjoy if the Malt Tax were not a part of law. Well, Sir, the artificial preferences thus given are, in our view, a very serious evil to import into trade.

“There is nothing so mischievous as for the Legislature to point out, either by positive enactment or by fiscal arrangements, to the manufacturers or traders of this country some particular line in which he must conduct his operations, or else that he must be content with a heavy fine if he deviates from it. Now that is the effect of all the arrangements which put upon a particular material a premium or preference, and lead him to limit his operations to that material for fear of the pecuniary loss which the law would otherwise lay upon him. . . . The law under which our taxes are at present levied has practically the effect of a prohibition as between malt made from barley and every other material for the manufacture of beer, and, as between different kinds of barley, it has the effect of giving artificial elevation to the value of the best barleys, and artificial depression in the same degree to all other kinds of barley.”

Eloquent words: and more than eloquent, they were true; and have stood the test of twenty years. Indeed, we cannot thoroughly read the history and debates of this great fiscal change of 1880 without admiring Mr. Gladstone for his superb grasp of the subject from the largest issues to its smallest detail. We are not surprised at the excellence of his finance, his economy, or perhaps at the accuracy of his forecasts of the effect of his measure upon the materials of our trade; but we are struck with admiration when we find him more at home in the brewing questions than brewers themselves. In removing the duty from malt to beer, it was Mr. Gladstone's object to place a tax upon beer which should produce for the Revenue the full equivalent of the Malt Tax. It was not his purpose to make a sensible augmentation of the duty: to diminish in any way the profits of the trade. But at the same time he did not wish the brewer to make an immediate profit out of the abolition of the Malt Tax itself. He accordingly estimated the value of the relief which would be given by the abolition of the Malt Tax, and then imposed a duty upon beer which, in his opinion, would bring him a like amount with a turn in the scale in favour of the Revenue. I will tabulate his estimate:—

<i>Value per Quarter of Relief from Malt Tax.</i>		<i>Equivalent per Barrel in Beer Duty.</i>
Malt duty	£ s. d. 1 1 8½	1 quarter of malt produces an average extract of 4 barrels of wort at 1055 sp. gr.
Brewers' licence duty.....	0 1 0	and $\frac{£1\ 4s.\ 6\frac{1}{2}d.}{4} = 6s.\ 1\frac{1}{2}d.$
*† Maltsters' profit on capital required to pay the Malt Tax.....	0 0 10	∴ Giving a turn to the Revenue
*† Estimated value to the Trade of the abolition of the legal restrictions on malt-houses, malting, materials, &c.....	0 1 0	1 barrel at 1055 sp. gr. = 6s. 3d.
	<hr/> 1 4 6½ <hr/>	

* "Money's worth," although not ostensibly paid in the shape of a direct monetary tax payment.

† It has been argued, because of the credit (six weeks: extendible to twelve weeks on payment of interest at rate of 3½ per cent. on amount of duty so deferred) which a maltster could obtain on finding securities, that this 10d. was considerably too much. Moreover, the malt allowance of 18½ per cent. on the couch dip gave an "increase" to maltsters of about 3 per cent. to 6 per cent., which was equivalent to making brewers an allowance of 3 per cent. to 6 per cent., so far as the duty was concerned; and it may be argued that this 3 per cent. to 6 per cent. ought to have been deducted by Gladstone from the "Value of Relief from Malt Tax."

But Gladstone had ground for replying that even assuming that the whole 10d. was wrongly included by him (which could scarcely be the case), yet the 4 per cent. waste (extended to 6 per cent.) was more than its equivalent; and as to the "increase" on the malt which brewers had been enjoying, they ought never to have so enjoyed it. The Malt Tax was always intended by law to be a tax on the finished malt, not on the barley from which it was made; as witness Act of 1702, 1 Anne; also 12 Anno, Sess. 1, c. 2.

But brushing aside all this fencing on one side and the other, and assuming that Gladstone was altogether wrong and his trade critics altogether right—which is assuming what was not true—and taking the allowance due to the "increase" as equalling 1s. per quarter, it cannot, in my opinion, be confidently argued that 2s. 10d. per quarter is an excessive value to place upon the advantages accruing to brewers from the abolition of the restraints upon malting and browing, which obtained previous to the Inland Revenue Act of 1880. I do not think that brewers would agree to return to the Malt Tax and the position before 1880, for 2s. 10d. a quarter.

We must also remember that when in 1860 malt was allowed to be imported into England for home use at an import duty of 25s. per quarter (Excise duty 21s. 8½d. + corn duty 1s. + "money's worth" claimed by maltsters 2s. 3½d.), maltsters claimed and obtained a value of 2s. 3½d. as attaching to the interest on the duty for 6 months, and to the Excise restrictions and licence. Thus:—

Interest on duty for six months per quarter = 6d.

Fine due to Excise restrictions (and licence) per quarter = 1s. 9½d.

We see that the Corn Duty was of the same value as the Brewers' Licence Duty:

From the above duty of 6s. 3d. a barrel upon wort he proposed to deduct 4 per cent. for waste during manufacture, thus making the duty a net one of 6s. a barrel upon the manufactured wort or beer.

On the introduction of the Bill for second reading on 24th June, Mr. Gladstone announced that he was making further inquiries to ascertain what augmentation in the figure adopted as the standard of specific gravity should be made, because the brewing trade had satisfied him that a larger produce would be obtained from a quarter of malt than he had with his former information felt justified in reckoning. Ultimately he fixed the average produce from a quarter of malt throughout the United Kingdom* at four barrels at 1057°. The Bill was criticised in the House by, amongst others, Mr. M. A. Bass and Mr. J. Watney. The members of a trade, generally speaking, nearly always resist any proposed marked alteration in the customs of their particular trade, unless there be some very evident present advantage to be gained from such innovation; and both Mr. Bass and Mr. Watney ably argued that the then restrictions on malting were not nearly so onerous as those which were about to be placed on the brewer. We, of course, now know differently; and I think I may say before a mixed gathering of brewers like this, that if a proposal were made to revert to the old system of collecting the duty in the malt-house with all its restrictions there, and all its restrictions upon the use of materials in the brewery, we should quickly find a majority of brewers resisting such a retrograde proposition, unless it were accompanied by a very large reduction in the duty charged.

I have said above that admiration was due to Mr. Gladstone for the full and accurate knowledge which he displayed in carrying through this great fiscal measure. As a brewer, one's admiration would not perhaps be sustained if one felt that in making the change he had put

so that the 25s. import duty of 1860 is exactly comparable to Gladstone's *gross* equivalent in 1880.

Cf. 13th *Inland Revenue Report*, p. 33; also *Hansard's Parl. Debates*, 3rd series, 156, 865, 10th February, 1860; and also speeches by Sir Fitzroy Kelly and Mr. Gladstone on 7th August, 1860.

* We must remember that at that time there were thousands of brewers of the smallest class—public-house brewers and brewers in an extremely small way of business in agricultural districts—who obtained very poor extracts from their malt.

I am told that many of these brewers after the passing of the 1880 Act found great difficulty in paying the duty within the specified time. They missed the credit allowed to them by the maltster.

his hand unduly into brewers' pockets. But it cannot substantially be said that he did. All things considered (not forgetting the increase during malting,* the credit given to responsible maltsters, and other smaller items), one is inclined to think that Gladstone did not obtain by his Beer Duty more than a fair sum—I do not say more than a *large equivalent* sum—for the relief given to the trade by the abolition of the Malt Tax and its accompanying evils.

No doubt, owing to the reduction of the average standard of gravity by the very poor extracts obtained by the thousands of licensed brewers of the smallest class, brewers obtaining good extracts had to pay more duty per quarter under the Beer Duty than they were calculated to have paid in money and "money's worth" under the Malt Tax;† and no doubt they would have felt the difference in the shape of a marked diminution of their profits but for the collateral drop in the prices of corn and the advantages which accrued to the trade from the "Free Malt House" and the "Free Mash Tun," with the consequent wider field for the remunerative application of capital and science.‡

The Commissioners of Inland Revenue in their 28th Report (1884-85) in summing up the financial results of the change made in 1880, expressed the opinion that Mr. Gladstone, by his measure, obtained no more than just the equivalent of the Malt Tax. They argued as follows:—

The average receipt§ from the taxes on malt and sugar used in brewing, together with the brewers' and maltsters' licences during the last four years of their existence was £8,400,000, a low average chiefly due to the failure of the barley crop of 1879, and the consequent decrease in the amount of malt made that season. During the previous four years the average was £8,570,000.

* With regard to the "increase" on malting, one sometimes hears a maltster say that he was by the abolition of the Malt Tax mulcted of the "turn" which he used to obtain by selling the "increase," upon which he had paid no duty, to the brewer at a "duty" price. It may have seemed so; but doubtless this "turn" or gift, so far as the maltster was concerned, was more apparent than real, as it would be discounted in competition. A maltster in selling his malt would have reckoned his duty per quarter at, say, £1 0s. 6d. instead of £1 1s. 8½d. But see footnote, p. 38.

† See Appendix C, p. 65.

‡ This remark must not be extended to the constant and successive increases in the rate of duty which have since taken place.

§ See Appendix D, p. 66.

The average receipt for the Beer Duty for the first four years was £8,500,000,* or, with £40,000 for brewers' licences, £8,540,000. The conclusion to be drawn is that the Beer Duty is no more than exactly equivalent to the taxes for which it was substituted.

The Commissioners also argued that Gladstone did not obtain his extra "turn" of £300,000 as was expected. This they attributed to the fact that 1055° was a more accurate standard of specific gravity than 1057°.† But brewers may well point out that trade sharply declined all through the eighties until 1889,‡ and that if the Beer Duty had not been instituted, the average receipts from the Malt Tax would have shown a *falling off* during the years 1880-5 instead of an equality; and that such an argument is sustained by the fact that an amount far larger than was received under the Malt Tax was obtained from the Beer Duty directly a revival of trade took place in 1889 (allowance being made for Mr. Goschen's extra 2½d. a barrel).

That this explanation is the true one is also sustained by the following consideration:—For the year 1874-5, when trade and wages were at a high level, the entire "Drink Revenue" may be taken as £31,000,000. In 1881-2, with the declining trade, it had fallen to roughly £28,500,000, a decrease when compared with the prosperous period, of 2½ millions, or 8 per cent. Assuming the beer trade to have declined in a similar ratio to that of other alcoholic liquors, we should have expected a falling off in the Beer Revenue of some £680,000. As

* Receipts from Beer Duty (the Act came into force on 1st October, 1880):—

1880-1 (5 months only).....	£3,482,000	} "Budget" years, which are not "Brewing" years.
1881-2	8,531,000	
1882-3	8,400,000	
1883-4	8,488,000	
1884-5	8,545,000	

The hop famine of 1882-3 no doubt affected the year's beer revenue. Bad hops meant inferior beer, and therefore a decrease in its consumption; moreover, brewers would lower their gravities to partially compensate them for the ruinous prices of hops.

† There is no doubt that Gladstone was correct, and that he did not over-estimate the average extract of a quarter of malt in 1880, when he, after deliberation, took it as being four barrels at 1057°. See *post*, p. 42.

‡ See Chart, Appendix E, showing falling trade and decreased expenditure per head on alcoholic liquors.

See also Gladstone's 1882 Financial Statement, *Hansard*, 3rd Series, 268, p. 1238 *et seq.*

a matter of fact, it maintained a level as high as that of the above-mentioned period of prosperity. Why? The reason is apparent when we consider that the quarterage brewed in 1881-2 was roughly 7,200,000, which, at 2s. per quarter (Gladstone's gain per quarter for "money's worth") = £700,000.

We must bear in mind that Gladstone, who knew his subject, had (after making further specific inquiries) deliberately declared four barrels at 1057° to be the correct average produce from a quarter of malt. Let us for a minute examine this question of average extract; the investigation will serve us later on.

For the year ending 30th September, 1882 (the first complete brewing year of the Beer Duty unaffected by the change), there were used 7,213,243½ quarters of materials.

The duty paid was £8,652,734 14s. 9d., which at 6s. 3d. per standard barrel, gives 27,688,751 barrels charged for duty at 1057° (standard gravity).

But 6 per cent. is deducted from the standard barrels produced before the duty is charged:—

$$\begin{aligned} \text{Therefore} \quad 27,688,751 + 27,688,751 \times \frac{6.383}{100} \\ = 29,456,124 \text{ standard barrels produced;} \end{aligned}$$

$$\text{and} \quad \frac{29,456,124}{7,213,243\frac{1}{2}} = 4.08 \text{ barrels at } 1057^\circ \text{ per quarter.}$$

It may safely be assumed that very many of the 14,000 brewers brewing under 1,000 barrels a year were charged on the goods.* We will grant that, and give them the odd 0.08 barrel per quarter (which will be giving them a good 15 lbs. extract per quarter on their quarterage, more than sufficient to bring them above a material

* Roughly, a brewer had to obtain an extract below 70.02 lbs. per quarter before a material charge was made. An Excise officer in making out a charge would work out the standard gallons produced, and compare the result with the deemed gallons from materials less 4 per cent. Whichever number of gallons so compared proved to be the greater would be taken, and after a deduction thereon of 6 per cent. the charge would be made.

See Appendix (F), p. 67, Inland Revenue Act, 1880, Sec. 13, sub-sec. 3 (a) and (b). In practice the month's brewings are taken for the purpose of making the monetary charge. By Section 13, sub-section 4, of the Act of 1880 the Commissioners of Inland Revenue have power to afford just relief to a brewer for sale where a material charge is concerned, if the nature of the materials used warrants such relief.

charge). We still have our four barrels at 1057° left,* and we see that Mr. Gladstone was doing himself and the Revenue ample justice when he declared, after special investigation, that he would obtain an average extract per quarter of four barrels at 1057°. If we work out the average extracts obtained for the different years since 1881-2, we shall find that as the very smallest breweries were continuously being absorbed, the average extract obtained per quarter showed a tendency to rise; and doubtless it can be shown to be a fact that Gladstone did obtain, and always obtained, his full average extract of four barrels at 1057°, and that Mr. Goschen had not the least justification, in 1889, for lowering the standard to four barrels at 1055°. But we shall come to Mr. Goschen later on.

It is sometimes erroneously stated that the abolition of the Malt Tax at once caused a drop in the price of barley. It is a fact that in the years 1880-5 the average prices of barley began to fall. It was an odd coincidence that this fall should have been contemporaneous with the institution of the Beer Duty; but it was merely a coincidence. Wheat, barley, and oats all fell together, wheat most of all; as is shown by the following, which I have taken from my paper on the Free Mash Tun:—

Average Prices per Imperial Quarter for the Two Decades.

	Wheat.		Barley.		Oats.	
	s.	d.	s.	d.	s.	d.
1870-79 (inclusive)	51	4	38	0	25	3
1880-89 "	37	0	29	6	19	10
A fall of	14	4	8	6	5	5
"	28 per cent.		22½ per cent.		21½ per cent.	

The removal of the Malt Tax can scarcely have affected the average price of wheat and oats in the above manner; and there were general causes at work† which would have acted greatly as they did whether Gladstone had brought in his 1880 Finance Measure or not.

* This fact is an additional proof that a decline in the beer trade (which existed contemporaneously with the general decline in trade practically from 1879 to 1889) was responsible for the failure of the proceeds of the Beer Duty to immediately and substantially exceed those of the Malt Tax. See also footnote to Discussion, p. 78.

† Could it have been that we did not until about 1880 reap the full benefit of

No doubt one effect of the abolition of the Malt Tax has been the admission of thin foreign malt, and materials known as malt adjuncts, into English brewing. But as a consequence of this admission, various beers are now produced in England of a better quality than used to be produced from English malt alone. The standard of quality in brewing has gone up. Beers of light gravity have to be brilliant, sparkling, and sound. X and table beer have to be as brilliant as the more expensive beers. Beer at 4*d.* a quart is now consumed, in large towns at any rate, from glasses, and is condemned unless "glass bright." And, almost throughout the Kingdom, beer drinkers refuse a beer which possesses any acid flavour.

the repeal of the Corn Laws? These laws are to be met with in varying forms all through English history, but Corn Laws of a more regrettable description than usual were enacted in 1815. Under them we find wheat, barley, and oats protected by the following rate of import duties:—

Wheat, £1 5*s.* a quarter to 1*s.* according as the price rises from 61*s.* to 70*s.* a quarter;

Barley, 13*s.* 10*d.* a quarter to 1*s.* according as the price rises from 32*s.* to 40*s.* a quarter;

Oats, 10*s.* 9*d.* a quarter to 1*s.* according as the price rises from 24*s.* to 31*s.* a quarter.

In 1832 we find Sir Henry Parnell writing that the effect of the Corn Laws, "namely, to raise the price of corn, is proved to be effectually secured by what are the prices of corn at home and abroad; for the state of the markets abroad show that, on a moderate calculation, foreign wheat may be imported and sold at 10*s.* a quarter, foreign barley at 5*s.* a quarter, and foreign oats at 3*s.* 6*d.* a quarter less than British wheat, barley, and oats have been sold for, on an average of the fifteen years since the passing of the Corn Law in 1815." The Corn Laws were repealed in February, 1849. The price of corn in England was not forthwith affected. The average prices of corn remained at about the same figure until 1880. The expected effects of the repeal of the Corn Laws may very well have been postponed by the great state of unrest which existed throughout Europe, and elsewhere, until the revival of trade in the seventies. Great wars followed one another in succession. There will occur to our minds the Crimean War (1854-6), the Indian Mutiny (1857), the war between France and Austria (1859), the American Civil War (1861-5), the war made by Austria and Prussia upon Denmark (1864), the Prussian and Austrian War (1866) and the Franco-German War (1870-1. With peace, trade flourished. The Continental grain-carrying and trading boats were set free, and also in England a greatly increased tonnage of shipping was registered. When the volume of trade began to fall off towards 1880, there would be a superabundance of carrying power afloat eager for employment; and one of the first uses to which it would be put would be the opening up of ports for the supply of food-stuffs to the large manufacturing centres, which the commercial and manufacturing prosperity of the preceding years had maintained and augmented; and, moreover, the freightage would be reduced.

In December, 1882, Mr. Gladstone placed the Chancellorship of the Exchequer into the hands of Mr. Childers, who, in 1885, found himself with a deficit of about £15,000,000. His proposals to meet this contained, amongst other things, an increase in duty of 1s. per barrel upon beer and 2s. per gallon upon spirits: and to mollify the opposition created by this proposal he offered to provide that the increase on beer should terminate on 31st May, 1886. But Parliament would not agree to his Finance Measures, and in June the Government was defeated. It is perhaps interesting to note that on the second reading of Mr. Childers's Customs and Inland Revenue Bill, 8th June, 1885, Sir Michael Hicks-Beach, the present Chancellor of the Exchequer, speaking in relation to the proposed increase in the duty on beer, said that the direct effect of the proposed taxation would be a decrease in the consumption of the best qualities of malt, and that in consequence the price of barley would, he was afraid, continue to fall; and that the tax would be a nail in the coffin of the representatives of the corn-growing industry. We need no reminder that Sir Michael since then has taken to the undertaking business, and that last year he himself drove in a shilling nail; and the agriculturists as well as the brewers will feel obliged to him if he will engage in some more cheerful and popular occupation, and withdraw his nail at the earliest possible opportunity.

We will pass to the year 1889, just mentioning, by the way, that in 1885 the term "beer" was extended to include any liquor which is made or sold as a description of beer, or as a substitute for beer, and which on analysis of a sample thereof at any time shall be found to contain more than 2 per cent. of proof spirit (48 & 49 Vict., c. 51, s. 4). Also under Section 8 of the same Act, dilution or adulteration of beer was prohibited. And in the Finance Act of 1888, Section 5, power was given to the Treasury to prohibit the use in brewing of any noxious substance or of any product prejudicially affecting the interests of the Revenue. The use of coal-tar saccharin was, under this section, prohibited in breweries, as a very small amount of it gives much sweetness and fulness to a liquid without appreciably adding to the gravity.

On 15th April, 1889, Mr. Goschen made his Financial Statement. At the end of his Budget he still required £300,000 to balance his accounts for the year, and this sum he decided to obtain from beer.

Concerning this decision in itself, apart from the fact that an increase in the Beer Duty is always to be regretted by brewers, there is not much to be said ; but concerning the way in which the decision was carried into effect, the case is altogether different. Mr. Goschen obtained his extra £300,000 not by openly putting an extra 3*d.* on the amount of the Beer Duty and so making it 6*s.* 6*d.* per standard barrel, but by lowering the gravity of the standard barrel from 1057° to 1055°. For acting thus he gave two reasons—the first and chief one was that as the deemed average extract per quarter of 4 barrels at 1057° had not produced to the Government the sum which it had been expected to produce, therefore the average extract ought to have been fixed in 1880 at a lower standard than 4 barrels at 1057°. Mr. Gladstone, argued Mr. Goschen, had, when imposing the Beer Duty, at first proposed to fix the average extract per quarter at 4 barrels at 1055°. If he had done so, he would have obtained a greater amount of duty from beer. I want £300,000 more. Therefore will I fix the average extract obtained from a quarter of malt at 4 barrels at 1055°.

In taking this line, Mr. Goschen showed a certain amount of acumen as a banker, but no proper grasp of his subject as a brewer. He wanted money, and he was perfectly within his rights in endeavouring to obtain it from beer if Parliament so thought fit ; but in arguing from the sum produced by the Beer Duty to the average extract obtained from a quarter of malt, he was unsound. Gladstone would never have done such a thing ; indeed, on the second reading of the Bill, we find him objecting to Mr. Goschen's line of argument. He (Gladstone) said that there ought to be no relation whatever between the question of standard and the question of the rate of duty. The rate of duty might vary with varying considerations of public policy ; but the question of the standard depended on chemical and scientific knowledge to determine how much beer was represented by a certain quantity of malt, and how much malt was represented by a certain quantity of beer. The relations of beer and malt to one another did not depend in the slightest degree on a question of policy, and consequently he could not regard an alteration of the standard as a proper means of obtaining additional taxation. If the Chancellor of the Exchequer were in a position to show that he (Gladstone) was in error when he acceded to an alteration of the standard, by all means

let it be set right in the interests of the public, but he objected to treating it as if it were equivalent to so much additional revenue.

Here, at a glance, we see in contrast the capacities of the two men upon the subject—Gladstone, with his true and accurate grasp of the principles upon which the Beer Duty rests from a scientific and from a brewer's point of view; Mr. Goschen, stumbling about in a confused manner between his money bags and the altogether independent fact of the average extract obtained from a quarter of malt. We have seen,* and it was quite easily demonstrable in 1889, that Gladstone's deemed average extract of 4 barrels at 1057° per quarter was, if anything, an under-estimate, and Mr. Goschen's method of obtaining his £300,000 was unscientific and inept and unworthy of a first-class intellect. He must, I think, have been badly advised.

His second reason for reducing the specific gravity of the standard barrel from 1057° to 1055° was that, in contrast to the larger brewers, a great number of the smaller brewers paid on a material charge; an inequality which would be lessened by a lowering of the standard gravity. In this there may have been some truth; but it may also be argued that the greater the extract the more the duty paid per quarter, and that therefore per quarter of malt the large brewer paid more than his fair share as compared with the small brewer.† Moreover, Mr. Goschen's second reason in no way excuses the unsoundness of his first; and if he wanted to ease those brewers coming under a material charge, he could easily have increased the special 4 per cent. allowance made to them before making the charge.

In dealing with Mr. Goschen's 1889 proposals, the Brewing Trade did not sufficiently keep the Chancellor of the Exchequer to the one point that he was altogether wrong in fact in advancing the argument that 4 barrels at 1055° was a more correct estimate of the average extract of a quarter of malt than 4 barrels at 1057°. The statement was erroneous, and the false coinage should have been nailed to the counter. On no account ought we to have permitted the lowering of the standard specific gravity. The agriculturists, led by Sir Edward Birkbeck, opposed the increase of the Beer Duty on the ground that such an increase was indirectly a further tax upon barley, and led to

* See *ante*, p. 42.

† See table, Appendix C, p. 65, in which are given the duties paid per quarter by brewers of various size during the year ending 30th September, 1890.

a diminution in the use and price of that material. Sir Edward therefore agitated for the proposed increase in the duty to be limited to one year. To this limitation Mr. Goschen declined to agree. In a semi-private negotiation with the brewers he offered to keep the standard at 1057°, if the Trade would agree to the duty being raised for a period of seven years. To this proposal the Trade (wrongly, I think) declined to accede. The result was a return to first positions, from which Mr. Goschen refused to budge, and made the matter one of confidence or not in the Government. The brewers and agriculturists had therefore to choose between allowing Mr. Goschen to have his way and an attempt to defeat the Unionist Government, perchance to make room for a Radical one. They shirked the issue, and on 16th May withdrew their amendments and opposition to the Budget proposals, professing contentment with some vague generalisations from the Chancellor of the Exchequer to the effect that he was favourably disposed towards agriculture, and that he thought beer would have a fair claim for consideration in the future, side by side with other great articles of consumption, if there were a satisfactory surplus all round, and if there were a general remission of taxation,* although he remained of opinion that the standard of 1055° ought to be regarded as permanent. Outside the lowering of the standard of gravity for the charging of the duty, the most interesting occurrence connected with the increase in the duty was the objection taken by the agriculturists to the increase. When Gladstone, in 1880, converted the Malt Tax into a Beer Duty, he foretold, as one of the great Governmental and Financial advantages attaching to the change, the divorcement of agricultural agitation from an increase in the duty. His prophecy was not fulfilled in 1889, but it began to be realised in 1890, and I think it may be said to have held good on later occasions, in 1894 and 1900.

* It is frequently stated by brewers that Mr. Goschen promised to limit the operation of the increase in the duty to one year. It is only just to point out that he stoutly refused to make any such promise whatever. This at the time was so fully recognised by the Trade that, on 10th May, we find the following resolution passed by the Country Brewers' Society:—

"That this meeting expresses its surprise and deep disappointment at Mr. Goschen's attack on the Brewing Trade, and his unconciliatory refusal to limit the increase in the Beer Duty to the current year; and it desires further to record its extreme disappointment at seeing an attempt made to inflict perpetual and permanent injury on the Brewing Trade."

Early in 1890 brewers began to remind Mr. Goschen of the statements which he had made during the previous year, indicating the removal of the extra duty imposed, if the Budget showed a satisfactory state of things; and a Memorandum, embodying the views of the Trade, was drawn up in March and sent to Mr. Goschen. In it was claimed the "remission of taxation" which brewers were led to expect.

An agitation amongst agriculturists was also initiated by Sir Edward Birkbeck and others for the purpose of obtaining a reduction of the Beer Duty, but it fell flat. A duty on beer and a duty on malt were fast becoming two very different things in the minds of the farmers, as Mr. Gladstone prophesied in 1880. On 4th March, 1890, at a Council Meeting of the Central and Associated Chambers of Commerce held in London, Sir Edward Birkbeck, M.P., presiding, the following resolution was moved:—

"That this Council protests against the increase of the Beer Duty made last year, and in the interests of the barley growers of this country urges the Chancellor of the Exchequer to remove this tax in the forthcoming Budget."

A discussion took place, during which opposition to the resolution was expressed upon the grounds that the matter was one for brewers rather than for farmers, one gentleman present suggesting that the words "in the interests of the barley growers of this country" should be altered to "in the interests of the brewers of this country." Finally, the previous question was moved and carried by 16 votes to 13.

It is not for a brewer to criticise an agriculturist, but it is a little difficult to understand why a farmer should strenuously object to an increase in the Malt Tax, but vote an increase in the Beer Duty to be a matter of no concern to him.

On 17th April Mr. Goschen made his Financial Statement. He had a surplus of over £2,800,000, the greater part of which was due to the increased consumption of spirits and beer.* The duty on beer had produced £270,000 more than was expected, after allowing for the

* Duty on beer exceeded estimate made in 1889 by.....	£270,000
„ foreign spirits exceeded estimate made in 1889 by	421,000
„ home spirits „ „ „	1,010,000
„ wine „ „ „	120,000

extra amount due to the alteration of the standard of gravity. Mr. Goschen said that as nearly £2,000,000 of his surplus was due to indirect taxation, therefore should indirect taxpayers be relieved. But no man in the House would advocate the relief of the consumers of alcoholic beverages. He would, therefore, reduce the duty on tea by 2*d.* per lb.: from 6*d.* to 4*d.*: the tipplers should relieve tea. He proceeded to say with regard to the words he had used last year in relation to the practical increase on beer of 3*d.* a barrel: Had the case he then indicated arisen? Who had paid the tax? He could not admit that it was a tax on the producer. However, under the circumstances of the case, he would part with the additional 3*d.* a barrel as an item of *Imperial Revenue*. Later in his Budget speech the Chancellor of the Exchequer lamented the fact that the County Councils complained of being short of money. He wished them to start on their work financially satisfied. Particularly would he like to see money found for satisfactorily superannuating the police, and to enable the local authorities to buy up some of that enormous multitude of licences which had so largely contributed to the drink bill of the nation. For these great purposes he would require £1,250,000. Where should he obtain the sum? He turned to alcohol. He would put 6*d.* a gallon on spirits, which would produce £918,000. But it would be unfair to tax spirits without taking toll of beer. Therefore he must ask the brewers to contribute to local taxation the 3*d.* a barrel which he had taken off in the Imperial Budget. He estimated this 3*d.* a barrel to produce £386,000. He proposed to appropriate an aggregate of £438,000 for licensing purposes, £350,000 of which would be allocated to England.

In these proposals there was evidently involved the principle of compensation* to a licensee when deprived of his licence, apart from the legal power of the magistrates, for no fault of his own and for State reasons. One or two notes of opposition were sounded on the night of the Budget; and before the motion upon the Spirit and Beer Tax was put, the opposition made it quite clear that the vote was only to be taken as an Imperial vote, and that the appropriation to local purposes of the money so voted was to be left open for further debate.

* In the year 1888 Mr. Ritchie had included clauses in his Local Government Bill involving similar principles for the extinction of licences. But the Opposition, aided by "Sharpe v. Wakefield," compelled him to withdraw them.

Shortly afterwards, a Bill called the Local Taxation (Customs and Excise) Bill was brought in for the special purpose of appropriating the money for the above-mentioned objects. Great opposition was shown to the proposals for the purchasing of licences. It was insisted that no specific mention of the scheme should appear in the Inland Revenue Act, and the passing of the financial measures was much delayed. The Local Taxation Bill was dubbed the "Public-house Endowment Bill." Mr. Cairne, who sat as a Unionist, made a fratricidal attack upon his own brother Unionists, and Mr. Gladstone and Sir William Harcourt were only too glad to take up the cry of "No endowment" and "No compensation." The clauses of the Bill relating to the purchase of licences were fought sentence by sentence, and countless amendments were put forward. Meetings for and against the Bill were held all over the country, and petitions* were signed and presented to Parliament. All through May and June the Parliamentary battle went on, to the exclusion of much other business. The Government did its best, but in June its majorities began to fall off, and on 26th June (after an attempt at compromise by suggesting that the proposed sums for the extinction of licences, so far as England and Scotland were concerned, should accumulate until Parliament should consider how to deal with the question) the Government gave way, and dropped the licensing clauses of the Bill. The money† was given to the County Councils in relief of local taxation. The Government came badly out of the fray, and it would have been better both for the reputation of Mr. Goschen and for the concord of his Party if he had never tampered with the Beer Duty in 1889, and so led up to his proposals of 1890.

In 1891, the Trade made strong representations to Mr. Goschen that, as the Government had failed to carry through its scheme for the purchase of licences, the extra 3d. per barrel on beer and the 6d. a gallon on spirits ought to be remitted. Mr. Goschen's reply on Budget night was to the effect that the £440,000 (the annual amount to be set aside

* A monster petition was sent to Parliament through the exertions of the Trade. It was wound on three drum frames, each measuring about 6 feet 6 inches diameter by 2 feet 6 inches broad. It contained over 600,000 signatures. It unfortunately appears to have arrived in the House rather late in the day, as the Licence Purchase Clauses were withdrawn on or about the day of its presentation.

† The amount in 1890-1 was £391,256; in 1899-1900 it had increased to £457,227. See table, Appendix B, p. 66.

for the scheme) only represented 1*d.* a barrel on beer and 2*d.* a gallon on spirits; that the remission of such a portion of the increase was undesirable; and, moreover, the £440,000 was being well spent, chiefly on technical education. Altogether, he regretted to say that he could make no alteration.

And so ended the unsatisfactory chapter of Mr. Goschen's handling of the Beer Duty. It began in 1889 with the bungling incident of the lowering of the standard extract per quarter of malt, and ended in a blow being administered to his Party, and in a feeling on the part of brewers that their trade had throughout been treated disingenuously by the Chancellor of the Exchequer.

In the middle of 1892 a General Election took place, with the result that Mr. Gladstone came into office, Lord Rosebery taking his place as Prime Minister in March, 1894. In April, 1894, Sir William Harcourt, the Chancellor of the Exchequer, raised the Beer Duty from 6*s.* 3*d.* to 6*s.* 9*d.* a barrel, and at the same time put an extra 6*d.* a gallon on spirits. His argument in raising the duty was that the Trade made large profits and could afford to pay up—a Chancellor of the Exchequer thus advancing the doctrine that the trade ought to be singled out for special direct taxation because it was a flourishing trade. In 1895, he, as a matter of expediency, remitted the extra 6*d.* a gallon on spirits, but he maintained the Beer Duty at 6*s.* 9*d.* a barrel.

In July, 1895, Parliament was dissolved, and, as a result of the General Election, in which the Veto Bill prominently figured, Lord Salisbury came into power with a majority of about 150, and since then, until last year, the Chancellor of the Exchequer let brewers alone, with the exception that, in 1896, he ruled in the Excise Brewing Book an extra column for unmalted corn, grits, flaked rice and maize, &c., and altered their equivalent from that of malt (42 lbs. per bushel) to that of sugar (28 lbs. per bushel). Later on, their equivalent was fixed by the Board of Inland Revenue at 32 lbs. per bushel. The effect of this alteration would be, of course, a reduction to some extent in the average extract produced by a quarter of material, as shown by the Excise Returns; and, also, it would increase the chances of a "goods charge" being made upon a small and unskilled brewer (Mr. Goschen's pet of 1889) if he used the malt adjuncts referred to.

During the second week in October, 1899, war was declared against us by the Boers in South Africa, and in order to meet the consequent

Imperial expenditure, the Chancellor of the Exchequer was compelled to resort to increased taxation. Giving but a day or two's notice, he brought in an early Budget on 5th March, 1900, raising money for the war both by direct and indirect taxation. Under the latter category he placed beer, the duty upon which he increased from 6s. 9d. to 7s. 9d. a barrel (estimating such increase to produce an additional £1,752,000) on and from 6th March, 1900, making provision* for the additional tax to last until 1st August, 1901. At the same time he said that he regarded all his increases of indirect taxation only as a temporary addition to existing taxation, and he expressed the hope that it would not be necessary for them to be levied up to 1st August, 1901. On 12th March, in reply to a question asked in the House of Commons, he emphasised the temporary nature of the increase.

Sir Michael Hicks-Beach increased the duty upon beer as a form of indirect taxation. An indirect tax of this description is one which is paid by the consumer of the manufactured article, and not by the supplier of the raw material or by the manufacturer. It follows that in order to carry out the Chancellor's intentions, the extra 1s. a barrel duty placed upon beer ought to have been borne and ought to be borne by the consumer of the beer. This at first blush would appear to be a simple-enough proposition and one easy of solution. But when we come to deal practically with the matter, we encounter many considerations and difficulties.

Broadly speaking, there are three possible—I do not say practicable—methods by which a brewer can relieve his shoulders of the burden of an increase in the Beer Duty:—

1. By directly charging his customer with the amount of the increase.
2. By providing that the barrel of beer, in the cost of which is included the increased duty, shall not cost him (the brewer) more than it did when it only included the lesser duty.
3. By giving a less quantity of beer for the same money—a consideration in places where the custom of giving a large amount of overmeasure has obtained.

The greater portion of the beer brewed in the United Kingdom is

* This provision was chiefly made to prevent speculative withholding of clearances of spirits at the period of the next Budget.

sold by the brewers to persons licensed to sell by retail who distribute it to the public; and it is sufficiently easy for a brewer with a tied trade to charge his tenant with the amount of the extra duty, which by law may be added to existent contract prices: and which duty, by the words of the Chancellor of the Exchequer, ought not to be taken from brewers' profits. But if the brewer charges the retailer 1s. a barrel more for his beer, the retailer in turn must in some way obtain from the public the extra 1s. so charged: otherwise the burden of the tax is merely shifted from the shoulders of the brewer to those of the retailer. When, therefore, the Beer Duty was increased in March last, the question—"How is the retailer to regain from the public the extra 1s.?" became a very pertinent one to many brewers. They felt that in view of the recent preceding "boom" in the values of licensed houses, with all its attendant consequences of increased capital invested therein, and having regard to other increases such as those of assessments, of the spirit duty and of the Income Tax, it would be unwise to still further saddle the often struggling retailer with the additional Beer Duty: to, as it were, lay a further burden on an already heavily-burdened property. We are all here on earth to make a living: and if a retail business connected with a brewery does not provide a decent living for the competent retailer, that business is of very little value to the brewer. Considerations such as those above outlined, led many brewers to insist on an answer to the question—"How can the retailer recoup himself?" before they would decide to charge the retailer with the extra duty. And many of us are still waiting for an answer. To instance a typical difficulty. The standard retail price of a quart pot of X is 4d. Even if the modern working man would, upon an increase of duty of 1s. a barrel, agree to pay for X more than the customary price, which is doubtful,* it would be impossible to add to the 4d. charged the proportional part of the duty appertaining to a quart. There is no coin of the realm representing the twelfth part of 1d. And when we descend to half-pints the difficulty becomes aggravated. But

* It is reported that the publicans of Thorne having intimated that they intended to increase the price of their beer from 2½d. to 3d. a pint, the consumers engaged the local bell-man to cry round the town the following notice:—"We, the beer-drinkers of Thorne, object to the proposed increase in the price of beer, and hereby give notice that we shall not pay more than the present price, which is 2½d. a pint." *Brewers' Journal*, April, 1900.

whatever the difficulties may or may not be in the way of charging the retailer with the extra tax, one thing, in the event of the tax remaining with the retailer, is tolerably clear: that unless brewers *unanimously* agree to charge retailers with the extra duty, the practical competition which exists amongst retailers in London and other centres of activity will, *cæteris paribus*, unfailingly result in those retailers who are not saddled with the extra burden attracting trade to their houses from the establishments of those retailers who have to pay the extra duty. The licensed trade is frequently spoken of as a monopoly. In some quiet country districts something like monopoly in the licensed trade may obtain, as it frequently does in other trades; but in London and other large populous districts competition is as keen and as powerful amongst the licensed trade as in almost any other business which could be named.

No doubt in times gone by the prices of beer have been raised in consequence of the cost price of the beer per barrel to the brewer having been seriously raised either by a large increase in the duty or by a heavy rise in the prices of either malt or hops or of both.*

For instance, you will remember the passage in Goldsmith's comedy, *The Good-natured Man*,† completed at the beginning of 1765, in which the Bailiff's Follower attributes the increase in the price of beer to 3½*d.* a pot, to the "Parley vous."

And Adam Smith, in his *Wealth of Nations*, published in 1776, in advancing the theory that beer, like tea, is to be classed in Political Economy as a luxury and not as a necessity, writes:—"The rise in the price of porter, occasioned by an additional tax of three shillings upon the barrel of strong beer, has not raised the wages of common labour in London. These were about eighteen pence or twenty pence a day before the tax and they are not more now."‡

The additional tax of 3*s.* a barrel on strong beer mentioned by Adam Smith was kept on, and the price of porter—a beer which seems to have held the place of the fourpenny ale of to-day—remained at 30*s.* a barrel wholesale and 3½*d.* a quart retail until 1799, when, as a result of malt jumping up in price to something like 90*s.* a quarter and hops to £17 a cwt., the price of porter was raised to 35*s.* a barrel

* See Appendix K, p. 63.

† *Good-natured Man*, Act III.

‡ *Wealth of Nations*, Book V, Chap. II, Art. IV.

wholesale, and 4*d.* a quart retail.* In the days of our great struggle with Napoleon I. and the French, the days of heavy war taxation and of impeded importation, and of corn laws and protective duties, it was not an uncommon thing for the cost price of a barrel of beer to show a comparatively sudden increase of over 5*s.* a barrel, and sometimes one of even 8*s.* and 10*s.* a barrel. Of necessity in such case was the brewer compelled to raise his prices to his customer, and of necessity had the retailer in turn to charge his customer more. So sensitive, indeed, became the beer market, that, in London, the standard price of beer was altered at frequent intervals of a few years† only, doubtlessly to the unsettlement and to the damage of the Trade. But the matter was evidently one of necessity; no brewer can afford to disregard a sudden rise in the cost price of his beer of from 5*s.* to 10*s.* a barrel.

Subsequently the prices of beer fell again to a more ordinary level, and by the time of the Crimea we find porter selling in London for 33*s.* a barrel. In 1847 barley jumped up some 12*s.* a quarter, and an attempt was made to increase the price of beer, but the attempt was a failure. In 1854, until 1856, the Malt Duty was raised from 2*s.* 7*d.* + 5 per cent., to 4*s.* a bushel; or, taking 4 barrels to the quarter, from say 5*s.* 6*d.* a barrel to 8*s.* a barrel, an increase of 2*s.* 6*d.* a barrel. As a consequence of this, efforts were made by brewers to increase the prices of their beers, I believe in most districts without much lasting success. The disagreement or the defection of one or two competing brewers in a district with regard to the raising of the price, quickly reduced prices to their former level; and I am told that in many cases even where the amount of the increase in the taxation was charged separately as a war tax and insisted upon, the customers agreed to owe it, and still owe it to this day.

Nevertheless, a sudden increase in duty equivalent to 2*s.* 6*d.* a barrel is one which to many minds would warrant an increase in the price of beer. Some of the London brewers appear to have raised the

* *Practical Treatise on Brewing.* By A. Morrice. Sixth Edition. London, 1819.

The harvests of 1799 and 1800 were particularly poor ones. Towards the end of the year 1799, barley was averaging 45*s.* 5*d.* per quarter; and towards the end of 1800 it averaged 76*s.* 7*d.* per quarter. In March 1801 it reached 90*s.* 7*d.* per quarter, but by the end of 1801 it had fallen to 44*s.*, and by the end of 1802 to 25*s.* 7*d.* See Tooke's *History of Prices*, Vol. I.

† See Appendix K, p. 60.

price in May, 1854, and to have maintained the increase until July, 1856—practically the term of the increase in the Malt Duty; and no doubt here and there other brewers charged their customers with and obtained an extra 2s. or 3s. a barrel. But, on the whole, judging from the experiences of 1847 and of 1854, it would seem that even then to generally* and effectively raise the price of beer to the public was no easy matter; and with the present "Free Mash Tun," the comparative cheapness and facility of carriage, and the increased keenness of competition, it will be found exceedingly difficult to raise the price of beer to the general public unless it be a case of absolute and acknowledged necessity, or unless a firm be exceptionally situated; and in any event such a course must, according to rule, diminish the consumption of the article as a direct result of the increase in price.

The second of the methods enumerated above by which a brewer may transfer the burden of the tax, is the regulation of the cost price of the barrel of beer so that it may cost him no more under the increased duty than it did under the lesser duty. Any economy in materials, manufacture, wages, or in the expenses of distribution will of course all work in the direction of keeping down the ultimate cost price of the barrel; but it will be generally found that the three factors to be considered in economising in the cost price are those of malt, hops, and duty. The consideration which arises in the minds of those brewers who, to meet an increase in the duty, aim at keeping the cost price of their barrel at somewhere about the old level, is to obtain their raw material in the shape of barley, malt, and hops at a lower price than they have been willing to pay before the increase in duty; and as a complement to this economy in the prices of their raw material, they will ascertain to what extent it is necessary to lower†

* A firm holding a commanding name for its particular product would be in an exceptional situation.

† The number of bulk or liquid barrels of wort produced (without distinction of gravity) in each part of the United Kingdom in the year ended 31st March, 1900, was:—

England.....	34,198,600
Scotland.....	2,435,158
Ireland	2,839,601
	<hr/>
	39,473,449

and 39,473,449 less 6 per cent. = 37,105,043. The number of barrels at 1055°

the original gravity of their beer to equalise the cost price of their beers under the new and the old duty. The duty being just as much a part of the cost price of a barrel of beer as the malt, and also being directly proportioned to the gravity of the beer, it follows that in using less malt per barrel brewed we proportionately economise in the duty, and thus we shall find that after we have equalised our cost prices under the new and the old duties, the Chancellor of the Exchequer will still derive a considerable sum from the increase in the tax. If, in the process of the equalisation of the cost per barrel we put in less hops per barrel (as we do, if we put in our hops per quarter), or purchase our malt and hops at a cheaper rate, then the necessary reduction of the original gravity becomes correspondingly less and the Chancellor receives correspondingly more.* I believe that some such course of equalisation as is above indicated is in part or in whole the one ultimately resorted to by the majority of brewers on an increase in the Beer Duty taking place. When more than one ingredient enters into the composition of a manufactured article, and when the price of one of those ingredients rises, the manufacturer will certainly endeavour to recover the increase in cost by endeavouring to obtain at a lower price one or more of the remaining ingredients. The duty is an ingredient of beer so far as cost per barrel is concerned, and an increase in duty must force brewers to endeavour to obtain their malt and hops at a cheaper rate.

It follows that agriculturists are to an extent adversely affected by an increase in the Beer Duty. Not only is there in consequence a somewhat decreased demand for malt and hops, but also the bent of the brewer's mind is actively turned in the direction of buying at a cheaper rate, either at home or abroad, his malt, barley and hops. This appears to have been realised by farmers under the Malt Tax;

sp. gr. upon which duty was charged was 37,153,031. Therefore it may be said that the average original gravity of the beer produced in the year ended 31st March, 1900, was about 1055° sp. gr. This, of course, has nothing to do with the average extract obtained from a quarter of material used; but it will be of interest, for the sake of comparison, to observe the average original gravity produced in the year ending 31st March, 1901.

* In the Appendix N, p. 72, will be found an example of a mode of calculating the necessary reduction of gravity to meet an increase in the duty. The calculation is not complicated by the assumption of cheaper malt and hops. The necessary allowances for economies of that description will readily present themselves.

but since 1889 they would seem to have altogether lost sight of the fact that barley is malt, and malt is beer.

But while an addition to the duty is not to be neglected by agriculturists, there is but little doubt that it also increases the stress of competition amongst brewers. Those brewers who are prosperous will, with a view to maintaining or gaining trade, themselves bear a portion of the burden of the increase of duty, and keep up the gravities of their beers over and above the gravity to which they ought to lower them to equalise the cost price of the barrel. The unprosperous brewer has to follow suit or else lose trade, a dilemma of which either issue accentuates his lack of prosperity.*

Theoretically, an increase in the Beer Duty should be paid wholly by the consumer. Practically, and generally speaking, I believe that it is ultimately borne chiefly by the consumer,† but that a portion of it is also borne by the brewer and by the agriculturist.

Perhaps as a business man, I may here remark that where a brewery company pays a dividend to its ordinary shareholders, and where the other shares carry, as is usual, a fixed rate of interest, the portion of the tax borne by the brewery is borne by the holders of the ordinary shares.

The third of my divisional heads for recovering the increase in the Beer Duty had reference to over-measure. Over-measure is merely a form of competition in the direction of giving the consumer an increasing quantity of beer for a given sum; or, what is virtually the same thing, of charging the consumer less money for a given quantity of beer. It is evident that if the amount of over-measure be decreased, the consumer pays more for his beer, and if the consumer pays more,

* The fact that quality is an important factor in the competition amongst brewers, is often neglected by those outside the Trade when discussing the prices of beers bearing similar descriptive markings.

† For example, since 1880—for reasons mainly quite apart from Mr. Gladstone's 1880 Inland Revenue Act—the prices of extract-yielding materials used for beer have in many cases fallen in price; an economy the benefit of which the beer-consumers ought to have obtained in the shape of better value for their money—either in quality or quantity of beer or in superior accommodation or comfort in the houses at which the beer is sold; advantages of which the Government has to a large extent deprived them by discounting brewers' profits by from time to time raising the Beer Duty. Mr. Gladstone imposed a gross duty equal to 25s. a standard quarter, in comparison with which the present gross duty stands at 32s. a standard quarter.

the brewer can charge more without merely shifting the tax from his shoulders to those of the retailer. To those brewers then who disliked the custom of over-measure, and there were many, the increase in the duty last March doubtless appeared to present an opportunity of "killing two birds with one stone": of decreasing over-measure and of thereby saving the extra tax. To the successful prosecution of this end, there was one *sine qua non*, an absolutely unanimous agreement amongst the brewers and the retailers. But in the struggle for life, from which the beer trade is no more exempt than are other trades, Competition and Unanimity are not always hand-maidens. As might have been expected, a certain percentage of retailers objected to giving their customers less for their money than they had been in the habit of doing. An agreement amongst competitors to lessen competition must, if it is to prove lasting and effective, be unanimous and must be kept in good faith. An extremely small dissentient minority, certainly one of 10 per cent., and probably one of 2 per cent., would vitiate any agreement of the sort amongst the licensed trade. Above all, such an agreement must be founded upon free-will. In one part of the Midlands where there was a dissentient minority, the majority took the unwise course at the last Brewster Sessions of invoking the aid of the magistrates to compel the dissentients to agree not to give over-measure to their customary extent. Of course the magistrates have no power to regulate the price at which any given quantity of beer is sold by a retailer to the consumer, and the majority of them who were sensible and fair-minded men intimated as much. One or two took the opportunity of saying that if beer could be sold so cheaply,* it ought to be taxed more heavily.

It is a great mistake in principle for some members of the Trade to call upon the magistrates to aid them in limiting a form of trade competition which, although it may be distasteful to many brewers and retailers, is, nevertheless, quite legitimate. There is an old adage to the effect that dog should not eat dog.

As the next Budget day draws near our minds will, in all probability, be again exercised on the question of the Beer Duty. Very many of

* The error underlying this superficial remark is the neglect of "strength" and quality. To have been of any real value, the statement ought to have included the original gravity and the quality of the beer in question. The magistrate will find that where over-measure has been abolished, the original gravity and the strength of the beers have much increased.

us believe that Sir Michael Hicks-Beach will honestly return to a Beer Duty of 6s. 9d. a barrel as soon as he is able to, and many of us did hope that he would be able to do so during this year. The Institute of Brewing is not a political body, and we do not forecast political events; but at the Annual Dinner of the Country Brewers' Society, held on 1st November last, I understood Mr. Spencer Charrington, M.P., one of the oldest and most respected members of the brewing trade, to use words to the effect that although he hoped to see the increase in duty removed, he scarcely thought that, what with the protraction of the war in South Africa and the crisis in China, the Chancellor of the Exchequer would be able to unclasp his hands just at present.

However this may be, Chancellors of the Exchequer ought to pause, and to consider that by imposing and maintaining successive increases in the Beer Duty, they unduly assist the economic law of competition to squeeze out of the Trade the less prosperous and the smaller of its members. The small and independent traders of a nation, working and thinking for themselves, go far towards the maintenance of the national character and strength; and it is a question whether a swollen revenue entirely compensates the nation for their loss.

And in connection with the revenue from the Beer Duty, there is this other phase. Attacks are made from time to time on what is known as the "Free Mash Tun," and at present, owing to arsenic having been discovered towards the end of last year in certain beers, chiefly in the North of England, the attack is being made with rejuvenated vigour. The brewing trade has every moral claim to the maintenance by the Government of the "Free Mash Tun," but apart from that, the Revenue has participated in the benefits accruing from the Act of 1847 (by which the use of sugar was allowed in brewing) and from Gladstone's Act of 1880, and the Chancellor of the Exchequer may be certain that any restriction placed upon the use by brewers of any wholesome extract-yielding material which it suits them to use will decrease the ability of the Trade to pay Beer Duty.

APPENDIX.

- A..... Table of Excise Duties on Beer, Malt, and Hops.
- B..... Table showing the decrease in the number of breweries as between the years 1838 and 1900.
- C..... Table showing materials used and duty paid per quarter by brewers of various sizes. (For year ending 30th September, 1896.)
- D..... Table showing the Annual Produce of Malt Tax, &c., from 1870-1 to 1879-80.
- E..... Chart showing the Rise and Fall of Trade: quinquennial averages—1874 to 1898.
- F..... Inland Revenue Act, 1890. Clauses relating to doemed extract and the duty: and to the taking of samples of wort, beer, and materials by an Excise officer.
- G..... Table of Net Beer Duty paid for the United Kingdom: showing the amounts given to Local Taxation Accounts. Years 1889 to 1900.
- K..... Standard London prices of Porter: with the duties upon Malt and Beer, and average prices of Barley, Malt, and Hops at the time of the alterations in the standard price of the beer.
- N..... Formula for calculating Reduction of Gravity.
- O..... Private Brewing.

APPENDIX A.—*English Duties on Beer, Malt, and Hops.*

Year.	Beer per barrel.				Malt, per bushel.	Hops.
	Strong.	Small.	Table.	Inter-mediate.		
1643	s. d.	s. d.				
1645	2 0	0 6				
1657	2 6	0 6	..	..		5 per cent.
1689	3 3	0 9	..	..		25 " "
1690	4 0	1 0				
1694	4 9	1 3				
1697	4 9	1 3	..	..	s. d.	
1710	5 0	1 4	..	..	0 6½	d.
1711	5 0	1 4	..	..	"	1 per lb.
1760	8 0	1 4	..	..	0 9½	1 " "
1778	"	"	..	..	0 " 9½	1 " + 5 per cent.
1779	"	"	..	..	0 " 9½	1 " + 5 "
1780	"	"	..	..	1 4½	1 " + 10 "
1782	"	"	3s.	..	"	1 " + 10 "
1783	"	"	"	..	"	1 " + 15 "
1786	"	"	"	..	"	1½ "
1791	"	"	"	..	1 7½	1½ "
1792	"	"	"	..	1 4½	1½ "
1801	"	"	"	..	"	2½ "
1802	10 0	"	2s.	..	2 5	2½ "
1804	"	..	"	..	4 5½	2½ "
1806	"	..	"	..	4 5½	2 "
1816	"	..	"	..	2 5	2 "
1819	"	..	"	..	3 7½	2 "
1822	"	..	"	..	2 7	2 "
1823	"	..	"	5s.	2 7	2 "
1830	Beer duty taken off. Re-instituted in 1830.				"	2 "
1840					2 7 + 5 per cent.	2 " + 5 per cent.
1851					4 0	2 " + 5 "
1856					2 7 + 5 per cent.	2 " + 5 "
1861					"	1½ "
1862					2 " 7 + 5 per cent.	Hop duty taken off.*
1880	6s. 3d. at 1057° sp. gr.				Duty on malt taken off.	
1889	6s. 3d. " 1055° "					
1894	6s. 9d. " 1055° "					
1900	7s. 9d. " 1055° "					

* A brewers' licence duty, equal to about 1s. per quarter of malt or other equivalent material used, was put on in place of the hop duty. Two pounds of hops were presumed to be used to the barrel, and four barrels were presumed to be the produce of a quarter of malt.

"Old Duty" on hops. The original Hop Duty of 1d. per lb. amounted to, roughly, 10s. a cwt. In 1801 an Act was passed imposing a New Duty of more than as much again. But in estimating a crop, the Old Duty was retained in the trade as a convenient gauge. Thus a crop equal to £200,000 Old Duty would indicate a crop of 400,000 cwts.

APPENDIX B.—*United Kingdom.*

Year ended 31st March.	Common Brewers. Number of licences issued.	Private Brewers. Number of licences issued.	
1838	49,200	—	—
1870	32,387	—	—
1875	27,322	—	—
1879	22,278	—	—
1880	21,131	—	—
1881*	15,707	71,876	licence 0s.
1882	15,569	110,025	} licence 6s. and 9s.
1886	13,308	95,301	
1887	12,938	33,581†	—
1890	11,364	25,281	—
1895	9,050	17,041	—
1900‡	6,447‡	12,734§	2717 (a) licence 4s. and beer duty. 3855 (b) licence 9s. but no beer duty. 6152 (c) licence 4s. but no beer duty.

* 1st October, 1880, to 31st March, 1881.

† Private brewers occupying houses of an annual value not exceeding £8 (*i.e.*, cottage brewers) were relieved from licence duty by the Inland Revenue Act, 1886; and of these private brewers no account is now kept.

‡ In this year, of the Common Brewers' licences there were issued 136 in Scotland and 41 in Ireland.

§ In this year, of the Private Brewers' licences there were issued in Scotland (a) 3; (b) 9; (c) 115; none in Ireland.

Year ending 30th September.	Common Brewers. For sale not by retail.	Brewing. Victuallers.	Beer Retailers (on) who brew.	Beer Retailers (off) who brew.
1810	2,616	27,125	14,009	1,407
1890	2,330	6,350	3,080	210
1899	1,891	3,161	1,615	129

APPENDIX C.—United Kingdom.
Year ended 30th September, 1896.

Number of Persons Licensed as Brewers for Sale, classified according to the Number of Barrels Brewed.			* Number of		Quantities of Materials used.		Quantities of Materials used reduced to Quarters.			Amount of Licence Duty Paid and Beer Duty Charged.		Amount of Beer Duty paid per Quarter of Materials used.	
Barrels.	Barrels Brewed of Specific Gravity of 1,035*.	No.	Persons Licensed.	Licences Issued.	Malt and Corn.	Sugar, including the Equivalents of Syrup.	Cwt. qrs. lbs.	Malt and Corn.	Sugar, 2 cwt. of Sugar = 3 cwt. (1 qr.) of Malt.	Total.	£ s. d.	£ s. d.	£ s. d.
Barrels.	Barrels.	No.	Persons Licensed.	Licences Issued.	Bushels.	Cwt. qrs. lbs.					£ s. d.	£ s. d.	£ s. d.
Under 1,000	Under 1,000	6,987	6,988	6,988	3,211,353	36,829 3 15		401,419	18,415	419,834	545,633 11 2	1 5 8½	1 5 8½
1,000 and under 10,000	1,000 and under 10,000	1,138	1,138	1,138	7,313,730	317,414 0 13		914,216	139,707	1,053,923	1,418,239 10 1	1 6 11½	1 6 11½
10,000 "	20,000 "	278	278	278	6,614,030	301,735 1 25		830,533	150,663	981,196	1,333,851 18 8	1 7 2	1 7 2
20,000 "	30,000 "	134	134	134	5,130,547	255,503 3 12		611,318	127,905	739,223	1,049,931 5 4	1 7 3½	1 7 3½
30,000 "	50,000 "	96	110	110	6,031,978	319,826 2 8		753,997	159,913	913,910	1,247,799 5 8	1 7 2½	1 7 2½
50,000 "	100,000 "	60	68	68	6,860,953	353,422 0 22		837,619	181,711	1,019,330	1,419,642 17 6	1 7 3½	1 7 3½
100,000 "	150,000 "	19	22	22	3,870,288	192,843 0 3		493,786	96,422	590,208	794,152 8 3	1 7 4½	1 7 4½
150,000 "	200,000 "	8	8	8	2,181,623	147,957 1 10		263,953	73,979	337,932	470,735 9 0	1 7 5½	1 7 5½
200,000 "	250,000 "	3	3	3	1,173,313	53,203 0 1		146,668	26,601	173,269	236,247 0 0	1 7 3½	1 7 3½
250,000 "	300,000 "	—	—	—	—	—		—	—	—	—	—	—
300,000 "	350,000 "	2	2	2	1,025,040	60,412 1 6		128,255	30,206	158,461	217,447 3 6	1 7 5½	1 7 5½
350,000 "	400,000 "	3	3	3	2,079,640	33,890 3 18		229,995	16,945	246,940	377,690 2 6	1 7 3½	1 7 3½
400,000 "	450,000 "	4	4	4	1,834,733	140,288 3 1		236,092	70,144	306,236	423,741 13 3	1 7 8	1 7 8
450,000 "	500,000 "	2	2	2	1,644,672	68,402 0 16		203,584	34,201	237,785	328,627 17 9	1 7 3	1 7 3
500,000 "	550,000 "	1	1	1	928,064	24,852 1 0		115,753	14,426	130,179	178,259 7 9	1 7 4½	1 7 4½
550,000 "	600,000 "	1	1	1	904,984	63,215 2 0		113,123	34,123	147,246	201,494 11 6	1 7 4½	1 7 4½
600,000 "	1,000,000 "	1	2	2	1,161,403	34,039 0 27		143,187	17,319	160,506	227,333 18 0	1 7 11½	1 7 11½
1,000,000 and over	1,000,000 and over	2	6	6	6,013,704	17,214 0 3		731,713	8,607	740,320	1,099,499 12 9	1 8 10½	1 8 10½
Total	Total	8,728	8,803	8,803	58,033,175	2,460,985 2 12		7,234,186	1,220,492	8,454,678	11,598,546 15 8	—	—

* In those cases where a licence has been transferred, only one person has been recorded in the first column.

APPENDIX (D).—*Produce of Duties on Malt and Sugar used in Brewing and of the Licence Duty charged on Brewers and Malsters for each of the Ten Years from 1st October, 1870, to 30th September, 1880.*

Period.		Licence Duty charged on			Duty charged on		Total Duty charged.	Drawback paid on Beer and Malt exported.	Net Produce.
From	To	Brewers.*	Malsters, Malt Roasters, and Dealers in Malt.	£	Malt made.	Sugar used in Brewing.	£	£	£
1 Oct., 1870	30 Sept., 1871	399,577	15,963		6,942,327	†109,818	7,466,085	228,861	7,237,824
" 1871	" 1872	425,811	16,365		7,622,872	†98,431	8,163,482	227,448	7,936,034
" 1872	" 1873	448,356	16,302		7,785,212	†211,309	8,461,179	264,825	8,196,354
" 1873	" 1874	452,235	15,890		7,811,248	†364,810	8,644,183	262,371	8,381,812
" 1874	" 1875	454,000	15,506		8,110,331	§512,144	9,092,594	238,338	8,854,246
" 1875	" 1876	414,691	15,594		8,236,734	503,863	9,170,855	221,432	8,949,453
" 1876	" 1877	411,832	14,611		7,846,202	464,669	8,737,314	235,306	8,502,008
" 1877	" 1878	409,995	14,319		7,909,031	614,009	8,977,354	200,872	8,776,482
" 1878	" 1879	378,921	13,706		7,795,159	600,291	8,788,080	216,844	8,571,236
" 1879	" 1880	301,968	4,737		¶6,765,588	759,314	7,922,637	197,627	¶7,725,010

* Includes Brewers' Licence Duty imposed in 1862 upon the abolition of the duty on hops.

† Excise duty on sugar used in brewing, 7s. 6d. per cwt.

‡ Excise duty on sugar used in brewing, 11s. 6d. per cwt. (1874-5 and subsequent years).

§ Brewers' licence duty reduced from 1st October, 1875, and made uniform: 12s 6d. on each 50 barrels.

¶ The barley harvest of 1879 was late and deficient.

Authority: Supplement to 24th Inland Revenue Report.

TRADE, DRINK, AND CRIME.

A Diagram showing the upward or downward movement of Trade, Drink, and Crime, respectively, during the period 1874-98, calculated on quinquennial averages.

Authorities: **Trade**—Various issues of the "Statistical Abstract for the United Kingdom."

Drink—Annual compilations as published by the "Times" in communications from the late Mr. W. Hoyle and Dr. Dawson Burns.

Crime—"Judicial Statistics," introduction to the 1893 issue, page 72, and the 1898 issue.

The figures for "Trade" and "Drink" are in respect of the United Kingdom; those for "Crime" apply to England and Wales.

I am indebted for the above chart to Mr. P. C. MORGAN, of the Country Brewers Society. I have retained the "Crime" line as being of interest, although outside the scope of my paper.—G.A.

APPENDIX F.—*Inland Revenue Act, 1880.*

Part II. Sec. 12. Forty-two pounds' weight of malt or corn* of any description, or twenty-eight pounds' weight of sugar,† shall be deemed the equivalent of a bushel of malt.

Sec. 13 (1) Every brewer shall be deemed to have brewed thirty-six gallons of worts of the gravity of one thousand and fifty-seven degrees‡ for every two bushels of malt entered or used by him in brewing.

(2)

(3)

(a) If the amount of worts deemed to have been brewed by relation to materials exceeds in quantity and gravity by more than four per centum the worts produced from such materials, the duty shall be charged in respect of the excess over and above the four per centum.

(b) In respect of such accidental loss and waste as arises in the brewing of beer, a deduction of six per centum shall be made from the quantity of worts produced.

Sec. 26 (1) An officer may take such samples as he may deem necessary of any worts or beer or materials for brewing in the possession of any brewer for sale.

* See Finance Act, 1896, Part II, sec. 10; also subsequent Order of Board of Inland Revenue, by which 32 lbs. of rice, maize, grits, &c. = 28 lbs. of sugar.

† Afterwards provided by the Board that—

Of a syrup weighing over 13 lbs. 2 ozs. and not over 14 lbs. 2 ozs. to the gallon, 34 lbs. = 1 bushel of malt.

Of a syrup weighing 13 lbs. and not over 13 lbs. 2 ozs. to the gallon, 41 lbs. = 1 bushel of malt.

‡ Lowered by Mr. Goschen in 1889 to 1055°.

- (2) The brewer may, if he wishes, before any such sample is taken, stir up and mix together all such worts, beer, or materials from which the sample is taken.

The chief Acts relating to the beer duty are the Inland Revenue Acts of 1860, 1881, 1885, 1886, 1888, 1889, 1890, and Finance Acts 1894, 1896, 1900.

APPENDIX G.—*Net Beer Duty: United Kingdom.*

Year ended 31st March.	Allocated to Exchequer.	To local taxation accounts.	Total.
	£	£	£
1889*	8,770,295	—	8,770,295
1890†	9,410,426	—	9,410,426
1891.....	9,390,142	391,256	9,781,398
1892.....	9,457,749	394,073	9,851,822
1893.....	9,445,893	393,578	9,839,471
1894.....	9,536,948	337,373	9,934,321
1895‡	10,102,050	302,279	10,494,329
1896.....	10,718,719	412,135	11,130,854
1897... ..	10,901,084	419,264	11,320,358
1898.....	11,388,126	438,003	11,826,129
1899.....	11,638,200	447,622	12,085,822
1900§	11,887,923	457,227	12,345,150

* The year ended 31st March, 1890, includes the extra duty of nearly 3d. a barrel obtained by Mr. Goschen by lowering the standard gravity from 1037° to 1055°.

† In 1890 the sum obtained by this extra duty of 3d. a barrel was devoted by Mr. Goschen to the local taxation accounts.

‡ Duty increased from 6s. 3d. to 6s. 9d. per barrel (57 and 58 Vict., c. 30).

§ Duty increased from 6s. 9d. to 7s. 9d. per barrel (63 Vict., c. 7), with power to maintain the higher rate from 6th March, 1900, until 1st August, 1901.

Authority: 43rd Inland Revenue Report, p. 19.

with the average Prices of Barley, of Malt, and of Hops, especially in the earliest years, may be taken as only approximately true: nevertheless, they are sufficiently accurate for the purpose for which they are here used.

Year.	Date.	Standard London prices of porter.				Malt duty per bushel.	Hop duty. Per lb.	Beer duty per barrel of "strong."	Average prices of—			
		Wholesale per barrel.		Retail at per quart.*	British barley. Imperial quarter.				Malt. per quarter.	Hops. Per cwt.		
		Advanced.	Reduced.									
1762	Jan. 10	s. d. 30 0	...	s. d. 0 3½	s. d. 0 9½	1d.			s. d. 8 0	s. d. 15 6	s. d. 26 0	s. d. 3 8 0
1799	Nov. 11	35 0	...	0 4	1 4½	1½d.			s. d. 8 0	36 2	60 0	11 0 0
1860	...	...	...	...	...	...			...	59 10	90 0	17 17 0
1801	Jan. 28	40 0	...	0 4½	1 4½	1½d. : 2½d.			8 0	68 6	185 0	5 18 0
1802	" 27	...	35 0	0 4	1 4½	2½d.			8 0	33 4	60 0	10 12 0
1803	April 13	40 0	...	0 4½	2 5	"			10 0	25 4	43 0	6 6 0
1803	July 5	45 0	...	0 5	2 5	"			10 0	66 9	98 6	13 8 0
1812	Nov. 16	50 0	...	0 5½	4 5½	2d.			10 0	58 6	96 6	...
1813	Jan. 14	55 0	...	0 6	4 5½	"			10 0	...	...	...
1815	Dec. 17	...	50 0	0 5½	4 5½	"			10 0	30 3	69 7½	7 10 0
1816	Feb. 22	...	45 0	0 5	4 5½	"			10 0	33 11	69 4½	...
1816	July 6	...	40 0	0 4½	2 5	"			10 0	...	...	13 13 0
1817	Oct. 15	45 0	...	0 5	2 5	"			10 0	49 4	86 10½	...
1817	Jan. 7	50 0	...	0 5½	2 5	"			10 0	...	...	27 0 0
1817	Dec. 30	55 0	...	0 6	2 5	"			10 0	...	...	4 8 0
1819	Sept. 5	...	50 0	0 5½	2s. 6d. : 3s. 7½d.	"			10 0	45 9	73 0	4 8 0
1820	Oct. 28	...	45 0	—	3s. 7½d.	"			10 0	33 10	68 8	4 4 0
1822	May 6	...	40 0	—	3s. 7½d. : 2s. 7d.	"			10 0	21 10	52 8½	4 4 0
1823	...	...	...	—	2s. 7d.	"			...	...	...	17 0 0
1824	Jan. 24	45 0	...	—	2s. 7d.	"			10 0	36 4	61 1	7 0 0
1825	Nov. 4	50 0	...	—	2s. 7d.	"			10 0	40 0	71 10	19 0 0
1826	Jan. 4	...	45 0	—	2s. 7d.	"			10 0	34 4	65 1	...
1830	Oct. 13	...	33 0	—	2s. 7d.	"			Duty taken off	32 7	56 1	12 8 0
1846	...	...	...	—	...	...			...	32 8	61 4	5 0 0
1847	Jan. 1	38 0	...	—	2s. 7d. + 5 per cent.	2d. + 5 per cent.			...	44 2	70 9	...
1847	Feb. 8	...	33 0	—	2s. 7d. + 5	"			...	...	...	...
1854	May 11	36 0	...	—	4s.	"			...	36 0	68 0	20 0 0
1856	June 23	...	33 0	—	4s. : 2s. 7d. + 5 p. cent.	"			...	41 1	73 0	4 3 8
1887	Feb. 1	...	30 0	3½d. and 4d.	...	...			0s. 3d. per 36 gals x 105½	25 4	38 4	3 18 4

Notes to Appendix (K).

* *Practical Treatise on Brewing*, by A. Morrice, London, 1819. Also for much of the above information with regard to prices, I am indebted to Mr. Reeve, of Messrs. Truman, Hanbury, Buxton & Co.

† Malt was at its highest in December, 1800, and began to fall in the spring of 1801.

‡ By the Inland Revenue Act, 1865, Sec. 8 (2), it was made illegal for retailers to dilute beer. The practice of dilution having been common and profitable, retailers protested to brewers that its prohibition necessitated a reduction in the price of Porter and X. A reduction of 3s. per barrel was agreed to by the brewers, it being firmly understood that dilution by retailers was to be altogether discountenanced by all branches of the Trade.

There must, I think, have been some considerable talk of raising the price of beer towards the end of 1772 or the beginning of 1773. In June, 1772, the Brewers' Company prepared a petition for the importation of hops on account of their scarcity in England; and in November, 1772, it presented a petition to Parliament in favour of the importation of barley and malt, because of the high prices ruling at home. And in the *Calendar of Home Office Papers*, 1773-5, p. 9, *et seq.*, we find reference to letters passing between persons in authority concerning the reported determination of publicans to raise the price of beer:—

28 Jan., 1773.—Lord Hardwicke writes to the effect that he read in yesterday's *Public Advertiser* that the publicans in Westminster had resolved to raise the price of beer on the 8th instant. The common people are already everywhere uneasy under the advancing price of the necessities of life, and a greater necessity than porter in this immense unruly town we all know there is not. He submits whether means might not be used to put an end to this combination amongst publicans, and the magistrates be directed to have an eye to any discontent or riotous symptom amongst the commonalty.

1 Feb., 1773.—Sir John Fielding to the Earl of Suffolk. As to the raising of the price of beer, on enquiry finds that the brewers, after many meetings and much debate, have resolved to raise one shilling a barrel on started beer and two shillings on storehouse beer. By 2 Geo. II, c. 14,|| they are authorised to raise the price in a reasonable manner. Perhaps what the brewers have done may be thought so; but the publican, as he cannot advance less than a halfpenny per quart, which is six shillings in a barrel and eighteen shillings in a butt, cannot be thought reasonable; nor will the subject submit to it. For his own part, does not believe they will seriously attempt it. If they do, it must occasion some disturbance from the populace, which we will be particularly attentive to check. Hopes and believes the idea will subside. The great douceur which the publicans in this metropolis languish for is barracks for the Guards.—*Bow Street.*

|| I think Sir J. Fielding must have made a slip here, in the reign. Sec 2 Geo. III, c. 14.—[G. A.]

Letters from Mr. Eden and Lord Suffolk to Sir John Fielding, Sir John Hawkins, and other magistrates relative to proposed meetings of the publicans to raise the price of porter and beer: "It is become a consideration how far it may be expedient to institute a criminal prosecution against the first promoters of the meetings, as for a conspiracy to raise the price of provisions."

Three letters from Sir John Fielding: the first two, dated 2nd February, to Mr. Eden; the third, dated 5th February, to Lord Suffolk:—

(a.) Being informed there was to be a meeting of publicans at the "Brown Bear and Rummer," the foot of Westminster Bridge, last night, we sent both publicans and others to observe what passed, and from their reports collectively it appears that the number was not large, that many went away before any motion was made, and that the three following motions were made by those that remained:—

- (1.) To raise the price of beer to fourpence a quart next Monday. In this matter they did not agree.
- (2.) To take off the shilling from the brewers' men for putting down their beer. In this they also disagreed.
- (3.) To make their own finings instead of having it from the brewers, by which they would save sixpence. But herein they came to no conclusion.

It desires the calling of the magistrates together, &c.—*Bow Street.*

The printed summons to the meeting issued to the publicans is attached to the letter.

(b.) Letter refers to a meeting of publicans at the "Angel," in Whitechapel, this evening. Suggests that the justices there should inquire about the meeting, and dissuade the landlord from permitting it.

(c.) Account of the meeting of the magistrates of Westminster this day in consequence of Sir John Fielding's advertisement. List of those present. Resolution adopted to be inserted in the *Public Advertiser and Gazetteer* next morning, viz.:—"That the combination of the publicans to raise the price of their porter to fourpence per quart is unreasonable and illegal, and that the magistrates of Westminster will do everything in their power, both singly and collectively, to prevent so shameful an imposition on the poor, and to bring to justice such as shall attempt to act in such an oppressive manner."

APPENDIX N.—*To find the New Gravity at which we must make a Beer in order to meet an Increase in the Duty.*

Let x = new gravity required

G = old gravity at which we have been making the beer

C = cost per barrel at G under old duty

B = total barrels in brew at G

B_1 = [(total barrels in brew at G) - 6 per cent.]

E = total lbs. extract in brew

d = old duty per barrel at G

d_1 = new duty per barrel at G

then
$$x = \frac{E}{B + \frac{B_1(d_1 - d)}{C}}$$

The steps upon which the above equation is founded are these :—

$B_1d_1 - B_1d$ = the extra sum which would be paid on the brew owing to new duty if there were no reduction in gravity, and

$\frac{B_1d_1 - B_1d}{C}$ = number of barrels at d which this extra sum represents;

$\therefore$ to preserve our cost price we must obtain from our malt, $B + \frac{B_1(d_1 - d)}{C}$ number of barrels, which, divided into the total lbs. extract, gives the required gravity.

APPENDIX O.—*Private Brewing.*

The collection of the Malt Tax or the Beer Duty from private brewers has always proved a distasteful task to the Excise authorities. Domiciliary visits of a tax collector are seldom welcomed by members of the British public, and the work attached to such collections by Excise officers is comparatively unremunerative to the Revenue. There is accordingly always a disposition on the part of the Governmental authorities to grant a dispensation to the smaller description of private brewers so long as thereby the net revenue is not materially diminished.

By the Inland Revenue Act of 1880 any private brewer had to take out a 6s. licence to brew, under a penalty of £100 and the forfeiture

of his vessels, beer, and materials. If the annual value of the house occupied by the private brewer exceeded £10, beer duty was levied by a "material charge"; but if the annual value of the house occupied by the private brewer did not exceed £10, then he only paid the 6s. licence duty and was exempt from beer duty. By the Act of 1880, Section 34, it was also provided that:—

1. A brewer, other than a brewer for sale, shall only brew beer for his own domestic use, or for consumption by farm labourers employed by him in the actual course of their labour or employment.
2. The brewer shall only brew on premises occupied by him, or, in case the brewer occupies a house of an annual value not exceeding ten pounds, on premises gratuitously lent to him by a brewer other than a brewer for sale.
3. If the brewer contravenes either of the foregoing provisions of this section, or sells, or offers for sale, any beer brewed by him, he shall incur the penalty of ten pounds.

In the Customs and Inland Revenue Act, 1881, it was provided in Sections 14 and 15 that a private brewer occupying a house of an annual value exceeding £10, and not exceeding £15, should pay a licence duty of 9s., and should be exempt from beer duty, provided that the beer brewed was solely for his own domestic use.

(A private brewer rated as above and brewing for purposes outside domestic use pays 4s. licence and beer duty.)

In 1882 there were 110,025 licensed private brewers, a greater number than was expected.

By the Customs and Inland Revenue Act of 1885, Section 5, it was provided that the licence for a private brewer payable under the Inland Revenue Act, 1880, should be 4s. instead of 6s.

By the Inland Revenue Act, 1886, private brewers occupying houses of an annual value not exceeding £8 were exempted from licence duty, and some 60,000 private brewers accordingly disappeared from the ken of the Excise officer and the Revenue authorities.

During the last five years the number of private brewers chargeable with beer duty has fallen from 3,914 to 2,717, and the number subject to licence duty from 13,127 to 10,017.

Year ended 31st March, 1900.

United Kingdom.		
	Brewers, not for sale.	Annual value of house.
(a). Liable to beer duty, 4s. licence	2,717	Exceeding £15.
(b). Not liable to beer duty, 9s. licence	3,865	Exceeding £10 and not exceeding £15, and brewing for domestic use only.
(c). Not liable to beer duty, 4s. licence	6,152	Exceeding £8 and not exceeding £10.

Farmers occupying houses exceeding £10 annual value who brew for their labourers are liable to beer duty.

As a general rule, private brewers can only brew on premises actually occupied by them, but in some few cases they have been allowed to use premises lent to them gratuitously. Of course as private vessels are not "entered," they can be moved or lent at will.

It would appear that private brewing is on the decrease.* It must be exceedingly difficult to produce a sound and wholesome and brilliant beer of light gravity in most of the private brewing plants; and the probability is that the number of licensed private brewers will continue to decrease.

Of cottage brewing no record is now kept by the Excise officers, and it is therefore difficult to form any estimate of its increase or decrease. I have been told that in the Eastern Counties, which were supposed to be one of its chief homes, it is on the decrease. As against this, evidence has been adduced that an increasing amount of malt for the purposes of cottage brewing is being bought in Warwickshire.† In any case, care ought to be taken that the laws regulating private brewing of any description are adhered to, otherwise both the common brewer and the Revenue may unfairly suffer.

The chief Acts relating to private brewing are the Inland Revenue Acts of 1880, 1881, 1885, and 1886.

* See table, Appendix B.

† *Journal of Fed. Inst. of Brewing*, 5, No. 5, p. 413 *et seq.*

DISCUSSION.

The CHAIRMAN said the Institute was very much indebted to Mr. Aldous for this paper, upon which he had evidently spent a great deal of time and trouble. Possibly some members might wish to ask him some questions upon it, and one or two had occurred to him. In the first place, at the beginning of the paper, Mr. Aldous proved that the Government benefited by the change from the Malt Tax to the Beer Duty; that the farmers possibly benefited or possibly did not, because the price of corn going down had made it difficult to judge. But he should like to know how he proved that the brewer benefited when the Beer Duty superseded the Malt Tax. Again, with regard to the original gravity, the second means by which Mr. Aldous suggested that the brewer might get the extra shilling from the public was by lowering the original gravity. He understood him also to say that the Chancellor of the Exchequer would not lose, and he did not quite understand that. It seemed to him that the Chancellor of the Exchequer would find himself in the same position as before.

Mr. MUIR said he should also like to ask whether Mr. Gladstone did not make nearly as much profit by the alteration from the Malt Tax to the Beer Duty in 1880 as Mr. Goschen made in 1889 when he put on the extra 3*d*. He also, like Mr. Buxton, did not quite understand how the Chancellor of the Exchequer would get the whole of the shilling if the brewers reduced the gravity. (Mr. Buxton here had to leave, and the chair was taken by Mr. Reeve.)

Mr. REEVE said, although not a member of the Institute, he was glad of the opportunity of saying a word or two. He thought they were all deeply indebted to Mr. Aldous for the masterly way in which he had presented the history of the Beer Duty from the beginning, and he was very glad to think it was to be printed, so that members would be able to study the arguments and figures he had brought forward, at their leisure. As far as he could judge, the whole case had been presented in the most clear and satisfactory way. From the very beginning Mr. Aldous had shown that he had studied the question deeply, and he must have given a great deal of time to it. What struck him more than anything else in the early part of the paper was the way in which Mr. Gladstone saw at once how the figures would fit in when he changed the duty from the malt to the beer. Although

he had been familiar with the matter himself, he had no idea how accurately it was done, and felt extremely obliged to Mr. Aldous for showing that to the turn of a halfpenny even, it really came out as Mr. Gladstone expected. Of course it was extremely difficult to say what would have happened if things had remained exactly as they were before. They were often met by the argument that because the duty in the years following 1880 did not come up to what would have been expected, it was all due to the alteration of the duty ; but there were so many factors in a question of that kind, that it was extremely difficult to say what would have happened, and they could only be guided by arguments, such as those so ably presented that evening, in trying to arrive at a right conclusion. With regard to the question of competition, it seemed to him that it put them in a difficulty in one way. It might be said that there was no way by which they could get the duty back except in the way suggested by the author ; but it appeared to him that it was possible of course for the Government to impose such difficulties in the way of any trade, that it had the effect of sharpening their wits to see how these difficulties could be got over, and that had happened very much in the case of the brewer. He had not suffered to the full extent that he would have done, because the very difficulties he had had to contend with had sharpened his mind to try and improve his methods, to find out how to get cheaper materials, and to do very many things that he never would have thought of doing if it had not been for the difficulties put in his way by the Government. That must be borne in mind when they took into account the possibilities of what they could bear. There must be a limit to that, and when they had exercised their minds to the utmost and tried to get the manufacture up to a certain pitch of perfection, at the lowest possible cost, and then made a loss, by the imposition of fresh duties, then that must be put upon the public. People were often deceived by finding that the brewer would bear the competition rather than impose the extra duty on the public generally, and they thought there was no limit to that process ; but he thought the time would come when they must do something of the sort to recoup themselves. That bore out what the author had said about putting it upon the right shoulders. Theoretically it was correct, the consumer ought to pay the duty, but it was a long time before they could get to the consumer unless the amount imposed were sufficient to bring them to

such a point that they could not go on any longer without making a loss.

Mr. ALDOUS, in reply, said Mr. Buxton asked him what benefit the brewers obtained from the change in the mode of taxation. It appeared to him that the benefits of the Free Malt House and the Free Mash Tun were very considerable, and he should not be inclined to put them at less than 2s. per quarter. Some time ago, when he read a paper on the Free Mash Tun, Mr. Muir estimated the benefit at about 5s. He thought that was too high, but in many instances there might be a considerable amount of benefit, and he would not dogmatise upon the matter. Of this gain, Mr. Gladstone obtained 2s.: but, owing to the decrease in the trade which took place in 1879-1889, this gain was masked. He understood Mr. Buxton to ask how it was that the Chancellor of the Exchequer could get any benefit from an increase in the tax if the brewers lowered their gravity to meet the tax. It was clear that the brewer, if he lowered his gravity, saved on duty: he, moreover, used less malt, and so saved on that, and if he used less hops he saved on that also, and practically it would be found that if he lowered an ordinary beer sufficiently to cover an increase in duty of about 1s. per barrel, he (the brewer) paid to the Chancellor of the Exchequer about 6*d.* extra instead of 1s. The Chancellor would get about half of what he expected, if gravities were lowered to meet the extra cost. They could easily work it out exactly, and no doubt many of them knew exactly by experience what it was. Mr. Muir asked whether Mr. Gladstone had made a profit by the exchange, equal to 3*l.* a barrel. He thought Mr. Gladstone made practically an amount equal to 6*d.* a barrel. He got the 2s. a quarter, and if the trade had not fallen off, so that much less beer was drunk, he would have shown an ostensible gain of, at least, that amount. The Revenue from the Malt Tax would have shown a large decrease in 1880 owing to the decrease in trade; but owing to the change to the Beer Duty, and the consequent profit of 2s. a quarter, the receipts kept up to practically the same level as in the years of good trade.

Mr. REEVE said he understood that the 2s. which the Chancellor of the Exchequer got was the 2s. the brewer saved, so that the brewer was left where he was.

Mr. ALDOUS said that that was so, if the advantages to the brewer were taken at a bare 2s. As for the Chancellor of the Exchequer, he

undoubtedly obtained an immediate profit, but it was masked by the drop in the trade;* the receipts in a bad period about equalled the receipts in a good period, the bad period being the Beer Duty, and the good period the Malt Duty. He thought they would all agree with the remarks of Mr. Reeve, that there must come a time when brewers could not afford to pay much more duty. The very richest could perhaps do so, but the poorer ones must suffer, and would get squeezed out of the business altogether; and he thought that was a consideration which the Chancellor of the Exchequer should bear in mind. He ought not to squeeze out the weaker members of the Trade for the sake of the Revenue. It was often a very long time before the brewer could put the tax on the shoulders of the consumer. There were many ways of doing it. You might give him rather less strength in his beer. You might give him less comfort in the "houses." The brewer instead of spending money on his houses and upon the comfort of those who were indirectly his customers, would spend less, and the consumer would suffer in that way. There were more ways than one in which these constant increments of duty detrimentally affected the consumer, as well as the brewer. There was no doubt that since 1880, as the prices of materials had fallen, Chancellors of the Exchequer had kept an eye upon what was going on and had gradually increased the duty, so that the Revenue had, as it were, fattened at the expense of the brewer: the latter had been deprived of profit which would otherwise have accrued to him. There were several points which they would find more fully explained in detail in the footnotes to the paper

* Since the reading of the Paper, I have received the following communication from Mr. P. C. Morgan:—"I am quite of your opinion that Mr. Gladstone in 1880, so far from getting merely an equivalent duty with a turn of the scale to the extent of £300,000, or £400,000 in favour of the Revenue, obtained a permanent increase of at least double the amount. I have taken out the figures relating to the actual quantities of malt and sugar used during the two periods of four years each which ended on 30th September, 1880, and 30th September, 1884. The yearly averages are as follows:—

	Malt, bushels.	Sugar, cwt.s.
1877-80	57,212,371	1,007,177
1881-84	52,285,838	1,144,714

which, roughly speaking, gives an annual average decrease during the latter period of from 61½ million to 56½ million bushels, or, say, one of 7½ per cent. It is, I think, quite clear that, but for the change, the Revenue must have fallen in the same proportion: and 7½ per cent. on £8,500,000 gives over £600,000."

when it appeared in print. There were also Tables in the Appendix: and a chart, for which he was indebted to Mr. Morgan, of the Country Brewers' Society. He had to thank Mr. Reeve for much of the information contained in Table K.

Mr. REEVE then proposed a hearty vote of thanks to Mr. Aldous, which was carried unanimously.

Institute of Brewing (Yorkshire and North Eastern Section).

LIST OF OFFICERS.

(1900.)

President: CHARLES F. TETLEY.

Vice-Presidents:

H. H. RILEY-SMITH.	FRANK RILEY-SMITH.
CHARLES F. HOYLE.	H. WHITWORTH.
T. W. WALLER.	J. H. KELLEY.
&c., &c., &c.	

Committee:

HAROLD TRINDER (<i>Chairman</i>).	C. V. MATTHEWS.
W. H. LINLEY (<i>Vice-Chairman</i>).	S. MITCHELL.
E. F. GODDARD.	A. J. MURPHY.
JOHN HEATON.	B. W. PECKITT.
WALTER HOWE.	ARTHUR ROGERS.
A. H. LEWIS.	JOHN TORDOFF.

Hon. Auditor: J. P. KIRK.

Secretary and Treasurer: T. P. WEBSTER, A.S.A.A.,
92, Albion Street, Leeds.

North of England Institute of Brewing.

LIST OF OFFICERS.

(1901.)

President : H. WELD-BLUNDELL.

Vice-Presidents :

R. S. BODDINGTON.

JAS. GRIMBLE GROVES, J.P.

WM. GRIMBLE GROVES, J.P.

EDWARD HOLT, J.P.

C. E. REDFERN, J.P.

Committee :

C. F. HYDE (*Chairman*).

A. L. LEES (*Vice-Chairman*).

A. BENNETT.

W. B. BOFFEY.

T. CROSSMAN, F.C.S.

A. G. GLOYER.

W. M. HERBERT.

JAMES KAY, Jun.

H. J. MARRIOTT.

T. MAY-SMITH, Jun.

A. K. MILLER, Ph.D., F.I.C., F.C.S.

JAMES MONRO.

W. B. ROBERTS, F.C.S.

F. R. STONE, F.C.S.

Hon. Auditors { W. TABERNER, F.I.S.
W. POTTS.

Hon. Treasurer : A. L. LEES.

Secretary :

J. STANLEY FRANCOMB, B.A. (Oxon.), Solicitor, 32, Kennedy Street, Manchester.

ANNUAL MEETING AND BANQUET.

THE Ninth Annual Meeting and Banquet of the North of England Institute of Brewing took place at the Victoria Hotel, Manchester, on Saturday, 19th January, 1901. Mr. H. WELD-BLUNDELL (the President) occupied the chair.

The Minutes of the previous Annual Meeting were read and adopted.

The Report and Balance Sheet were submitted and passed.

Mr. H. WELD-BLUNDELL was re-elected President.

Mr. C. F. HYDE (Vice-Chairman) was elected Chairman in the room of Mr. C. H. Hill, deceased.

Mr. A. L. LEES was elected Vice-Chairman in the place of Mr. C. F. Hyde.

The retiring members of the Committee and the Officers were re-elected.

THE ANNUAL BANQUET.

The Annual Banquet was afterwards held at the same Hotel. The President (Mr. H. WELD-BLUNDELL) occupied the chair. There were also present Mr. James, Grimble Groves, M.P., Professor Delépine, Mr. Frank Lott, Mr. W. W. Butler, Mr. T. A. Nelham, Mr. R. N. White, Dr. A. K. Miller, and other gentlemen, the total number present being 51.

The usual loyal toasts having been duly honoured,

The Secretary (Mr. STANLEY FRANCOMB) read letters and telegrams of apology for inability to attend from various gentlemen.

Mr. THORNE proposed "The President." He said his knowledge of the North of England Institute of Brewing was confined to his experience of that evening. Hitherto he had merely known of its existence through their Federated Institutes. He felt some diffidence in stepping into the shoes of Mr. A. Gordon Salamon, who was a very effective after-dinner speaker, and to whose presence they had looked forward to give them some information which would have been very interesting at the present time. He had followed with a great deal of interest the progress of the Institutes of Brewing, and fully recognised the value of their President, to whom he was personally known, in the management of their Institute. He congratulated them on having re-elected Mr. Weld-Blundell, who would, he felt sure, continue to lead the Institute successfully during the coming year, in which they would require a firm leader, a leader who had tact and knowledge of the world. The Federated Institutes had done good work in the past, and he believed the work of that Institute in the coming year would be as important as the work of any other.

The PRESIDENT, in responding, thanked them very much indeed for the cordial way in which they had responded to the toast proposed by Mr. Thorne. He was not, however, justified in accepting the encomiums and congratulations which had been offered, as he felt it was his duty to do all he possibly could to assist in every conceivable way the business of the Institute. They all regretted Mr. Gordon Salamon's absence. He had expressed his desire to be with them that evening and wished to come, but had to meet a number of gentlemen from abroad, in London, and owing to the delays over the special inquest in Manchester was obliged to leave for London on Friday. If Mr. Salamon had been present he would have told them many things which would have been interesting to the Institute. Twelve months ago when he (the speaker) was elected President, the brewing industry was prosperous in every way. Nobody thought that in 12 months a calamity would have fallen upon them such as the discovery of arsenic in beer. It was quite sudden and unexpected, and it had brought a great deal of trouble to their trade. Bold and decided action was at once taken by Mr. Groves and others, who did their best to discover the source of all the trouble which had been brought upon them, and he personally thanked Mr. Groves and those who had assisted him for what they had done. People who knew nothing about the trade had said it all came through brewers using invert-sugar and glucose and that sort of thing, but they now knew that there was no blame to be put upon the brewer. All the trouble had been brought about by the mishap and ignorance of one or two people supplying the materials required by brewers. In times past, brewers had been charged with adulterating their productions; but during the last 20 years, committees of public institutions and others who had to carry out the provisions of the Food and Drugs Act had examined the various goods and discovered that the beer of the country was free from adulteration. Science had developed the production of beers. Some people cried out for beer made only from malt and hops, but it was necessary to tell the public that it was the starch in barley, acted upon by the diastase formed during malting, which converted the starch into malt-sugar from which beer was made. The sugar obtained by the action of diastase upon the starches found in other grain, such as oats, maize, or rice, was identically the same sugar as that found in malt. Science had shown that the starches could be as easily

converted into the malt-sugar by proper treatment in the presence of sulphuric acid as by diastase; and the conversion of the sugar of cane in the same way into invert-sugar was perfectly analogous. A beer, therefore, brewed from these materials was absolutely as pure in every sense as a beer brewed from malt and hops. There was a feeling amongst a section of the public who were ignorant of these matters that a law should be passed for the purpose of compelling brewers to brew from malt and hops only. There was not, he considered, the slightest chance of such a measure being carried in Parliament. It was recognised that the contract made with the brewers by Mr. Gladstone when the free mash-tun was allowed rendered it impossible. He would endeavour during his tenure of office to help the work of the Institute to the best of his ability.

Professor DELÉPINE proposed "The North of England Institute of Brewing." He said he felt a great difficulty in having to propose the toast of an Institute which he knew very well existed, but which he now saw for the first time in the body. Not that he was unacquainted with its aims, for they were the same as those of several societies with which he was better acquainted in his own profession. Their chief object was to promote intercourse between practical men, who knew a great many things which purely scientific people did not know, and scientific men who could assist practical men by researches relating to matters of value in business. He had not read all the accounts of their proceedings, but he happened to know a little about brewing. In recent times they had come together on a common ground of research, and that common ground had proved partly pleasant and partly unpleasant. Still both parties had been moderate in the expression of their views. The present aspect of the last trouble which had come upon them was also to show the very healthy relations which existed between all the responsible persons connected with the matter. The public medical authorities on the one hand, and the scientific representatives of the brewers on the other, had met on the safe ground of pure science for the purpose of solving the difficulty which was a source of anxiety to them all. The way in which Mr. Groves opened his brewery to everybody who wanted information had been an example of good faith, and showed the way in which any responsible person, especially a leader of opinion, should deal with such matters. It was unfortunate that while investigations of this kind were in progress

matters were published prematurely, and without the slightest benefit to the public. No person had felt this more than himself and Dr. Tattersall, who had been conducting their investigations before any one had thought of the source of the evil. Dr. Tattersall had been informed of the existence of an outbreak of disease, which seemed to be associated with beer drinking, and consequently he obtained samples, which he sent for analysis in the usual way. For nearly two weeks he had waited for the results of analyses of beer, but could obtain no information. On the 16th of November Dr. Tattersall brought the matter under his notice, and, after consultation, they came to the conclusion that there were only three things which might possibly account for the disease, namely, the presence in the beer of (1) some metallic poison, such as lead or arsenic; (2) the action of some toxic substances resulting from some abnormal fermentation; or (3) the excessive production of some of the higher alcohols which might have been produced by the use of some unusual ferment; and it was not very likely that either of the two last theories would prove satisfactory in itself. The only thing that seemed certain was that the disease was only indirectly related to the composition of beer, and that it must have been in connection with some unusual change in some article used in brewing. Nothing at the beginning had been stated which could give rise to the suspicion that arsenic was present, but on the 19th of November Dr. Reynolds stated that he had found arsenic in beer, and he (Professor Delépine) came to the conclusion that it could only have come from the brewing sugars, in the preparation of which some impure sulphuric acid had been used as a result of some mistake or negligence. They had come to this conclusion immediately. The reason he alluded to the matter was that it had been their intention not to rouse public excitement unnecessarily, and to give the brewers all the information necessary to enable them to deal with the matter without delay. They had been defeated in that object by the undue and useless haste of some irresponsible persons. The public had gained nothing by the publication in the papers of their discoveries, and such publication, by warning those who might be at fault, might have prevented their completing their evidence had Dr. Tattersall been slower. The results of their investigations were communicated to Mr. J. G. Groves, M.P., Messrs. Bostock, and Messrs. Nicholson at the earliest possible date, so that without using

any forcible methods, which would have been unnecessary at that stage, and could only have caused delay, they sent word to those concerned that arsenic had been found in certain substances used in brewing. Dr. Tattersall knew that the brewers were as anxious as himself to know what was the source of the mischief, in order that the public should be protected at the earliest possible date. Those before him now knew the whole thing, and he dared say they knew it before, for he had had the pleasure of meeting Mr. Salamon and other members of the Brewers' Commission and had given them all the information which they desired. The object of their Institute was to fathom all the possible changes that might take place in the constituents of beer so as to discover anything deleterious that might be produced during the manufacture of beer, and to study various modes of brewing that might be advantageous. The brewing profession had the highest aims in that respect. It had often struck him how careless the Government of the country was in relation to the manufacture of food-stuffs, and the facility with which contamination might get into them without any detection. It had often struck him that at any firm manufacturing articles used for or in the preparation of food there should be chemists able to detect poisonous substances and matters affecting the health of the people, and that they should be paid for their services accordingly. In a big centre like Manchester there should be some central institution where researches could be carried on, where articles of food might be examined—articles which might be a source of danger to the public—and public danger thereby averted. New articles were constantly coming up, and ought to be carefully examined. It was with objects of that kind that their Institute had been formed, and he thought those objects should be carried out in a practical fashion. He heartily wished their Institute success and prosperity in every way.

Mr. J. G. GROVES, M.P., said it had been his privilege on former occasions to respond to the toast of the Institute, and he was glad to have the opportunity of recognising the presence and making the acquaintance of Professor Delépine. Until that night, although he had many times heard Professor Delépine's name associated with the great beer inquiry going on, he had never had the opportunity of making his acquaintance. He recognised the great debt which they in the Trade owed to Professor Delépine, who had been associated with Dr. Tattersall (the Medical Officer of Health for Salford)

in endeavouring to discover the source of the mischief in beer prior to the announcement of the discovery of arsenic by Dr. Reynolds; and if their investigations had been allowed to run their course they would have arrived at the same conclusions as Dr. Reynolds, but in a more conclusive manner. They did not desire, however, to control the labours of scientific men and the medical profession in their local centres, much less the wider areas of scientific research. There was one element of satisfaction which had come out of the great difficulty in which they had found themselves, and that was the spirit of loyalty which the brewers had, with a few notable exceptions, shown to each other in the crisis. There had been, he regretted to say, a few brewers who had endeavoured to make the most of the difficulty of those who quite innocently were more prominently associated with the various stages of the inquiry. It was to be deplored that in the ranks of their trade there should be some who endeavoured to put themselves on a pedestal, claiming immunity from the misfortunes in which other brewers had found themselves placed from causes quite beyond their own control, and he believed the time would come when those who had done so would regret it. Referring to the remarks of Mr. Thorne, as to the stress and strain they might expect during the coming year, he could say that much as they had felt their responsibilities—and he for one had no desire to shirk them—he believed they could not physically or mentally bear the strain and terrible anxiety of another 12 months equal to that which they had undergone during the last few weeks. They had, however, done their duty, and had nothing to fear. They had taken a perfectly free and open attitude, and done all that was possible to assist the local authorities, and he believed they had got through the greater part of their difficulties. The arbiters were the public, and to the public they confidently appealed. He did not think what had taken place would permanently affect the use of the national beverage of the country. He believed the public would justify them in the action they had taken. The opinion of a high authority had just been expressed that if anybody wanted a glass of pure beer they could certainly get it now in Manchester. That was a compliment to Manchester brewers. With regard to the prosecution of innocent retail beer dealers, he thought it deplorable that the law compelled the authorities to take this channel of prosecution instead of being able to go straight for the manufacturers. The retailers had

certainly been blameless in the matter, whoever else had been guilty ; and he deeply deplored the pain they had suffered by having their names published in connection with the inquests and prosecutions.

The PRESIDENT gave "the Federated Institutes of Brewing." He said they were all aware that combination was a source of strength. He trusted that all kindred institutions would show energy in the acquisition of knowledge with regard to their industry indeed, he had no doubt they would do so. He knew that the papers read before their own Institute were up to date, and that the members did their best to become acquainted with everything which was most perfect in connection with the great industry with which they were associated.

Mr. W. W. BUTLER said he had much pleasure in rising to respond to the toast of the Federated Institutes of Brewing, and in doing so he should in the first place like to thank the North of England Institute of Brewing for their kind hospitality. He regarded his presence there that evening as an honour conferred upon the Midland Counties Institute of Brewing. There was no doubt that these Institutes were doing a valuable work, not only in extending the knowledge of the science and practice of brewing, but also in what he thought quite as valuable, namely, creating a good understanding between the employers and employés of the various breweries throughout the country. In connection with this good understanding he believed it had been at times remarked that in these Institutes lurked the danger of employés of different firms communicating to each other information detrimental to the interests of their employers. He could only repeat what he had often said before, that during the years that he had been connected with the Institutes, he had never heard matters divulged by any employé which could in any way be considered as endangering the interests of his employer. He thought it simply priggishness for any member to think that he was so well informed that to open his mouth to a fellow-member he was giving away more than he could possibly receive in return. He prided himself on possessing a good knowledge of brewing, yet he had never met the member who could not impart knowledge to him. This good understanding between brewery proprietors was valuable in other directions besides the practice of brewing, as, for example, in Birmingham, where there were brewers whom it would be impossible to surpass in the matter of amicable working

with each other ; they had combined together and equipped a cold store for the storage of hops, mainly brought about through the valuable information given in the papers of Messrs. Briant and Meacham, read before the London Institute. Also such matters as the levy of the war tax, and matters of licensing reform by the removal of surplus licensed houses, had been discussed in a manner which would not have been possible without a perfect understanding. Again, during the arsenic scare, with which he should like to say the brewers of the Midland Counties deeply sympathised with their Manchester friends, who, through no fault of their own, had been put to great loss and inconvenience, the brewers met together, and rather than take advantage of each other by issuing unfair placards, decided to send out a combined analysis as to the purity of the beers. So much for the value of Institutes of Brewing. Now, as to the relationship between the Institutes, he must say that he was surprised when he read in their Journal the day before an account of the extraordinary meeting of the Yorkshire Institute of Brewing, and especially at the speech of Mr. Murphy at that meeting. In the first place Mr. Murphy stated that the federation of the Institutes was of the thinnest possible character. He (the speaker) could only say he was sorry to read that that was Mr. Murphy's opinion. speaking for the Midland Counties Institute, it had been his desire to make the bond between them all firmer than ever. There seemed to be an undercurrent of misapprehension that one or more of the Institutes intended to cut itself adrift from the others. He could assure those present that such had not been suggested by the Midland Counties Institute. He had no doubt that as the Midland Counties Institute of Brewing thought that the original scheme of establishing a central building in London did not go far enough without having in connection therewith a school of brewing, such action was indirectly responsible for the speech of Mr. Murphy. He had explained at other gatherings that to his mind they missed a golden opportunity of establishing a school of brewing worthy of the trade of this country. He had never heard of any objection to the London scheme, and they wished it every success. He could only say that he was surprised that no correspondence had taken place during the past two years between the Midland Counties Institute and the London Institute with reference to any suggested amalgamation. Mr. Murphy

hoped that the amalgamation would receive the serious consideration of other Institutes. For his part he could promise him that the Midland Counties Institute would only be too willing to join in any scheme which would further the objects of the suggested Central Institute. He was sorry Mr. Murphy touched upon a most delicate subject, the crowding of their profession with badly prepared would-be brewers. For his part he should welcome any scheme which included a method of examination which would make a selective test for all new-comers, and had no doubt such a test would conclusively prove that the establishment of a school of brewing where the students could undergo a full course of scientific training was too long delayed in its establishment, and here he was proud to say it redounded to the credit of the brewers of Birmingham that out of the funds of their Association they had guaranteed the expenses of a British School of Brewing for at least five years, and it might be information for the Manchester Brewers to know that last year this school cost the brewers of Birmingham over a thousand pounds, but they considered it money well spent. The laboratory of the school was now full, and already several students had obtained valuable posts in large breweries where previously chemists had not been employed. There was no doubt there would be a greater demand in the future for men from such a school, as the "arsenic scare" had impressed upon brewers that now they had not only to look into the manufacture of beer but also more fully into the ingredients used in brewing, seeing that the manufacturers of such articles had in the past leaned upon the user of the same rather than on themselves in more closely supervising the proper production of such articles. He could not follow Mr. Murphy with reference to the anomalous position of members referring their membership to this Institute or the other, for it was quite usual for members to speak of belonging to this section or that of the society of chemical industry, and at the present time it was one of the rules of the Federated Institutes that a member of any Institute might attend the meetings of the other Institutes. He quite agreed with Mr. Murphy that the question of brewing schools had now no connection with the affiliation of the Institutes, and at the same time he could see no objection to the Council of the Institutes having a voice in the curriculum of schools of brewing, but he must entirely disagree with the idea that it was possible to establish a hundred schools

of brewing doing useful work. University colleges and such institutions were able to give a good scientific groundwork for the person intending to become a brewer ; but unless such university colleges were equipped with a brewing laboratory, and better still, in addition, a brewing plant, which he understood they in Manchester intended to possess, and also a Professor with a practical and scientific knowledge of brewing, then he contended such colleges could not be looked upon as the source of supply of brewers possessing full knowledge of the art of brewing. Mr. Murphy made reference to separate elements in the Institutes being at cross-purposes, and Mr. Chapman at the same meeting spoke of hostile interests. He (Mr. Butler) could only say, as President of the Midland Counties Institute, that such elements it certainly did not foster, and they would not oppose any suggestion which would help forward any movement for the good of the Institutes and the brewing trade. He trusted he should be forgiven for digressing from the subject of the toast. He again thanked them for their kind hospitality, and wished their Institute continued success.

Dr. A. K. MILLER proposed "The Guests."

Mr. FRANK LOTT, in replying to the toast, said he had always been received in Manchester with the greatest cordiality ; he thanked the members most sincerely for their kindness, and knew the other guests would cordially endorse those feelings. He had been there several times since the birth of the Institute, and had seen it grow into manhood strong and lusty. He had seen it do good work, bringing together the scientific and the practical members, which was a matter of great importance. On the present occasion, when the minds of all of them had been concentrated on a great and serious question, he might be expected to make a few remarks upon it. In the first place, however, he could not deal with matters which were *sub judice*. He had no right to come forward as an advocate on the part of either the brewers or the scientific experts, at the present time. But during the past two months he had had a large and almost painful association with brewers throughout the country in a difficulty which had arisen from no fault of their own, and he felt it his duty to say that from one and all he had received nothing but the most active assistance, and in no case had there been the slightest hesitation on the part of brewers in disclosing their position to the fullest extent. He thought this openness was a thing which the trade might be proud of. Another thing

was, that it had been stated that there had been found traces of arsenic in many of the articles used in brewing; but when it came to analysis, it came to quantities, and he could tell them that there was a great difference between the beers containing arsenic introduced by contaminated sugars and beers contaminated by traces of arsenic from a variety of other sources; and that difference was of such great importance that the public should have it clearly brought before them. The first was, undoubtedly, a danger to the public; but he believed that there was now no danger, the cause having been discovered and stopped. He hoped that if present with them next year, they might meet without any such terrible anxiety hanging over them. He had passed through two months of anxious work which he should be sorry to have to go through again. He was sure they all joined in deep sympathy with those who had suffered so severely. With regard to the Federated Institutes of Brewing, he felt very strongly that they should all work together for the good of all. He was very glad to hear Mr. Butler say that the Midland Counties took that attitude, and he felt sure that the North of England Institute would also join in heartily knitting together the bonds of science and practice.